

**TABLE OF CONTENTS**

<b>UNIT</b>	<b>TITLE</b>	<b>PAGE NO.</b>
<b>I</b>	Introduction to Airline Agency Role and Its Functions	3
<b>II</b>	Airline Types, Control, Facilities and Services	25
<b>III</b>	Airline Code, Tariff, Fare Construction and Principles	75
<b>IV</b>	Types of Journey, Restrictions and Travel Procedures	151
<b>V</b>	Ticketing System, Procedure, Travel Plan, Travel Card and BSP	221

[www.FirstRanker.com](http://www.FirstRanker.com)

MBA (Tourism) - IV Semester

Paper Code: MBTM 4001

---

**Paper - XVI**

---

---

**Air Fares and Airlines Management**

---

**Objectives**

- To understand the structure and dynamics of airline industry;
- To understand the airport and airlines management linkages
- To study the international airfares, regulations and formalities to travel, and
- To study different organizations and their contributions to airlines management

**Unit - I**

Role of IATA and its functions – ICAO; role and functions – Airport Authority of India – Open sky Policy \_ International Conventions: Warsaw Convention, Chicago Convention

**Unit - II**

Management of Airlines: Types of Airlines – Airline personnel and revenue earning – Airport Management – Study of aircraft parts – The aircraft turnaround The control tower- Airport facilities and special passengers \_ Airport access \_ Check in facilities – Landing facilities for departing passengers – In-flight services – cabin component – Audio and video projection equipments – Emergency equipments for disembarkation – In-flight entertainment – Class of service with more comfort.

**Unit - III**

Familiarization with OAG: Three letter city and airport code, airline designated code – minimum connecting time – Global indicators – Familiarisation with Air tariff: Currency regulation, NUC conversion factors, General rules, Planning itinerary by air, Introduction to fare construction – Mileage principles – Fare construction with Extra Mileage allowances (EMA) – Extra Mileage surcharge (EMS).

## Unit - IV

One Way and Return Trip – Circle trip journey – Open Jaw – Add-on mixed class journey- HIP check – Back Haul Minimum Check (BHC) – CTM check – Indirect Travel Limitation – Around the World fare – Special fares.

## Unit - V

Issue of manual ticket – reservation procedure – MPD, MCO, PTA and their purposes – Universal Air Travel Plan: Types of air travel cards – Billing and Settlement Plan (BSP) – Case studies of selected Airlines' Modules

## References

1. **Jagmohan Negi**, AIR TRAVEL TICKETING AND FARE CONSTRUCTION, *Kaniska*, New Delhi, 2005
2. **OAG**, CONSULTANT, IATA, Geneva AIR TARIFF BOOK
3. **Stephen Shaw**, AIRLINE IN SHIFTS & MANAGEMENT, *Ashgate Pub.*, USA, 2004
4. IATA GUIDE, Geneva
5. **Doganis R.**, AIRPORT BUSINESS, *Routledge Publishing*, London, 2002
6. **Sikdar K.**, ALL AYOU WANTED TO KNOW ABOUT AIRLINES FUNCTIONS.

---

**UNIT – I**

---

---

**Introduction to Airline Agency Role and Its Functions**

---

**Learning Objectives**

*By studying this unit the students will be able to understand the following:*

- IATA – Its objectives, functions and role
- ICAO – Its function and role
- Airport Authority of India
- Open Sky Policy
- International Conventions

**Introduction**

Tourism is a complex industry that involves a broad range of businesses, organizations and government agencies working together at different levels to deliver a complete tourism experience. Each party in the chain contributes to the overall holiday experience of the customer - from initial destination marketing through to the ground level experience. Each state and territory within in a country has its own government tourism agency that works to promote the country as a tourism destination internationally. Within each state and territory there are a number of other organizations - the Regional Tourism Organizations and Visitor Centers, that work with the local tourism industry, local government and state organizations to develop and market tourism in their local area. In this section you will find details on how various organizations works with the various types of industry and also will understand the policies and regulation of international associations.

**IATA (International Air Transport Association)**

The International Air Transport Association (IATA) is an international industry trade group of airlines headquartered in Montreal, Canada, where the International Civil Aviation Organization is also headquartered. IATA was formed on 19 April 1945, in Havana, Cuba. It is the successor to the International Air Traffic Association, founded in The Hague in 1919, the year of the world's first international scheduled services. At its founding, IATA had 57 members from 31 nations, mostly in Europe and North America. Today it has about 230 members from more than 140 nations in every part of the world.

## Role of IATA

IATA's mission is to represent, lead, and serve the airline industry. IATA represents some 230 airlines comprising 93% of scheduled international air traffic. The Director General and Chief Executive Officer is Giovanni Bisignani. Currently, IATA is present in over 150 countries covered through 101 offices around the globe. All the Airline rules and regulations are defined by IATA. The main aim of IATA is to provide safe and secure transportation to its passengers. The IATA's mission includes three types of actions: representing the industry and lobbying governments and regulators; leading the industry by working with airlines to increase passenger convenience; and serving the industry by providing support with products and expert services. The Organization work benefits all industry stakeholders, such as simplifying the travel and shipping process for consumers, and keeping governments informed about aviation industry complexities.

The IATA Head Office are located at 800 Place Victoria (Montreal Stock Exchange Tower) in Montreal since 1977 (having been located at Central Station (Montreal) since its founding) and the executive offices are at the Geneva Airport in Switzerland.

## Objectives of IATA

Its stated aims and objectives are as follows:

To promote safe, regular and economical air transport for the benefit of the people of the world, to foster air commerce and study the problems connected therewith

To promote means for collaboration among air transport enterprises engaged directly or indirectly in international air transport service

To cooperate with ICAO and other international organisations There is always close association and dialogue between ICAO and IATA.

## Organizations

In order to fulfill its aims and objectives IATA is divided into various departments, each with a specific role to fulfill.

### *Traffic Department*

Provides a forum for traffic coordination discussions

Serves as a central source of traffic information for publishers and members

Lists and verifies services of cargo and travel agents worldwide on behalf of the member airlines

Coordinates training programmes for cargo and travel agents

Arranges centralised billing and reporting of agents' sales

Provides a forum for airlines to resolve scheduling problems

Helps represent the industry on airmail issues

Promotes awareness programmes to combat fraud

### *Legal Department*

Provides professional legal advice and interpretations to individual members as required from an airline perspective

Distributes and publishes information on legal or regulatory issues of industry-wide interest and importance

Formulates industry positions vis-à-vis bodies like ICAO, the European Community and individual governments

### **Functions of IATA**

IATA was involved in establishing a sound technical and legal frame work for the operation of the world's airlines. It organized the first worldwide Traffic Conference in 1947 which worked out agreements related to fare construction rules for multi-sector trips, revenue allocation-prorating rules, baggage allowance, ticket and airway bill design and agency appointment procedures. IATA is also the coordinator of Multilateral Interline Traffic Agreements that allow nearly 300 airlines around the world to accept each other's' ticket and airway bills-and thus their passenger and cargo traffic-on a reciprocal basis.

In 1952, the pattern for airline-travel agent relations was set with the introduction of Standard Passenger Sales Agency Agreement. There are now nearly 81,000 IATA sponsored agency training courses since they were introduced.

One of the IATA's major issues today is taxation and user charges (payment for using airports and air navigation services). IATA makes specific challenges to the legality of certain taxes and point out to governments the counter-productive effect of excessive aviation taxation. Higher user charges mushroomed during the 1960's and 70's. IATA's task is to minimize their impact by ensuring that the charges are for facilities actually required, that charges are cost-related and that productivity improvements are built into cost projection.

## ICAO – International Civil Aviation Organization

The International Civil Aviation Organisation (ICAO) is the specialised agency of the United Nations (UN) for civil aviation, was created by the Convention on International Civil Aviation signed in Chicago on 7 December 1944. It codifies the principles and techniques of international air navigation and fosters the planning and development of international air transport to ensure safe and orderly growth. Its headquarters are located in the Quartier International of Montreal, Quebec, Canada.

The ICAO Council adopts standards and recommended practices concerning air navigation, its infrastructure, flight inspection, prevention of unlawful interference, and facilitation of border-crossing procedures for international civil aviation. ICAO defines the protocols for air accident investigation followed by transport safety authorities in countries signatory to the Convention on International Civil Aviation (Chicago Convention).

The Air Navigation Commission (ANC) is the technical body within ICAO. The Commission is composed of 19 Commissioners, nominated by the ICAO's contracting states, and appointed by the ICAO Council.<sup>[2]</sup> Commissioners serve as independent experts, who although nominated by their states, do not serve as state or political representatives. The development of Aviation Standards and Recommended Practices is done under the direction of the ANC through the formal process of ICAO Panels. Once approved by the Commission, standards are sent to the Council, the political body of ICAO, for consultation and coordination with the Member States before final adoption.

The forerunner to ICAO was the **International Commission for Air Navigation** (ICAN). It held its first convention in 1903 in Berlin, Germany but no agreements were reached among the eight countries that attended. At the second convention in 1906, also held in Berlin, 27 countries attended. The third convention, held in London in 1912 allocated the first radio callsigns for use by aircraft. ICAN continued to operate until 1945.

Fifty-two countries signed the Convention on International Civil Aviation, also known as the Chicago Convention, in Chicago, Illinois, on 7 December 1944. Under its terms, a **Provisional International Civil Aviation Organization** (PICAO) was to be established, to be replaced in turn by a permanent organization when 26 countries ratified the convention. Accordingly, PICAO began operating on 6 June 1945, replacing ICAN. The 26th country ratified the Convention on 5 March 1947 and, consequently PICAO was disestablished on 4 April 1947 and replaced by ICAO, which began operations the same day. In October 1947, ICAO became an agency of the United Nations linked to the United Nations Economic and Social Council (ECOSOC)

## Membership

As of November 2011, there are 191 International Civil Aviation Organization members, consisting of 190 of the 193 UN members (all but Dominica, Liechtenstein, and Tuvalu), plus the Cook Islands.

## Governing Council

The Governing Council is elected every 3 years and consists of 36 members divided into 3 categories. The present Council was elected on October 1, 2013 at the 38th Assembly of ICAO at Montreal. The Structure of present Council is as follows:

- i. Part I** – (States of chief importance in air transport) – Australia, Brazil, Canada, China, France, Germany, Italy, Japan, Russian Federation, United Kingdom and the United States. All of them have been re-elected.
- ii. Part II** – (States which make the largest contribution to the provision of facilities for international civil air navigation) – Argentina, Egypt, India, Mexico, Nigeria, Norway, Portugal, Saudi Arabia, Singapore, South Africa, Spain and Venezuela. Except Norway, Portugal and Venezuela, all others have been re-elected.
- iii. Part III**– (States ensuring geographic representation)- Bolivia, Burkina Faso, Cameroon, Chile, Dominican Republic, Kenya, Libya, Malaysia, Nicaragua, Poland, Republic of Korea, United Arab Emirates and United Republic of Tanzania. Bolivia, Chile, Dominican Republic, Kenya, Libya, Nicaragua, Poland and United Republic of Tanzania have been elected for the first time.

## Standards

ICAO also standardizes certain functions for use in the airline industry, such as the Aeronautical Message Handling System (AMHS), making it a standards organization. Each country should have an accessible Aeronautical Information Publication (AIP), based on standards defined by ICAO, containing information essential to air navigation. Countries are required to update their AIP manuals every 28 days and so provide definitive regulations, procedures and information for each country about airspace and aerodromes. ICAO's standards also dictate that temporary hazards to aircraft are regularly published using NOTAMs.

ICAO defines an International Standard Atmosphere (also known as ICAO Standard Atmosphere), a model of the standard variation of pressure, temperature, density, and



viscosity with altitude in the Earth's atmosphere. This is useful in calibrating instruments and designing aircraft.

ICAO standardizes machine-readable passports worldwide. Such passports have an area where some of the information otherwise written in textual form is written as strings of alphanumeric characters, printed in a manner suitable for optical character recognition. This enables border controllers and other law enforcement agents to process such passports quickly, without having to input the information manually into a computer. ICAO publishes Doc 9303 Machine Readable Travel Documents, the technical standard for machine-readable passports. A more recent standard is for biometric passports. These contain biometrics to authenticate the identity of travellers. The passport's critical information is stored on a tiny RFID computer chip, much like information stored on smartcards. Like some smartcards, the passport book design calls for an embedded contactless chip that is able to hold digital signature data to ensure the integrity of the passport and the biometric data.

ICAO is active in infrastructure management, including Communication, Navigation, Surveillance / Air Traffic Management (CNS/ATM) systems, which employ digital technologies (like satellite systems with various levels of automation) in order to maintain a seamless global air traffic management system

### **Aims and Objectives of ICAO**

Its aims and objectives are to develop the principles and techniques of international air travel navigation and to foster the planning development of international air transport. It also sets international standards and regulations necessary for safe, regular, efficient and economical air transport, and serves as the medium for co-operation in all fields of civil aviation among its 187 Contracting States.

Another of ICAO's functions is to facilitate the adoption of international air law instruments and to promote their general acceptance. ICAO also conducts workshops in various regions to provide States with information and advice on its activities and to facilitate exchange of information and views. In addition, ICAO also provides assistance to States to improve their aviation security facilities and procedures.

In recent years, ICAO has undertaken extensive work in areas like reporting aircraft accident and incident data, and automation of air traffic services. Among ICAO's more significant achievements has been the development of a satellite-based concept to meet the future communications, navigation, surveillance and air traffic management needs of civil aviation.

The ICAO is made up of an Assembly, a Council of limited membership with various subordinate bodies and a Secretariat. The Assembly, the sovereign body of ICAO comprising representatives from all Contracting States, meets at least once in three years to discuss civil aviation issues in the technical, economic, legal and technical co-operation fields. The Council, which is the governing body and comprises 33 Contracting States, gives continuing direction to the work of ICAO. One of its roles is to adopt International Standards and Recommended Practices and to incorporate these as Annexes to the Convention on International Civil Aviation. The Council is supported by the Air Navigation Commission (technical matters), the Air Transport Committee (economic matters), and the Committee on Joint Support of Air Navigation Services and the Finance Committee. The Secretariat, headed by a Secretary General, is divided into five main divisions - the Air Navigation Bureau, the Air Transport Bureau, the Technical Co-operation Bureau, the Legal Bureau and the Bureau of Administration and Services.

### **Aim of ICAO**

ICAO works in close co-operation with other members of the UN family such as the World Meteorological Organisation (WMO), the International Telecommunication Union (ITU) and the International Maritime Organisation (IMO). Non-governmental organisations such as the Airports Council International (ACI), the International Air Transport Association (IATA) and the International Federation of Air Line Pilots' Associations (IFALPA) also participate in ICAO's work. The main aim of ICAO include

Ensure the safe and orderly growth of international civil aviation throughout the world

Promote safety of flight in international air navigation. Some other aims include

Standardisation - the establishment of International Standards, Recommended Practices and Procedures covering licensing of personnel, rules of the air, aircraft operations, airworthiness, aeronautical telecommunications, air traffic services, accident investigation, aircraft noise and emission levels, security and safe transport of dangerous goods. After a standard is formally adopted, each of the ICAO 'contracting states' implements it within their territories.

CNS/ATM - the development of a satellite-based system concept to meet future communications, navigation surveillance/air traffic management (CNS/ATM) needs of civil aviation.

Regional planning - for the purposes of the ICAO, the globe is divided into 9 geographical regions which are treated individually for 'planning the provision of air

navigation facilities and services required on the ground'. ICAO regional meetings are held periodically.

Facilitation - the reduction of procedural formalities which may add extra time to a passenger's journey and the provision of adequate air terminal buildings.

Economics - air services to be established on the basis of equality and opportunity and operated soundly and economically.

Technical co-operation for development - the promotion of civil aviation in developing countries which includes the provision of assistance to states in order to improve their aviation security facilities and procedures. This has involved the creation or assistance of many large civil aviation training centres.

Law - development of a code of international air law governing certain issues.

### **Airports Authority of India**

Airports Authority of India (AAI) was constituted by an Act of Parliament and came into being on 1st April, 1995 by merging erstwhile National Airports Authority and International Airports Authority of India. The merger brought into existence a single Organization entrusted with the responsibility of creating, upgrading, maintaining and managing Civil Aviation infrastructure both on the ground and air space in the country.

Airports Authority of India (AAI) manages a total of 125 Airports, which include 11 International Airports, 08 Customs Airports, 81 Domestic Airports and 25 Civil Enclaves at Defence Airfields. AAI also provides Air Traffic Management Services (ATMS) over entire Indian Air Space and adjoining oceanic areas with ground installations at all Airports and 25 other locations to ensure safety of Aircraft operations.

The Airports at Ahmedabad, Amritsar, Calicut, Guwahati, Jaipur, Trivandrum, Kolkata & Chennai, which today are established as International Airports, are open to operations even by Foreign International Airlines. Besides, the International flights, National Flag Carriers operate from Coimbatore, Tiruchirappalli, Varanasi, and Gaya Airports. Not only this but also the Tourist Charters now touch Agra, Coimbatore, Jaipur, Lucknow, Patna Airports etc.

AAI has entered into a Joint Venture at Mumbai, Delhi, Hyderabad, Bangalore and Nagpur Airports to upgrade these Airports and emulate the world standards.

All major air-routes over Indian landmass are Radar covered (29 Radar installations at 11 locations) along with VOR/DVOR coverage (89 installations) co-located with Distance Measuring Equipment (90 installations). 52 runways are provided with ILS installations with Night Landing Facilities at most of these Airports and Automatic Message Switching System at 15 Airports.

AAI's successful implementation of Automatic Dependence Surveillance System (ADSS), using indigenous technology, at Calcutta and Chennai Air Traffic Control Centres, gave India the distinction of being the first country to use this advanced technology in the South East Asian region thus enabling effective Air Traffic Control over oceanic areas using satellite mode of communication. Use of remote controlled VHF coverage, along with satellite communication links, has given added strength to our ATMS. Linking of 80 locations by V-Sat installations shall vastly enhance Air Traffic Management and in turn safety of aircraft operations besides enabling administrative and operational control over our extensive Airport network. Performance Based Navigation (PBN) procedures have already been implemented at Mumbai, Delhi and Ahmedabad Airports and are likely to be implemented at other Airports in phased manner.

AAI has undertaken GAGAN project in technological collaboration with Indian Space and Research Organization (ISRO), where the satellite based system will be used for navigation. The navigation signals thus received from the GPS will be augmented to achieve the navigational requirement of aircrafts. First Phase of technology demonstration system has already been successfully completed in February 2008. Development team has been geared up to upgrade the system in operational phase.

AAI has also planned to provide Ground Based Augmentation System (GBAS) at Delhi and Mumbai Airports. This GBAS equipment will be capable of providing Category-II (curved approach) landing signals to the aircrafts thus replacing the existing instrument landing system in the long run, which is required at each end of the runway.

The Advanced Surface Movement Guidance and Control System (ASMGCS), installed at Delhi, has upgraded operation to runway 28 from CAT-IIIA level to CAT-IIIB level. CAT-IIIA system permits landing of aircrafts up to visibility of 200mtrs. However, CAT-IIIB will permit safe landing at the Airports at a visibility below 200mtrs but above 50mtrs.

AAI's endeavour, in enhanced focus on 'customer's expectations', has evinced enthusiastic response to independent agency, which has organised customer satisfaction surveys at 30 busy Airports. These surveys have enabled us to undertake improvements on

aspects recommended by the Airport users. The receptacles for our 'Business Reply Letters' at Airports have gained popularity; these responses enable us to understand the changing aspirations of Airport users. During the first year of the millennium, AAI endeavours to make its operations more transparent and also make available the instantaneous information to customers by deploying state-of-art Information Technology.

The specific training, focus on improving the employee response and the professional skill up-gradation, has been manifested. AAI's four training establishments viz. Civil Aviation Training College (CATC) - Allahabad, National Institute of Aviation Management and Research (NIAMAR) - Delhi and Fire Training Centres (FTCs) at Delhi & Kolkata are expected to be busier than ever before.

AAI has also undertaken initiatives to upgrade training facilities at CATC Allahabad and Hyderabad Airport. Aerodrome Visual Simulator (AVS) has been provided at CATC recently and non-radar procedural ATC simulator equipment is being supplied to CATC Allahabad and Hyderabad Airport.

AAI is having a dedicated Flight Inspection Unit (FIU) and it has fleet of three aircrafts fitted with latest state-of-art fully automatic flight inspection system capable of inspecting.

ILS up to Cat-III  
VOR (CVOR/DVOR)  
DME  
NDB  
VGS (PAPI, VASI)  
RADAR (ASR/MSSR)

In addition to in house flight calibration of navy aids, AAI also undertakes flight calibration of navy aids for Air force, Navy, Coast Guard and other private Airfields in India.

### **Functions of AAI**

The main functions of AAI inter-alia include construction, modification & management of passenger terminals, development & management of cargo terminals, development & maintenance of apron infrastructure including runways, parallel taxiways, apron etc., Provision of Communication, Navigation and Surveillance which includes

provision of DVOR / DME, ILS, ATC radars, visual aids etc., provision of air traffic services, provision of passenger facilities and related amenities at its terminals thereby ensuring safe and secure operations of aircraft, passenger and cargo in the country. Some other functions of AAI includes

Design, Development, Operation and Maintenance of international and domestic airports and civil enclaves.

Control and Management of the Indian airspace extending beyond the territorial limits of the country, as accepted by ICAO.

Construction, Modification and Management of passenger terminals.

Development and Management of cargo terminals at international and domestic airports.

Provision of passenger facilities and information system at the passenger terminals at airports.

Expansion and strengthening of operation area, viz. Runways, Aprons, Taxiway etc.

Provision of visual aids.

Provision of Communication and Navigation aids, viz. ILS, DVOR, DME, Radar etc.

### **Passenger Facilities**

- i. Construction, modification & management of passenger terminals, development & management of cargo terminals, development & maintenance of apron infrastructure including runways, parallel taxiways, apron etc.,
- ii. Provision of Communication, Navigation and Surveillance which includes provision of DVOR / DME, ILS, ATC radars, visual aids etc., provision of air traffic services, provision of passenger facilities and related amenities at its terminals thereby ensuring safe and secure operations of aircraft, passenger and cargo in the country.

### **Air Navigation Services**

In tune with its global approach to modernize Air Traffic Control (ATC) infrastructure for seamless navigation across state and regional boundaries, AAI is upgrading to satellite based Communication, Navigation, Surveillance (CNS) and Air Traffic Management. A number of co-operation agreements and memoranda of co-operation have been signed with the Federal Aviation Administration, US Trade & Development Agency, European Union, Air Services Australia and the French Government Co-operative Projects and Studies initiated to gain from their experience. Through these activities more and more executives

of AAI are being exposed to the latest technology, modern practices & procedures being adopted to improve the overall performance of Airports and Air Navigation Services.

Some of the major initiatives in this direction are introduction of Reduced Vertical Separation Minima (RVSM) in Indian air space to increase capacity and reduce congestion in the air; implementation of GPS and Geo Augmented Navigation (GAGAN) jointly with ISRO which when put to operation would be one of the four such systems in the world. AAI is a full member of the Civil Air Navigation Services Organization (CANSO).

### **IT Implementation**

AAI website is a website giving a host of information about the organization besides domestic and international flight schedules and such other information of interest to the public in general and passengers in particular.

### **HRD Training**

AAI has a number of training establishments, viz. NIAMAR in Delhi, CATC in Allahabad, Fire Training Centres at Delhi & Kolkata for in-house training of its engineers, Air Traffic Controllers, Rescue & Fire Fighting personnel etc. NIAMAR & CATC are members of ICAO TRAINER programme under which they share Standard Training Packages (STP) from a central pool for imparting training on various subjects.

Both CATC & NIAMAR have also contributed a number of STPs to the Central pool under ICAO TRAINER programme. Foreign students have also been participating in the training programme being conducted by these institutions

### **Revenue**

Most of AAI's revenue is generated from landing/parking fees and fees collected by providing CNS & ATC services to aircraft over the Indian airspace. Only 16 of the 126 airfields operated by the AAI are profitable while the other airports incur heavy losses due to underutilization and poor management.

### **Privatization of Airports**

The AAI was involved in a tussle with the Ministry of Civil Aviation over the issue of privatization of its two most profitable airports at Delhi and Mumbai. The Government of India handed over these two airports to private companies for the purpose of modernization



in 2006 under revenue sharing agreement to the GMR Group and GVK group respectively. The Nagpur Airport was transferred to the Maharashtra State owned MADC.

In addition to these, several green field airports are being operated by Private consortiums, namely, Bengaluru International Airport, Kazi Nazrul Islam Airport at Durgapur in West Bengal, Rajiv Gandhi International Airport at Hyderabad and Cochin International Airport.

### **International Projects**

The AAI has been involved in various consultancy projects with Libya, Algeria, Yemen, Maldives, Nauru and Afghanistan. The AAI also provides trained personnel for operation, maintenance and management of airports in these countries.

### **International Conventions**

#### **Warsaw Convention**

The **Warsaw Convention** is an international convention which regulates liability for international carriage of persons, luggage or goods performed by aircraft for reward. Originally signed in 1929 in Warsaw (hence the name), it was amended in 1955 at The Hague and in 1975 in Montreal. United States courts have held that, at least for some purposes, the Warsaw Convention is a different instrument from the Warsaw Convention as Amended by the Hague Protocol.

In particular, the Warsaw Convention:

- i. Mandates carriers to issue passenger tickets;
- ii. Requires carriers to issue baggage checks for checked luggage;
- iii. Creates a limitation period of 2 years within which a claim must be brought (Article 29); and
- iv. Limits a carrier's liability to at most:
  - a. 250,000 Francs or 16,600 Special Drawing Rights (SDR) for personal injury;
  - b. 17 SDR per kilogram for checked luggage and cargo, or \$20USD per kilogram for non-signatories of the amended Montreal Protocols.
  - c. 5,000 Francs or 332 SDR for the hand luggage of a traveler.

The sums limiting liability were originally given in Francs (defined in terms of a particular quantity of gold by article 22 paragraph 5 of the convention). These sums were



amended by the Montreal Additional Protocol No. 2 to substitute an expression given in terms of SDR's. These sums are valid in the absence of a differing agreement (on a higher sum) with the carrier. Agreements on lower sums are null and void.

On June 1, 2009, the exchange rate was 1.00 SDR = 1.088 EUR or 1.00 SDR = 1.548 USD. A court may also award a claiming party's costs, unless the carrier made an offer within 6 months of the loss (or at least 6 months before the beginning of any legal proceedings) which the claiming party has failed to beat. The Montreal Convention, signed in 1999, replaced the Warsaw Convention system.

### **Scope and Definition**

- i. This Convention applies to all international carriage of persons, luggage or goods performed by aircraft for reward. It applies equally to gratuitous carriage by aircraft performed by an air transport undertaking.
- ii. For the purposes of this Convention the expression "international carriage" means any carriage in which, according to the contract made by the parties, the place of departure and the place of destination, whether or not there be a break in the carriage or a transshipment, are situated either within the territories of two High Contracting Parties, or within the territory of a single High Contracting Party, if there is an agreed stopping place within a territory subject to the sovereignty, suzerainty, mandate or authority of another Power, even though that Power is not a party to this Convention. A carriage without such an agreed stopping place between territories subject to the sovereignty, suzerainty, mandate or authority of the same High Contracting Party is not deemed to be international for the purposes of this Convention.
- iii. A carriage to be performed by several successive air carriers is deemed, for the purposes of this Convention, to be one undivided carriage, if it has been regarded by the parties as a single operation, whether it had been agreed upon under the form of a single contract or of a series of contracts, and it does not lose its international character merely because one contract or a series of contracts is to be performed entirely within a territory subject to the sovereignty, suzerainty, mandate or authority of the same High Contracting Party.

This Convention applies to carriage performed by the State or by legally constituted public bodies provided it falls within the conditions laid down in Article 1. This Convention does not apply to carriage performed under the terms of any international postal Convention.

## Documents of Carriage

### Passenger Ticket

- i. For the carriage of passengers the carrier must deliver a passenger ticket which shall contain the following particulars:-
  - a. the place and date of issue;
  - b. the place of departure and of destination;
  - c. the agreed stopping places, provided that the carrier may reserve the right to alter the stopping places in case of necessity, and that if he exercises that right, the alteration shall not have the effect of depriving the carriage of its international character
  - d. the name and address of the carrier or carriers
  - e. a statement that the carriage is subject to the rules relating to liability established by this Convention.
- ii. The absence, irregularity or loss of the passenger ticket does not affect the existence or the validity of the contract of carriage, which shall none the less be subject to the rules of this Convention. Nevertheless, if the carrier accepts a passenger without a passenger ticket having been delivered he shall not be entitled to avail himself of those provisions of this Convention which exclude or limit his liability.

### Luggage Ticket

- i. For the carriage of luggage, other than small personal objects of which the passenger takes charge himself, the carrier must deliver a luggage ticket.
- ii. The luggage ticket shall be made out in duplicate, one part for the passenger and the other part for the carrier.
- iii. The luggage ticket shall contain the following particulars:-
  - a. The place and date of issue;
  - b. The place of departure and of destination;
  - c. The name and address of the carrier or carriers;
  - d. The number of the passenger ticket;
  - e. A statement that delivery of the luggage will be made to the bearer of the luggage ticket;

- f. The number and weight of the packages;
  - g. The amount of the value declared in accordance with
  - h. A statement that the carriage is subject to the rules relating to liability established by this Convention.
- iv. The absence, irregularity or loss of the luggage ticket does not affect the existence or the validity of the contract of carriage, which shall none the less be subject to the rules of this Convention. Nevertheless, if the carrier accepts luggage without a luggage ticket having been delivered, or if the luggage ticket does not contain the particulars set out at (d), (f) and (h) above, the carrier shall not be entitled to avail himself of those provisions of the Convention which exclude or limit his liability.

### **Air Consignment Note**

- a) Every carrier of goods has the right to require the consignor to make out and hand over to him a document called an "air consignment note"; every consignor has the right to require the carrier to accept this document.
- b) The absence, irregularity or loss of this document does not affect the existence or the validity of the contract of carriage which shall, subject to the provisions of Article 9, be none the less governed by the rules of this Convention.
- c) The air consignment note shall be made out by the consignor in three original parts and be handed over with the goods.
- d) The first part shall be marked "for the carrier," and shall be signed by the consignor. The second part shall be marked "for the consignee"; it shall be signed by the consignor and by the carrier and shall accompany the goods. The third part shall be signed by the carrier and handed by him to the consignor after the goods have been accepted.
- e) The carrier shall sign on acceptance of the goods.
- f) The signature of the carrier may be stamped; that of the consignor may be printed or stamped.
- g) If, at the request of the consignor, the carrier makes out the air consignment note, he shall be deemed, subject to proof to the contrary, to have done so on behalf of the consignor.
- h) The carrier of goods has the right to require the consignor to make out separate consignment notes when there is more than one package.
- i) The air consignment note shall contain the following particulars:-

The place and date of its execution;

The place of departure and of destination;

The agreed stopping places, provided that the carrier may reserve the right to alter the stopping places in case of necessity, and that if he exercises that right the alteration shall not have the effect of depriving the carriage of its international character;

The name and address of the consignor;

The name and address of the first carrier;

The name and address of the consignee, if the case so requires;

The nature of the goods;

The number of the packages, the method of packing and

The particular marks or numbers upon them;

The weight, the quantity and the volume or dimensions of the goods;

The apparent condition of the goods and of the packing;

The freight, if it has been agreed upon, the date and place of payment, and the person who is to pay it;

If the goods are sent for payment on delivery, the price of the goods, and, if the case so requires, the amount of the expenses incurred;

The amount of the value declared in accordance with

The number of parts of the air consignment note;

The documents handed to the carrier to accompany the air consignment note;

The time fixed for the completion of the carriage and a brief note of the route to be followed, if these matters have been agreed upon;

A statement that the carriage is subject to the rules relating to liability established by this Convention.

## Chicago Convention

The **Convention on International Civil Aviation**, also known as the **Chicago Convention**, established the International Civil Aviation Organization (ICAO), a specialized agency of the United Nations charged with coordinating and regulating international air travel. The Convention establishes rules of airspace, aircraft registration and safety, and details the rights of the signatories in relation to air travel. The Convention also exempts air fuels from tax.

The document was signed on December 7, 1944 in Chicago, U.S., by 52 signatory states. It received the requisite 26th ratification on March 5, 1947 and went into effect on April 4, 1947, the same date that ICAO came into being. In October of the same year, ICAO became a specialized agency of the United Nations Economic and Social Council (ECOSOC). The Convention has since been revised eight times (in 1959, 1963, 1969, 1975, 1980, 1997, 2000 and 2006).

As of 2013, the Chicago Convention has 191 state parties, which includes all member states of the United Nations—except Dominica, Liechtenstein, and Tuvalu—plus the Cook Islands.

### **Main Articles of Chicago Convention**

Some important articles are:

Article 1: Every state has complete and exclusive sovereignty over airspace above its territory.

Article 5: The aircraft of states, other than scheduled international air services, have the right to make flights across state's territories and to make stops without obtaining prior permission. However, the state may require the aircraft to make a landing.

Article 6: (Scheduled air services) No scheduled international air service may be operated over or into the territory of a contracting State, except with the special permission or other authorization of that State.

Article 10: (Landing at customs airports): The state can require that landing to be at a designated customs airport and similarly departure from the territory can be required to be from a designated customs airport.

Article 12: Each state shall keep its own rules of the air as uniform as possible with those established under the convention, the duty to ensure compliance with these rules rests with the contracting state.

Article 13: (Entry and Clearance Regulations) A state's laws and regulations regarding the admission and departure of passengers, crew or cargo from aircraft shall be complied with on arrival, upon departure and whilst within the territory of that state.

Article 16: The authorities of each state shall have the right to search the aircraft of other states on landing or departure, without unreasonable delay...

Article 24: Aircraft flying to, from or across, the territory of a state shall be admitted temporarily free of duty. Fuel, Oil, spare parts, regular equipment and aircraft stores retained on board are also exempt custom duty, inspection fees or similar charges.

Article 29: Before an international flight, the pilot in command must ensure that the aircraft is airworthy, duly registered and that the relevant certificates are on board the aircraft. The required documents are:

- Certificate of Registration
- Certificate of Airworthiness
- Passenger names, place of boarding and destination
- Crew licences
- Journey Logbook
- Radio Licence
- Cargo manifest

Article 30: The aircraft of a state flying in or over the territory of another state shall only carry radios licensed and used in accordance with the regulations of the state in which the aircraft is registered. The radios may only be used by members of the flight crew suitably licenced by the state in which the aircraft is registered.

Article 32: the pilot and crew of every aircraft engaged in international aviation must have certificates of competency and licences issued or validated by the state in which the aircraft is registered.

Article 33: (Recognition of Certificates and Licences) Certificates of Airworthiness, certificates of competency and licences issued or validated by the state in which the aircraft is registered, shall be recognised as valid by other states. The requirements for issue of those Certificates or Airworthiness, certificates of competency or licences must be equal to or above the minimum standards established by the Convention.

Article 40: No aircraft or personnel with endorsed licenses or certificate will engage in international navigation except with the permission of the state or states whose territory is entered. Any license holder who does not satisfy international standard relating to that license or certificate shall have attached to or endorsed on that license information regarding the particulars in which he does not satisfy those standards”.

## Annexes

The Convention is supported by nineteen annexes containing standards and recommended practices (SARPs). The annexes are amended regularly by ICAO and are as follows:

Annex 1 – Personnel Licensing - Licensing of flight crews, air traffic controllers & aircraft maintenance personnel

Annex 2 – Rules of the Air

Annex 3 – Meteorological Service for International Air Navigation

Annex 4 – Aeronautical Charts

Annex 5 – Units of Measurement to be used in Air and Ground Operations

Annex 6 – Operation of Aircraft

Part I – International Commercial Air Transport – Aeroplanes

Part II – International General Aviation – Aeroplanes

Part III – International Operations – Helicopters

Annex 7 – Aircraft Nationality and Registration Marks

Annex 8 – Airworthiness of Aircraft

Annex 9 – Facilitation

Annex 10 – Aeronautical Telecommunications

Part I – Digital Data Communication Systems

Part II – Voice Communication Systems

Vol IV – Surveillance Radar and Collision Avoidance Systems

Vol V – Aeronautical Radio Frequency Spectrum Utilization

Annex 11 – Air Traffic Services – Air Traffic Control Service, Flight Information Service and Alerting Service

Annex 12 – Search and Rescue

Annex 13 – Aircraft Accident and Incident Investigation

Annex 14 – Aerodromes, Vol I – Aerodrome Design and Operations, Vol II – Heliports

Annex 15 – Aeronautical Information Services

Annex 16 – Environmental Protection

Annex 17 – Security: Safeguarding International Civil Aviation Against Acts of Unlawful Interference

Annex 18 – The Safe Transport of Dangerous Goods by Air

Annex 19 – Safety Management (Since 14 November 2013)

Annex 5, Units of Measurement to be Used in Air and Ground Operations, named in its Table three “non-SI alternative units permitted for temporary use with the SI”: the foot (for vertical distance = altitude), the knot (for speed), and the nautical mile (for long distance).

### **Outcomes of Chicago Convention**

The Convention prevents the taxation of commercial aviation fuel (though fuel for recreational purposes is not exempt). This has led to debate in the UK Parliament over whether the lack of tax represents a subsidy to the aviation industry, estimated at £10 billion annually in the UK. Furthermore, the planned inclusion of international aviation into the European Union Emission Trading Scheme in 2014 has been called an ‘illegal tax’ by countries including the USA and China, who cite the Chicago Convention

### **Self Assessment Questions**

1. Write down the objectives and functions of IATA
2. Write short note on ICAO
3. Explain the role and functions of AAI.
4. Bring out the scope and objectives of Chicago Convention.
5. Explain the main Articles of Chicago Convention

\*\*\*\*



[www.FirstRanker.com](http://www.FirstRanker.com)

**UNIT – II**

---

**Airline Types, Control, Facilities and Services**

---

**Learning Objectives**

*By studying this unit the students will be able to understand the following:*

Management of Airlines

Airport Management

Airport facilities and In-flight facilities

In-flight entertainments

**Introduction**

Hindu and Greek mythologies suggest the presence of aero planes in ancient times. In Greek Mythology, *Icarus* equipped with wings made of Bird feathers held together with wax failed in his attempt to escape imprisonment because he flew too close to the sun it melted. Hindu Mythology also mentions Garuda who was the vehicle of Vishnu. These crude experiments led to the modern day aviation technology. Cuisine and Costumes were a part of culture and cultural Tourism. The Aero planes had a revolutionary impact on Tourism from World War – II. Air travel has become a symbol of Economy, Speed, and Comfort as compared to other modes of Transport. The passenger rides comfortably, enjoys good food, wine and music.

Aviation provides the only transportation network across the globe and it is crucial for global business development and tourism enrichment. Air transportation is one of the most important services to offer both significant social and economic benefits. By serving tourism and trade, it contributes to economic growth. It also provides jobs and increases tax revenues. Air transportation is essential for the fast movement of people and cargo shipments around the world. Finally, air transportation improves the quality of people's lives by broadening their leisure and cultural experiences. It gives a broad choice of holiday destinations around the world and is an affordable means to visit distant friends and relatives

## **Airline Personnel**

Just as in any occupation, airline personnel have tremendous responsibilities on their hands, and any negligent harmful act can cause financial damage and years of ongoing court battles. As a result, employers in the aviation field are conscientious in both their hiring and managing process as well. For instance, airline personnel are required to take numerous training courses and seminars in order to be adept in their field and avoid any possible lawsuits. These courses assure employers that their employees will have all of the tools necessary to become proficient in their line of work, as well as become motivated to learn more. In the end, airline personnel, such as flight attendants, ramp agents, pilots, and the like take pride in being able to perform their job with the utmost care and attention. They not only understand the importance of carrying out their job in an excellent manner, but putting a smile on the faces of the many passengers who board planes almost every year. A satisfied and pleased customer is the first sign of a job well performed, as well as a sign for future business dealings, and that is something that airline personnel learn from the very beginning.

## **Pilot in Command**

The pilot in command (PIC) of an aircraft is the person aboard the aircraft who is ultimately responsible for its operation and safety during flight. This would be the “captain” in a typical two- or three-pilot aircrew, or “pilot” if there is only one certified and qualified pilot at the controls of an aircraft. The PIC must be legally certified (or otherwise authorized) to operate the aircraft for the specific flight and flight conditions, but need not be actually manipulating the controls at any given moment. The PIC is the person legally in charge of the aircraft and its flight safety and operation, and would normally be the primary person liable for an infraction of any flight rule. The strict legal definition of PIC may vary slightly from country to country. The International Civil Aviation Organization, a United Nations agency, definition is: “The pilot responsible for the operation and safety of the aircraft during flight time.” Flight time for airplanes is defined by the U.S. FAA as “Pilot time that commences when an aircraft moves under its own power for the purpose of flight and ends when the aircraft comes to rest after landing.” This would normally include taxiing, which involves the ground operation to and from the runway, as long as the taxiing is carried out with the intention of flying the aircraft.

## **First Officer – Civil Aviation**

In commercial aviation, the first officer is the second pilot (sometimes referred to as the “co-pilot”) of an aircraft. The first officer is second-in-command of the aircraft, to

the captain who is the legal commander. In the event of incapacitation of the captain, the first officer will assume command of the aircraft. Control of the aircraft is normally shared equally between the first officer and the captain, with one pilot normally designated the “pilot flying” (PF) and the other the “pilot not flying” (PNF), or “pilot monitoring” (PM), for each flight. Even when the first officer is the flying pilot, however, the captain remains ultimately responsible for the aircraft, its passengers, and the crew. In typical day-to-day operations, the essential job tasks remain fairly equal.

Many airlines promote by seniority only within their own company. As a consequence, an airline first officer may be older and/or have more flight experience than a captain, by virtue of having experience from other airlines or the military. Traditionally, the first officer sits on the right-hand side of a fixed-wing aircraft (“right seat”) and the left-hand side of a helicopter (the reason for this difference is related to the fact that in many cases the pilot flying is unable to release his right side from the cyclic control to operate the instruments, thus he sits on the right hand and does that with his left hand). In the rank of senior first officer the pilot will also sit in the right hand seat. Often the senior first officer position is used within airlines to mean someone who has passed all the requirements for captain, but there are no captains positions within the company as yet, and therefore they are “on hold” until a position as captain becomes available when they will receive their command line check.

### **Second Officer**

A second officer usually refers to the third in the line of command for a flight crew on a commercial or non-military aircraft. Usually the second officer is a flight engineer who is also a licensed pilot. A second officer on some airlines is part of a relief crew. Rarely, such relief pilots are called third officer. The title derives from the nautical title indicating a third in command officer. Aircrew is personnel who operate an aircraft while in flight. The composition of the crew depends on the type of aircraft as well as the purpose of the flight.

### **Third officer (Civil Aviation)**

Third officer is a lesser used civil aviation rank. It was primarily used by Pan American World Airways, particularly on its “Clippers” during the infancy of extended range airline routes. The third officer served as a relief pilot and aircrew member and could move between pilot, co-pilot, radio officer, and flight engineer positions to provide a rest period for the primary crews (Flying the World in Clipper Ships). Third officers in modern civil aviation are often not formally titled as such. Rather, these relief pilots take on a junior first officer rank or in some cases a second officer rank.

## **Flight Attendant**

Flight attendants or cabin crew (also known as stewards/stewardesses, air hosts/hostesses, cabin attendants) are members of an aircrew employed by airlines primarily to ensure the safety and comfort of passengers aboard commercial flights, on select business jet aircraft, and on some military aircraft. The role of a flight attendant derives from that of similar positions on passenger ships or passenger trains, but it has more direct involvement with passengers because of the confined quarters on aircraft. Additionally, the job of a flight attendant revolves around safety to a much greater extent than those of similar staff on other forms of transportation. Flight attendants on board a flight collectively form a cabin crew, as distinguished from pilots and engineers in the cockpit. Heinrich Kubis was Germany's (and the world's) first flight attendant, in 1912.

## **Chief Purser**

The Chief Purser (CP), also titled as Inflight Service Manager (ISM), Flight Service Manager (FSM), Cabin Service Manager (CSM) or Cabin Service Director (CSD) is the senior flight attendant in the chain of command of flight attendants. While not necessarily the most senior crew members on a flight (in years of service to their respective carrier), Chief Pursers can have varying levels of "in-flight" or "on board" bidding seniority or tenure in relation to their flying partners. To reach this position, a crew member requires some minimum years of service as flight attendant. Further training is mandatory, and Chief Pursers typically earn a higher salary than flight attendants because of the added responsibility and managerial role.

## **Purser**

On modern airliners, the Cabin Manager (chief flight attendant) is often called the purser. The purser oversees the flight attendants by making sure airline passengers are safe and comfortable. A flight purser completes detailed reports and verifies all safety procedures are followed. The Purser is in-charge of the cabin crew, in a specific section of a larger aircraft, or the whole aircraft itself (if the purser is the highest ranking). On board a larger aircraft, Pursers assist the Chief Purser in managing the cabin. Pursers are flight attendants or a related job, typically with an airline for several years prior to application for, and further training to become a purser, and normally earn a higher salary than flight attendants because of the added responsibility and supervisory role.

## **Flight Engineer**

A flight engineer is a member of the flight crew in an aircraft who monitors and operates aircraft systems. Flight engineers work in multiple types of aircraft: fixed-wing (airplanes), rotary wing (helicopters), tilt rotor, and space flight. As airplanes became even larger requiring more engines and complex systems to operate, the workload on the two pilots became excessive during certain critical parts of the flight regime, notably takeoffs and landings. Piston engines on airplanes required a great deal of attention throughout the flight with their multitude of gauges and indicators. Inattention or a missed indication could result in engine or propeller failure, and quite possibly cause loss of the airplane if prompt corrective action was not taken.

In order to dedicate a person to monitoring the engines and other critical flight systems, the position of Flight Engineer (FE) was created. The Flight Engineer (FE) did not actually fly the airplane; instead, the Flight Engineer (FE) had his/her own specialized control panel allowing the FE to monitor and control the various aircraft systems. The Flight Engineer is therefore an integrated member of the flight deck crew who works in close coordination with the two pilots during all phases of flight. The Flight Engineer position was usually placed on the main flight deck just aft of the pilot and copilot. Earlier referred to as the flight mechanic on the four engine commercial seaplanes like the Sikorsky S-42, Martin M-130 and the Boeing 314, the Flight Engineer role was referred to as the Engineer (much like a ship's engineer) on the first very large flying boat, the Dornier Do-X where he/she operated a large and complex side facing engineering station similar to later large transport aircraft.

The first commercial land airplane to include a flight engineering station was the Boeing 307 but only ten were built before the onset of World War II; during the war the Avro Lancaster bomber and Handley Page Halifax required a Flight Engineer as these large bombers had only one pilot. The first military operation involving Flight Engineers was in February 1941 on a Short Stirling, and was the first four-engine bomber raid of the war by the RAF.

## **Loadmaster**

A loadmaster is an aircrew member on civilian aircraft or military transport aircraft. Loadmasters serve in the Air Force, Marines, Coast Guard and Navy of many nations or many civilian airliners. The loadmaster performs the calculations and plans cargo and passenger placement to keep the aircraft within permissible center of gravity limits throughout the flight. Loadmasters ensure cargo is placed on the aircraft in such a way as

to prevent overloading sensitive sections of the airframe and cargo floor. Considerations are also given to civilian and military regulations which may prohibit the placement of one type of cargo in proximity to another. Unusual cargo may require special equipment to be loaded safely aboard the aircraft, limiting where the other cargo may feasibly be placed.

Tactically, loadmasters may also directly affect combat readiness as they are also responsible for determining the load order of aircraft so that more tactically important material (e.g. ammunition) is off-loaded and therefore ready to deploy faster than other support items; this may be especially germane to forward operating bases. The loadmaster may physically load the aircraft, but primarily supervises loading crews and procedures. Once positioned aboard the aircraft, the loadmaster ensures that their charge is properly secured, as an unexpected shift of the load can produce serious handling problems for the aircraft. Chains, straps, and integrated cargo locks are among the most common tools used to secure the cargo. Because cargo may shift during abrupt maneuvers, the loadmaster must determine the appropriate type(s), quantity and placement of cargo restraint.

### **Pilot (Aircraft)**

A pilot or aviator is a person actively involved in flying an aircraft. Pilot is a somewhat more precise term, as the pilot by definition directly controls the aircraft whereas the slightly broader term aviator is a person who, though actively involved in flying the aircraft (whether plane, rotary-wing, powered or unpowered), does not necessarily directly control its path. People who fly aboard an aircraft, such as passengers and cabin crew, who are not involved in the aircraft's flight systems are not generally considered aviators, but crew such as navigators, and flight engineers are generally included.

The first recorded use of the term aviator (aviateur in French) was in 1887, as a variation of "aviation", from the Latin avis (meaning bird), coined in 1863 by G. de la Landelle in *Aviation Ou Navigation Aérienne* ("Aviation or Air Navigation"). The term aviatrix (aviatrice in French), now archaic, was formerly used for a female aviator. These terms were used more in the early days of aviation, before anyone had ever seen an airplane fly, and it was used to denote bravery and adventure.

### **Deadheading (Aviation)**

In aviation, deadheading is the practice of carrying members of an airline's flight staff free of charge when they are not working. This most often happens when airline crew are located in the wrong place and need to travel to take up their duties (positioning).



## Revenue Earnings

Aviation provides the only worldwide transportation system which makes it essential for global business and tourism. Aviation transported around 3.1 (est.) billion passengers in 2013. Aviation carries over 51.6 (est. 2013) million tonnes of freight annually and 35% of interregional exports of goods by value, 51% of international tourists travel by air. In a recent survey of over 2,200 business people, 52% said that restrictions on the numbers of flights they take would hurt their business. Aviation broadens people's leisure and cultural experiences via wide choice/affordable access to destinations across the globe. It improves living standards and alleviates poverty through tourism. Often serves as the only means of transportation to remote areas promoting social inclusion. Contributes to sustainable development by:

Facilitating tourism and trade

Generating economic growth

Creating jobs

Increasing tax revenues

Facilitates the delivery of emergency and humanitarian aid relief

Swift delivery of medical supplies, organs for transplantation

## Revenue Management

Airlines apply *advanced revenue management* (RM) techniques to maximize the revenue of their flights in different markets. *RM is defined as selling the right seat to the right customer at the right price and at the right time.* The idea behind RM is that travelers have different characteristics and primarily have different requirements for their travel. Basically, travelers can be classified as ***business travelers and leisure travelers.***

Business travelers are *traveling for a work-related trip or a business meeting.* This group of travelers is typically *less sensitive to the price of the ticket,* because, in most cases, *they are reimbursed for the cost of their travel by their employers.* Business travelers have rigid travel plans that are typically constrained by predefined dates and times that usually span week days. They also tend to spend shorter periods of time at their destinations. They do not book their tickets far in advance and prefer flexible tickets that can be changed or canceled to match any possible changes in their travel plans.

Leisure travelers, as the name implies, *travel for recreational purposes or to visit family or friends.* These *travelers are sensitive to ticket prices.* They also have flexible travel



plans and tend to spend longer periods of time, including weekends, at their destinations. Given that business travelers are more profitable to the airlines, the objective of RM is to ensure that enough seats are always available for these travelers; while there remaining seats on each flight are filled with low-revenue leisure passengers. The RM process involves three main modules, including pricing, demand forecasting, and seat inventory control. The main objective of pricing is to determine the right price for each market, taking into consideration competition from other carriers in the market. Demand forecasting means predicting the number of travelers by type in each market. Finally, the objective of seat inventory control is to assign seats on each flight to the different demand streams to maximize total revenue. The RM process is implemented for each future flight. The decisions of the RM process are updated on a daily basis until the day of the flight departure.

### **Sales and Distribution**

Airlines expend considerable effort on sales and distribution initiatives that improve their market share and enhance profitability. These initiatives include, for example, relations with travel agents, global distribution systems, online ticket distribution channels, travelers' mileage plans, sales agreements with major businesses and promotions, and alliances and code sharing. Each of these initiatives needs proper evaluation in order to understand its impact on the airline profitability.

### **Irregular Operations Management**

It is almost rare that an airline schedule is implemented as planned. Airline schedules are usually subject to disruptions due to adverse weather conditions, aircraft breakdowns, crew delays, and security breaches. When the airline schedule is disrupted, it is important for the airline to alleviate the impact of this disruption and recover the schedule in order to return to normal operations. When recovering the schedule, several objectives are considered by the airline.

For example, the airline must minimize the deviation from the planned schedule by minimizing flight delays, cancellations, and crew swapping. In addition, it must not only adhere to the maintenance requirements of different aircraft at the right time, but also follow the regulations that govern the work rules of the crew on different flights. Furthermore, the airline must comply with air traffic control regulations and programs that manage traffic in the airspace and at airports. Last but not least, it must minimize the total cost of recovery by avoiding expensive decisions such as flight cancellation, calling additional crew, and passenger rebooking on other airlines.

## Revenue Integrity

Leading airlines are discovering that applying Revenue Integrity principles to stem revenue leakage can yield more revenue improvements and cost reductions than any other changes to their business. Conventional Revenue Integrity (“Booking Integrity”) looks at booking problems and solves these, mainly focusing on cost savings. Total Revenue Integrity does this too. Airlines are estimating that at least 4-6% of their revenue is leaking out of the company.

Revenue Integrity improves process management by creating a system for monitoring processes in bookings, reservations, and departure control systems.

Revenue Integrity benefits customer relationship management and empowers you to monitor trends and reservations of your most valuable customers. This information can be used to further tailor benefits to them.

Revenue Integrity can provide you with business intelligence on passenger trends, booking and reservation statistics and other vital information for future planning.

Stopping revenue leakage has a direct impact on the bottom line and is therefore one of the most compelling profit improvement opportunities for airlines. Airlines are now looking at revenue leakage recovery as an opportunity every bit as attractive in financial terms as entering a new market, restructuring an operation or acquiring assets.

These are some of the factors they deem most crucial to their solutions.

1. **Empowerment:** Revenue Integrity empowers airline staff to make the differences that will raise revenues and the flexibility to tailor individual enquiries and processes.
2. **Better Customer Service:** Revenue Integrity solutions can provide airlines with crucial information on their most valuable passengers, so they can improve frequent flyer programs and increase customer loyalty.
3. **Mutual Success:** The benefits foster a mutual success between airlines, their customers, and their partners.
4. **Wider Scope:** New applications mean that Revenue Integrity can apply to so much more than booking problems – including e-ticketing.
5. **Holistic Approach:** In order to maximize results, Revenue Integrity must become a companywide change. It affects all major processes and practices – from distribution to delivery and from the agent to the CEO.

6. Business Intelligence: The extra information gathered by Revenue Integrity solutions help to increase customer satisfaction and loyalty, as well as facilitating better business planning.

### **Aircraft Turn Around**

Aircraft Turn around process *consist of continuous ground operations required to service the Aircraft from the time chocks* (rubber blocks to prevent Aircraft from moving) are put in front of the wheels after it lands, to the time the chocks are removed and the Aircraft is ready to leave. There are number of tasks carried out during an Aircraft turn round such as loading, and unloading passenger baggage, safety & security checks, catering replenishment, and the completion of essential post and pre-flight administration.

In aviation, aircraft ground handling defines the servicing of an aircraft while it is on the ground and (usually) parked at a terminal gate of an airport. Many airlines subcontract ground handling to airports, handling agents or even to another airline. According to the International Air Transport Association (IATA), conservative estimates indicate airlines outsource more than 50 per cent of the ground handling that takes place at the world's airports. Ground handling addresses the many service requirements of an airliner between the time it arrives at a terminal gate and the time it departs on its next flight.

Speed, efficiency, and accuracy are important in ground handling services in order to minimize the turnaround time (the time during which the aircraft must remain parked at the gate). Airlines with less-frequent service or fewer resources at a particular location sometimes subcontract ground handling or on-call aircraft maintenance to another airline, as it is a short-term cheaper alternative to setting up its own ground handling or maintenance capabilities.

### **Cabin Service**

These services ensure passenger comfort. The cabin cleaning is the main job in the cabin service. They include such tasks as cleaning the passenger cabin and replenishment of on-board consumables or washable items such as soap, pillows, tissues and blankets.

### **Catering**

Catering includes the unloading of unused food and drinks from the aircraft, and the loading of fresh food and drink for passengers and crew. Airline meals are typically delivered in trolleys. Empty or trash-filled trolleys from the previous flight are replaced

with fresh ones. Meals are prepared mostly on the ground in order to minimize the amount of preparation (apart from chilling or reheating) required in the air. While some airlines provide their own catering, others have either owned catering companies in the past and divested themselves of the companies, or have outsourced their catering to third-party companies.

### **Ramp Service**

This includes services on the ramp or apron, such as:

Guiding the aircraft into and out of the parking position (by way of aircraft marshalling),

Towing with pushback tractors

Lavatory drainage

Water cartage (to refill fresh water tanks)

Air conditioning (more common for smaller aircraft)

Airstart units (for starting engines)

Luggage handling, usually by means of belt loaders and baggage carts

Gate checked luggage, often handled on the tarmac as passengers disembark

Air cargo handling, usually by means of cargo dollies, and cargo loaders

Catering trucks

Refueling, which may be done with a refueling tanker truck or refueling pumper

Ground power (so that engines need not be running to provide aircraft power on the ground)

Passenger stairs (used instead of an aerobridge or air stairs, some budget airlines use both to improve turnaround speed)

Wheelchair lifts, if required

Hydraulic mules (units that provide hydraulic power to an aircraft externally)

Passenger service

This includes services inside the airport terminal such as:

Providing check-in counter services for the passengers departing on the customer airlines.

Providing gate arrival and departure services. The agents are required to meet a flight on arrival as well as provide departure services including boarding passengers and closing the flight.

Staffing the transfer counters, customer service counters and airline lounges.

### **Air Traffic Control**

Air traffic control (ATC) is a service provided by ground-based controllers who direct aircraft on the ground and through controlled airspace, and can provide advisory services to aircraft in non-controlled airspace. The primary purpose of ATC worldwide is to prevent collisions, organize and expedite the flow of traffic, and provide information and other support for pilots. In some countries, ATC plays a security or defensive role, or is operated by the military. To prevent collisions, ATC enforces traffic separation rules, which ensure each aircraft maintains a minimum amount of empty space around it at all times.

Many aircraft also have collision avoidance systems, which provide additional safety by warning pilots when other aircraft get too close. In many countries, ATC provides services to all private, military, and commercial aircraft operating within its airspace. Depending on the type of flight and the class of airspace, ATC may issue instructions that pilots are required to obey, or advisories (known as flight information in some countries) that pilots may, at their discretion, disregard. Generally the pilot in command is the final authority for the safe operation of the aircraft and may, in an emergency, deviate from ATC instructions to the extent required to maintain safe operation of their aircraft.

### **Airport Control**

The primary method of controlling the immediate airport environment is visual observation from the aerodrome control tower (TWR). The tower is a tall, windowed structure located on the airport grounds. Aerodrome or Tower controllers are responsible for the separation and efficient movement of aircraft and vehicles operating on the taxiways and runways of the airport itself, and aircraft in the air near the airport, generally 5 to 10 nautical miles (9 to 18 km) depending on the airport procedures. Surveillance displays are also available to controllers at larger airports to assist with controlling air traffic.

Controllers may use a radar system called Secondary Surveillance Radar for airborne traffic approaching and departing. These displays include a map of the area, the position of various aircraft, and data tags that include aircraft identification, speed, altitude, and other information described in local procedures. In adverse weather conditions the tower

controllers may also use Surface Movement Radar (SMR), Surface Movement Guidance and Control Systems (SMGCS) or Advanced SMGCS to control traffic on the maneuvering area (taxiways and runway).

### **Ground Control**

Ground Control (sometimes known as Ground Movement Control) is responsible for the airport “movement” areas, as well as areas not released to the airlines or other users. This generally includes all taxiways, inactive runways, holding areas, and some transitional aprons or intersections where aircraft arrive, having vacated the runway or departure gate. Exact areas and control responsibilities are clearly defined in local documents and agreements at each airport. Any aircraft, vehicle, or person walking or working in these areas is required to have clearance from Ground Control. This is normally done via VHF/UHF radio, but there may be special cases where other procedures are used.

Aircraft or vehicles without radios must respond to ATC instructions via aviation light signals or else be led by vehicles with radios. People working on the airport surface normally have a communications link through which they can communicate with Ground Control, commonly either by handheld radio or even cell phone. Ground Control is vital to the smooth operation of the airport, because this position impacts the sequencing of departure aircraft, affecting the safety and efficiency of the airport’s operation.

### **Local Control or Air Control**

Local Control (known to pilots as “Tower” or “Tower Control”) is responsible for the active runway surfaces. Local Control clears aircraft for takeoff or landing, ensuring that prescribed runway separation will exist at all times. If Local Control detects any unsafe condition, a landing aircraft may be told to “go-around” and be re-sequenced into the landing pattern by the approach or terminal area controller. Within the TWR, a highly disciplined communications process between Local Control and Ground Control is an absolute necessity.

Ground Control must request and gain approval from Local Control to cross any active runway with any aircraft or vehicle. Likewise, Local Control must ensure that Ground Control is aware of any operations that will impact the taxiways, and work with the approach radar controllers to create “holes” or “gaps” in the arrival traffic to allow taxiing traffic to cross runways and to allow departing aircraft to take off. Crew Resource Management (CRM) procedures are often used to ensure this communication process is efficient and clear, although this is not as prevalent as CRM for pilots.

## **Flight Data / Clearance Delivery**

Clearance Delivery is the position that issues route clearances to aircraft, typically before they commence taxiing. These contain details of the route that the aircraft is expected to fly after departure. Clearance Delivery or, at busy airports, the Traffic Management Coordinator (TMC) will, if necessary, coordinate with the en route center and national command center or flow control to obtain releases for aircraft. Often, however, such releases are given automatically or are controlled by local agreements allowing “free-flow” departures.

When weather or extremely high demand for a certain airport or airspace becomes a factor, there may be ground “stops” (or “slot delays”) or re-routes may be necessary to ensure the system does not get overloaded. The primary responsibility of Clearance Delivery is to ensure that the aircraft have the proper route and slot time. This information is also coordinated with the en route center and Ground Control in order to ensure that the aircraft reaches the runway in time to meet the slot time provided by the command center. At some airports, Clearance Delivery also plans aircraft push-backs and engine starts, in which case it is known as the Ground Movement Planner (GMP): this position is particularly important at heavily congested airports to prevent taxiway and apron gridlock.

## **Approach and Terminal Control**

Many airports have a radar control facility that is associated with the airport. In most countries, this is referred to as Terminal Control; in the U.S., it is referred to as a TRACON (Terminal Radar Approach Control). While every airport varies, terminal controllers usually handle traffic in a 30-to-50-nautical-mile (56 to 93 km) radius from the airport. Where there are many busy airports close together, one consolidated Terminal Control Center may service all the airports. The airspace boundaries and altitudes assigned to a Terminal Control Center, which vary widely from airport to airport, are based on factors such as traffic flows, neighboring airports and terrain.

A large and complex example is the London Terminal Control Centre which controls traffic for five main London airports up to 20,000 feet (6,100 m) and out to 100 nautical miles (190 km). Terminal controllers are responsible for providing all ATC services within their airspace. Traffic flow is broadly divided into departures, arrivals, and over flights. As aircraft move in and out of the terminal airspace, they are handed off to the next appropriate control facility (a control tower, an en-route control facility, or a bordering terminal or approach control).



Terminal control is responsible for ensuring that aircraft are at an appropriate altitude when they are handed off, and that aircraft arrive at a suitable rate for landing. Not all airports have a radar approach or terminal control available. In this case, the en-route center or a neighboring terminal or approach control may co-ordinate directly with the tower on the airport and vector inbound aircraft to a position from where they can land visually.

### **En-Route, Center, or Area Control**

ATC provides services to aircraft in flight between airports as well. Pilots fly under one of two sets of rules for separation: Visual Flight Rules (VFR) or Instrument Flight Rules (IFR). Air traffic controllers have different responsibilities to aircraft operating under the different sets of rules. While IFR flights are under positive control, in the US VFR pilots can request flight following, which provides traffic advisory services on a time permitting basis and may also provide assistance in avoiding areas of weather and flight restrictions.

Across Europe, pilots may request for a “Flight Information Service”, which is similar to flight following. In the UK it is known as a “Traffic Service”. En-route air traffic controllers issue clearances and instructions for airborne aircraft, and pilots are required to comply with these instructions. En-route controllers also provide air traffic control services to many smaller airports around the country, including clearance off of the ground and clearance for approach to an airport.

### **Airport Operation**

Each time a pilot operates an airplane; the flight normally begins and ends at an airport. An airport maybe a small sod field or a large complex utilized by air carriers. This chapter discusses airport operations and identifies features of an airport complex, as well as provides information on operating on or in the vicinity of an airport. There are two types of airports.

Controlled Airport

Uncontrolled Airport

### **Controlled Airport**

A controlled airport has an operating control tower. *Air traffic control* (ATC) is responsible for providing for the safe, orderly, and expeditious flow of air traffic at airports where the type of operations and/or volume of traffic require such a service. Pilots operating



from a controlled airport are required to maintain two-way radio communication with air traffic controllers, and to acknowledge and comply with their instructions.

### **Uncontrolled Airport**

An uncontrolled airport does not have an operating control tower. Two-way radio communications are not required, although it is a good operating practice for pilots to transmit their intentions on the specified frequency for the benefit of other traffic in the area.

### **Airport Data Source**

When a pilot flies into a different airport, it is important to review the current data for that airport. This data can provide the pilot with information, such as communication frequencies, services available, closed runways, or airport construction. Three common sources of information are:

*Aeronautical Charts* - Aeronautical charts provide specific information on airports.

*Airport/Facility Directory (A/FD)* - The Airport/Facility Directory (A/FD) provides the most comprehensive information on a given airport. It contains information on airports, heliports, and seaplane bases that are open to the public. The A/FDs are contained in seven books, which are organized by regions. ***These A/FDs are revised every 8 weeks.***

*Notices to Airmen (NOTAMs)* - Notices to Airmen (NOTAMs) provide the most current information available. They provide time-critical information on airports and changes that affect the national airspace system and are of concern to instrument flight rule (IFR) operations. NOTAM information is classified into three categories. These are NOTAM-D or distant, NOTAM-L or local, and flight data center (FDC) NOTAMs. NOTAM-Ds are attached to hourly weather reports and are available at flight service stations.

### **Airport Markings and Signs**

There are markings and signs used at airports, which provide directions and assist pilots in airport operations. Some of the most common markings and signs will be discussed. Additional information may be found in the Aeronautical Information Manual.

## Runway Markings

Runway markings vary depending on the type of operations conducted at the airport. A basic VFR runway may only have centerline markings and runway numbers. Since aircraft are affected by the wind during takeoffs and landings, runways are laid out according to the local prevailing winds. Runway numbers are in reference to magnetic north. Certain airports have two or even three runways laid out in the same direction.

These are referred to as parallel runways and are distinguished by a letter being added to the runway number. Examples are runway 36L (left), 36C (center), and 36R (right).

## Taxiway Markings

Airplanes use taxiways to transition from parking areas to the runway. Taxiways are identified by a continuous yellow centerline stripe. A taxiway may include edge markings to define the edge of the taxiway. This is usually done when the taxiway edge does not correspond with the edge of the pavement. If an edge marking is a continuous line, the paved shoulder is not intended to be used by an airplane. If it is a dashed marking, an airplane may use that portion of the pavement. Where a taxiway approaches a runway, there may be a holding position marker. These consist of four yellow lines (two solid and two dashed). The solid lines are where the airplane is to hold. At some controlled airports, holding position markings may be found on a runway. They are used when there are intersecting runways, and air traffic control issues instructions such as “*cleared to land—hold short of runway 30.*”

## Other Markings

Some of the other markings found on the airport include vehicle roadway markings, VOR receiver checkpoint markings, and non-movement area boundary markings. Vehicle roadway markings are used when necessary to define a pathway for vehicle crossing areas that are also intended for aircraft. These markings usually consist of a solid white line to delineate each edge of the roadway and a dashed line to separate lanes within the edges of the roadway.

## Runway Lighting

There are various lights that identify parts of the runway complex. These assist a pilot in safely making a takeoff or landing during night operations. Runway End Identifier Lights (REIL) is installed at many airfields to provide rapid and positive identification of the

approach end of a particular runway. The system consists of a pair of synchronized flashing lights located laterally on each side of the runway threshold. Runway edge lights are used to outline the edges of runways at night or during low visibility conditions. These lights are classified according to the intensity they are capable of producing. They are classified as High Intensity Runway Lights (HIRL), Medium Intensity Runway Lights (MIRL), or Low Intensity Runway Lights (LIRL). Omni-directional taxiway lights outline the edges of the taxiway and are blue in color. At many airports, the sedge lights may have variable intensity settings that may be adjusted by an air traffic controller when deemed necessary or when requested by the pilot. Some airports also have taxiway centerline lights that are green in color.

## Study of Air-Craft Parts

### The Fuselage Structure

The word fuselage is based on the French word fuseler, which means “*to streamline.*” The fuselage must be strong and streamlined since it must withstand the forces that are created in flight. It houses the flight crew, passengers, and cargo. Fuselages are classified according to the arrangement of their force-resisting structure. The types of fuselages we will study are the truss and the semi-mono-coque. Five types of stress act on an aircraft in flight: tension, compression, bending, shear, and torsion. Let’s look at each one individually:

#### Tension

Tension is the stress which tends to pull things apart. When you try to break a length of rope, you exert a type of stress which is called tension.

#### Compression

Compression is the opposite of tension. It is the stress which tends to push materials together. When you grasp a football at both ends and push, the ball is subject to compression. The landing gear struts of an aircraft are also subject to compression.

#### Bending

This type of stress combines tension and compression. You put a bending stress on a bar when you grasp it with both hands and push the ends together or when you bend a paper clip. The wing spars (interior structural members) are subjected to bending while the aircraft is in flight. The lower side of the spar is subjected to tension, while the upper side is

subjected to compression. Obviously, some materials will break before they bend and often are unacceptable for aircraft construction.

## Shear

Shear stress is caused by forces tending to slip or slide one part of a material in respect to another part. This is the stress that is placed on a piece of wood clamped in a vise and you chip away at it with a hammer and chisel. This type of stress is also exerted when two pieces of metal, bolted together, are pulled apart by sliding one over the other or when you sharpen a pencil with a knife. The rivets in an aircraft are intended to carry only shear. Bolts, as a rule, carry only shear, but sometimes they carry both shear and tension.

## Torsion

Torsion is the stress which tends to distort by twisting. You produce a torsional force when you tighten a nut on a bolt. The aircraft engine exerts a torsional force on the crankshaft or turbine axis. All the members (or major portions) of an aircraft are subjected to one or more of these stresses. Sometimes a member has alternate stresses, such as compression one instant and tension the next. Some members can carry only one type of stress. Wire and cables, for example, normally carry only tension. Since any member is stronger in compression or tension than in bending, members carry end loads better than side loads. In order to do this, designers arrange the members in the form of a truss, or rigid framework (see figure). In order for a truss to be rigid, it must be composed entirely of triangles. When the load on a truss acts in one direction, every alternate member carries tension while the other members carry compression. When the load is reversed, the members which were carrying compression now are subjected to tension and those which were carrying tension are under compression.

The truss itself consists of a welded tubular steel structure with longerons (horizontal members) and diagonal braces. These features make it rigid, strong, and light. The truss is covered with a metal or fabric cover so that less drag will be generated. To produce a smooth surface, the fabric cover is put on fairing strips, which are thin flat strips of wood or metal. These fairing strips run the length of the fuselage in line with the direction of flight.

## Wings

Wing construction is basically the same in all types of aircraft. Most modern aircraft have all metal wings, but many older aircraft had wood and fabric wings. Ailerons and flaps will be studied later in this chapter. To maintain its all-important aerodynamic shape, a

wing must be designed and built to hold its shape even under extreme stress. Basically, the wing is a framework composed chiefly of spars, ribs, and (possibly) stringers. Spars are the main members of the wing. They extend lengthwise of the wing (crosswise of the fuselage).

The entire load carried by the wing is ultimately taken by the spars. In flight, the force of the air acts against the skin. From the skin, this force is transmitted to the ribs and then to the spars. Most wing structures have two spars, the front spar and the rear spar. The front spar is found near the leading edge while the rear spar is about two-thirds the distance to the trailing edge. Depending on the design of the flight loads, some of the all-metal wings have as many as five spars. In addition to the main spars, there is a short structural member which is called an aileron spar. The ribs are the parts of a wing which support the covering and provide the airfoil shape. These ribs are called forming ribs and their primary purpose is to provide shape.

Some may have an additional purpose of bearing flight stress, and these are called compression ribs. The most simple wing structures will be found on light civilian aircraft. High-stress types of military aircraft will have the most complex and strongest wing structure. Three systems are used to determine how wings are attached to the aircraft fuselage depending on the strength of a wing's internal structure. The strongest wing structure is the full cantilever which is attached directly to the fuselage and does not have any type of external, stress-bearing structures. The semi cantilever usually has one, or perhaps two, supporting wires or struts attached to each wing and the fuselage. The externally braced wing is typical of the biplane (two wings placed one above the other) with its struts and flying and landing wires.

## **Empennage**

The empennage, commonly *called the tail assembly*, is the rear section of the body of the airplane. Its main purpose is to give stability to the aircraft. The fixed parts are the horizontal stabilizer and the vertical stabilizer or fin. The front, fixed section is called the horizontal stabilizer and is used to prevent the airplane from pitching up or down. The rear section is called the elevator and is usually hinged to the horizontal stabilizer. The elevator is a movable airfoil that controls the up-and-down motion of the aircraft's nose. The vertical tail structure is divided into the vertical stabilizer and the rudder. The front section is called the vertical stabilizer and is used to prevent the aircraft from yawing back and forth. The principle behind its operation is much like the principle of a deep keel on a sailboat. In light, single-engine aircraft, it also serves to offset the tendency of the aircraft to roll in the opposite direction in which the propeller is rotating. The rear section of the vertical structure is the rudder. It is a movable airfoil that is used to turn the aircraft.

## Landing Gear

Airplanes require landing gear for taxiing, takeoff, and landing. The earliest airplane of all—the Wright Flyer—used skids as its landing gear. Soon, wheels were attached to the skids. Since that time, various arrangements have been used for wheels and structures to connect them to the airplane. Today, there are three common types of landing gear: conventional, tricycle, and tandem. Conventional landing gear consists of two wheels forward of the aircraft's center of gravity and a third small wheel at the tail.

This type of landing gear is most often seen in older general aviation airplanes. The two main wheels are fastened to the fuselage by struts. Without a wheel at the nose of the plane, it easily pitches over if brakes are applied too soon. Because the tail wheel is castored—free to move in any direction—the plane is very difficult to control when landing or taking off. The tricycle landing gear, as you can guess from its name, has three wheels—two main wheels and a nose wheel. This type of landing gear makes the aircraft easier to handle on the ground and it also makes landings much safer. An aircraft equipped with tricycle landing gear is less apt to pitch forward.

The tandem landing gear is used for very large aircraft like the B-52 bomber and the U-2 reconnaissance/research aircraft. The main landing gear is in two sets that are located one behind the other on the fuselage. The tandem landing gear allows the use of a highly flexible wing, but it may also require the use of small wheels on the tips of the wings to keep the wings from scraping the ground.

## Power Plant

The power plant may be an engine and propeller combination or a jet engine. The most commonly used power plant in personal aircraft is the gasoline engine, which will be studied in detail later in this chapter. It is mounted in position against a fire wall in the front section of the airplane. The fire wall provides separation of the power plant from the remainder of the fuselage. The engine cowling is the metal covering which encases the engine and its accessories, streamlining the plane and conducting air around the engine cylinders for cooling. Because the action of the pistons is an up-and-down movement, this engine is called a reciprocating engine or a piston engine. In multiengine aircraft, the engines are usually mounted on the leading edges of the wings. The jet engine gives the airplane a thrust (push forward) because of the jet exhaust gas coming out of the back of the engine. The moving part of this engine is a turbine. Jet engines may be mounted inside the fuselage as in most military fighters or on the outside of the fuselage or on the wings as seen on most commercial airlines.

## **Turbojet Engines**

The turbojet uses a series of fan-like compressor blades to bring air into the engine and compress it. An entire section of the turbojet engine performs this function, which can be compared to the compression stroke of the reciprocating engine. In this section, there is a series of rotor and stator blades. Rotor blades perform somewhat like propellers in that they gather and push air backward into the engine. The stator blades serve to straighten the flow of this air as it passes from one set of rotor blades to the next.

As the air continues to be forced further into the engine, it travels from the low-compression set of rotors and stators to the high-compression set. This last set puts what we might say is the final squeeze on the air. The combustion chamber receives the high-pressure air, mixes fuel with it, and burns the mixture.

The hot, very high-velocity gases produced strike the blades of the turbine and cause it to spin rapidly. The turbine is mounted on a shaft which is connected to the compressor. Thus, the spinning is what causes the compressor sections to function. After passing the turbine blades, the hot, highly accelerated gases go into the engine's exhaust section. The exhaust section of the jet engine is designed to give additional acceleration to the gases and thereby increase thrust. The exhaust section also serves to straighten the flow of the gases as they come from the turbine.

Basically, the exhaust section is a cone mounted in the exhaust duct. This duct is also referred to as the tailpipe. The shape of the tailpipe varies, depending on the design operating temperatures and the speed-performance range of the engine. With all the heat produced in the turbojet engine, you probably wonder how it is kept from overheating. Like most aircraft reciprocating engines, the jet is also air-cooled. Of all the air coming into the compressor section, only about 25 percent is used to produce thrust; the remaining 75 percent passes around the combustion chamber and turbine area to serve as a coolant.

## **Turbofan Engines**

The turbofan engine has gained popularity for a variety of reasons. It has one or more rows of compressor blades extend beyond the normal compressor blades. The result is that four times as much air is pulled into the turbofan engine as in the simple turbojet. However, most of this excess air is ducted through bypasses around the power section and out the rear with the exhaust gases. Also, a fan burner permits the burning of additional fuel in the fan airstream. With the burner off, this engine can operate economically and efficiently at low altitudes and low speeds. With the burner on, the thrust is doubled by



the burning fuel, and it can operate on high speeds and high altitudes fairly efficiently. The turbofan has greater thrust for takeoff, climbing, and cruising on the same amount of fuel than the conventional turbojet engine.

### **Turboprop Engines**

The turboprop engine is an effort to combine the best features of turbojet and propeller aircraft. The first is more efficient at high speeds and high altitudes; the latter is more efficient at speeds under 400 mph and below 30,000 feet. The turboprop uses a gas turbine to turn a propeller.

Its turbine uses almost all the engine's energy to turn its compressor and propeller, and it depends on the propeller for thrust, rather than on the high-velocity gases going out of the exhaust. Strictly speaking, it is not a jet. The gas turbine can turn a propeller with twice the power of a reciprocating engine. Reduction gears slow the propeller below the turbine's rpm, and this must be done because of the limitations of propellers.

That is, no propeller is capable of withstanding the forces generated when it is turned at the same rate as that of the gas turbine. Even so, the turboprop engine receives fairly extensive use in military and civilian aviation circles. In summary, aircraft turbine engines may be classified as turbojet, turbofan, or turboprop. As a group, the turbine engines have many advantages over reciprocating engines, the most obvious being the capability of higher-altitude and higher-speed performance.

Vibration stress is relieved as a result of rotating rather than reciprocating parts. Control is simpler because one lever controls both speed and power. With the large airflow, cooling is less complicated. Spark plugs are used only for starting, and the continuous ignition system of reciprocating engines is not needed. A carburetor and mixture control are not needed. The major disadvantages have been the high fuel consumption and poor performance at low power setting, low speeds, and low altitudes. Turboprop and turbofan developments have greatly improved aircraft turbine engines in these areas.

### **Ramjet Engines**

The ramjet engine is the simplest type of the all-jet engines because it has no moving parts. Note that it may have an internal body that serves to compress the air as it enters the intake. The spray bar injects a mist of fuel into the airstream and the mixture is ignited by a spark. The grill-type flame holder provides a type of barrier to the burning mixture while allowing hot, expanding gases to escape through the exhaust nozzle. The high-pressure air

coming into the combustion chamber keeps the burning mixture from effectively reacting toward the intake end of the engine. Ramjets will not function until enough air is coming through the intake to create a high-pressure flow.

Otherwise, the expanding gases of the burning fuel-air mixture would be expelled from both ends of the engine. As you can see, this would amount to a single explosive reaction. Therefore, the ramjet has to be traveling through the air very fast before it is started. This means that it has to be boosted to the proper speed by some other type of engine. In theory, the ramjet engine has no maximum speed; it can keep accelerating indefinitely as long as it stays within the atmosphere. In practice, the ramjet is limited, at this time, to low hypersonic speeds (five times the speed of sound) because atmospheric friction will melt it. The biggest drawback of the ramjet is its high rate of fuel consumption.

## **Airport Mangement**

Air transport drives economic and social progress. It connects people, countries and cultures. It provides access to global markets. It generates trade and tourism. It forges links between developed and developing nations. The air transport industry supports 56.6 million jobs globally. It directly creates 8.4 million jobs worldwide. Airlines, airports and air navigation service providers employ 7.6 million people. The civil aerospace sector employs 800,000 people, 9.3 million indirect jobs are created via purchases of goods and services from companies in the air transport supply chain, 4.4 million Jobs are induced through spending by industry employees 34.5 million Direct and indirect jobs are created through air transport's catalytic impact on tourism.

## **Airport**

Airports being nuclei of economic activity assume a significant role in the national economy. The quality of airport infrastructure, which is a vital component of the overall transportation network, contributes directly to a country's international competitiveness and the flow of foreign investment. While cargo carried by air in India weighs less than 1% of the total cargo exported, it accounts for 35% of the total value of exports. Better cargo handling facilities lead to enhanced levels of importation, especially of capital goods and high-value items. Likewise, 97% of the country's foreign tourists arrive by air and tourism is the nation's second largest foreign exchange earner. India has 115 airports in the country, which includes 23 civil enclaves, managed by Airports Authority of India (AAI). There are seventeen international airports in India as on date.

1. Airports also represent a country's window on the world. Passengers form their first impressions about a nation from the state of its airports. They can be effectively used as symbols of national pride, if we pay sufficient attention to their quality and maintenance.
2. In many remote, hilly and inaccessible areas of the country, air transport is the quickest and sometimes the only mode of travel available. This is especially true of sensitive regions on the borders with our neighbours in the west, north and north-east.
3. Airports need to be integrated with other modes of transport like Railways and Highways, enabling seamless transportation to all parts of the country.

### **AAI Managed Airports**

Netaji Subhash Chandra Bose International Airport, Kolkata

Chennai International Airport, Chennai

Thiruvananthapuram International Airport

Sardar Vallabh Bhai Patel International Airport, Ahmedabad

Guru Ram Dass Jee International Airport, Amritsar

Lokpriya Gopinath Bordoloi International Airport, Guwahati

Goa International Airport (Civil Enclave)

Srinagar International Airport, Srinagar (Civil Enclave)

Jaipur International Airport

Kozhikode Airport, Calicut

Veer Savarkar International Airport (Civil Enclave), Port Blair, A&N Islands

### **Privately Managed Airports**

Indira Gandhi International Airport, Delhi

Chhatrapati Shivaji International Airport, Mumbai

GMR Hyderabad International Airport, Hyderabad

Bangalore International Airport Limited, Bengaluru

Cochin International Airport, Kochi (Private)

Bharat Ratna Babasaheb

Dr. B.R. Ambedkar International Airport, Nagpur (Maharashtra)

Government of India has been encouraging participation of State Governments in development of airport infrastructures. The New Bangalore Airport, New Hyderabad Airport and Cochin International Airport (CIAL) are examples of participation of State Govt. through joint venture. In the Domestic airport, State Governments normally hand over the required land for development of airport free of cost and free from all encumbrances as a token of State government participation. The examples are Vizag, Khajuraho, Amritsar, Pathankot, Dehradun, Lucknow, Varanasi airports where respective State Govts., have given land free of cost. All operational airports managed by AAI have been provided with Aeronautical Ground Lights except Umroi (Barapani) in Meghalaya.

However, only Instrument Flight Rules airports (Airports equipped with all weather day and night operational capability) can be permitted to be used for night operations. A new Greenfield airport is under construction at Pakyong in Sikkim. *National Institute of Aviation Management and Research, also known by its acronym as NIAMAR, established in the year 1986*, is a premier training institute in the field of Aviation Management. It imparts training in all disciplines of airport management i.e. airport operations, airport engineering construction, maintenance and project management, airport finance, human resource management, airport commercial and Land Management, Aviation law, cargo management.

### Classification of Air Ports

Airports are presently classified in the following manner:

- 1. International Airports:** These are declared as international airports and are available for scheduled international operations by Indian and foreign carriers. Presently, Mumbai, Delhi, Chennai, Calcutta and Thiruvananthapuram are in this category.
- 2. Custom Airports:** These have custom and immigration facilities for limited international operations by national carriers and for foreign tourist and cargo charter flights. These include Bangalore, Hyderabad, Ahmedabad, Calicut, Goa, Varanasi, Patna, Agra, Jaipur, Amritsar and Tiruchirappali.
- 3. Model Airports:** These are domestic airports which have minimum runway length of 7500 feet and adequate terminal capacity to handle Airbus 320 type of aircraft. These can cater to limited international traffic, if required. These include Lucknow, Bhubaneswar, Guwahati, Nagpur, Vadodara, Coimbatore, Imphal and Indore.
- 4. Other Domestic Airports:** All other airports are covered in this category.
- 5. Civil Enclaves in Defence Airport:** There are 28 civil enclaves in Defence airfields.

To develop the capacity of airports in accordance with the future projections, it is proposed to reclassify the airports as follows:

#### **a. International Hubs**

This category will be that of 'International Hubs' which may cover airports currently classified at 'international airports' and those eminently qualified to be upgraded as such. These would at present cover Delhi, Mumbai, Chennai, Calcutta and Thiruvananthapuram. Airports at Bangalore, Hyderabad, Ahmedabad, Amritsar and Guwahati can be added to the list as and when the facilities are upgraded to the desired level. International hubs would be used for dispersal of international traffic to the hinterland. In these airports, the facilities shall be of world class standards, including convenient connections to international and domestic passengers, airport-related infrastructure like hotels, shopping areas, conferencing and entertainment facilities, aircraft-maintenance bases, etc.

#### **b. Regional Hubs**

Government is keen to encourage development of regional airlines based on small aircraft to provide air-linkages in the interior areas of the country. Regional hubs will have to act as operational bases for regional airlines and also have all the facilities currently postulated for model airports, including the capability to handle limited international traffic. The identification of Regional Hubs will be made on the basis of origin-destination surveys, traffic demand and the requirements of the airlines. State Govt. will be closely associated as co-promoters of regional airlines.

#### **c. Other Operational Airports**

These will be developed so as to be cost-effective on the basis of individual needs to meet the requirements of traffic handled by them. Airports serving State Capitals will be given priority.

#### **Greenfield Airports**

1. In view of the fact that there are already a sufficient number of airports, many of which are not viable, Greenfield airports will normally not be taken up either in the public or private sector without the prior approval of the Government. In the case of the Other Airport category run by private operators, the approval of the DGCA would suffice as at present.

2. A Greenfield airport may be permitted where an existing airport is unable to meet the projected requirements of traffic or a new focal point of traffic emerges with sufficient viability. It can be allowed both as a replacement for an existing airport or for simultaneous operation. This aspect will have to be clearly spelt out in the notice inviting tenders.
3. No Greenfield airport will normally be allowed within an aerial distance of 150 kilometers of an existing airport. Where it is allowed as a second airport in the same city or close vicinity, the parameters for distribution of traffic between the two airports will be clearly spelt out.
4. The Government may, while permitting a Greenfield airport, decide whether it will be in the public or private sectors or be taken up as a joint venture.
5. Where the Government decides to set up a Greenfield airport throughout the AAI on social considerations even though the same is not economically viable, suitable grant-in-aid will be provided to AAI to cover both the initial capital cost as well as the recurring losses.

### **AAI Airport Authority of India**

Airports Authority of India (AAI) was constituted by an Act of Parliament and came into being on 1st April 1995 by merging erstwhile National Airports Authority and International Airports Authority of India. The merger brought into existence a single Organization entrusted with the responsibility of creating, upgrading, maintaining and managing civil aviation infrastructure both on the ground and air space in the country. AAI manages 125 airports, which include 11 International Airport, 08 Customs Airports, 81 Domestic Airports and 27 Civil Enclaves at Defense airfields. AAI provides air navigation services over 2.8 million square nautical miles of air space. During the year 2008- 09, AAI handled aircraft movement of 1306532 Nos. [International 270345 & Domestic 1036187], Passengers handled 44262137 Nos. [International 1047614 & Domestic 33785990] and the cargo handled 499418 tons [International 318242 & Domestic 181176].

### **Airport Infrastructure**

1. In keeping with the ICAO standards and recommended practices and the requirements of upgrading airports to the level of international and regional hubs, detailed master plans for the development of all selected airports will be prepared or revised by the operating agency. Such master plans should be conceived of and executed by the best expert advice available and taking futuristic requirements into account.

2. Priority will be accorded to safety, passenger facilities, aircraft and cargo handling, while deciding the allotment of funds among different up gradation and modernisation schemes.
3. Air transport serves a time-sensitive market. The surface access to airports should, therefore, be efficient and city planners should keep the airport-linked requirements constantly in view while designing surface transport development plans.
4. The helicopter provides a direct and rapid means of transport over short-haul routes and is, therefore, particularly attractive for businessmen. There is also a great potential for helicopter operations in off-shore oil exploration and production, movement of food grains and essential commodities in remote, hilly and inaccessible areas, traffic management in metropolitan cities and so on.

### **Ground Facilities**

1. Speed is the essence of air transport. The AAI will set standards of performance in various areas of passenger and cargo handling, so that both ICAO standards as well as comparable standards at similar airports around the world, are achieved. For this purpose, procedures will be simplified, regulations which delay or restrict movement of traffic reviewed and efforts made to reduce ground delays to a minimum.
2. Dwell time of passengers and cargo will be drastically reduced, thus enhancing capacity at existing airports. The short-term objective will be to clear incoming international passengers within 45 minutes of arrival and clear departing passengers in 60 minutes including check-in-time. Similar targets of 30 and 45 minutes respectively, will be laid down for domestic flights.
3. Technological and other improvements will be made by introduction of automation and computerization, mobile check-in counters, improvement in emigration/immigration and security checks, mechanization of baggage and ground handling services, provision of aero-bridges, introduction of better systems of passenger transfer between terminals, improvement in cargo terminals, reduction in bunching of flights and contracting out of operating and maintenance facilities. New approaches in airport design will be required to accommodate technological innovations like the New Large Aircraft. Construction technology and architectural inputs will also need to be updated to standards applicable globally.
4. Efforts will be made to upgrade the facilities, manpower, equipment, etc., by concerned departments and institutions like customs, immigration, meteorology, oil



companies, etc., so that these keep pace with the upgradation of airports, enabling the users to experience the optimum benefits of airports as 'cohesive' transit points.

5. Apart from the AAI and the national carriers, private agencies will also be encouraged for providing ground handling services.

### **Cargo Handling**

1. Special attention needs to be given to the speedy handling of cargo and reducing its dwell time. The objective will be to reduce dwell time of exports from the present level of 4 days to 12 hours and of imports for the present level of 4 weeks to 24 hours to bring us in line with internationally achieved norms. Cargo clearance will be on 24-hour basis
2. Infrastructure relating to cargo handling like satellite freight cities with multi-modal transport, cargo terminals, cold storage, automatic storage and retrieval systems, mechanised transportation of cargo, computerization and automation, etc., will be set up on top priority basis. Such facilities have to come up at smaller places too.
3. The Electronic Data Interchange systems will be developed and linked amongst all stake-holders in the trade.

### **Commercial Activities**

1. Across the world, the trend is towards a very high percentage, ranging from 60 to 70%, of the total revenue of airport operators being generated from non-aeronautical sources at major airports. In India, although these services are even now provided by private agencies, the comparable figure for AAI at international airports is just 22%. There will be a major thrust towards increasing the share of commercial revenue emerging from non-aeronautical sources. This will help in optimal exploitation of the full commercial potential of airports and make many airports not only viable but capable of generating surpluses for further expansion and development.
2. In order to maximize the revenue while at the same time maintain transparency, there will be a master plan for development of commercial activities and facilities, as part of the overall master plan approved by the management, for the airport as a whole. The space-use patterns will normally not be deviated from.
3. In the allocation of space among concessionaires, there will be a strict adherence to stipulated procedures, while maintaining sufficient flexibility in order to ensure quality products and services and attract the holders of reputed brand-names. For

this purpose, innovative tendering procedures involving limited tenders, two-bid system, use of net present value of bids spread over several years, grant of management contracts, bunching of similar facilities etc. will be devised.

4. Except for user developmental fees, there will be total freedom for airport operators in the matter of raising revenue through non-aeronautical charges and there will not be any Government control over the same.

### **Environmental Issues**

1. The operation of airports has to be in full accord with the provisions relating to prevention of air, water and noise pollution. All effluents would require to be treated before these are allowed to leave the airports. There will be close liaison with state governments and municipal authorities to maintain cleanliness and remove encroachments in airports and surrounding areas, so as to obviate the menace of bird hits. Large scale plantations and other eco-friendly activities like construction of golf courses would be encouraged around airports, both for environmental purposes as also to provide relaxation to transit passengers. Such environmental issues would need close interaction with regional planning bodies.
2. The airports would be set up after the requisite environmental clearances and a time-frame of 90 days would be prescribed by Ministry of Environment and Forests for completing the processing of applications for such clearances.
3. Improved connectivity between airports and adjacent population centers should form an integral part of each airport infrastructure development projects and not be left to evolve by it.

### **Airport – Check-In-Facilities**

Airport check-in uses service counters found at commercial airports handling commercial air travel. The check-in is normally handled by an airline itself or a handling agent working on behalf of an airline. Passengers usually hand over any baggage that they do not wish or are not allowed to carry on to the aircraft's cabin and receive a boarding pass before they can proceed to board their aircraft. Check-in is usually the first procedure for a passenger when arriving at an airport, as airline regulations require passengers to check in by certain times prior to the departure of a flight. This duration spans from 15 minutes to 4 hours depending on the destination and airline. During this process, the passenger has the ability to ask for special accommodations such as seating preferences, inquire about

flight or destination information, make changes to reservations, accumulate frequent flyer program miles, or pay for upgrades.

### **Passenger Identity Registration**

At the time of check-in one of the Agent's primary duties is to check for valid documents. This includes tickets, passports, visas, letters of consent etc. (depending on the type of visit, the arrival and destination of the trip).

In countries like the United States and United Kingdom, which has special requirements, passengers have to provide information like their name, address and contact details of places in which they live, from which they are taking the flight and in which they intend to stay once in the United States and United Kingdom respectively. This information, known as Advance Passenger Information, is now usually collected online with or after the flight booking.

### **Baggage Registration**

At the time of check-in, the passenger hands over baggage which is checked by the airport security and sealed. Anything that is above the weight limit or which is not allowed to be carried by the passenger himself to the aircraft cabin is usually handed over to the agent at the time of check-in. The baggage allowance, if any, is prescribed by the airline and anything in excess will warrant additional surcharges. These baggage restrictions are based on the class the passenger is traveling. E.g. *Economy Class, First Class, Executive Class*.

### **Online Check-in**

Online check-in is the process in which passengers confirm their presence on a flight via the Internet and typically print their own boarding passes. Depending on the carrier and the specific flight, passengers may also enter details such as meal options and baggage quantities and select their preferred seating.

This service is generally promoted by the airlines to passengers as being easier and faster because it reduces the time a passenger would normally spend at an airport check-in counter. Some airlines, however, would still require passengers to proceed to a check-in counter at the airport, regardless of preferred check-in method, for document verification (e.g., to travel to countries where a visa is required, or to ensure the credit card used to purchase is genuine and/or matches the identity of the person who made the purchase). If passengers need to continue the check-in process at the airport after performing an online

check-in, a special lane is typically offered to them to reduce wait times unless all desks are designated as baggage drop-off points. Furthermore, online check-in for a flight is often available earlier than its in-person counterpart. Alaska Airlines was the first to offer online check-in.

### **Mobile Check-in**

In the mid-late 2000s, checking in was made possible using a passenger's mobile phone or PDA. A GPRS or 3G-capable smart phone or an internet-capable PDA is required, and the check-in feature may be accessed by keying in a website on the mobile phone's browser or by downloading a dedicated application. The process is then similar to that which one would expect when checking in using a personal computer. At the end of the mobile check-in process, some airlines send a mobile boarding pass to a passenger's mobile device, which can be scanned at the airport during security checks and boarding. However, others send an electronic confirmation with a barcode that can be presented to the staff at check-in or scanned at the kiosks to continue the check-in process.

### **Gate/Lounge Check-in**

Domestic services introduced a self-check-in process allowing passengers with bags to arrive and check-in at the self-service kiosks up to 10 min prior to departure time. Passengers then attach the baggage tag and drop the bag themselves at the baggage drop belt. However, passengers without checked luggage can go straight to the lounge (if entitled to lounge access) and check in at the kiosk there using their e-Pass or proceed straight to the departure gate when boarding using either their e-Pass or m-Pass.

### **Premium Check-in and Lounge Access**

If the passenger carries a first or business class ticket or presents a certain frequent flyer program membership card (usually the higher-level tiers), or any other arrangements with the carrier, access to the premium check-in area and/or the lounge may be offered. Premium check-in areas vary among airlines and airports. The main airport in which an airline hub is located normally offers a more thorough and exclusive premium check-in experience, normally inside a separate check-in lounge. For example, Air New Zealand's Auckland International premium check-in lounge provides a dedicated customs clearance counter and direct shortcut access to the security checkpoints. Airlines operating in minor airports generally offer an exclusive and separate premium check-in queue lane, often combined for its first, business, and/or premium economy passengers.

## Inflight Entertainment

In-flight entertainment (IFE) refers to the entertainment available to aircraft passengers during a flight. ***In 1936, the airship Hindenburg offered passengers a piano, lounge, dining room, smoking room, and bar during the 2½ day flight between Europe and America.*** After the Second World War, IFE was delivered in the form of food and drink services, along with an occasional projector movie during lengthy flights. ***In 1985 the first personal audio player was offered to passengers, along with noise cancelling headphones in 1989.*** During the 1990s the demand for better IFE was a major factor in the design of aircraft cabins. Before then, the most a passenger could expect was a movie projected on a screen at the front of a cabin, which could be heard via a headphone socket at his or her seat. The largest manufacturers of IFE systems are Panasonic Avionics Corporation, Thales Group, Zodiac, Lumexis, Gogo, On Air, Row 44 Rockwell Collins, and Live TV. Design issues for IFE include system safety, cost efficiency, software reliability, hardware maintenance, and user compatibility. The in-flight entertainment onboard airlines are frequently managed by content service providers.

***The first in-flight movie was in 1921 on Aero-marine Airways*** showing a film called Howdy Chicago to its passengers as the amphibious airplane flew around Chicago. The film The Lost World was shown to passengers of an Imperial Airways flight on April 1925 between London (Croydon Airport) and Paris. Eleven years later in 1932, the *first in-flight television called 'media event'* was shown on a Western Air Express. It was not until the 1960s that in-flight entertainment (other than reading, sitting in a lounge and talking, or looking out the window) was becoming mainstream and popular. In 1961, David Flexer of In-flight Motion Pictures developed the 16mm film system for a wide variety of commercial aircraft. ***In 1963, AVID Airline Products developed and manufactured the first pneumatic headset used on board the airlines and provided these early headsets to Trans World Airlines.*** These early systems consisted of in-seat audio that could be heard with hollow tube headphones. ***In 1979 pneumatic headsets were replaced by electronic headsets.*** In the late 1970s and early 1980s, CRT-based projectors began to appear on newer widebody aircraft, such as the Boeing 767.

## Varieties of in-Flight Entertainment

### ***Audio Entertainment***

Audio entertainment covers music, as well as news, information, and comedy. Most music channels are pre-recorded and feature their own DJs to provide chatter, song introductions, and interviews with artists. In addition, there is sometimes a channel devoted

to the plane's radio communications, allowing passengers to listen in on the pilot's in-flight conversations with other planes and ground stations. In audio-video on demand (AVOD) systems, software such as MusicMatch is used to select music off the music server. Phillips Music Server is one of the most widely used servers running under Windows Media Center used to control AVOD systems. This form of in-flight entertainment is experienced through headphones that are distributed to the passengers.

The headphone plugs are usually only compatible with the audio socket on the passenger's armrest (and vice-versa), and some airlines may charge a small fee to obtain a pair. The headphones provided can also be used for the viewing of personal televisions. In-flight entertainment systems have been made compatible with XM Satellite Radio and with iPods, allowing passengers to access their accounts or bring their own music, along with offering libraries of full audio CDs from an assortment of artists.

### ***Video Entertainment***

Video entertainment is provided via a large video screen at the front of a cabin section, as well as smaller monitors situated every few rows above the aisles. Sound is supplied via the same headphones as those distributed for audio entertainment. However, personal televisions (PTVs) for every passenger provide passengers with channels broadcasting new and classic films, as well as comedies, news, sports programming, documentaries, children's shows, and drama series. Some airlines also present news and current affairs programming, which are often pre-recorded and delivered in the early morning before flights commence. Some airlines also provide video games as part of the video entertainment system.

### ***Closed-Captioning***

*Closed captioning technology for deaf and hard-of-hearing passengers started in 2008 with Emirates Airlines.* The captions are text streamed along with video and spoken audio and enable passengers to either enable or disable the subtitle/caption language. Closed captioning is capable of streaming various text languages, including Arabic, Chinese, English, French, German, Hindi, Spanish, and Russian. The technology is currently based on Scenarist file multiplexing so far; however, portable media players tend to use alternative technologies. A WAEA technical committee is trying to standardize the closed caption specification. In 2009, the US Department of Transportation ruled a compulsory use of captions of all videos, DVDs, and other audio-visual displays played for safety and/or informational purposes in aircraft should be high-contrast captioned.



### ***In-Flight Movies***

Personal on-demand videos are stored in an aircraft's main IFE computer system, from whence they can be viewed on demand by a passenger. Along with the on-demand concept comes the ability for the user to pause, rewind, fast forward, or jump to any point in the movie. There are also movies that are shown throughout the aircraft at one time, often on shared overhead screens or a screen in the front of the cabin.

### ***Personal Televisions***

Some airlines have now installed Personal Televisions (otherwise known as PTVs) for every passenger on most long-haul routes. These televisions are usually located in the seat-backs or tucked away in the armrests for front row seats and first class. Some show direct broadcast satellite television which enables passengers to view live TV broadcasts. Some airlines also offer video games using PTV equipment. Fewer still provide closed captioning for deaf and hard-of-hearing passengers. Audio-Video on Demand (AVOD) entertainment has also been introduced. This enables passengers to pause, rewind, fast-forward, or stop a program that they have been watching. This is in contrast to older entertainment systems where no interactivity is provided for. AVOD also allows the passengers to choose among movies stored in the aircraft computer system.

### ***In-Flight Games***

Video games are another emerging facet of in-flight entertainment. Some game systems are networked to allow interactive playing by multiple passengers. Later generations of IFE games began to shift focus from pure entertainment to learning. The best examples of this changing trend are the popular trivia game series and the Berlitz Word Traveler that allows passengers to learn a new language in their own language. Appearing as a mixture of lessons and mini games, passengers can learn the basics of a new language while being entertained. Many more learning applications continue to appear in the IFE market.

### ***In-Flight Attainment System***

An In-Flight Attainment System in the future could have contextual ads for each passenger depending on co-passengers, travel history, route, ticket/seat preferences, mileage history, ticket preferences (paid by credit card/ X days in advance/flight portal/cheap-average-costly ticket), food preferences, marital statuses, and so on. Using social media and pre-computed data, travelers will be able to experience state-of-the-art in-flight shopping experience. They would be able to shop items while they are travelling to be delivered later at a preferred location.



### ***Moving-Map Systems***

A moving-map system is a real-time flight information video channel broadcast through PTVs and cabin video screens. In addition to displaying a map that illustrates the position and direction of the plane, the system gives the altitude, airspeed, outside air temperature, distance to the destination, distance from the origination point, and local time.

The moving-map system information is derived from the aircraft's flight computer systems. *The first system designed for passengers was invented in 1982 by ASINC, Inc.* a small southern California corporation. Their product was called Air show. KLM and Swiss Air were the first airlines to offer the moving map systems to their passengers.

### ***Islamic Prayers and Directions to Mecca***

In several airlines from Islamic states, their AVOD systems provides Qibla directions to allow Muslims to pray toward Mecca (e.g. Emirates, Etihad, Malaysia Airlines, Qatar Airways, and Royal Jordanian); Malaysia Airlines has built-in Qur'an e-books and Garuda Indonesia has a unique Qur'an channel. Several Islamic airlines may also switch to a pre-flight Qur'an prayer prior to taking off.

### ***In-Flight Connectivity***

In recent years, IFE has been expanded to include in-flight connectivity—services such as Internet browsing, text messaging, cell phone usage (where permitted), and emailing. In fact, some in the airline industry have begun referring to the entire in-flight-entertainment category as "IFEC" (In-Flight Entertainment and Connectivity or In-Flight Entertainment and Communication).

The airline manufacturer Boeing entered into the in-flight-connectivity industry in 2000 and 2001 with an offshoot called **Connexion** by Boeing. The service was designed to provide in-flight broadband service to commercial airlines; Boeing built partnerships with United Airlines, Delta, and American. By 2006, however, the company announced it was closing down its Connexion operation. Industry analysts cited technology, weight, and cost issues as making the service unfeasible at the time. The Connexion hardware that needed to be installed on an aircraft, for example, weighed nearly 1,000 pounds (450 kg), which added more "drag" (a force working against the forward movement of the plane) and weight than was tolerable for the airlines.

### ***Satellite and Internal Telephony***

Some airlines provide satellite telephones integrated into their system. These are either found at strategic locations in the aircraft or integrated into the passenger remote control used for the individual in-flight entertainment. Passengers can use their credit card to make phone calls anywhere on the ground. A rate close to US\$10.00/minute is usually charged regardless of where the recipient is located and a connection fee may be applied even if the recipient does not answer. These systems are usually not capable of receiving incoming calls. There are also some aircraft that allow faxes to be sent and the rate is usually the same as the call rate, but at a per page rate. Some systems also allow the transmission of SMS.

### ***Data communication***

IFE producers have begun to introduce Intranet type systems. Virgin America's and V Australia's RED Entertainment System allows for passengers to chat amongst one another, compete against each other in the provided games, talk to the flight attendants and request, and pay for in advance, food or drinks, and have full access to the internet and email.

### ***Wi-Fi***

Several airlines are testing in-cabin wi-fi systems. In-flight internet service is provided either through a satellite network or an air-to-ground network. In the Airbus A380 aircraft, data communication via satellite system allows passengers to connect to live Internet from the individual IFE units or their laptops via the in-flight Wi-Fi access. Boeing's cancellation of the Connexion by Boeing system in 2006 caused concerns that inflight internet would not be available on next-generation aircraft such as Qantas' fleet of Airbus A380s and Boeing Dreamliner 787s. However, Qantas announced in July 2007 that all service classes in its fleet of A380s would have wireless internet access as well as seat-back access to email and cached web browsing when the Airbuses started operations in October 2008. Certain elements were also retrofitted into existing Boeing 747-400s.

### ***Mobile Phone***

As a general rule, mobile phone use while airborne is usually not just prohibited by the carrier but also by regulatory agencies in the relevant jurisdiction (e.g. FAA and FCC in the US). However, with added technology, some carriers nonetheless allow the use of mobile phones on selected routes. *Emirates Airline became the first airline to allow*

*mobile phones to be used during flight.* Using the systems supplied by telecom company Aero Mobile, Emirates launched the service commercially on March 20, 2008. Installed first on an Airbus A340-300, Aero Mobile is presently operating on Emirates A340, A330, and B777 aircraft. Emirates planned to roll out the system over their entire fleet by 2010.

## **In-Flight – Services**

### ***Air Line Meal***

An airline meal or in-flight meal is a meal served to passengers on board a commercial airliner. These meals are prepared by airline catering services. These meals vary widely in quality and quantity across different airline companies and classes of travel. They range from a simple beverage in short-haul economy class to a seven-course gourmet meal in long-haul first class. When ticket prices were regulated in the American domestic market, food was the primary means airlines differentiated themselves.

*The first airline meals were served by Handley Page Transport, an airline company founded in 1919, to serve the London-Paris route in October of that year. The type of food varies depending upon the Airline Company and class of travel. Meals may be served on one tray or in multiple courses with no tray and with a tablecloth, metal cutlery, and glassware (generally in first and business classes). The airline dinner typically includes meat (most commonly chicken or beef) or fish, a salad or vegetable, a small bread roll, and a dessert.*

1. Caterers usually produce alternative meals for passengers with restrictive diets. These must usually be ordered in advance, sometimes when buying the ticket. Some of the more common examples include:
2. Cultural diets, such as French, Italian, Chinese, Japanese or Indian style.
3. Infant and baby meals. Some airlines also offer children's meals, containing foods that children will enjoy such as baked beans, mini-hamburgers and hot dogs.
4. Medical diets, including low/high fiber, low fat/cholesterol, diabetic, peanut free, non-lactose, low salt/sodium, low-purine, low-calorie, low-protein, bland (non-spicy) and gluten-free meals.
5. Religious diets, including kosher, halal, and Hindu, Buddhist and Jain vegetarian (sometimes termed Asian vegetarian) meals.
6. Vegetarian and vegan meals. Some airlines do not offer a specific meal for vegetarians; instead, they are given a vegan meal.

For several Islamic airlines (e.g. Emirates, Etihad Airways, Gulf Air, Iran Air, Qatar Airways, Saudia, Pakistan International Airlines, and Malaysia Airlines) in accordance of Islamic customs, all classes and dishes on the plane are serving with Muslim meal with Halal certification - without pork and alcohol.

Condiments (typically salt, pepper, and sugar) are supplied in small sachets. For cleanliness most meals come with a napkin and a moist towelette. First and business class passengers are often provided with hot towels and actual salt and pepper shakers. During morning flights a cooked breakfast or smaller continental-style may be served. On long haul flights and (short/medium haul flights within Asia) breakfast normally includes an entrée of pancakes or eggs, traditional fried breakfast foods such as sausages and grilled tomatoes, and often muffins or pastries, fruits and breakfast cereal on the side. On shorter flights a continental-style breakfast, generally including a miniature box of breakfast cereal, fruits and either a muffin, pastry, or bagel. Coffee and tea are offered as well, and sometimes hot chocolate.

### ***Buy-on-Board***

In commercial flight, *buy on board* (BoB) is a system where food or beverages are paid for on board; often food or beverages are not included in the ticket price for certain fare classes. Starting in 2003, many United States air carriers began eliminating free meal services in economy classes on North American flights and replacing them with buy on board services. By 2009, many US carriers had established buy on board as part of an à la carte pricing movement. Around that year, US carriers began using celebrity-named and brand name products to make their buy on board products generate more revenue.

Continental Airlines, the last large United States carrier to offer free meals on all domestic flights, announced in March 2010 that it would begin a buy on board program in fall 2010 and end many of its free meal programs on domestic flights. Jeff Green of Business week described the end of Continental's program as an "end of an era." As the airline market in the United States became deregulated, airlines began to compete by price. Airline ticket prices began to decrease, and airlines began to charge extra for services that were once included in the airfare.

### ***In-Flight Smoking***

In-flight smoking is prohibited by almost all airlines; smoking on domestic U.S. airliners, for instance, has been prohibited since April 1998. According to FAA regulations,

smoking lit cigarettes or anything else that produces smoke or flame is prohibited onboard most commercial aircraft. However, the FAA has not issued a regulation for or against electronic cigarettes, leaving that decision up to the individual airlines. Normally, passengers found to be smoking on non-smoking flights will at least face a fine (up to \$5,000) and at worst be arrested and detained upon landing. Due to stringent security measures, this often causes disruption such as having to land the flight early in order to escort the smoker from the plane.

### ***Airsickness Bag***

An airsickness bag (also known as a sick sack, airsick bag, sick bag, barf bag, or motion sickness bag) is a small bag commonly provided to passengers on board airplanes and boats to collect and contain vomit in the event of motion sickness. Hovercraft-ferry operators and even train companies have also been known to supply bags. Pregnant women with morning sickness and travelers who know they are prone to motion sickness will sometimes bring their own bags. The plastic-lined airsickness bag was created by inventor Gilmore Schjeldahl for Northwest Orient Airlines in 1949.

### ***Timatic***

Timatic is the database containing cross border passenger documentation requirements. It is used by airlines to determine whether a passenger can be carried, as well as by airlines and travel agents to provide this information to travellers at the time of booking. This is critical for airlines due to fines levied by immigration authorities every time a passenger is carried who does not have the correct travel documentation.

The information contained in Timatic covers:

1. Passport requirements and recommendations
2. Visa requirements and recommendations
3. Health requirements and recommendations
4. Airport Tax to be paid by the traveller at either departure or arrival airport
5. Customs regulations relating to import/export of goods and small pets by a passenger
6. Currency regulations relating to import and export by a passenger

*Timatic was first established in 1963 and is managed by International Air Transport Association (IATA). Over 60M travellers have their documentation requirements checked against the Timatic database every year.*

### ***Landing Facilities***

An airport terminal is a building at an airport where passengers transfer between ground transportation and the facilities that allow them to board and disembark from aircraft. Within the terminal, passengers purchase tickets, transfer their luggage, and go through security. The buildings that provide access to the airplanes (via gates) are typically called concourses. However, the terms “terminal” and “concourse” are sometimes used interchangeably, depending on the configuration of the airport. Smaller airports have one terminal while larger airports have several terminals and/or concourses.

At small airports, the single terminal building typically serves all of the functions of a terminal and a concourse. Some larger airports have one terminal that is connected to multiple concourses via walkways, sky-bridges, or underground tunnels (such as Denver International Airport). Some larger airports have more than one terminal, each with one or more concourses (such as New York’s JFK Airport). Still other larger airports have multiple terminals each of which incorporate the functions of a concourse. Due to the rapid rise in popularity of passenger flight, many early terminals were built in the 1930s–1940s and reflected the popular art deco style architecture of the time. One such surviving example from 1940 is the Houston Municipal Airport Terminal.

Early airport terminals opened directly onto the tarmac: passengers would walk or take a bus to their aircraft. This design is still common among smaller airports, and even many larger airports have “bus gates” to accommodate aircraft beyond the main terminal.

### ***Pier***

A pier design uses a small, narrow building with aircraft parked on both sides. One end connects to a ticketing and baggage claim area. Piers offer high aircraft capacity and simplicity of design, but often result in a long distance from the check-in counter to the gate (up to half a mile in the cases of Kansai International Airport or Lisbon Portela Airport’s Terminal 1).

### ***Satellite Terminals***

A satellite terminal is a building detached from other airport buildings, so that aircraft can park around its entire circumference. The first airport to use a satellite terminal was London Gatwick Airport. It used an underground pedestrian tunnel to connect the satellite to the main terminal. This was also the first setup at Los Angeles International Airport, but it has since been converted to a pier layout. The first airport to use an automatic people

mover to connect the main terminal with a satellite was Tampa International Airport, which is the standard today.

### ***Semicircular Terminals***

Some airports use a semicircular terminal, with aircraft parked on one side and cars on the other. This design results in long walks for connecting passengers, but greatly reduces travel times between check-in and the aircraft. Airports designed around this model include Charles de Gaulle International Airport (terminal 2), Chhatrapati Shivaji International Airport, Mumbai (terminal 2).

One rarer terminal design is the mobile lounge, where passengers are transported from the gate to their aircraft in a large vehicle which docks directly to the terminal and the aircraft. A common-use facility or terminal design disallows airlines to have its own proprietary check-in counters, gates and IT systems. Rather, check-in counters and gates can be flexibly reassigned as needed. Many small and mid-size airports have a single two or three-lane one-way loop road which is used by local private vehicles and buses to drop off and pick-up passengers.

An international airport may have two grade-separated one-way loop roads, one for departures and one for arrivals. It may have a direct rail connection by regional rail, light rail, or subway to the downtown or central business district of the closest major city. The largest airports may have direct connections to the closest freeway. There will be car rental agencies and taxi companies operating around the terminals.

### ***Boarding***

*Boarding is the entry of passengers onto a vehicle, usually in public transportation.* Boarding starts with entering the vehicle and ends with the seating of each passenger and closure of the doors. *The term is used in road, water and air transport.* At commercial airports, a boarding call on the public announcement system asks travelers to proceed to the exit gate and board the aircraft. This can begin any time from an hour to thirty minutes before departure (depending on the size of the plane and number of passengers). For boarding an aircraft, air-stairs or jet-ways are used. Small aircraft may carry their own stairs.

Airlines control the access to the aircraft by checking passengers' boarding passes and matching them with the list of passengers. Many airlines use the IATA standard *Bar Coded Boarding Passes (BCBP)* to automate this process. A 2D bar code is scanned and



the data are sent to the airline's system to look up the list of passengers. If the passenger is entitled to board, a positive message is sent back to the airline agent. Boarding in air travel is supervised by ground personnel. The pilot is responsible for the boarding as soon as the doors are closed because by law the aircraft is then "in flight". After boarding, the taxiing and takeoff will follow in most cases. Most North American airlines have assigned seating, but Southwest Airlines does not.

Southwest boards passengers in A, B, and C groups depending on their ticket purchase date. Across North American airlines, it is standard to allow early boarding for passengers with mobility impairments, those with small children, and first class passengers. All airlines allow passengers in premium cabins or with elite status to board earlier, with some offering it to coach customers for a fee. Several boarding patterns by seating location are possible:

Back-to-front by row

Outside-in by column (window, middle, aisle)

Block boarding (outside-in within a zone, with zones ordered back-to-front)

Reverse pyramid (combines back-to-front with outside-in)

Rotating zone (alternating back-to-front and front-to-back segments)

Random

## **Gate**

A gate in aviation is a long, movable, "bridge" that allows passengers to embark and disembark their aircraft.

## **Jet-Way Bridges**

Air stairs, either built into the aircraft or from a mobile vehicle

## **Mobile Lounges**

Leaving the aircraft via mobile safety steps and walking across the apron into or from the terminal building. For international airports, certain gates must be configured to accept arriving international passengers. The configuration varies from airport to airport but usually, the door leading to the gate is moved further into the terminal, and will open to a room, where the passengers will pass through on their way to the aircraft. Inside the room will be an escalator leading to customs and immigration on a different level. When

the gate is being used for departures or domestic arrivals, the door leading to the waiting area will be opened and usually the escalators will be blocked off, thus passengers will not mistakenly wander into customs and immigration. For an international arrival, the door leading to the waiting area is simply closed, and passengers are directed to the escalators for immigration/customs.

### **Jet Bridge**

A jet bridge (also termed jet-way, loading bridge, aerobridge / air-bridge, air jetty, portal, passenger walkway or passenger boarding bridge) is an enclosed, movable connector which extends from an airport terminal gate to an airplane, allowing passengers to board and disembark without going outside. Depending on building design, sill heights, fueling positions and operational requirements, it may be fixed or movable, swinging radially or extending in length.

Jet-way is a registered trademark of JBT Aero-Tech. However, it is often used in North American parlance to refer to any jet bridge, regardless of manufacturer. Prior to the introduction of jet bridges, passengers normally boarded an aircraft by walking along the ground-level ramp and climbing a set of movable stairs, or up air-stairs on aircraft so equipped. Mobile staircases or "ramp stairs" are still employed at many airports around the world, particularly smaller airports and terminals supporting low cost carriers. ***The first jet bridge in the United States was installed on July 29, 1959 at San Francisco International Airport.***

### **Cabin - Aircraft**

An aircraft cabin is the section of an aircraft in which passengers travel. At cruising altitudes of modern commercial aircraft the surrounding atmosphere is too thin for passengers and crew to breathe without an oxygen mask, so cabins are pressurized at a higher pressure than ambient pressure at altitude.

In commercial air travel, particularly in airliners, cabins may be divided into several parts. These can include travel class sections in medium and large aircraft, areas for flight attendants, the galley and storage for in-flight service. Seats are mostly arranged in rows and alleys. The higher the travel class, the more space is provided. Cabins of the different travel classes are often divided by curtains, sometimes called class dividers though some airlines will not utilize a curtain between Business and First class. Passengers are not usually allowed to visit higher travel class cabins in commercial flights.

Some aircraft cabins contain passenger entertainment systems. Short haul cabins tend to have no or shared screens whereas long haul flights often contain personal screens which allow passengers to choose what to watch on their personal screen.

## **Class of Service**

First class is a travel class on some airliners intended to be more luxurious than business class, premium economy, and economy class. On a passenger jetliner, first class usually refers to a limited number (rarely more than 20) of seats or cabins toward the front of the aircraft which have more space, comfort, service, and privacy. Propeller airliners often had first class in the rear, away from the prop noise. First-class seats vary from large reclining seats with more legroom and width than other classes to suites with a fully reclining seat, workstation and TV surrounded by privacy dividers. International first-class seats usually have between 147–239 cm (58–94 inches) of seat pitch and between 48–89 cm (19–35 inches) of width while domestic flights may have between 86–173 cm (34–68 inches) of pitch and between 46–56 cm (18–22 inches) in width. In fact this means there is less discomfort for taller people. Some airlines have first-class seats which allow passengers to let one guest sit for a short while face-to-face with the occupant of the cabin.

## **Air India First Suite**

First-class passengers usually have at least one lavatory for their exclusive use, with more than one on larger planes. Business- and economy-class passengers are not normally permitted in the first-class cabin. Normally AVOD (audiovisual on demand) entertainment is offered, although sometimes normal films, television programs and interactive games are provided on medium-large seat-back or armrest-mounted flat panel monitors. Especially for long-haul and high-yielding routes on top airlines, a first-class seat may have facilities akin to a five-star hotel, such as a mini-bar.

Recently, some airlines have gone far enough to model their first-class section as suites. Singapore Airlines now markets its highest class on its A380s as “suites”, with the tagline “A class above first.” The 2 m (78 inches) bed is separate from the seat and folds out from the back wall, with several other components of the suite lowering to accommodate the mattress. Windows are built into the doors and blinds offer privacy. Suites located in the center can form a double bed after the privacy blinds between them are retracted into the ceiling. Other A380 operators like Emirates also have a suite-like first class with similar amenities but the bed and chair are integrated where a button is pushed to turn the seat into a bed in seconds and vice versa.

## **First Class**

On the ground, first-class passengers usually have special check-in and security zones at the airport. Some airlines operate private first-class terminals and/or offer international first class passengers complimentary limousine rides to the airport. While it is typical that these passengers have lounge access, some airlines have separate lounges for first and business where the former may have more luxurious amenities. These passengers can often board the aircraft before other passengers, sometimes through their own jet bridge. Alcoholic and non-alcoholic drinks are complimentary and gourmet meals are usually served with a choice of wine, dessert, and aperitifs. Often these meals have been designed by leading chefs and are served on white linen table cloths and with real cutlery (often with the exception of knives for security reasons). When it comes to mileage, revenue first-class passengers are entitled to more bonus miles which can make the earning of a free ticket and other perks (such as a higher tier on a frequent flyer programme) much faster

## **Business Class**

Business class is a travel class available on many commercial airlines and rail lines, known by brand names which vary by airline or rail company. In the airline industry, it was originally intended as an intermediate level of service between economy class and first class, but many airlines now offer business class as the highest level of service, having eliminated first class seating. Business class is distinguished from other travel classes by the quality of seating, food, drinks, ground service and other amenities. Full business class is usually denoted 'J' or 'C' with schedule flexibility, but can be many other letters depending on circumstances.

## **Long Haul Business Class**

Long haul business class seats are substantially different from economy class seats and many airlines have installed "lie flat" seats into business class, whereas previously seats with such a recline were only available in international first class. There are essentially three types of long haul business class seats today. These are listed in ascending order of perceived "quality".

## ***Cradle Seats***

***Cradle Seats*** are seats with around 160 degrees of recline and substantially more leg room compared to the economy section. The seat pitch of business class seats range from 33–79.5 in (84–202 cm) (usually 55–62 in (140–160 cm)), and the seat size of business class

seats range from 17.5–34 in (44–86 cm) (usually 20–22 in (51–56 cm)). Although many airlines have upgraded their long-haul business class cabins to angled lie flat or fully flat seats, cradle seats are still common in business class on shorter routes.

### ***Angled Lie Flat Seats***

Recline 170 degrees (or slightly less) to provide a flat sleeping surface, but are not parallel to the floor of the aircraft when reclined, making them less comfortable than a bed. Seat pitch typically ranges from 55 to 65 in (140 to 170 cm), and seat width usually varies between 18 to 23 in (46 to 58 cm). These seats first appeared on Northwest, Continental, JAL, Qantas and several other airlines in 2002 and 2003.

### ***Fully Flat Seats***

Recline into a flat sleeping surface which is parallel to the floor. Many airlines offer such seats in international first class but retain inferior seating in business class to differentiate the two products and fares. British Airways, which introduced flat beds in first class in 1995, was among the first airlines to introduce fully flat business class seats with its Club World product in 1999.

### ***Herringbone Seating***

In which seats are positioned at an angle to the direction of travel, is used in some wide body cabins to allow direct aisle access for each seat and to allow a large number of fully flat seats to occupy a small cabin space.

The concept was first developed by Virgin Atlantic Airways for its Upper Class cabin and has since been used by Delta, Cathay Pacific, Air Canada and Jet Airways, among other airlines.

### ***Cabin Seat***

These seats are designed to give the business class traveler the most privacy they can attain while in flight. These seats are typically positioned in a 1 - 2 - 1 arrangement on a wide body jet. On each side of the seat is a privacy panel about 4 feet in height. Aircraft such as this offer the best ergonomic comfort on long haul business class flights. These were first introduced on US Airways.

## Premium Class

Premium economy is a travel class offered on some airlines, positioned in price, comfort, and amenities between economy class and business class. *In 1991, EVA Air became the first airline company that has this kind of class in aircraft.* As of 2011, the term is not standardized among airlines, and varies significantly when comparing its use on domestic versus international flights or when comparing low-cost or regional airlines with other airliners. Premium economy is sometimes limited to just a bit more leg room, but at its most comprehensive can feature multiple “creature comforts” that are only a notch below Business class. “main cabin select” includes more amenities such as premium check-in, large customized seats (some for couples, others targeting solo travelers), seat pitch up to 41 inches (100 cm) with 50% more recline, premium meals, a self-service bar for drinks and snacks, a personal in-flight entertainment center with remote control, noise-cancelling headphones and choices in games and movies for children and adults, skin care products in the lavatory, and an amenities pouch containing items such as socks, sleep masks, earplugs, and toothbrush.

## Economy Class

Economy class, also called coach class, steerage, or standard class, (colloquially: Cattle class), is the lowest travel class of seating in air travel, rail travel, and sometimes ferry or maritime travel. Historically, this travel class has been called tourist class on ocean liners and third class, or even fourth class, on railways. Economy class seats usually recline and include a fold-down table. The seats pitch range from 29 to 36 inches (74 to 91 cm), usually 30–32 in (76–81 cm), and 30 to 36 in (76 to 91 cm) for international economy class seats. Domestic economy class seat width range is from 17 to 18.25 in (43.2 to 46.4 cm). Full economy class is usually denoted ‘Y’ with schedule flexibility, but can be many other letters depending on circumstances.

A pocket attached to the seat in front will contain an airsickness bag, in-flight magazine, Duty-Free catalogue and a safety and evacuation card. Depending on the airline, extras might include a blanket, an amenities bag (e.g. ear plugs, toothpaste, eye mask) and headphones. In-flight entertainment in economy class is either a “main screen” mounted to the aircraft bulkhead providing the same viewing for all cabin passengers or individual screens for each seat that may show Video on demand. Some low-cost carriers can charge a fee for headphones. But economy standards vary between carriers. Qantas and Cathay Pacific offer in-flight audio and visual entertainment and meals on both international and selected domestic routes to all passengers, including those in economy.

Availability of food depends on the airline. Some major carriers no longer serve meals in economy for short haul flights. Meals are now only generally provided on international flights. Some airport vendors have started to offer packaged meals to economy travellers that can be carried on to flights. Airlines offer a Premium Economy class to passengers willing to pay more for slightly better seats and, in some cases, better service.

### Let Us Sum Up

Aviation provides the only transportation network across the globe and it is crucial for global business development and tourism enrichment. Just as in any occupation, airline personnel have tremendous responsibilities on their hands, and any negligent harmful act can cause financial damage and years of ongoing court battles. Aviation provides the only worldwide transportation system which makes it essential for global business and tourism. There are number of tasks carried out during an Aircraft turn round such as loading, and unloading passenger baggage, safety & security checks, catering replenishment, and the completion of essential post and pre-flight administration.

Air Traffic Control (ATC) is a service provided by ground-based controllers who direct aircraft on the ground and through controlled airspace, and can provide advisory services to aircraft in non-controlled airspace. Air transport drives economic and social progress. It connects people, countries and cultures. It provides access to global markets. It generates trade and tourism. It forges links between developed and developing nations. Airport check-in uses service counters found at commercial airports handling commercial air travel. The check-in is normally handled by an airline itself or a handling agent working on behalf of an airline. First class is a travel class on some airliners intended to be more luxurious than business class, premium economy, and economy class.

### Self Assessment Questions

1. List out and explain the various parts of aircraft.
2. Explain the different types of audio and video projection equipments in an aircraft.
3. Write down the different classes of services in an aircraft.
4. Explain the various emergency equipments used for disembarkation.
5. Who is a Special Passenger? List out the different types of Special Passengers

\*\*\*\*



---

**UNIT - III**

---

---

**Airline Code, Tariff, Fare Construction and Principles**

---

**Learning Objectives**

*After completing this module, you will be familiar with:*

Air Transport in India

Travel & Tourism competitiveness enablers and change drivers

Aviation India

The “six freedoms of the air”

Official airline guide

Tracing the history of OAG

Three letter city and airport code

A list of civil airport codes of India: major city codes

Minimum connecting time

Global indicators

Familiarisation with air tariff

Airline prices

Currency regulation

NUC conversion factors

Airfare calculation

Planning itinerary by air

Extra Mileage Surcharge (Ems)

**Introduction**

“We must look at the world as it is versus how airlines would like it to be”-Robert L. Crandall

After discussing the concept of tourism, tourist product and its importance as an industry, we move on to related services and operations in this unit. These services form part of travel management e.g. modes of transport, accommodation and ticketing. Also there is

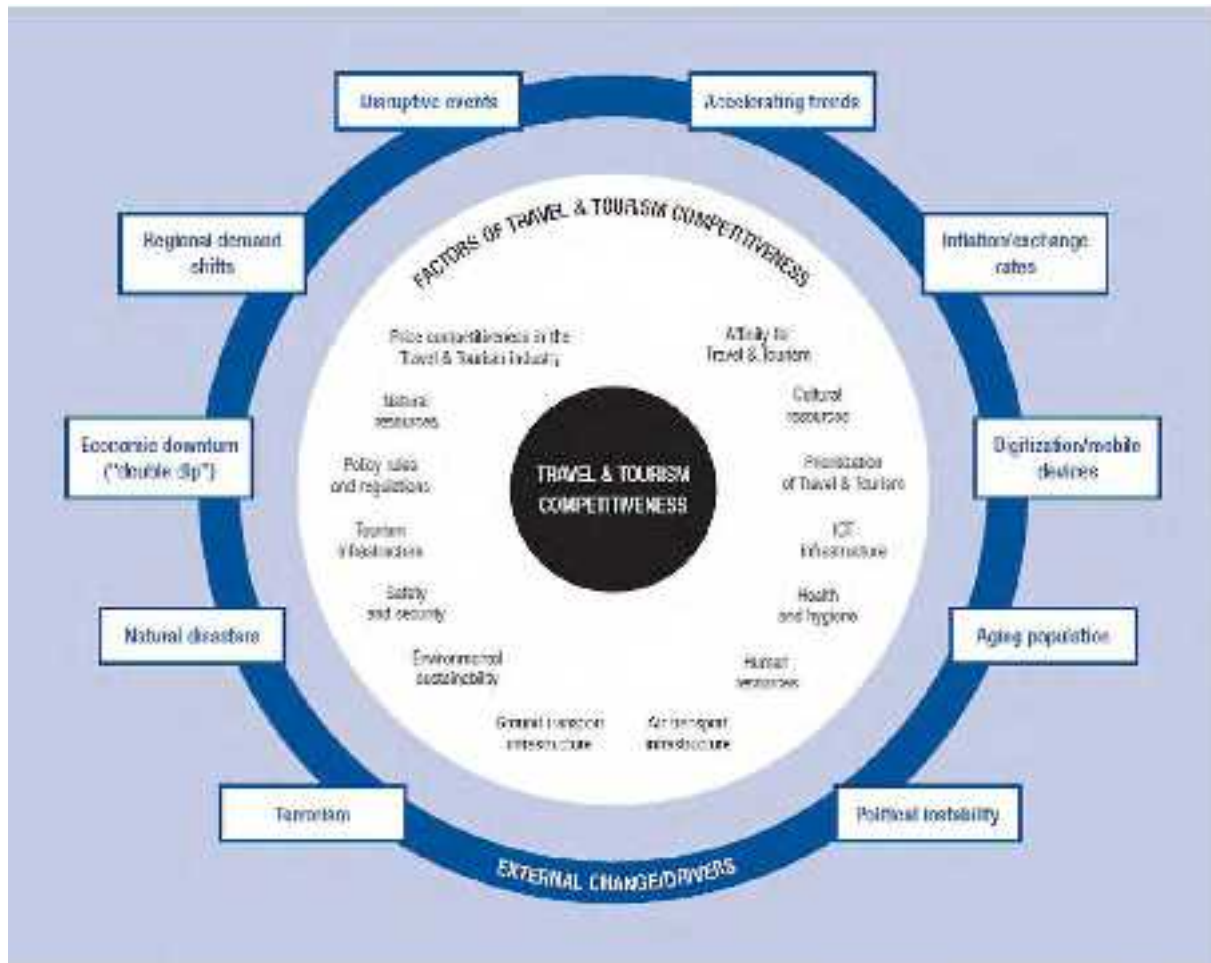
a need to understand different aspects of the travel agency business and tour operation. Tourism is an economic activity, which involves the movement or travelling from one region to another for business, pleasure, curiosity, adventure and study purposes. Travel is like no other industry; it is very complex and can sometimes be difficult to understand. It is, however, a happy, fun industry, and very rewarding. While rail transport played a crucial role in the growth and development of inter regional travel, especially within Europe, air transport on the other hand introduced an entirely new dimension in the introduction of mass-intercontinental travel. It has certainly been a key factor in the growth of international travel and tourism. Although commercial air travel was introduced before the Second World War on a limited scale, air transport for the masses has essentially been a post-war phenomenon. The principal period of growth was from the late fifties continuing into sixties when overseas holiday became a systematic benefit of society, experiencing rising living standards and resulting in disposable incomes for holidays. Air transport is by far the most effective transport mode. Notably because of prices, only 12.5% of the tourist travel by plane. Air transport has revolutionized the geographical aspect of distances; the most remote areas can now be attained, any journey around the world can be measured in terms of hours of travelling. With jet that can reach up to 1950 km/hrs, international tourism is no longer an on going adventure. Businesspeople are among the biggest users of airline facilities.

### **Air Transport in India**

India's booming economy has created a large middle-class population in India. Five years back, air travel was a dream for the majority of the Indian population. But rapid economic growth has made air travel more and more affordable in India. Air India, India's flag carrier, presently operates a fleet 135 aircraft and plays a major role in connecting India with the rest of the world. Several other foreign airlines connect Indian cities with other major cities across the globe. Air Deccan, Jet Airways, Kingfisher Airlines, IndiGo Airlines and Air India (formerly Indian Airlines, before merging with Air India) are the most popular brands in domestic air travel in order of their market share. Of these, Jet, Indian and Kingfisher also operate overseas routes after the liberalization of Indian Aviation. These airlines connect more than 80 cities across India. However, a large section of country's air transport system remains untapped, even though the Mumbai-Delhi air corridor was ranked 6th by the Official Airline Guide in 2007 among the world's busiest routes. India's vast unutilized air transport network has attracted several investments in the Indian air industry in the past few years. More than half a dozen low-cost carriers entered the Indian market in 2004-05. Major new entrants include Air Deccan, Kingfisher Airlines, Spice Jet, Go Air, Paramount Airways and IndiGo Airlines. To meet India's rapidly increasing demand for air travel, Air India recently placed orders for more than 68 jets from Boeing for 7.5 billion USD while Indian placed orders for 43 jets from Airbus for

2.5 billion USD. Jet Airways, India's largest private carrier, has invested billions of dollars to increase its fleet. This trend is not restricted to traditional air carriers in India. IndiGo Airlines came into the news with a bang when it announced orders for 100 Airbus A320s worth 6 billion USD during the Paris Air Show; the highest by any Asian domestic carrier. Kingfisher Airline became the first Indian air carrier in June 15, 2005 to order Airbus A380 aircraft. The total deal with Airbus was worth 3 billion USD.

**Travel & Tourism Competitiveness Enablers and Change Drivers**



Source: WTTC/2014

Each of the following three sub indexes is composed in turn by a number of pillars of T&T competitiveness, of which there are 14 in all. These are:

1. Policy rules and regulations
2. Environmental sustainability
3. Safety and security
4. Health and hygiene
5. Prioritization of Travel & Tourism

6. Air transport infrastructure
7. Ground transport infrastructure
8. Tourism infrastructure
9. ICT infrastructure
10. Price competitiveness in the T&T industry
11. Human resources
12. Affinity for Travel & Tourism
13. Natural resources
14. Cultural resources

The tourist industry is based on the travellers' means of transport, accommodation and other related services. It is surprised to know that Travel & Tourism is the world's largest foreign exchange earner among the industries and it generates millions of employment opportunities worldwide; more than any other industry. Travel and tourism is a very wide industry and it includes Govt. tourism departments, immigration and custom services, travel agencies, airlines, tour operators, hotels, etc and many associated services such as airline catering & laundry services, guides, interpreters, tourism promotion and sales etc.



Source: The Travel & Tourism Competitiveness Report 2013 worlds economic forum page no.4

Aviation provides the only transportation network across the globe and it is crucial for global business development and tourism enrichment. Air transportation is one of the

most important services to offer both significant social and economic benefits. By serving tourism and trade, it contributes to economic growth. It also provides jobs and increases tax revenues. Air transportation is essential for the fast movement of people and cargo shipments around the world. Finally, air transportation improves the quality of people's lives by broadening their leisure and cultural experiences. It gives a broad choice of holiday destinations around the world and is an affordable means to visit distant friends and relatives.

Tourism may involve people travelling within the country i.e. domestic tourism or travelling to places outside their country of residence i.e. international tourism. Air travel remains a large and growing industry. It facilitates economic growth, world trade, international investment and tourism and is therefore central to the globalization taking place in many other industries. Components of travel and tourism industry: accommodation (serviced, non-serviced); transport provision (road, rail, sea, air); attractions (natural, heritage, purpose-built, events); tour operations (mass market, specialist); travel agents (retail, business, call centre, web-based); tourism development and promotion e.g. tourist boards; trade associations and regulatory bodies e.g. Association of Independent Tour Operators; ancillary services e.g. insurance etc. The key organisational aims e.g. to make profit, maximise sales revenue, increase market share, ensure compliance with regulations; to provide products and services (to other organisations, for the industry, for customers) e.g. to put together packages, provide accommodation, provide scheduled flights, provide sea transport, sell leisure travel products, sell business travel products, promote tourism etc

Businesses and organisations that offer services and facilities to consumers make up the tourism product in the travel and tourism industry.

'Provider' is the name given to a business or organisation that offers services or facilities to a potential or actual visitor.

Providers include:

- Travel agencies and tour operators
- Caterers and accommodation providers
- Transport providers
- Providers of activities
- Providers of attractions to visit
- Entertainment providers
- Currency exchange facilities
- Tourist information services.



## Aviation in India

Directorate General of Civil Aviation (DGCA) is the national regulatory body for the aviation industry. It is controlled by the Ministry of Civil Aviation. The ministry also controls aviation related autonomous organizations like the Airports Authority of India (AAI), Bureau of Civil Aviation Security (BCAS), Indira Gandhi Rashtriya Uran Academy and Public Sector Undertakings including Air India, Pawan Hans Helicopters Limited and Hindustan Aeronautics Limited.

Air India is India's national flag carrier after merging with Indian Airlines in 2011 and plays a major role in connecting India with the rest of the world. IndiGo, Jet Airways, Air India, Spicejet and GoAir are the major carriers in order of their market share. These airlines connect more than 80 cities across India and also operate overseas routes after the liberalization of Indian aviation. Several other foreign airlines connect Indian cities with other major cities across the globe. However, a large section of country's air transport potential remains untapped, even though the Mumbai-Delhi air corridor was ranked 10th by Amadeus in 2012 among the world's busiest routes.

Hindu and Greek mythologies suggest the presence of aero planes in ancient time. In Greek mythology, Icarus, equipped with wings made of bird feathers held together with wax failed in his attempt to escape imprisonment because he flew too close to the sun which melted his wax and he was drowned in the sea. Hindu mythology also mentions Garuda, who was the vehicle of Vishnu. The Ramayana refers to the Vimana, which brought back Rama to his capital Ayodhya from Lanka. The sixteenth and the seventeenth centuries were dangerous times for people dreaming of flying. It was considered as an act against the law of God. Then there was an accidental discovery of the principle of the balloon. These crude experiments led to the modern day aviation technology. The credit of developing the modern aeroplane goes to the Wright Brothers of the United States who made their first flight in Kitty Hawk, in a power-driven aeroplane on December 17, 1903. Air travel has become a symbol of economy, speed and comfort as compared to other modes of transport. The passenger rides comfortably, enjoys good food, wine and music. The aeroplane had a revolutionary impact on tourism from World War II onwards. The modern era can be termed the mass air travel era. This has been the most important socio-economic phenomenon. For international travel, air travel is the second most popular mode of transport, which is next to automobiles. Air travel is attractive because of its speed and range and also as it offers status. In the international tourism, air travel has made a most valuable contribution. In the year 1952, the two-class travel was introduced which was made possible by the larger capacity of the new aircrafts. This made possible the lowering of airfares. This period was also remarkable for 'package holiday' around air transport, the model for most of today's

global tourism. The beginning of Jet air travel in 1958 added a new dimension to aviation industry in terms of speed, comfort and efficiency. Thereafter Pan America introduced the Boeing 707 between Paris and New York. The most significant development during this period was the development of the concept of 'inclusive tours' in which travellers were carried on charter flights at rates substantially lower than normal services. The introduction of Jumbo jets in the year 1970 introduced the phenomenon of mass market and business tourism. The Jumbo jets made air travel more convenient, comfortable and luxurious. Pan America and Japan Airlines were among the first to offer to its passengers business class travel. The seats in this class were wider, giving more space to stretch and relax in comfort, making long distance less cumbersome.

International Air Transport Association (IATA) regulates international air travel with its head office in Montreal in Canada. It was established in 1945. IATA regulates the prices of air tickets in different areas of travel in the world. The IATA decides all international airfares. The respective governments decide domestic airfares. IATA provides machinery, which makes the worldwide system of air transportation possible. IATA has been closely associated with the International Civil Aviation Organization (ICAO), an inter-government agency established also in 1945 that creates world standards for technical regulation and standardization of civil aviation.

IATA divides the world into three areas commonly known as IATA Traffic Conference Areas.

Traffic Conference Area 1- The whole of North and South America and islands adjacent thereto.

Traffic Conference Area 2- Europe, Africa and islands adjacent thereto.

Traffic Conference Area 3- Asia and islands adjacent thereto except that portion of Asia already included in area 2 and islands of Pacific Ocean except those included in Area 1. India is in this traffic area.

The representatives from Great Britain and United States met in the Bermudas in 1946 to develop a compromise between their opposing positions. The agreement reached between them became a model for all bilateral agreements in later years.

### **The "Six Freedoms of the Air"**

1. The right to fly across another nation's territory.
2. The right to land in another country for non-commercial purposes.



3. The right to disembark passengers and cargo that originated in the carrier's home country, in a foreign country.
4. The right to pick up passengers and cargo destined for the carrier's home country, from a foreign country.
5. The right to transport passengers and cargo from one foreign country to another foreign country.
6. The right of an airline to carry traffic from a foreign country to the home nation of that airline and beyond to another foreign country.

As the popularity of business class travel grew, another class, Executive Class was introduced in 1975. New wide-bodied jets like Boeing 747, the Mc Donnell Douglas DC 10, and Airbus A300 are all part of response to the requirements of the ever-growing transport market. 747 Boeing Jumbo jets offered 800 seats in 1990s, which is another unique event in aviation industry. The sky train concept is the latest innovation.

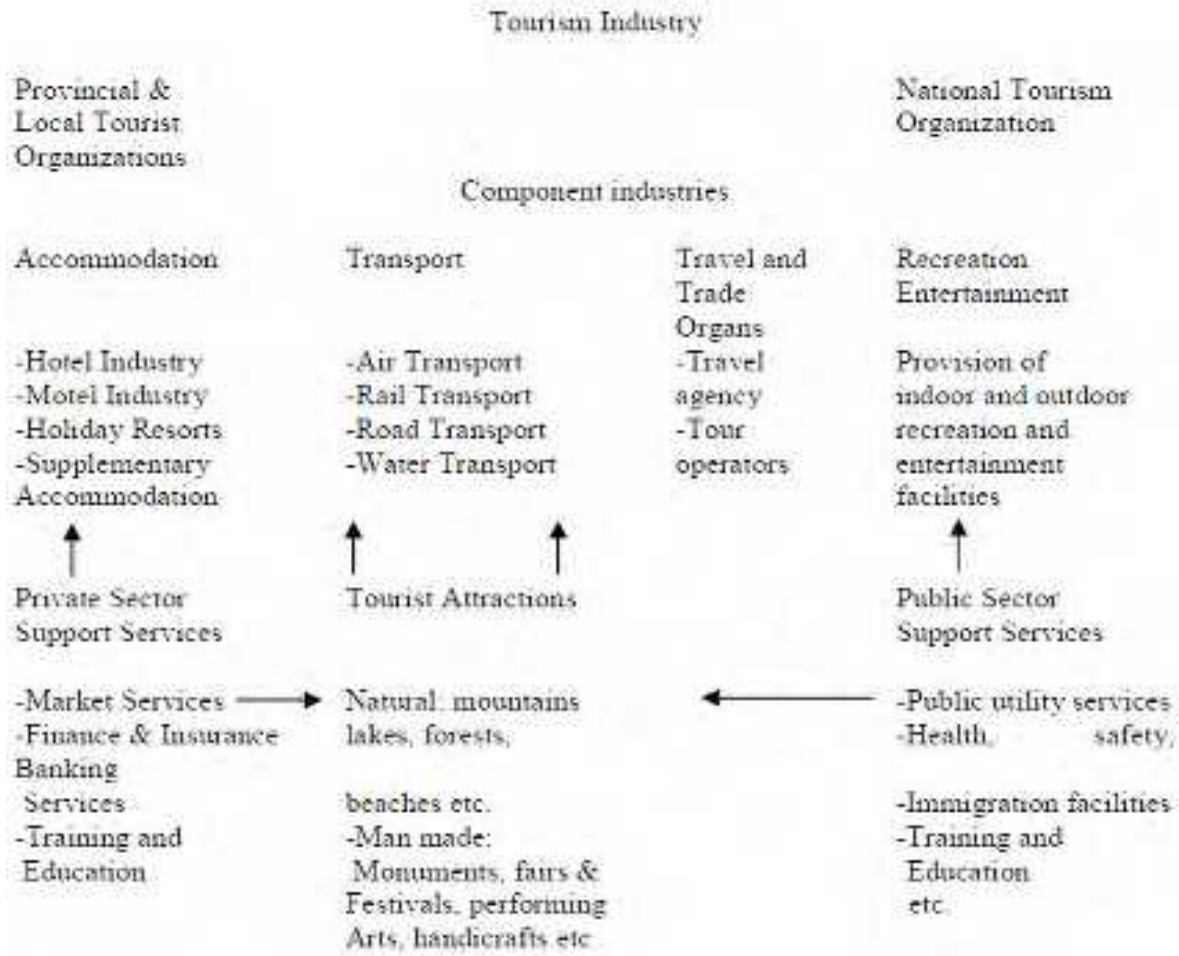
Air travel is a form of travel in vehicles such as airplanes, helicopters, hot air balloons, blimps, gliders, hang gliding, parachuting, or anything else that can sustain flight.

Use of air travel has greatly increased in recent decades - worldwide it doubled between the mid-1980s and the year 2000. Air travel can be separated into two general classifications: national/domestic and international flights.

Flights from one point to another within the same country are called domestic flights. Flights from a point in one country to a point within a different country are known as international flights. Travel class on an airplane is usually split into a two, three or four class model. US Domestic flights usually have two classes: Economy Class and a Domestic First Class partitioned into cabins.

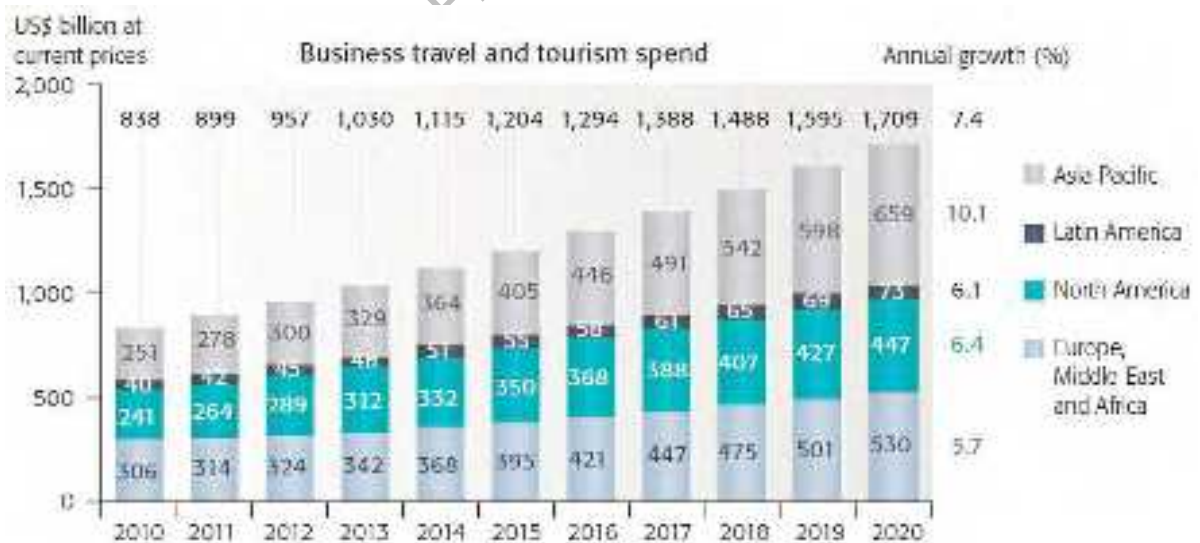
International flights may have up to four classes: Economy Class or Economy; Business or Club Class; and First Class. Most air travel starts and ends at a commercial airport.

The typical procedure is check-in; border control; airport security baggage and passenger check before entering the gate; boarding; flying; and pick-up of luggage and - limited to international flights - another border control at the host country's border. A simplistic structure of the tourism industry can be suggested by way of a framework as in the following illustration.



(Source: Karma, K.K.M.Chand, 2006 "Basis of tourism –theory, operation and practice", Kanishka publishers).

Growing air travel is evident due initiatives taken by different sector. The following figure illustrates the percent annual growth is forecast for international travel spend (2010-20)



Source: World travel and tourism Council, CWI Travel Management Institute.

The priorities listed for the development of Air tourism all over the world can be found with following:

- 1 Improving traveler compliance
- 2 Optimizing online adoption
- 3 Driving air and ground transportation savings
- 4 Optimizing hotel spend
- 5 Enhancing the traveler experience
- 6 Optimizing the travel policy
- 7 Developing key performance indicators
- 8 Addressing safety and security needs
- 9 Further consolidating the travel program
- 10 Tackling meetings and events
- 11 Making the program more environmentally friendly

Sources: CWT Travel Management Institute

### Key Trends and Developments in Indian Tourism

- Devaluation of local currency will hinder the growth of outbound tourism
- Government continues to promote travel and tourism
- Lifestyle changes help to drive travel and tourism
- Ministry of Civil Aviation allows 49% foreign direct investment in aviation
- Ministry of Tourism and state tourism boards continue to promote tourism aggressively
- Movies and social media websites became popular media for marketing
- New marketing strategies drive travel and tourism
- Online channel drives travel retail
- Rising airport and fuel taxes increase the cost of flight tickets
- Tourists prefer budget travel options
- Young urban consumers start to take up travelling as a lifestyle choice

## Familiarization With OAG

***“OAG provide us with the most flexible range of data and analytics products available in the market. As a world class airport we need to use accurate and reliable worldwide data - OAG delivers that for us.”-Sydney Airport***

Official Airline Guide [OAG] is a global flight information and data solutions company for the passenger aviation, air cargo logistics and business travel markets. It brings together buyers and sellers of air travel and transport through the management and distribution of airline product information; the supply of corporate travel planning tools; and the promotion of travel and transport products. OAG offers a range of data and analytical tools that can help support the needs of both passenger and cargo operations teams. OAG supplies flight information to the world's leading Global Distribution Systems (GDS), e-portals and hosted airline reservations systems. In addition we have a portfolio of OAG branded travel planning services which reach a lucrative global audience of frequent travellers. OAG have years of experience in the compilation and analysis of aviation data and can give an airline's planning teams accurate facts and results to make decision making easier and quicker. OAG offers a range of solutions that can help you maximize these benefits. It is believed Customer Service is a vital part of any airline's operations. OAG can provide solutions to support your service offering and increase the ability of passengers to access information remotely. OAG is at the interface between airline companies and flight ticket selling systems. The OAG database contains the flight schedules of all airline companies that submit their schedules to OAG. This flight database contains current and detailed information about past and planned flights, especially types of aircraft and cargo or seat capacities. The process for acceptance of schedules in the database is as follows: Airlines send their flight schedules to OAG in intervals that they determine (daily, weekly or monthly, etc.). Data undergoes quality control at OAG and is then accepted in the database captured in standardized format, and distributed worldwide to global computer reservation systems of travel agencies and airlines, online booking platforms, industry analysts, publishers, government agencies and service providers of the aviation industry. The service is free of charge for airlines. The enticement for the airline companies to submit their flight schedules comes from the associated marketing vehicle for their flight capacities.

## Official Airline Guides (OAG)

It contains current Domestic and international cargo flight schedules, including freighter, wide body and combination passenger-cargo flights. Each monthly issue also contains information on air carriers' special services, airline and aircraft decoding, airport codes, air carrier and freight forwarders directory, customs information, glossary of ULD

terms and information, cargo charter airlines, interline air freight agreements, aircraft loading charts and more.

### **Official Airline Guide (OAG)**

OAG operates globally in three vertical sectors: Aviation, Cargo and Travel. The Specialties includes: Aviation Data, Travel Planning Tools, Aviation Analysis, Passenger and Cargo Flight Schedules. OAG holds a breadth of aviation, cargo and travel related content and is best known for its airline schedules database. This feeds the world's global distribution systems and travel portals, and drives the internal systems of many airlines, air traffic control systems, aircraft manufacturers, airport planners and government agencies. Every ten seconds a flight is updated on the OAG system.

The OAG contains information about flight schedules and frequencies for airlines throughout the world. The OAG includes information like:

- (i) Air Carrier- Indicates the airline that operates the service between the airport pairs.
- (ii) Origin Airport - The originating point of the flight.
- (iii) Destination Airport - The endpoint of the flight.
- (iv) Airtime - Time spent in air.
- (v) Ground time - Time spent on the ground including waiting and transfer times at airports.
- (vi) Seats - Number of available seats in the flight.
- (vii) Distance - Flight distance in miles.
- (viii) Frequency - Number of flights between the origin and destination during the considered time interval.
- (ix) Aircraft type - The name and model of aircraft that was flown between the origin and destination airports.

### **Tracing the History of OAG**

The forerunner of the "OAG" began in 1929 as The Official Airline Guide with 24 pages of airline schedules. Since those early days, we've experience quite a few changes. A Washington, D.C. firm, American Aviation Publications, bought and merged The Official Guide of the Airways with their own Universal Airline Schedule to form the Official Airline



Guide. The guide made its first appearance under the new name in September of 1948. In 1962, the publications, North American Edition, International Edition, Travel Planer and Air Travel Magazine, were purchased from American Aviation Publication by R.H. Donnelley (RHD), a subsidiary of the Dun & Bradstreet Corp., and our company became know as the Transpiration Guides and Service Division of RHD.

During a re-organization of the D&B corporate structure in 1979, OAG officially became a separate company of D&B as Official Airline Guides, Inc. While still part of RHD, OAG moved in 1969 from the original offices in downtown Chicago to Oak Brook, Illinois, where our Transportation Guides Division is now based. In 1972, the magazine publishing portion of our business became a separate division, Travel Magazines, and its main office was established in New York City. The company has offices in Washington, D.C., Los Angeles, San Francisco, Chicago, and London. When OAG moved to Oak Brook in 1969, there were approximately 200 people in the entire company. Today, our two divisions employ more than a thousand people in management, sales and marketing, operations, research, magazine reporting, editorial support, data processing and administrative services.

The business is underpinned by its data management expertise. OAG holds a breadth of aviation, cargo and travel related content and is best known for its airline schedules database. This feeds the world's global distribution systems and travel portals, and drives the internal systems of many airlines, air traffic control systems, aircraft manufacturers, airport planners and government agencies. Every ten seconds a flight is updated on the OAG system. OAG publishes the Official Airline Guide and a variety of airline schedule databases and provides airline data to the CRSs and airlines, including customized timetables and market analysis of flight schedules and related data.

OAG is organized into three customer-facing channels: OAG Aviation, OAG Cargo and OAG Travel.

#### (a) **OAG Aviation**

It offers airline schedules distribution; real time flight status information; timetables; code share synchronization and flight connection marketing. OAG utilizes its databases to provide market intelligence on aircraft fleets, capacity supply, traffic demand, financial and operating performance, and MRO (maintenance, repair & overhaul) forecasting. Its customers include airlines, airports, travel distributors, aircraft manufacturers, financial institutions, government agencies and aviation service providers.

## **(b) OAG Cargo**

OAG Cargo delivers decision support tools that can be integrated into an organization's workflow to optimize the planning of shipments by air. It sells stuff for routing and shipment planning; dangerous goods regulations and compliance information; real-time access to air freight rates and schedule data; operational announcement services; cargo tracking and analysis solutions and multi-media cargo schedule products. Its customers include freight forwarders, airlines and logistics providers.

## **(c) OAG for the Traveller**

OAG for the Traveller provides comprehensive and unbiased online, mobile and print planning tools for travel arrangers and travellers. Whether you're an on-line travel agent, looking to gain competitive advantage by selling new routes as soon as the flight schedules become available, a network planner requiring in-depth route analysis and airline route maps or a start-up company looking for "pay as you go" flight status data - OAG has the solution for you. Whether you are looking for aviation data for your products, flight schedules or flight status information to run your systems or real-time distribution to your sales channels, OAG has the right solution for every business.

Thus, OAG has served Airlines, Airports, Travellers and the wider Aviation Industry for over 70 years setting the benchmark for the collection and distribution of the most comprehensive and accurate flight information. We bring a combination of schedules expertise, innovative technology, publishing expertise and industry knowledge which is unrivalled in our market. Airlines vary enormously from major global carriers to regional and commuter operators. And every Airline has its own individual needs and priorities.

This guide outlines the services OAG can offer to support the different functions and teams within airlines; Passenger and Cargo Operations; Distribution; Network Planning; Alliance and Airline Partnerships; Passenger Services and Marketing and Promotion. In today's competitive climate, having effective code share agreements are critical to extend your airline's reach and capture incremental revenue. OAG's understanding of shared operations is second to none and we have a number of services that can help ensure your passengers receive accurate and consistent flight information, no matter which partner airline they choose to fly. This aggregated data feeds the world's global distribution systems and travel portals, and drives the internal systems of many airlines, air traffic control systems, aircraft manufacturers, airport planners and government agencies around the world.





For many years in India, air travel was perceived to be a luxury. In recent years however, the market has undergone rapid growth and aviation is now viewed in a different light, as an essential link not only for international travel and trade but also for an increasing VFR market as the population grows.

India's aviation industry is expanding rapidly but the growth has its limits, where airlines contend with insufficient infrastructure and challenging political bureaucracy. It is estimated that in the next decade, India will need three times the number of airports that it has today.

### Indian Top 10 Domestic Carriers

Indian Top 10 domestic carriers by capacity (to/from)		Source: OAG Schedules iNet
Carrier	Scheduled capacity 2011	Aircraft in service 2011
<b>Jet Airways India Ltd</b>	<b>18,854,143</b>	<b>92</b>
Air India	16,502,264	34
IndiGo	16,323,480	44
Kingfisher Airlines	13,927,206	63
SpiceJet	13,000,176	34
Kingfisher Red Service	7,658,413	3
Jetliner	6,238,531	19
Go Air	4,854,432	10
Indian Airlines	2,083,302	84
Air India Express	2,075,791	21

### Middle East top 10 International Carriers

Middle East Top 10 international carriers by capacity (to/from)		Source: OAG Schedules iNet
Carrier	Scheduled capacity 2011	Aircraft in service 2011
Turkish Airlines	33,227,912	154
Emirates Airlines	22,521,212	156
Saudi Arabian Airlines	21,001,427	134
Qatar Airways	13,744,363	99
El Al Airlines	2,621,367	44
Etihad Airways	7,399,040	59
Gulf Air	5,441,356	35
Iran Air	5,088,289	50
Flydubai	4,647,888	17
Iran Asseman Airlines	4,522,933	39

Source: OAG Schedules iNet and Fleet iNet

### Three Letter City and Airport Code

In aviation's early days, airlines simply used the local weather station's two letter code combinations. In the 1930s, the rapid boom of the aviation industry taxed the two letter code designators prompting existing airports to add a third letter (most commonly the letter X) to expand the pool of airport designators. At present, a lot of two and three letter codes are used in the travel industry. Airports, cities, airlines, car companies, and hotels are identified by a two or three letter code. In this section, we would familiarize with city and airport codes. A volume of traffic and flights are monitored by Traffic Controllers every day. Tons of cargo and baggage are tagged and carried by baggage handler's day in and day out. In addition to maintaining this data, there are millions of flight data processed by pilots, travel and airline agents daily. It therefore makes the use of codes convenient and efficient. For example, truncating Detroit Metropolitan Wayne County Airport or Detroit to DTW. There are three different ways that city / airport codes can be derived:

The first 3 letters of the city

3 letters taken from the city and/or state

3 letters partially derived from the city name or the airport name.

Every airline in the world has a unique two letter code (some are one letter and one number) assigned by the International Air Transport Association (IATA) to identify its flights, tickets and other commercial documents. Many airlines have now entered into agreements whereby they share these codes, and usually coordinate their schedules as well. The result is that each airline can offer its passengers more destinations, and a more convenient routing to those destinations, than would be possible for either one of them alone. The motive, of course, is to control that traffic by keeping it within the joint system and avoid losing passengers that are going to points outside the route network of one or the other of the partners. In airline geography, all countries cities and airports have been given three letters ISO code by IATA. Table gives examples of city codes

### Cities / Countries and their Codes

City	Country Code
Bombay	BOM
Delhi	DEL
Frankfurt	FRA
Hong Kong	HKG
India	IND
London	LON
Madrid	MAD
Mexico City	MEX
Rome	ROM
Sydney	SYD
Tokyo	TYO
Toronto	YYZ

The airline code number forms the first three digits of the document number shown on the passenger ticket and excess baggage ticket. Some major international carrier and Airline codes are given in the following table.

### Carrier And Airline Codes

Carrier Code	Names Of Airlines	Airline Code
Af	Air France	057
Ai	Air India Ltd	098
Ba	British Airways	125

Cx	Cathy Pacific Airways	160
Jl	Japan Airways	131
Nz	Air New Zealand	086
Os	Austrian Airlines	257
Sr	Swiss Air	085

IATA airline designators, sometimes called IATA reservation codes, are two-character codes assigned by the International Air Transport Association (IATA) to the world's airlines in accordance with the provisions of IATA Resolution 762. They form the first two characters of the flight number. Designators are used to identify an airline for all commercial purposes, including reservations, timetables, tickets, tariffs, air waybills, and in airline interline telecommunications. There are three types of designator: unique, alpha/numeric, and controlled duplicate. IATA maintains two policies to deal with the limited number of available codes:

1. After an airline is de-listed, the code becomes available for reuse after six months;
2. IATA issues "controlled duplicates".

Controlled duplicates are issued to regional airlines whose destinations are not likely to overlap, in such a way that the same code would be shared by two different airlines.

### City & Airport Codes examples

Each city with an airport has a 3-letter IATA code that is used in reservation messages, fares and ticketing. Often, the first three letters of the city name are used, e.g. ATH is ATHENS; SIN is Singapore; DEN is DENVER

Some codes are instantly recognisable, even when the first three letters are not used. E.g. NBO is NAIROBI, HKG is HONG KONG some codes is difficult to remember, in particular the Canadian city codes. E.g. (All Canadian city codes start with a Y) YMQ is MONTREAL, YEA is EDMONTON

The ICAO airline designator is a code assigned by the International Civil Aviation Organization to aircraft operating agencies, aeronautical authorities, and services. The codes are unique by airline which is not true for the IATA airline designator codes. Each aircraft operating agency, aeronautical authority, and services related to international aviation is allocated both a three-letter designator and a telephony designator. The designators are listed in ICAO Document 8585: *Designators for Aircraft Operating Agencies, Aeronautical*

### *Authorities and Services.*

An example is:

Three-letter designator – AAL

Telephony designator – AMERICAN

Operator – American Airlines

Certain combinations of letters are not allocated to avoid confusion with other systems (for example SOS). Other designators (particularly those starting with Y and Z) are reserved for government organizations.

Designator YYY is used for operators that do not have a code allocated.

For example code, city, Airport and corresponding country name listed hereunder. More you see in annexure –A at the end of this unit.

<b>Code</b>	<b>City</b>	<b>Airport</b>	<b>Country</b>
SAA	Saratoga, WY	Shively	USA
SAB	Saba Island	J. Yrausquin	Netherlands Antilles
SAC	Sacramento, CA	Executive	USA
SAD	Safford, AZ	Safford	USA
SAE	Sangir	Sangir	Indonesia
SAF	Santa Fe, NM	Santa Fe	USA
SAG	Sagwon, AK	Sagwon	USA
SAH	Sana'a	Sana'a International	Yemen
SAI	San Marino	San Marino	San Marino
SAJ	Sirajganj	Sirajganj	Bangladesh
SAK	Saudarkrokur	Saudarkrokur	Iceland
SAL	San Salvador	Comalapa International	El Salvador

### **A List of Civil and Defence Airport Codes of India: Major City Codes**

All the major airports have a unique three letter airport code to identify them. An old airline system, it is used for a variety of purposes. Airline personnel are able to read tickets with the abbreviated code at a glance much easier than they would if the full airport and city name were listed. This allows them to keep the line moving quickly. Baggage handlers too

can quickly identify where a checked bags needs to be, based on the bag tag information. It's all about getting you and your luggage to the same destination at the same time, as quickly as possible.

1. Mumbai Chattrapathi Shivaji International Airport [ Code BOM ]
2. Bangalore Bengaluru International Airport [ Code BLR ]
3. Hyderabad Rajiv Gandhi International Airport [ Code HYD ]
4. Chennai Meenambarkkam International Airport [ Code MAA ]
5. Kolkata Netaji Subhash Chandra Bose International Airport [ Code CCU ]
6. New Delhi Indira Gandhi International Airport [ Code DEL ]

### A List of Civil and Defence Airport Codes of India

City	State/Region	Airport	Airport Code
Agartala	Tripura	Agartala Singerbhil	IXA
Agra	Uttar Pradesh	Agra Airport	AGR
Ahmedabad	Gujarat	Ahmedabad Airport	AMD
Allahabad	Uttar Pradesh	Allahabad Bamrauli	IXD
Amritsar	Punjab	Amritsar Raja Sansi Airport	ATQ
Aurangabad	Maharashtra	Chikalthan	IXU
Bagdogra	Sikkim	Bagdogra Airport	IXB
Bangalore	Karnataka	Bangalore Airport	BLR
Bhavnagar	Gujarat	Bhavnagar Civil Airport	BHU
Bhopal	Madhya Pradesh	Bhopal Airport	BHO
Bhubaneswar	Orissa	Bhubaneswar Airport	BBI
Bhuj	Gujarat	Bhuj Rudra Mata Airport	BHJ
Calcutta (Kolkata)	West Bengal	Netaji S C Bose International Airport	CCU
Chandigarh	Chandigarh	Chandigarh Airport	IXC
Chennai(Madras)	Tamil Nadu	Menmbarkam Airport	MAA
Cochin	Kerala	Cochin Airport	COK
Coimbatore	Coimbatore	Coimbatore Peelamedu Airport	CJB
Daman	Daman	Daman Airport	NMB
Dehradun	Uttar Pradesh	Dehradun Grant Airport	DED

Dibrugarh	Assam	Dibrugarh Airport	DIB
Dimapur	Nagaland	Dimapur Airport	DMU
Diu	Daman and Diu	Diu Airport	DIU
Gauhati	Assam	Gauhati Borjhar	GAU
Goa	Goa	Dabolim Airport	GOI
Gwalior	Madhya Pradesh	Gwalior Airport	GWL
Hubli	Karnataka	Hubli Airport	HBX
Hyderabad	Andhra Pradesh	Begumpet Airport	HYD
Imphal	Manipur	Imphal Municipal Airport	IMF
Indore	Madhya Pradesh	Indore Airport	IDR
Jaipur	Rajasthan	Jaipur Airport	JAI
Jammu	Jammu & Kashmir	Jammu Airport	IXJ
Jamnagar	Gujarat	Govardhanp Airport	JGA
Jamshedpur	Jharkhand	Jamshedpur Sonari Airport	IXW
Jodhpur	Rajasthan	Jodhpur Airport	JDH
Jorhat	Assam	Rowriah Airport	JRH
Kanpur	Utter Pradesh	Kanpur Airport	KNU
Khajuraho	Madhya Pradesh	Khajuraho Airport	HJR
Kozhikode (Calicut)	Kerala	Kozhikode (Calicut) Airport	CCJ
Leh	Jammu & Kashmir	Leh Airport	IXL
Lucknow	Utter Pradesh	Amausi Airport	LKO
Ludhiana	Punjab	Ludhiana Sahnewal	LUH
Madurai	Tamil Nadu	Madurai Airport	IXM
Mangalore	Karnataka	Mangalore Bajpe Airport	IXE
Mumbai (Bombay)	Maharashtra	C S M International Airport	BOM
Nagpur	Maharashtra	Sonegaon Airport	NAG
Nanded	Maharashtra	Nanded Airport	NDC
Nasik	Maharashtra	Gandhi Nagar Airport	ISK
New Delhi	Delhi	Indira Gandhi International Airport	DEL
Patna	Bihar	Patna Airport	PAT
Pondicherry	Union Territory (UT)	Pondicherry Airport	PNY
Poona (Pune)	Maharashtra	Lohegaon Airport	PNQ



Porbandar	Gujarat	Porbandar Airport	PBD
Port Blair	Andaman and Nicobar Islands	Port Blair Airport	IXZ
Puttaparthi	Andhra Pradesh	Puttaparthi Airport	PUT
Rae Bareli	Uttar Pradesh	Rae Bareli Airport	BEK
Rajkot	Gujarat	Rajkot Airport	RAJ
Ranchi	Jharkhand	Ranchi Airport	IXR
Shillong	Meghalaya	Shillong Barapani Airport	SHL
Silchar	Mizoram	Kumbirgram Airport	IXS
Srinagar	J & K	Srinagar Airport	SXR
Surat	Gujrat	Surat Airport	STV
Tezpur	Assam	Tezpur Airport	TEZ
Tiruchirapally	Tamil Nadu	Tiruchirapalli Airport	TRZ
Tirupati	Andhra Pradesh	Tirupati Airport	TIR
Trivandrum	Kerala	Trivandrum International Airport	TRV
Udaipur	Rajasthan	Udaipur Airport	UDR
Vadodara	Gujarat	Vadodara Airport	BDQ
Varanasi	Utter Pradesh	Babatpur Airport	VNS
Vijayawada	Andhra Pradesh	Vijayawada Airport	VGA
Vishakhapatnam	Andhra Pradesh	Vishakhapatnam Airport	VTZ

### Minimum Connecting Time

There is no single definition of air transport “connectivity”. However, connectivity is a property of a network and can be defined in such a way as to constitute an indicator of the network’s concentration. Therefore, connectivity is the ability of a network to move a passenger from one point to another with the lowest possible number of connections and without an increase in fare, focusing on, from a commercial perspective, minimum connecting times with maximum facilitation ultimately resulting in benefits to air transport users. It can be defined as “The amount of time, agreed in advance between airlines and airport authorities, that is considered sufficient for a passenger to make a connection between an arriving flight and a departing flight” The legally defined minimum time necessary to change planes at a given airport. The airlines serving a particular airport determine this specific standard period required to make a connecting flight. This broad definition of air transport connectivity illustrates that there are several factors which enable connectivity, from availability of air transport services and airline practices, to security and facilitation procedures

A Minimum Connecting time (MCT) interval is defined as the shortest time interval required in order to transfer a passenger and his luggage from one flight to a connecting flight, in a specific location or metropolitan area. In a cargo context, the MCT can be defined as the shortest time interval required in order transferring cargo shipment from one flight to a connecting flight. MCT intervals are also referred to as 'official' or 'standard' MCTs. Bilateral MCT agreements, and online connecting time intervals established by a carrier that differ from the industry MCTs, are known as 'MCT exceptions'. MCTs must be observed by all ticketing and reservations outlets all over the world and also are used as input for automated reservations systems.

Minimum connecting time is the standard time period required to make a connecting flight in a particular airport, determined by the airlines serving it. Every commercial airport in the world has what's known as a **minimum connection time (MCT)**. MCT is the amount of time the airport has determined is the absolute least amount of time an able bodied person needs to make a connection to a continuing flight. The time period is chosen bearing in mind variables like airport layout, security and whether the connection is between combinations of international and domestic flights. Most online booking engines and airline websites will not offer flights with layovers that break the minimum connection time rule. When booking a series of one-way flights on your own, however, it *is* possible to arrange a connection that does not meet this requirement. If you miss a flight with a connection that does not meet the MCT, airlines will generally *not* offer assistance such as a free seat on the next flight or pay restitution, monetarily or otherwise. In other words, if the tickets you put together don't meet the MCT and you miss your continuing flight, you're on your own to get to your final destination.

Simply, minimum connection time (MCT) is the time allowed for a passenger to change from one aircraft to another on a connecting flight. It is decided by the International Air Transport Association and most airports take no responsibility for the accuracy of this information. It is only applicable for people who have booked a connecting flight and have checked their luggage all the way through to their final destination. The word allowed in the definition above is not necessarily the time it will take you to disembark, collect your luggage, make a quick bathroom stop, pass through security and get to the boarding gate – it is the shortest time needed to connect to your second flight.

For example: The minimum connecting times apply only when all flights have been issued on the same ticket. In case you have flights on separate tickets, you need to reserve a significantly longer time for transfer.

Transfer times at Helsinki Airport listed below are relatively short compared to other major European airports. Connecting times for other airlines and destinations may vary.

Minimum Connecting Times Between Flights at Helsinki Airport	
Flights within Finland	25–35 minutes
Flights within the Schengen area	35 minutes
Flights from a Schengen area to a non-Schengen area	40 minutes
Leisure flight to any other flight	75 minutes

On leisure flights, your baggage will be checked through to your final destination when the connecting time between flights is at least 75 minutes. At Helsinki Airport, passengers can contact Finnair Transfer Services, where they will be checked in for connecting flights within Finland.

If we see the airline practices some of them are: Network carriers generally offer scheduled flights to major domestic and international cities while also serving smaller cities; the carriers normally concentrate most of the operations in a limited number of hub cities, serving most other destinations in the network by providing one-stop or connecting service through the hubs. An efficient utilization of the hub allows airlines to offer better connectivity. The “hub and spoke” model is a system which enhances efficiency in transportation by greatly simplifying a network of routes. Many airlines supplement the “hub and spoke” model with code shares, partner flights, or a small commuter airline. It should be noted that the way in which airlines price tickets can also impact connectivity, notably in the case of transit by flight stage; if a trip is sold by flight stage as opposed to origin to destination (i.e. two tickets rather than one ticket), there can be significant increases in transit times, hence a loss of connectivity.

## Global Indicators

The global indicator is shown in the fare rule display and the specific airline fares display. The indicator shows the direction of travel between the origin and destination. For instance, a fare can be published from San Francisco to Singapore with a global indicator of PA, for travel via the Pacific. A fare from Atlanta to Paris can have a global indicator of AT to specify travel via the Atlantic. The global indicator can be defined as:

**“a code that appears next to the fare and tells what route travel must take”**

Most fares have a single global indicator; however, multiple global indicators do exist. It helps to understand worldwide features across airline routes:

Major international routes across the three IATA areas and their sub-areas

Global features (continents, hemispheres, significance of lines of latitude and longitude, time zones, oceans)

Global indicators, e.g. Routing and impact on mileage and fare, potential stopovers

Political features on maps (boundaries, countries, capital cities, hubs and major airports)

Physical features on maps (mountain ranges, deserts, tundra, ice caps, major forests, seas, rivers, lakes)

You will find that there are seven global indicators and these are used in the airline industry to help mark which areas the baggage has come from. The 7 global indicators are as follows:-

1. Atlantic Route (AT)-This indicator is used when a journey has been made from an IATA area 1 and 2 and came via the Atlantic Ocean.
2. Atlantic and Pacific Route (AP)-This covers any journeys that are made from an IATA area 2 and 3 and came via the Atlantic and Pacific Ocean.
3. Eastern Hemisphere (EH) -This covers any journeys that are made from an IATA area within 2 and 3 or between 2 and 3.
4. Western Hemisphere (WH) -This covers any journeys that are made from an IATA in area 1.
5. Trans Siberian Route (TS)-This covers any journeys that are made from Europe to the Far East via Moscow.
6. Pacific Route (PA)-This covers any journeys that are made from an IATA area 1 and 3 and came via the Pacific Ocean.
7. Polar Route (PO)-This covers any journeys that are made from Europe to the Far East via Alaska.

This coding can be very useful for airports when sorting tickets and baggage and certainly for tracking any lost items.

## Familiarisation With Air Tariff

It is necessary for a travel agent to use several airlines to complete a trip. It is essential for him to know the geographical region and major route structure because no airline services every city. Airlines and travel agencies should have a complete set of all tariffs with latest revisions at all offices. India doesn't have very long history of airline regulations before 1952- 53, when the Air India and Indian Airlines Act were passed. The Civil Aviation Authority established that airlines should be regulated, passengers should be charged reasonably and their handling should be safe and uniform.

Each airline has to convince the Civil Aviation Authority that it is capable of performing the transportation and provide services convenient to public, to get the certificate from Authority. There is a tariff structure or guidelines to establish passenger rules and fares. Once a fare is approved between two cities that becomes the only legal fare the airline can charge. Airlines and travel agencies must have complete copy of all tariffs at all offices where air tickets are being sold. Also it is essential to review and revise them promptly. The different fare can be seen below:

1. *Normal fare tickets* which are usually refundable, re-routable and have no expiry dates. Travel agents earn commissions from airlines through the sale of these tickets. The commission rates given to the ticketing consolidators are more favourable when compared with those given to IATA agents
2. *Special fare tickets* which have a number of restrictions in terms of routes or expiry dates. The airline has set a price and the ticketing consolidator marks up the price for sale to customers.
3. *Group tickets* allocated to ticketing consolidators in particular during peak seasons as an incentive to them. *Group tickets* with specified seats for the ticketing consolidators' ordinary use when operating tours. During peak seasons, the airlines may allocate a slot of group tickets to the consolidators for incentive purpose.

To attract more passengers airlines are offering cheaper promotional fares such as Excursion Fares and Group fares:

1. **Excursion Fares:** These are provided to the tourists on the basis of round trip journey and have conditions of minimum and maximum stay, restricted to one airline, cancellation fees, weekend travel purchase and so on. Some excursions also give seven day to twenty-day advance purchase requirements. These fares are discounted by twenty to forty per cent below the normal economy fare. The passenger must

spend at least 10 days in the country where he is going. Such restriction is applied to discourage the business executives from using cheap excursion fares.

2. Group Fares: Group fares are applicable to groups and are discounted by 20 to 40 percent. There are three types of group fares: -
  - (i) Group Inclusive Tour (GIT) Fare-Such fares are designed for group travel subject to certain conditions. GIT 4 fare requires at least four passengers to travel together.
  - (ii) Incentive Tour Fare: A special fare designed for incentive groups where one organization pays for the entire trip.
  - (iii) Affinity Group Fare: This fare is used when a corporation or an organization pays for its employees or members to travel to a meeting, a convention or a conference. The airlines have two basic types of services- scheduled and chartered services. While the scheduled services operate as per timetable, chartered services operate like taxi services. Chartered flights are able to offer cheaper fares because they carry fully loaded flights both ways.

Aviation achievements are impressive and even more remarkable considering the brief time span involved. On the operational side, Indian Airlines (Government owned) and some other private airlines like Spice jet, Jet airway, Kingfisher, Air Deccan and so on are providing domestic services. Air India provides international air services.

### Airline Prices

Pricing-refers to the process of determining fare levels, combined with various service amenities and restrictions, for a set of fare products in an origin destination market. Revenue Management is the subsequent process of determining how many seats to make available at each fare level. Regulated Pricing the Civil Aeronautics Board (CAB) used a mileage based formula to ensure equal prices for equal distances. It is possible that low volume OD markets are more costly to serve per passenger basis will see higher prices than high-density OD markets, even if similar distances are involved. In practice, most airline pricing strategies reflect a mix of these theoretical principles for determining prices to charge in an OD market, airlines can utilize one of following economic principles:

1. Cost based pricing
2. Demand based pricing
3. Service based pricing

## Price Discrimination Vs Product Differentiation

Price discrimination: The practice of charging different prices for same product with same costs of production

–Based solely on different consumers' "willingness to pay".

### Product Differentiation

–Charging different prices for products with different characteristics and costs of production. Current airline fare structures reflect both strategies: Differential Pricing based on differentiated fare products. But higher prices for fare products targeted at business travellers are clearly based on their willingness to pay

## Factors Affecting the Price

### Type of Journey

1. One way
2. Round trip
3. Circle trip
4. Open jaw

### Type of Flight

1. Non-stop
2. Direct
3. Interline connect
4. Online connection
5. Stopover.

## Different Types of Trips

A trip is an entire flight itinerary and all of the flights in that itinerary. A segment, or leg, is a portion of a journey between two consecutive stops. One itinerary can have many segments, or it can have only one.



Let's take a look at the different types of trips.

1. **One-Way Trip** – A trip that begins in one city and ends in another.

MIA → TPA

### Basic fare construction

One way – steps and application

1. FCP – Establish the fare construction point or Fare break points
2. NUC – Take the OW Neutral unit of construction from the origin to the destination of the fare component using the correct Global Indicator ( Check the fare rules and ensure that the itinerary satisfies all conditions, collect stopover/transfer charges-if any )
3. SR – Check out if the fare component qualifies as a specified routing. If it is. Ignore the mileage system and take the NUC as the applicable Fare ( AF)
4. MPM – Establish the maximum permitted Mileage between the fare construction points of the fare component following the same global Indicator as that used in the NUC (refer PAT – Passenger Air Tarrif)
5. TPM – Add up the Ticketed Point Mileage of each sector and compare the total TPM to the MPM (refer PAT – Passenger Air Tarrif )
6. EMA – Deduct the extra Mileage Allowance, if any from the total TPM (refer PAT – Passenger Air Tarrif )
7. EMS – if the EMA is insufficient or not applicable, determine the Excess Mileage Surcharge (%) by dividing the TPM by the MPM. Take the result up to 5 decimals (refer PAT – Passenger Air Tarrif )
8. HIP – Look for the Higher Intermediate Point fare from –
  - a. Unit origin to intermediate stopover point
  - b. Intermediate stopover point to another
  - c. Intermediate stopover point to the unit destination

(Check the rules to ensure that the fare qualifies as an HIP, do not collect any additional stopover/transfer charges)

Get the applicable one way (OW) through fare in NUC using above steps.

9. BHC – Apply the Backhaul check when there is a fare from unit origin to intermediate stopover point is higher than the fare from unit origin to unit destination.

- a. Calculation:

HI fare – unit of origin to intermediate stopover point

Less (-) LO fare – unit origin to unit destination

Equal (=) OWM – OW minimum fare

(Check the rules to ensure that the fare qualifies as an HI fare)

10. Stop over/transfer charge(S) – collect stopover/transfer charge. Select the charge published in the currency of the country of fare component origin. Convert this into NUC at applicable IROE.

11. Surcharges (Q) – Collect security surcharges, if any. Convert into NUC at applicable IROE.

12. Total – add up all the NUC's to get the sum total.

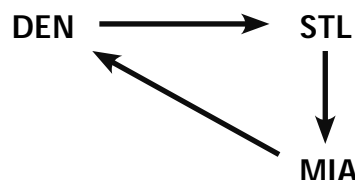
13. IROE – Multiply the total NUC by the IATA Rate of Exchange based on the country of commencement of travel.

14. LCF – Round the resulting Local currency Fare ( refer the required number of decimal units for the currency)

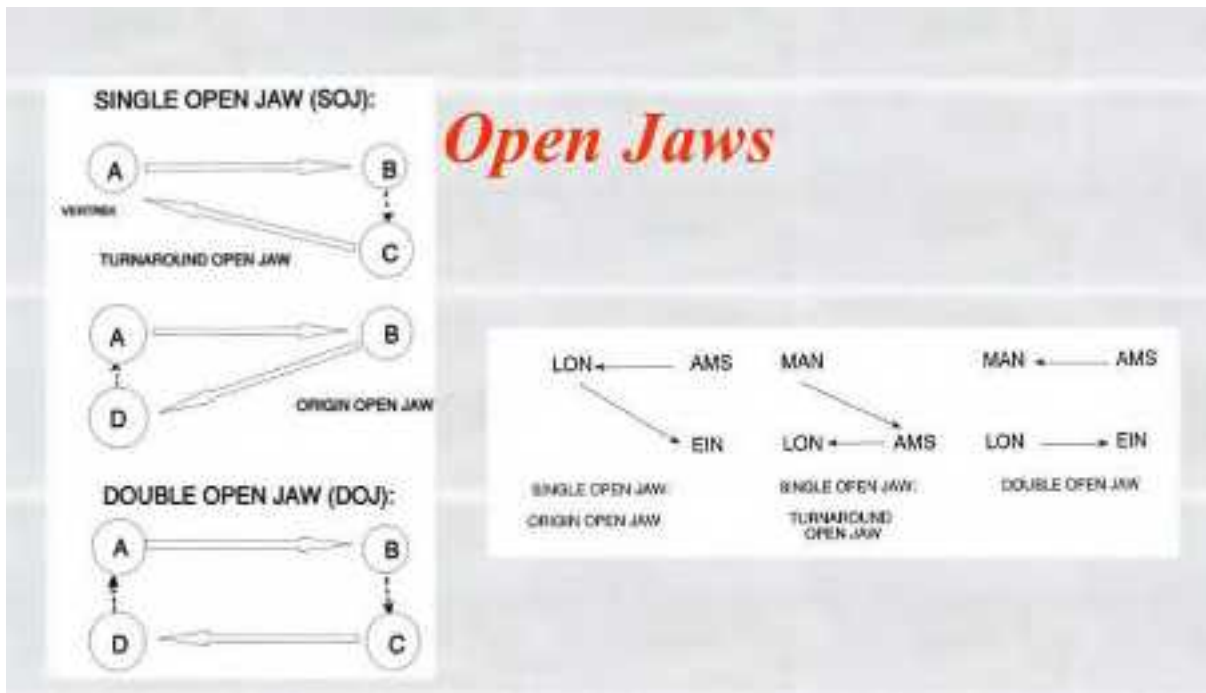
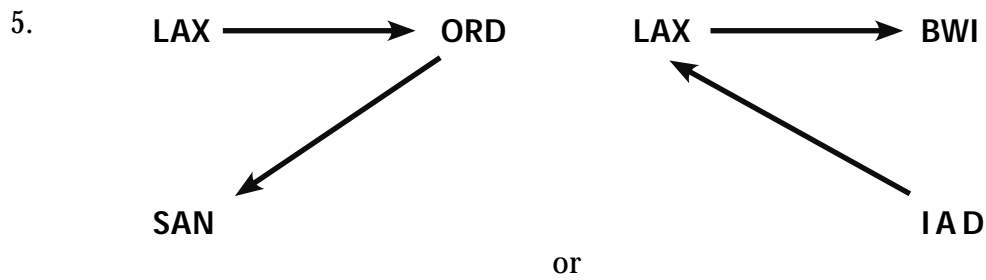
2. **Round Trip** – A trip that begins and ends in the same city. Technically, when the term is used for faring purposes, the return trip must be a mirror image of the outbound trip, with same airline, same routing, and same class of service.



3. **Circle Trip** – A trip that involves at least three different flights, and returns to the point of origin.



4. **Open Jaw Trip** – A circle trip with a leg missing. The passenger returns to a different city (other than the origin), or departs from a city that was not one of their destinations.



A fare basis code or FBC, very simply, is the combination of the booking code, which is the first letter of the FBC, and the applicable fare elements. Common booking codes used by airlines are as follows:

F, P, A: First Class

J, C, D: Business Class

Y, B, M, K, Q, V, H, T, W, S: Economy/ Premium Economy

The subsequent letters in the FBC, define the rules that will accompany the fare. They include the rules for change and cancellation, minimum stay, high season, low season, weekend fares and so on.

**Penalties:**

**From:** Montreal, QC (YUL - Trudeau)

**To:** Lisbon, (LIS - Lisboa)

**Fare Basis Code:** YWFFEO

FCL: YWFFEO TRF: 864 RULE: ACFR BK: Y

PTC: ADT-ADULT FTC: EU -ECONOMY UNRESTRICTED

PE.PENALTIES

BASE FARE

CANCELLATIONS

ANY TIME

CANCELLATIONS PERMITTED.

CHANGES

BEFORE DEPARTURE

CHANGES PERMITTED.

NOTE -

BEFORE DEPARTURE OF JOURNEY - FOR O/B CHANGE  
THE NEW BASE FARE AMOUNT MUST BE

RECALCULATED USING CURRENT AND APPLICABLE FARES IN  
EFFECT AT THE DATE OF ISSUANCE. CHARGE DIFFERENCE  
IN FARE.

-----  
BEFORE DEPARTURE OF JOURNEY - FOR I/B CHANGE  
THE NEW BASE FARE AMOUNT MUST BE RECALCULATED  
USING HISTORICAL AND APPLICABLE FARES IN EFFECT  
AT THE ORIGINAL TICKET DATE. CHARGE DIFFERENCE  
IN FARE.

-----  
IN THE EVENT OF A DOMESTIC/TRANSBORDER AND  
INTERNATIONAL AC FARE COMBINATION - INTERNATIONAL  
RULE PROVISION FOR CHANGE AND CANCELLATION WILL  
APPLY.

-----  
PAX HOLDING CONFIRMED RESERVATION AND TICKETS ON  
AC OPERATED FLIGHTS ONLY MAY CONFIRM EARLIER/LATER  
SAME DAY FLIGHTS BETWEEN THE SAME ORIGIN/DEST./STP  
POINTS FOR FREE OF CHARGE.

-SEAT INVENTORY MUST BE AVAIL. IN THE CABIN APPLIC  
TO THE FARE CHARGED

## Different Types of Flights of Breaks

Let's take a look at the different types of flights.

1. **Non-Stop Flight** – A flight that makes no stops

IAH → MIA

2. **Direct Flight** – A flight that makes a stop en route, but continues on to the destination without a change in planes (equipment). For example, DL293 flies from Atlanta to

Los Angeles. This flight makes a stop in Dallas before continuing on to Los Angeles. Passengers do not have to get off the plane in Dallas to get to their destination.

ATL → LAX

3. **Connection Flight** – A flight that hooks up to another flight to get the passenger to his / her destination. A domestic connection is 4 hours or less between two flights and an international connection is 24 hours or less. On a ticket, or in a PNR, an X by the city code indicates a connecting flight. For example, a customer wants to go from Atlanta to Honolulu on American Airlines. AA does not have one non-stop flight that will take the customer directly from Atlanta to Honolulu, so they have to use 2 flights to get the customer to his / her destination.

ATL → DFW → HNL

A connection flight where the passenger stays on the same airline is considered an **on-line connection flight**. When more than one airline is used between the origin and destination cities, the connection flight is considered an **off-line** or **inter-line connection flight**.

4. **Stopover** – A voluntary break in travel that is 4 hours or more for domestic flights and 24 hours or more for international flights. It is a stop at an intermediate point before continuing on to another destination. In a PNR or on a ticket, an O next to the airport code indicates a stopover. If the stopover is overnight, it is usually called a Layover.

MCI → MSY → JFK

O

5. **Layover** – A stop on a trip, usually overnight and usually associated with a change of planes or other transportation.

Basic fare construction

One way – steps and application

EMS – Excess mileage surcharge (%)

If the result is over	Up to and including	The fare shall be not less than the direct route fare plus		
1.00,000	1.05,000	05%	5M	X 1.05
1.05,000	1.10,000	10%	10M	X 1.10
1.10,000	1.15,000	15%	15M	X 1.15
1.15,000	1.20,000	20%	20M	X 1.20
1.20,000	1.25,000	25%	25M	X 1.25
	Over 1.25,000	Use highest combination (25M)		

### Construction Steps-OW

Type of Journey-OW,RT,CT,RW

GI- Global Indicator (EH, PA, AT...)

FCP-Fare Construction Point

NUC-Neutral Unit Construction

SR-Specific Routing

MPM-Maximum Permitted Mileage

TPM-Ticketed Point Mileage

EMA-Extra Mileage Allowance

EMS-Excess Mileage Surcharge

HIP-Higher Intermediate Point

BHC-Backhaul Minimum Check

LCF-Local Currency Fare = NUC \* ROE

### Standard Calculation-Ex (1)

ITIN: TPE/FRA/PAR/LON

Type of Journey-OW

GI-Global Indicator: EH

FBP-Fare Break Point

NUC-Neutral Unit Construction

**ITIN1-Steps**

DF-TPELON OW Y (1709.69)

SR-NIL

MPM-8791

TPM-6593

EMA-NIL

EMS-NIL

HIP-TPELON 1709.69

LCF-1709.69\*34.45700=TWD59811

**Standard Calculation-Ex (2)**

ITIN: TPE/HKGx/FRA/MUCx/FRA/BKK

Type of Journey-OW

GI-Global Indicator: EH

FBP-Fare Break Point: MUC

NUC-Neutral Unit Construction

**ITIN2-Steps**

DF1-TPEMUC OW Y (1627.27)

SR-NIL

MPM-8125

TPM-6384

EMA-NIL

EMS-NIL

HIP-HKGMUC 1811.66

**ITIN2-Steps**

DF2-MUCBKK OW Y (1946.55)

SR-NIL

MPM-7034



TPM-5761

EMA-NIL

EMS-NIL

HIP-MUCBKK 1946.55

LCF =  $(1811.66 + 1946.55) * 34.45700$

=TWD129497

### **OW Minimum Fare-Ex (1)**

ITIN: TPEx/FRA/LON/PAR

Type of Journey-OW

GI-Global Indicator: EH

FBP-Fare Break Point

NUC-Neutral Unit Construction

### **Why Differential Pricing?**

It allows the airline to increase total flight revenues with little impact on total operating costs:

Incremental revenue generated by discount fare passengers who otherwise would not fly

Incremental revenue from high fare passengers willing to pay more

Studies have shown that most “traditional” high cost airlines could not cover total operating costs by offering a single fare level. Consumers can also benefit from differential pricing:

Most notably, discount passengers who otherwise would not fly

It is also conceivable that high fare passengers pay less and/or enjoy more frequency given the presence of low fare passengers

If airline could charge a different price for each customer based on their WTP, its revenues would be close to the theoretical maximum.

**Promotional ad from Indian Airlines**

Air India introduces daily non-stop flights between Delhi and Singapore on the latest Dream liner aircraft.

Flight No	Departure	Arrival
AI380	Delhi 0005 hrs	Singapore 0800 hrs
AI 381	Singapore 0915 hrs	Delhi 1230 hrs

Avail of introductory discount offers on the flights from India to Singapore, operating via Delhi to Singapore.

Special discounts available on tickets booked through [www.airindia.in](http://www.airindia.in).

The offer is valid for sale with immediate effect till 4th April 14 and for travel from 20th March till 30th April 14.

Source: <http://www.airindia.com/fly-the-dreamliner-to-singapore.htm>

**Currency Regulation****Banker's Buying Rate (BBR)**

Means the rate at which, for purpose of the transfer of funds through banking channels (i.e. other than transactions in bank notes, travellers cheques and similar banking instruments), a bank will purchase a given amount of foreign currency exchange for one unit (or units) of the national currency of the country, in which the exchange transaction takes place. Note: Where no such banker's rates are available, the rates published by the IATA Clearing House may be used in lieu of such bankers buying rates. The applicable banker's rates or the sources where such rates applicable will be published weekly or monthly by the carriers.

**Banker's Selling Rate (BSR)**

Means the rate at which, for the purpose of transfer of funds through banking channels (i.e. other than transactions in bank notes, travellers cheques and similar banking instruments), a bank will sell a given amount of foreign currency in exchange for one unit (or units) of the National currency of the country, in which the exchange transaction takes place.

**Country of Commencement of Transportation:** The country from which travel on the first international sector takes place.

**Country of Payment:** The country where payment is made by the purchaser to the carrier or its agent.

**Currency of the Country of Payment:** The currency in which international fares are denominated.

**Date of Transportation:** The date of issuance of the ticket, MCO or PTA.

**Local Currency Fares:** Fares and related charges expressed in the currency of the country of commencement of travel.

### **Neutral Unit of Construction [NUC]**

#### ***Other Charges***

Charges such as taxes, fees etc. excluding excess baggage charges.

#### ***Related Charges***

Charges such as cancellation fees, non-refundable amounts, rebooking and rerouting charges, stopover charges, weekend surcharges etc. excluding excess baggage charges.

#### ***ROE***

The rate of exchange notified by IATA to convert local currency fares to NUC and to convert NUC amounts to the currency of the country of commencement of transportation

#### ***Applicable Currency for Fares and Charges***

All passenger fares (except add-ons) and excess baggage charges are established in the currency of the country of commencement of travel. Domestic add-ons are established in the currency of the country concerned or in US dollars or any other currency. Related charges are established in the currency of the country of commencement of travel or in US dollars or in EURO.

#### **Exception 1**

Passenger fares and excess baggage charges are established in US dollars for the following countries: Afghanistan, Anguilla, Angola, Argentina, Bahamas, Bangladesh,

Barbados, Bermuda, Bolivia, Brazil, Chile, Cambodia, Congo (Kinshasa), Costa Rica, Colombia, Cuba, Dominica, Iraq, Indonesia, Jamaica, Israel, Maldives, Mongolia, Mexico, Nepal, Nigeria, Philippines, Vietnam, Zimbabwe, Zambia etc

## Exception 2

Passenger fares and excess baggage charges are established in EURO for the following countries: Albania, Austria, Belgium, Bosnia and Herzegovina, Finland, Germany, France, Greece, Ireland, Italy, Netherlands, Portugal, Romania, Serbia and Montenegro, Slovenia, Spain, Turkey

## NUC Conversion Factors

The neutral unit of construction or neutral unit of currency (code: NUC) is a private currency used by the airline industry, to record fare calculation information. A set of exchange rates is issued by the International Air Transport Association (IATA) every month. The ticket component prices are converted from the original currency (of the country of commencement of travel) and recorded on the airline ticket. The NUC system came into being on 1 July 1989, having superseded the older "Fare Construction Unit" (FCU) system. As of 2008, the NUC is pegged approximately to the US dollar (\$1 = 1 NUC). A similar unit, formerly used by the European railway industry is the UIC Franc (XFU).

## NUC Values

Fares, add-ons and related charges are published in the Passenger Air Tariff in NUC values. These values will be revised every January, April, July and October together with the factors shown in the NUC Conversion Factors Table. The NUC value for a local currency amount not published in this tariff can be obtained by dividing such local currency amount by the conversion factor shown in the NUC Conversion Factors Table for the country in which the currency is denominated. Express the resultant NUC amount to two decimal places, ignoring any further decimal places. When excess baggage charges are paid in a currency other than the local currency, the local currency amount must be converted to the currency of payment at the BBR. "Other charges" established in local currency amounts and shown on the ticket are converted to the currency of the country of sale at the BSR. When payment is made in a currency other than the currency of the country of payment, the equivalent local currency amount in the country of payment will be collected at the BBR.

### **Construction of Unpublished Fares**

Fares in the Passenger Air Tariff are published in local currency and NUC's. If a through fare for a particular journey is not published, and therefore requires the combination of local currency fares (or the construction of fares by use of add-on amounts) on the same ticket, construct the through fare for such journey as follows.

1. Add the published NUC amounts for the sectors involved.
2. Multiply the resultant total by the exchange rate in the NUC Conversion Factors Table for the country of commencement of travel. Take the resultant amount to one decimal place beyond the rounding unit indicated in the table.
3. Round the resultant total in accordance with the NUC Conversion Factors Table

### **Combination of Local Currency Fares**

To combine two or more local currency fares into the currency of the country of origin:

Establish NUC amount for each local currency fare by dividing local currency fare by the applicable IATA rate of exchange. Calculate to two decimal places ignoring any further decimal places

Add NUC amounts

Establish through local currency fare by multiplying NUC amount by the IATA rate of exchange for the country of origin. Calculate to one decimal place beyond the number of decimal places shown in the NUC conversion factors table, ignoring any further decimal places. Round up to the next higher rounding unit shown in the NUC conversion factor's table unless otherwise shown.

The International ticketing requires more or less similar information as domestic ticketing. The issue of an International ticket is more complex as it involves the problem of change of currency. This is based on Neutral Units of Construction (NUC) system. To determine the price of an international itinerary, the NUC fares are added and the total is then converted to the currency of the country, where the ticket is sold. The rate of exchange for converting NUC to various currencies is published from time to time by IATA. If the client is planning to travel to different countries, the fare is converted to NUC first. All the NUC fares are added and are converted from NUC to the currency of the country where the ticket would be sold.

## Airfare Calculation

This is considered to be the most complex task of Ticketing. This means dividing of air itinerary into different fare parts and showing how each fare has been calculated. The calculation also depends on the type of journey –

For example, one way, round, circle or open jaw. The domestic airfare calculations are comparatively easier to understand. They are not governed by so many regulations and conditions. In India there are 6 private sectors airlines whereas there is only one public sector airline for domestic travel. Till early 1990s, Indian Airlines occupied the maximum market share, i.e. 60% of the total domestic market. The transformation began in the mid 1990s, when the government scrapped a ban on privately owned airlines. A host of smaller carriers sprouted up. Some had restricted growth but others like Jet Airways flourished, Jet Airways now has more than 40% of the market share while market for Indian Airlines has fallen to less than 40%. The company distributes free of cost 'Fare Chart Sheet' which includes point-to-point airfare and its network (Operation). It includes Base Fare + Inland Air Travel Tax + Passenger Service Tax. Passenger service tax at present is calculated at 0.51% of base fare.

## Planning Itinerary By Air

Let us first know the meaning of the term itinerary planning. Roday, Biwal, Joshi, (2009) have defined itinerary planning as the linking of all the journey points of the traveler's journey, i.e. from the origin point, and in-between stopping points for sightseeing at the destination and back to the point of origin. This is not always the case as sometimes the tourist may not come back to the point of origin.



## Definition

“Itinerary: It is designated to identify all portions of the travel from the original point to the final destination. It includes all the stopping points en route, along with transportation, accommodation and other services on a traveller's trip”

Itinerary planning has to be done carefully as many details need to be considered like sightseeing, time taken, meals, weather, monument information, the timings of the monuments and its closure.

Itinerary planning is one of the major functions of any travel agency.

The travel agencies sell readymade package tours to their clients or may design customized itineraries as per the requirement of the client.

Planning a basic itinerary is simple to do but requires some time and concentration.

Steps involved:

Step 1: Make an ideal outline of all the places you'd like to visit and arrange them in a sequence

Step 2: Note ideal travel and accommodation options on your itinerary, even if you don't end up using them.

Step 3: Book transport and accommodation in advance whenever your plans are set.

Step 4: Plan for activities within cities and regions whenever possible, again keeping in mind that these may be subject to change — plan alternates accordingly

Step 5: Remember that itineraries are often tentative and understand that your plans can change

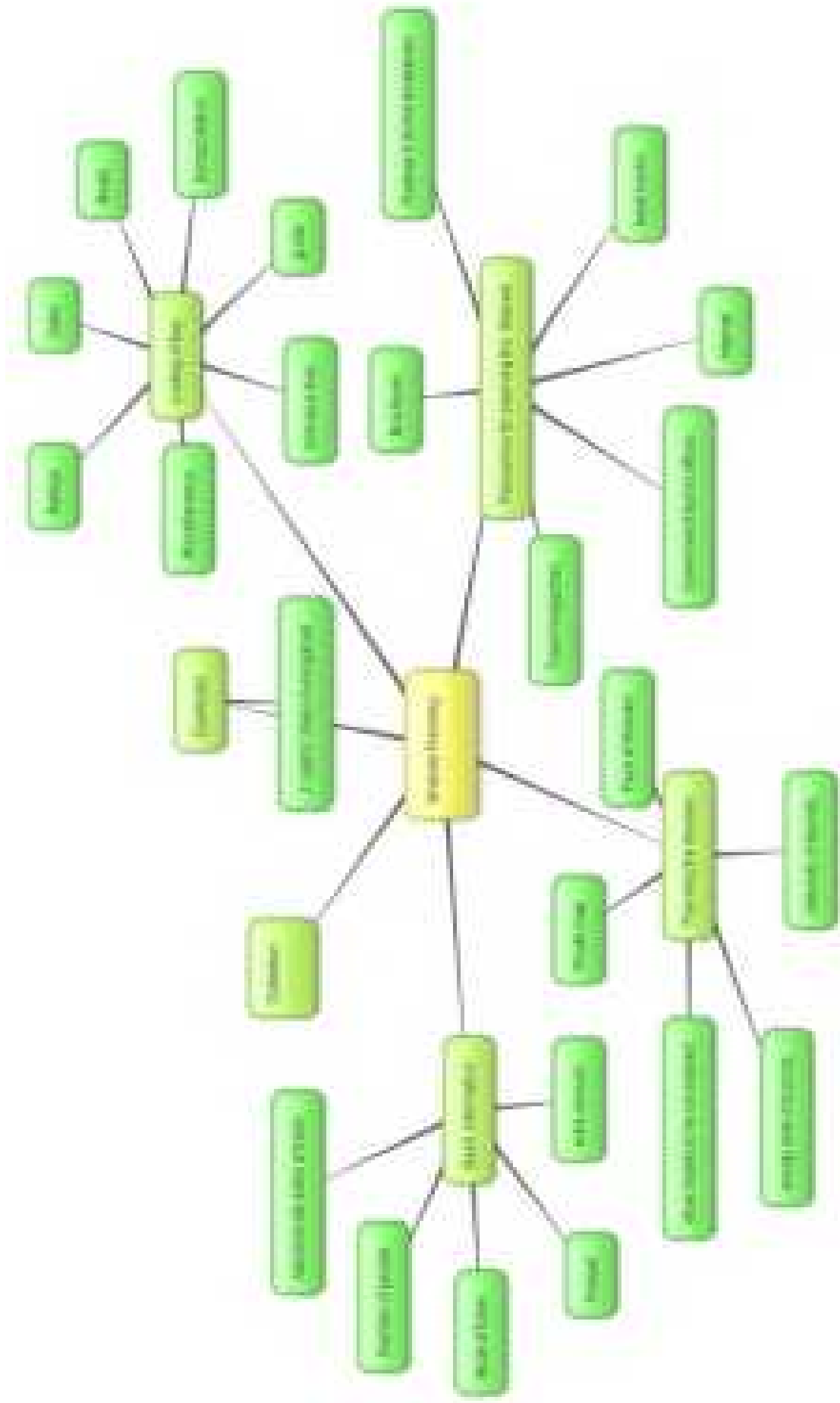
### **Importance of Itinerary Planning**

Itinerary planning is one of the important functions of a travel agency and requires detailed and careful planning. The travel agent should have knowledge of the basic requirements of tourist and facilities available at the destination before planning the tour itinerary. Tariffs and facilities are constantly changing and current information is necessary if the tour is to be successful. Itineraries are sold as readymade package tour or they may be customized according to the client's requirements. Costing of the itinerary is an essential component of itinerary planning.

“Itinerary – it is the schedule of activities of a guest, included in the tour package designed by the tour operator.

- Is normally a prepaid arrangement
- It is the tour guide who is the link between the paying guest and the tour operator
- It is an important responsibility for tour guides to be able to review the itinerary prior to the day of the tour”. (Claravall, 2000).





**Itinerary making/planning requires the following knowledge & skills:**

Phonetic alphabet

International and local geography (location and its significance)

Military time versus the local time

Important codes (airline, city, airport and currency)

Reading the airline timetable

Special requirements of the guests

Basic reservation system

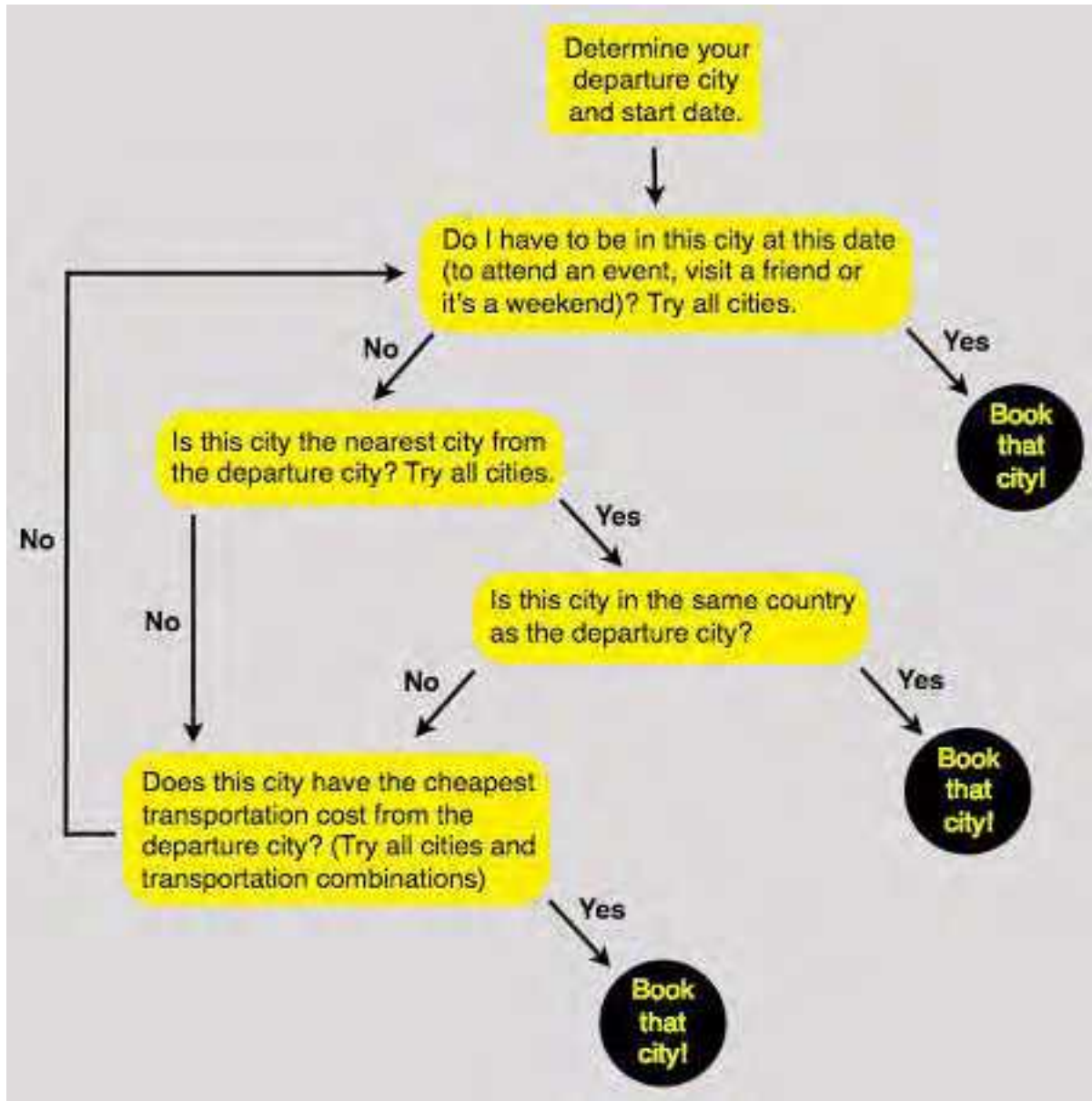
Important abbreviations ( pax, ovr,etc).

Suppliers included in the itinerary such as:

- Hotel for accommodation
- Restaurant for food
- Transportation (air, sea, land, rail)
- Tours
- Entertainment
- Others



The following figure helps you understand how one can go about tour plan in simplest case. The flowchart above is basically how I optimally plan your trips.



In this part of the planning you will most likely play around with different variations of your itinerary to arrive at your best and most affordable route. It includes

- Airline Booking and Contact Details
- Airport Name and Address
- Car Rental Location
- Directions to and from the Airport
- Flight Departure and Arrival Time

Hotel Address and Directions to the Hotel

Hotel Room and Confirmation Number

Local Road Maps

## Fare Construction

### **Some key concepts: Terminology of the Airline Business**

#### ***Fare Construction Principles - How to Proceed***

Establish the journey type by calculating the itinerary as a single PUC whenever possible.

1. Apply fare construction steps and checks required for the journey type involved
2. Take note of type of surface sectors, if any
3. When applying fares with stopover and transfer conditions, note that ticketed transfer points include all intermediate points with or without stopovers
4. For each fare component, determine whether the published fare may be applied by means of specified routing options or the mileage system
5. Compare the fare of this single puc to the fare resulting from the combination of two or more puc
6. For combinations of normal fare pricing units, follow the normal fare determination
7. Choose appropriate breakpoints and take note of limitations on indirect travel, if any
8. Make sure that terms of combinability are satisfied
9. Quote whichever is lower

#### **Basic Fare Construction Principles**

An itinerary is priced as a single journey however if the itinerary can be broken into separate “stand-alone” prices which give the consumer a lower price then this is permitted.

A “journey” is every point on the ticket. The fare for a journey (excluding side trips assessed separately) is the lowest of

A single pricing unit for the journey, or

Any series of end-on combined pricing units which collectively comprise the journey being traveled

A “pricing unit” is any stand-alone price (this also includes the price for a “journey” which is also a stand-alone price). The term “pricing unit” is used instead of the term “stand-alone”

(a stand-alone price is a price which could be sold separately on a separate ticket). The fare for a pricing unit is assessed as a “one way sub journey” using OW fares or as a “return sub journey” using 1/2-RT-fares.

The fare for a fare component is the lower amount which can be determined according to:

1. Mileage principle
2. Lowest combination of fares principle: the lowest combination of fares over an intermediate ticketed point on the itinerary, subject to minimum fare checks

Note: this principle does not preclude combination of international fares with normal/special fares within the USA. All fare constructions must be accomplished in NUCs. Fares to be assessed for the total journey are the applicable fares effect on the date of departure on the first sector.

The fare paid will only apply when international travel commences in the country of the origin of the journey shown on the ticket. If international travel actually commences outside the country of the ticketed origin of the journey, the fare must be reassessed from the point where international travel actually began.

For example, if a ticket is purchased at the Koruna fare for travel PRG-ZRH-NYC, and the passenger actually commences travel in ZRH instead of PRG, the fare must be reassessed at the ZRH-NYC, Swiss franc level.

### **Pricing Unit Concept**

The Pricing Unit Concept for fare construction rules was introduced 01. JUN 2000. A pricing unit is essentially a fare which is capable of being sold independently of any other fare. The pricing unit concept provides the opportunity to price multiple stopover journeys in alternate ways.

For example, a journey PAR-TYO-SYD-surface TYO-PAR can be assessed either as a OW PAR-SYD (via TYO) plus a OW TYO-PAR (in the direction from PAR), or as a RT PAR-TYO plus a OW TYO-SYD. The lower fare obtained by the 2 methods would be used, subject to any minimum fare checks. Explanations and examples of different types of itineraries and associated fare construction principles appear in the following rules.

### **Definitions**

A new set of definitions were established for use with the pricing unit concept. The most important definitions for the PUC are:

**Journey:** The origin to destination of the entire ticket (every point on a ticket)

**Pricing unit:** A journey or part of a journey which is priced as a separate entity, i.e. is capable of being ticketed separately.

**One way sub journey:** Part of a journey where travel from one country does not return to such country of origin. The fare for a OW sub journey is assessed as a single pricing unit using a OW fare.

**Return sub journey:** Part of a journey where travel from a point/country returns to such point/ country (RT/CT/NOJ). The fare for a return sub journey is assessed as a single pricing unit using 1/2-RT-fares.

**Country of unit origin:** The country in which the origin of the pricing unit is situated.

**Destination:** The final stopping place of the journey shown on the ticket.

**Origin:** The initial starting place of the journey as shown on the ticket.

**Unit destination:** The final stopping place of a pricing unit.

### **Comparing fares with global indicators**

In applying Global Indicators (GI) the following applies:

1. The comparison of the itinerary of a fare component with a GI is based on the ticketed points within the fare component and not on the operation of the flights
2. Fares may only be used for the GI for which they are established. The itinerary within a fare component will attract a Global Indicator as follows:

FARE COMPONENT	AND	GI	Routing Restriction
Within Area 1		WH	
Within Area 2		EH	
Within Area 3		EH	
Between Area 1	Area 2 via Atlantic	AT	
Between Area 1 (except Argentina, Brazil, Chile, Paraguay, Uruguay)	Area 3 via Atlantic	AT	
Between Argentina, Brazil, Chile, Paraguay, Uruguay	Area 3 (except South East Asia via the Atlantic)	AT	
Between Argentina, Brazil, Chile, Paraguay, Uruguay	South East Asia via the Atlantic	AT	if travel is via Central Africa, Southern Africa, Indian Ocean Islands then travel must also be via a point(s) in Area 2 outside Central Africa, Southern Africa, Indian Ocean Islands
Between Argentina, Brazil, Chile, Paraguay, Uruguay	South East Asia / South Asian Subcontinent via the Atlantic	SA	via point(s) in Central Africa, Southern Africa, Indian Ocean Islands only or via direct services
Between Area 1	Area 3 (except South West Pacific)	PA	
Between Area 1 (except Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, French Guiana, Guyana, Panama, Paraguay, Peru, Suriname, Uruguay, Venezuela)	South West Pacific	PA	
Between Argentina, Bolivia, Brazil,	South West	PA	not via North America



Chile, Colombia, Ecuador, French Guiana, Guyana, Panama, Paraguay, Peru, Suriname, Uruguay, Venezuela	Pacific		
Between Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, French Guiana, Guyana, Panama, Paraguay, Peru, Suriname, Uruguay, Venezuela	South West Pacific	PN	must be via North America but not via North and Central Pacific
Between Area 2 (except Russia in Europe, Ukraine)	Area 3	EH	not for routings on non-stop services between Europe and Japan, Korea (Dem. Rep. of), Korea (Rep. of)
Between Russia (in Europe), Ukraine	Area 3	EH	not for routings on non-stop services between Europe and Japan, Korea (Dem. Rep. of), Korea (Rep. of); only for routings via another country(ies) in Europe (except Russia in Europe, Ukraine) and/ or Middle East
Between Area 2 (except Russia in Europe)	Area 3	TS	only for routings on non-stop services between Europe and Japan, Korea (Dem. Rep. of), Korea (Rep. of)
Between Russia (in Europe)	Area 3	TS	only for routings on non-stop services between Europe and Japan, Korea (Dem. Rep. of), Korea (Rep. of); via another country(ies) in Europe
Between Russia (in Europe)	Area 3	RU	only for routings on non-stop services between Russia (in Europe) and Japan, Korea (Dem. Rep. of), Korea (Rep. of); not via another country(ies) in Europe
Between Russia (in Europe), Ukraine	Area 3	FE	only for routings on non-stop services between Russia (in Europe), Ukraine and Area 3 other than Japan, Korea (Dem. Rep. of), Korea (Rep. of)
Between Area 2	Area 3 via the Atlantic and Pacific	AP	

If there is no fare with the GI identified by the routing traveled, the fare is constructed in accordance with the lowest combination principle. If a fare component can attract more than one GI the routing of the flights must be used to determine the GI e.g. SIN-NYC - options via PA or via AT

### **Revenue Passenger Mile (RPM)**

**This** is the way traffic is measured, and it is one passenger carried one mile. Traffic and RPMs are synonymous and the terms are used interchangeably. The presumption is that the passenger paid for the trip, thus the use of the word “Revenue”. Some passengers don’t pay, such as those using frequent flier miles, but they are counted the same way.

### **Available Seat Mile (ASM)**

This is the definition of capacity and it is one seat carried one mile, whether or not a passenger occupies that seat. In the case of both RPM and ASM the acronym is what you will hear.

### **Load Factor**

**The** percentage of RPMs to ASMs and a key measurement of how efficiently the airline is utilizing its capacity. In general higher is better but there is a limit beyond which the airline will turn away, or “spill”, passengers to its competitors and not have seats available for last minute business travelers who are prepared to pay the highest fares for that seat.

**Yield:** The amount of passenger revenue received for each RPM. It is a weighted average price and is expressed in cents.

### **Unit Cost or Cost per ASM (CASM)**

The cost of producing one ASM, also expressed in cents

### **Total Revenue per ASM (RASM)**

RASM is not an independent variable in airline economics, so using it without looking at trends in the two underlying components can lead to erroneous conclusions, particularly about the trend of passenger fares.

## Breakeven Load Factor

Another way of expressing the relationship between revenue and expenses. You get it by dividing total operating costs by total revenue and then multiplying the quotient by the load factor.

## Operating Ratio

Most industries describe earnings before such non-operating factors as interest on debt, currency gains or losses and income taxes, as the operating profit margin. Airlines use the reciprocal and call it the operating ratio; thus a 10% operating profit margin becomes, in airline terms, a 90% operating ratio.

## Scheduled Service

Most airlines in the world operate a scheduled system where a schedule of flights is established and passengers can select the one that best meets their needs. This is often called an “on demand” system because the flight will depart when scheduled so that from the passenger’s standpoint that, or any other flight, is available upon his or her demand. By contrast non-scheduled service, which is more generally called Charter service, means that the flight operates only if the seats are sold.

There are certain elementary terminologies, which should be understood before studying fare construction:

**Blocking:** Blocking means that a ticket has been blocked for reservation. There is time allowed to the passenger to get his ticket booked within the stipulated time. If the passenger gets his tickets booked within this time, he actually purchases the ticket with the actual status stated on ticket. If he doesn’t book the ticket within the stipulated time, his blocking stands cancelled. The difference between the blocking and ticketing is that blocking may not result in ticketing sometimes but ticketing automatically results in blocking also.

**Routing:** Routing means a logical sequence of point-to-point destinations. It consists of carriers, class of service and cities served. For example: New Delhi AIF

## Itinerary

Itinerary plays an important part in the fare construction. It is defined as all portions of the passenger’s reservation from original to final destination. It may also include surface

transportation. The different types of itineraries are: One-way trip: Any journey, which is not a complete, round or circle trip entirely by air. For example,

Delhi  
Chennai AIF

### Round Trip

It is a travel from one point to another and returns to the point of origin by the same air route or a different air route from that used for outbound travel. For example,

Delhi  
Chennai AIF  
Delhi AIF

### Circle Trip

It means a journey with that return to the point of departure without retracing its route. It is travel from point and return to the same point by a continuous circuitous air route.

New Delhi  
Kolkata AAF  
Mumbai AAF  
New Delhi AAF

### Round the World Trip

These are the circle trips and apply to continuous eastbound or westbound travel commencing from and returning to the same point via both east and west. The fare is constructed in same way as a circle trip.

### Open Jaw

It is essentially of a round or circle trip nature but has a segment not carried by air. For example,

DELHI
CHENNAI      OPEN JAW
MUMBAI

The difference here is that arrival point is different from departure point. Usually it has a surface segment.

**Airline Itinerary:** An airline itinerary identifies the origin point, stopping points, connecting points and destination points of a flight. An airline itinerary is of two types- International and Domestic. An airline itinerary, which has points within India, is called a domestic itinerary and if the points are outside India, it is known as an international air itinerary. Two things are required to plan airline itinerary – timetables and airline guide.

**Online service –** It means the segment of the same airline. For example, AI to AI

**Offline Service –** It means segments of differing airline. For example, AI to BA

**Interline service –**It means cooperative understanding between airlines and/or reciprocal acceptance of tickets between them.

**Local fare –** It is a fare for on-line transportation.

**Joint fare –** It is a fare for off line or interlines transportation.

**Connections –** A required carrier change at an intermediate point between point of departure and the point of destination. In order to enable the passenger to connect, he must depart that intermediate city within four hours of arrival on first flight on which the space is available.

**Intermediate Stop –** It is a point of landing between two points from original point to destination point, which does not require deplaning by the passenger.

**Stop Over –** It means a stop of usually 24 hours or more by the passenger along the route of a journey according to agreement with the carrier. It is equal to a break in the trip.

**Non-Stop –** It means point-to-point flight with no intermediate stops

**Direct –** It means point-to-point flight with any number of intermediate stops.

## **Mileage Principles**

### **Fare Rules**

Discounted air fares are always subject to certain restrictions. Lower the fare; the more are the restrictions applicable. These restrictions, commonly referred to as fare rules, they fall into six main categories: -

**Minimum or Maximum stay:** With most discount fares, the length of time between outbound and return flights is restricted. For example, a fare may be valid only if the passenger is willing to stay over until the next Sunday before starting a return trip. This may be called a Saturday stay-over. A maximum stay may also apply. For example, passengers may be required to return no later than 21 days after arriving at their destination.

**Advance Purchase:** In most of the discount fares, advance purchase prior to departure date is required; say 30 days in advance, which is commonly known as 'Super Saver'. Generally, the longer the advance purchases requirement, the lower the fare.

**Validity Dates:** The discount travel is generally valid on certain dates. It has both an effective date and an expiration date. Certain dates may also be blacked out, meaning that the travel is not valid on those dates. **Combinability:** Discount fares can be combined with other fare types. For example, a traveler using an M-class fare on one segment may be able to use a V-class fare on another segment in the same trip.

**Routing:** Only permitted routings may be used in restrictive fares. The rating specifies the connecting and stopover points that can be used with a particular fare basis.

**Penalties:** Generally for cancellations or changes in itinerary under restrictive fares, penalties are imposed. In some cases restrictive fares are non-refundable.

**Other Restrictions:** A number of other special conditions may also apply to discount fare. For example, a fare rule may require all segments of the itinerary to be confirmed at the time of ticketing, or may prohibit travel on certain dates of the week.

## **Construction Rules for Journeys**

### ***General***

The following will be considered as one country:

USA and Canada

Denmark, Norway and Sweden (=Scandinavia)

To establish unpublished fares, or fares expressed as a percentage, see the rule.

Combination of international fares and normal/special fares within the USA is permitted.



## How to determine the Fare for a Journey

The fare for a journey (excluding side trips assessed separately) is the lowest of - a single pricing unit for the journey or any series of end-on combined pricing units which collectively comprise the journey being traveled. Fares may only be constructed over ticketed points in the passenger's itinerary. The addition of points into the itinerary is not permitted, provided this does not apply to add-on construction points.

### Exception

Combination of USA domestic fares with international fares

### “Slicing” and “Dicing” an Itinerary

The application of the PUC depends on the itinerary. It is necessary to travel over a common point/country more than once in order to be able to “slice and dice” the itinerary. If this occurs the itinerary is assessed as a single price (pricing unit) and where separate pricing units can be assessed these are calculated and the sum of the pricing units compared to the fare for the entire journey - the lower amount being charged. It is sometimes possible that an itinerary will allow a number of different pricing unit calculations. In all cases it is the lowest of the possibilities that is applied. In order to ensure that simple RT or CT journeys are not broken into a series of OW-units, any journey or sub journey which is by definition a RT or CT must use 1 /-RT-fare.

### Round, Circle, Open Jaw Trip Journeys

If the routing of a journey satisfies the definition of a RT, CT or OJ: the PU must be assessed as a RT/CT or OJ as applicable and must use half RT fares, the use of OW fares is not permitted - for end-on combination normal and special fares, completely separate the special and normal fare and access the normal fare sub journey.

### Example

Travel: MAN ROM CPH MAD

Fare construction:

MAN ROM 1/2 RT

ROM CPH 1/2 RT ONE PU

MAN CPH 1/2 RT



- OW fares are not allowed as travel is continuous, circuitous and returns to the same point
- A CTM check is performed MAN-ROM RT and MAN-CPH RT
- The last fare component is assessed from the country of unit origin

### **RT, CT, OJ Journeys with common Point/Country**

If there is a common point/country on the routing, the journey may be broken into multiple return sub journey PUs using half RT fares.

A return sub journey only occurs if the fare is broken more than once at the common point/country. The fare for travel between such fare break points must be priced as a RT, CT or normal/special fare OJ, as applicable, and must use 1/2-RT-fares. If travel between such fare break points would require the use of OW-fares, this is not permitted.

### **Fare Direction for RT, CT, OJ Journeys**

Fares are assessed in the direction of travel, except that the fare component into the country of pricing unit origin shall be in the direction from such country i.e. not in the direction of travel. Note: except for RT pricing units, fare components between Canada and USA and within the area of Denmark, Norway, and Sweden are assessed in the direction of travel.

### **OJ Journeys - alternative Option for Assessment**

If the routing of the journey is determined as fulfilling the definition of a normal/special fare OJ, the pricing unit is assessed as two half RT fares, provided that, if there is a common point(s) or other points in either the country of origin or the country of turnaround or both, the fare may alternatively be assessed as a return sub journey from/to the common points(s) or other points and a OW sub journey (s) for the domestic sector(s). In the case of the alternative pricing option the OW pricing unit must be assessed using OW fares and the return sub journey must be assessed using half RT-fares. Fares must be assessed in the direction of travel except that the fare component into the country of pricing unit origin shall be in the direction from such country, i.e. not in the direction of travel\***Note:** except for RT pricing units, fare components between Canada and USA and within the area of Denmark, Norway, Sweden are assessed in the direction of travel.

### **Journeys other than Round, Circle, Open Jaw Trips**

If the routing of a journey does not satisfy the definition of a RT, CT or normal/special fare OJ such routings shall be assessed:

As a OW journey using a OW PU

As a series of OW sub journey s using OW PUs

As a RT or CT journey with the surface sector assumed to be flown

If there is a common point/country: as a mix of a OW sub journey and a RT sub journey.

For the OW sub journey, OW fares must be used, the use of half RT fares is not permitted

Fares will be constructed in the direction of travel except that the fare for a OW sub journey that terminates in a country from which a previous PU has commenced will be assessed in the direction from that country

**\*Note:** Except for RT PUs, fare components between Canada and USA and within the area of Denmark, Norway, Sweden are assessed in the direction of travel.

### **Journey Limitations on Indirect Travel**

For Canada and USA and for Denmark, Norway, Sweden to be considered one country this rule does not apply:

### **Arrivals and Departure in one Country**

A journey on a ticket, at any time, must not include more than four international arrivals and four international departures in any country provided for the counting of arrivals and departures surface sectors are considered to be flown

Example

AMS-CAI-RTM-LON-AMS-DXB-AMS-JNB-AMS-BAH

This journey is not allowed to have five international departures from the Netherlands

**Fare Construction With Extra Mileage Allowances (EMA)**

This requires agency staff to have a basic knowledge of airfares; different prices and rates essential to serve the clients. First he should know what is an Airfare? In other words, it is a price paid to acquire the right to use an airline seat in a specific aircraft and within a prescribed period. Airfares are of two types- International and Domestic airfare. Domestic airfare is applicable only after the approval from Director General of Civil Aviation (DGCA). International airfares are applicable only after the approval from International Air Transport Association (IATA), which are based on bilateral agreements between the countries. Airfare is based on three main factors:

- Class of Service
- Fare Basis
- Fare Rules

Airlines offer various classes of service. The fare and the cabin in which the passenger will sit determine the class of service in an airline. Broadly they can be divided into two- (1) First Class (2) Coach Class. In the first class cabin, seats are usually larger and more comfortable. Passengers in coach cabin get standard level of service. In many airlines there may be third cabin known as 'Business' class or it may be known by some other name – Executive, Ambassador or so on. Service in the cabin is superior to coach but inferior to First Class. First Class may also be known as 'Premium Class'. There may be sub-classes within a class, which may be indicated by different booking codes. This is shown in the table:

**Class of Service and Booking Codes**

Booking code	Class	Description
P F A } }	First	This provides carrier's highest level of service.
J C } }	Business	This provides carrier's superior service level.
S Y } }	Standard	This provides carrier's Standard level of service.
K M Q L V } }	Discount Coach Class	This provides carrier's discounted fare for standard level of service.

Depending upon restrictions, route and carrier, the first class fare may be 35- 50 % higher than the standard coach and Business class may be 20-35 % higher than coach class.

### The Hub and Spoke System

It's very expensive for an airline to purchase new aircrafts to provide point- to-point flights on their own. Adopting 'hub and spoke' system solves this problem. This can be explained with an example of wheel with numerous spokes leading from a hub or centre. The passengers are transported to a central point, called a 'hub', to board an aircraft for the final destination. For example, Delhi and Mumbai are Hubs for Air India's International flights from Delhi to London and Mumbai to Bangkok. For passengers staying in Jaipur and Bangalore, Indian Airlines is acting as the spoke between Jaipur to Delhi and Bangalore to Mumbai. Following are the benefits of this system.

Caters to serve maximum passengers.

Enables airlines to expand their activities without much investment for aircrafts.

Retains competitive fare structure.

Promotes better relationships.

Generates more income.

It is determined by the class of service and other factors such as the destination, season, day of the week, type of trip, advance purchase, length of stay, etc. Each fare basis has one primary code and one and more secondary code. A Hub is an airport at a geographical center of an airline's route and generally includes administrative offices and maintenance facilities. Hubs are airports used as bases through which the airline routes most of its traffic. Flights from other cities (these are the spokes) are routed to the hub. Passengers from the spoke flights are combined with passengers from the hub and other spoke flights, and transported to a common destination. These shorter flights are more economical for the airlines to operate, and afford the airline a more comprehensive route structure. The following table presents the major hubs in North America:

<b>Airline</b>	<b>Airline Code</b>	<b>Hub Code</b>	<b>Hub</b>
AirTran Airlines	FL	ATL	Atlanta
Alaska Airlines	AS	SEA	Seattle
		ANC	Anchorage
		LAX	Los Angeles

America West	HP	PHX LAS	Phoenix Las Vegas
American Airlines	AA	DFW MIA ORD JFK / LGA BOS	Dallas / Fort Worth Miami Chicago / O'Hare NYC Boston
American Trans Air	TZ	MDW	Chicago/Midway
Continental Airlines	CO	IAH CLE EWR	Houston/Intercontinental Cleveland Newark
Delta Airlines	DL	ATL DFW	Atlanta Dallas / Fort Worth
Northwest Airlines	NW	MSP DTW MEM	Minneapolis Detroit Memphis
Southwest Airlines	WN	DAL PHX OAK	Dallas / Love Field Phoenix Oakland
United Airlines	UA	ORD SFO LAX IAD/ DCA	Chicago / O'Hare San Francisco Los Angeles Washington DC
US Airways	US	PHL CLT PIT	Philadelphia Charlotte Pittsburgh

Primary Codes are booking codes, which represent the class of the services being used. The following table shows the Primary codes of the Fare basis.

### Primary Fare Codes

Primary Code	Description
P	Premium First Class
F	First Class
A	Discounted First Class
J	Premium Coach
C	Premium Coach
S	Standard Class
Y	Economy Coach
K, B, M, Q	Discount Coach
L, V	Discount Coach (Off Peak Economy)
X	Free - Travel (e.g., Mileage Club Member)

Secondary codes make each fare basis distinct from other fare bases with the same primary code. For example 'AP' indicates advance purchaser, 'IT' indicates inclusive tour fare, and 'Z' indicates youth fare.

### Secondary Fare Codes

Secondary Code	Description
AP	Advance Purchase
CD	Senior Citizen Discovery
CH	Child's Fare (2-11 yrs.)
CL	Clergy fare
D	Discount Fare
DG	Discounted Government Fare
E	Excursion Fare
G	Group Fare
I	Inclusive Tour Fare
N	Night
L	Low (Day of week time of day, or season)
M	Military Discount
MR	Military recruits
NR	Night off peak
P	Family Plan
PE	Penalty for cancellation
R	Round Trip fare

For example, FAP 5 where F= First Class, AP= Advance purchaser, indicates travel in First class and 5 days advance purchase i.e., the ticket to be purchased at least 5 days before departure. In some cases, the booking code is the same as the fare basis. For example, F is for first class, Y is for economy or coach class. Different airlines use various primary

codes for the same class. For example, 'C' class is same on some airline as 'J' class is for another airline. Number may be used to indicate days of week. For example, Y5 indicate a coach fare valid only for departure on Friday. One or two letters may indicate weekday, for example, TU for Tuesday, W for Wednesday and TH for Thursday.

## **Fares and Fare Basis Codes**

### **Unrestricted Fares and Restricted Fares**

*Based on booking classes, fares can be divided into two categories:*

Unrestricted or Normal Fares

Restricted or Excursion or Special or Discounted Fares

An unrestricted fare is a higher fare for a ticket offering maximum flexibility. Typically, unrestricted fares require no advance purchase, no Saturday night stay, no roundtrip purchase, and are fully refundable without penalty or fee.

Restricted fares available between city pairs that require an advance purchase, minimum and maximum stay, are non-refundable, have change fees that apply, routing restrictions, and require that the same carrier be used in both directions. In short, there are certain restrictions to be followed if these fares are to be availed.

### **Fare Basis Codes**

A fare basis code consists of two basic elements – the booking code and applicable fare elements. Together, they make up a fare basis that will be up to but no longer than eight (8) characters in length. The booking code refers to the letter representing the class of service in which the fare has been published and the inventory that you will use to confirm the booked flight segment.

In general, the following table lists the most commonly used booking codes and the classes of service they represent.

P, F, A	First Class
J, C, D	Business Class
Y, S, W	Economy /Coach - Unrestricted
B, H, K, L, M, N, Q, T, V, X	Economy / Coach - Restricted



Caution should be used as there are some markets on some airlines, particularly internationally, that will have a fare basis listed and the booking code will not be the first letter of that fare basis. Many business fares can start with J and yet require a C or D booking code.

Fare basis elements are individual letters and or numbers used in combination to further define, in basic terms, the rules that will accompany the fare that the code represents. These elements often refer to the advanced purchase, seasonality, refund restrictions, and minimum and / or maximum stay requirements. Further details on a fare's rules can be found in the actual rules display.

<b>Fare / Passenger Type Codes</b>	<b>Description</b>
6, 06, 8, 9, 26, AA, UA, DL	Discount unrestricted First or Coach Class
AP	Advanced Purchase
CT	Circle Trip
OJ	Open Jaw
OW	One Way
PEX, or E	Advanced Purchase Excursion or Excursion
RT	Round Trip
SS	Super Saver
CH	Child
DG	Government Official
IN	Infant
MM	Military
SC	Ship Crew
ZZ	Youth Fare
Fare Rule Codes	Description
H, K, J, F, T, Q, Y, L	Seasonality Codes from highest to lowest
M, T, W, Q, F, J, S	Days of the week – US
1,2,3,4,5,6,7	Days of the week – internationally
FLT	Flight Specific

D followed by number or letter	Valid only on ...day
X followed by number or letter	Valid except on...day
HOL	Holiday – BOO, TURKEY, SANTA, FLAG
W	Weekend
X	Weekday
1,3,7,14,21,30	Minimum Advanced Purchase
NR	Non Refundable
P	Penalty
25/50	% Cancellation Penalty
MDW, BWI, EWR	Indicates airport specific
UP	Coach fare with upgrade to business/first

The table below can be used to decipher the fare basis codes.

V30X7MN	Booking class V, Midweek, 30 days AP, 7 Day Max, Non Ref
ME14NQ	Booking Class M, Excursion fare, 14 day AP, Non-Ref
V14X77NN	Booking class V, 14 Day AP, Midweek, 77 days Max Non-Ref
V14W77NN	Booking Class V, 14 Day AP, Weekend, 77 days Max Non-Ref
VA0GNR	Booking Class V, One Way, Non-Ref
YUP6	Pay Coach fare Upgrade to First or Business Class
F10BIZN	Discount First Class fare, 10 day AP, Non-Ref
B26	Un-restricted coach fare, limited number of seats available.
LLW7AP	Booking class L, Low Season, Weekend Travel, 7 AP
Y2GB	Un-restricted, special coach fare to Great Britain
QE3WKND	Booking Class Q, 3 day AP, good for weekend travel only.
UXE14NV	Booking class, Mid Week Excursion, 14 Day AP, Non-Ref, No Value if not Used or changed by flight date.

## Extra Mileage Surcharge (EMS)

### Milage system means,

**“An airfare system allowing stopovers up to specific maximum permitted mileage”**

IATA is an organization of airlines that creates standards. The IATA rules are guidelines, not hard and fast rules, and each airline is welcome to pick and choose which provisions they want to apply to their own flights. Various airlines may waive the mileage checks in various ways, including filing generic extra mileage allowances (EMA), filing fare-specific overrides that would appear in the fare rules, or simply ignoring the MPM principle altogether.

IATA has complicated rules regarding what they call LOIT (limitations on indirect travel). On an international fare, these rules usually allow you to transit the same airport more than once, as long as you stopover at that point at most once. For many national flag carriers with a single large hub, this is the only way you could get to any stopover point that is not the hub itself.

## Mileage System / Routings

MPM: Maximum permitted mileage  
 TPM: Ticketed point mileage (effective mileage between two ticketed points of the routing)

### *Mileage Calculation*

- add up the TPM for all ticketed sectors between the terminal points of the through fare
- compare the sum of the TPM with the MPM
- sectors travelled by surface within a through fare must be included. If a TPM is not published for the surface sector, the lowest combination of TPMs over another point may be used
- TPMs and MPMs must be used into the global direction according to the fare

### *Applicable Fare when Mileage exceeded*

Where the TPM is in excess of the MPM by:

Over	Up to and including	The fare shall be the direct route fare plus
	5%	5%
5%	10%	10%
10%	15%	15%
15%	20%	20%
20%	25%	25%
	Over 25%	lowest combination

**Note:** permitted mileages calculated in accordance with above procedures shall be rounded down to the next lower whole mile.

**Example:**

Mileage calculation for a return indirect journey:

Routing			Relevant miles
OSL	TPM	OSL-CPH	314
CPH	TPM	CPH-DUS	422
DUS	TPM	DUS-PAR	289
PAR	TPM	PAR-GVA	250
GVA			-----
LON			1275
CPH			
OSL	MPM: OSL-GVA 1173		
	TPM	GVA-LON	466
	TPM	LON-CPH	594
	TPM	CPH-OSL	314
			-----
			1374
	MPM:	OSL-GVA 1173	

**Explanation:**

In case of return journeys, the journey is divided in 2 parts, an outbound and an inbound part. For each part, a separate mileage calculation is done.

On the outbound part TPM (1275) exceeded MPM and a surcharge of 5% has to be collected. On the inbound part, a 20% surcharge is applicable.

**Excess Mileage Allowance**

A special mileage calculation procedure applies to define indirect routings. A TPM-deduction is permitted if: EMA applies

Mileages specified in the table below must be deducted from the total TPM before comparison with the MPM is made.

- these TPM deductions only apply when the fare component includes intermediate ticketed points shown in the applicable routing; provided additional intermediate ticketed points may be added to the routing
- only one TPM deduction per fare component is permitted

**Special EMAs for LH and UA**

Between	And	Via	TPM Deduction
OR/WA	BE/FR/DE/NL/GB		470
ANC	BE/FR/DE/NL/GB		2600
BOS	BE/FR/DE/NL/GB	WAS	200
PVD	BE/FR/DE/NL/GB	WAS	70
Saudi Arabia	USA/CA/MX	TLV	660
CA	Area 2/3	USA	850
Caribbean	Europe	MIA	1000
Caribbean	Europe	NYC	300
USA	PT	FRA/LON/PAR	800
USA	Gambia, Congo (FIH), Senegal, Guinea, Mauritania,	BRU	2100
USA	Benin, Burkina Faso, Cameroon, Congo (BZV), cote d'Ivoire, Gabon, Mali, Niger, Nigeria, Senegal	PAR	1200
USA	Angola	LON	300
USA	Ghana, Nigeria	LON	1000
USA	Liberia, Sierra Leone	LON-ACC	2600
USA	Ghana, Nigeria	FRA	1400
USA	Togo	PAR-DLA	1500
BGO	NYC	OSL/CPH	50
Points in Alberta, Yukon, British Columbia	Europe	YMQ/YTO/YOW	400
Points in New Brunswick, Nova Scotia, Prince Edward Island	Europe	BOS/YMQ/YTO/YOW	1500
Points in Newfoundland	Europe	YHZ	700
MD/PA/WAS	IE	LON	150

**Mileage Calculator can be done in online for example:**

Just enter two cities (or airport codes) in the fields below and click **How Far?**

Top of Form

Departing from:	<input type="text"/>
Then flying to:	<input type="text"/>
Optional	

And on to:	<input type="text"/>
And on to:	<input type="text"/>
And on to:	<input type="text"/>
And on to:	<input type="text"/>
Elite bonus:	<input type="text" value="None"/>
Elite bonus based on:	<input type="checkbox"/> Actual miles. <input type="checkbox"/> Minimum miles.
Class of service bonus:	<input type="text" value="None"/>
Class bonus based on:	<input type="checkbox"/> Actual miles. <input type="checkbox"/> Minimum miles.
Special promotion bonus:	<input type="text" value="None"/>
Promo bonus based on:	<input type="checkbox"/> Actual miles. <input type="checkbox"/> Minimum miles.
Minimum per segment:	<input type="text" value="None"/> <input type="text" value="üü"/>
Ticket price(in dollars):	<input type="text"/>

### Student Activity 1

The tourism product

The teacher will present an introduction to the tourism product in general.

The tourism product

Businesses and organisations that offer services and facilities to consumers make up *the tourism product* in the travel and tourism industry.

The *provider* is the name given to a business or organisation that offers services or facilities to a potential or actual consumer.



**Include more examples in the boxes below. These do not have to be in your own area but it would be a good introduction to the portfolio if you were to include a few local examples.**

Travel agencies and tour operators

Going Places

Caterers and accommodation providers

Holiday Inn

Transport providers

City Link, British Airways, Superfast Ferries

Providers of activities

Gleneagles Golf Course

Providers of attractions

Scone Palace – Perth; Deep Sea World – Inverkeithing

Providers of entertainment

Perth Theatre

Banks/tourist information services

Bureau de change – Waverley Station, Edinburgh



## Student Activity 2

Private sector, public sector, voluntary sector

Follow the lecture and participate in sorting examples into the different sectors.

### 1. The private sector

Made up of companies who run a business to make profits.

#### *Examples*

Big hotel chains (Thistle Hotels)

Airtours

Pizza Hut

GNER (Great North Eastern Railway)

American Express Travel Agency

Deep-Sea World in Fife

British Airways

Parque de Atracciones in Torremolinos (Costa del Sol)

Private Youth Hostels for low-price accommodation.

Add more examples here.

### 2. The Public Sector

Local or central government are partly responsible for funding and control.

#### *Examples*

Tourist Information Centres in Scotland

VisitScotland

Historic Scotland manages around 300 tourist attractions

Local authorities provide leisure, parking and toilet/ facilities.

Add more examples here.

### 3. Voluntary Sector

Providers of facilities that are funded by charitable donations. They sometimes make use of volunteers for staffing but some have paid employees as well. They are usually non-profit making. However, they may charge customers for their services.

#### *Examples*

YMCA and Scottish Youth Hostel Association

The National Trust for Scotland

Hopetoun House near South Queensferry (run by a trust).

Add more examples here.

### Student Activities 3-5

The tourism product in the local area.

#### **Activity 3**

Investigate the tourism product in the local area. The teacher may give you Form A (next page) or another sheet for your notes on the local area.

You may have collected information on your local area or your teacher may provide a selection of the following, which you can use to fill in Form A:

Local brochures

Timetables

- Street plans
- Leaflets
- General information
- Hotel and restaurant details
- Festivals and events details
- Information on conference/ meeting facilities for business visitors
- Website information on the local area.

**Activity 4**

Identify the location of the providers on a local map. Circle those marked in already.

Or

Draw a simple map of the area and mark in the location of providers.

Invent a key for the type of facility, e.g.

- \* for hotel
- + for tourist attraction
- £ for currency exchange or bank etc.

**Activity 5 (Option)**

Print out a map of the local area from a suitable website and highlight attractions on it.

**Form A**

What does your local area have to offer of interest to the tourist? (Tick)

Scenery \_\_\_\_\_ Culture \_\_\_\_\_ Leisure pursuits \_\_\_\_\_ Heritage \_\_\_\_\_

Do people visit your area for any other purpose?

---

---

---

---

Does your area have a local speciality like Arbroath Smokies, a famous historical figure, a known author/artist/actor, or a major sporting facility?

---

---

---

Does it have historic hotels, preserved railways, distilleries open to the visitors?]

---

---

---

Any other unusual/different visitor facilities?

---

---

---

What kind of facility does your local area have to service the basic needs of the visitor? Tick the ones your area has.

- Hotels and places to stay \_\_\_\_\_
- Restaurants and places to eat; inns, pubs and bars \_\_\_\_\_
- Places to spend leisure time like cinemas, theatres, museums,  
bingo halls, discos, parks, sports and amusement facilities \_\_\_\_\_

Note the main ones here:

---

---

---

---

What about facilities for people wishing to travel away from the area? (Tick)

- Travel agents
- Tour operators
- Transport terminals

List the names of organisations and terminals here:

### **Chapter Summary**

After reading the above lesson, you must be now clear about what really is a tourism product along with its unique and distinguishing features. We have discussed in detail the various forms of tourism products. By now you know natural, man-made, symbiotic, event based and site based tourist products. Now when you look around you, in any newspaper, magazine or even T.V. programmes, you will see the various tourism products and will be able to identify their forms. At this stage it's important for you to understand and identify how each tourism product has a distinguishing feature and its marketing strategy must highlight this feature. Advertising, publicity, sales promotion, brochures, pamphlets, posters, direct mailing, personal selling and advertorial are some of these strategies which you will learn in the later lessons. The tourism product has to be packaged and priced keeping in mind the target customer. Without any doubt, tourism is the main sector that can play a significant part in achieving rapid economic growth and drastically reducing unemployment in our country. Currently, it is the largest foreign exchange earner for our country. The development of the tourism industry on a priority basis is the need of the hour. You will study about Tourism as an industry and the economic impact of tourism in the next lesson. Despite this, the airline industry has proceeded along the path towards globalization and consolidation, characteristics associated with the normal development of many other industries. It has done this through the establishment of alliances and partnerships between airlines, linking their networks to expand access to their customers. Hundreds of airlines have entered into alliances, ranging from marketing agreements and code-shares to franchises and equity transfers. The outlook for the air travel industry is one of strong growth. Forecasts suggest that the number of passengers will double by 2010. For airlines, the future will hold many challenges. Successful airlines will be those that continue to tackle their costs and improve their products, thereby securing a strong presence in the key world aviation markets.

### **Closing Thought**

Tourism and Travel Management today is a way of life of all individuals. A desire to break from routine or to look forward to a better life, travel has always remained a constant joy ever since intelligent life came into being. India has a bright future in the area of tourism and has a kaleidoscope of sights and products to offer to visitors. Realising this Government of India is taking keen interest to develop facilities to attract tourists from world over.

### Self Assessment Questions

1. Explain the role of Air Transport in India and tourism development in India with bottlenecks we face today?
2. Describe how Travel & Tourism competitiveness enablers and change drivers which affects Indian Air tourism.
3. Briefly explain the growth of Aviation business in India.
4. List down the “six freedoms of the air” concept.
5. Write short note on Official airline guide
6. Explain Trace out the history of OAG. How it helps consolidation of air traffic. Illustrate with suitable diagram.
7. Explain the need for three letter city and airport code. Give suitable examples.
8. What do you understand the Minimum connecting time in airline operations?
9. What are Global indicators? State its usefulness in airline business.
10. What are the problems involved in fixing air tariff? What are the methods adopted by different airlines?
11. What are baseline for fixing the airline prices
12. Write short note on NUC conversion factors
13. List different type of Airfare.
14. What is itinerary by air? What are the steps involved in it?
15. Define Extra Mileage Surcharge (Ems)
16. Describe IATA codes
17. Define IATA areas
18. Explain IATA terms and definitions
19. Identify fare types
20. Select the most appropriate fare for a given itinerary/journey
21. Construct basic fares using the mileage system
22. Identify baggage allowances, taxes, fees and charges

\*\*\*\*

---

**UNIT - IV**

---

---

**Types of Journey, Restrictions and Travel Procedures**

---

**Learning Objectives**

*On completion of this unit a learner should:*

Understand airfare terms and definitions

Be able to construct fares for journeys that include more than one class

Be able to construct fares for journeys that are via a city which has a higher fare

Be able to construct fares for journeys that include visiting the same city more than once

Be able to construct Special Fares

Be able to calculate backhaul and circle trip minimum checks.

Be able to construct fares using various breakpoints.

**Introduction**

**“The world is a book and those who do not travel read only one page.”-St. Augustine**

Tourism today is the most vibrant activity and a multi-billion industry in India. Traditionally known for its historical and cultural dimensions, tourism is being highlighted for its business opportunities. With its lucrative linkages with transport, hotel industry etc., the potential and performance of India's tourism industry needs to be gauged in terms of its socio-economic magnitudes. Tourism has a direct bearing on air transport. 90% of the tourist's arriving into India come by air; however India's share in the world tourist traffic is less than 1%. Further India's share of total world international air passenger's traffic has been quite low at 3%. The majority of business organizations such as travel agents, meeting planners, and other service providers including accommodation, transportation, attractions and entertainment are classified as travel and tourism business. In practice, these organizations are closely linked in the provision of services to the travellers. Tourism is so vast, so complex, and so multifaceted that the practitioners need to obtain a wide range of knowledge related to tourism.



Tourism accounts for one-third of the foreign exchange earnings of India and employs large number of people compared to other sectors. According to the World Tourism Organization, by the year 2020, it is expected that India will become the leader in the tourism industry in South Asia, with about 8.9 million arrivals. According to provisional statistics 6.29 million foreign tourists arrived in India in 2011, an increase of 8.9% from 5.78 million in 2010.

This ranks India as the 38th country in the world in terms of foreign tourist arrivals. Domestic tourist visits to all states and Union Territories numbered 1,036.35 million in 2012, an increase of 16.5% from 2011. The most represented countries are the United States (16%) and the United Kingdom (12.6%). In 2011 Maharashtra, Tamil Nadu and Delhi were the most popular states for foreign tourists. Domestic tourists visited the states Uttar Pradesh, Andhra Pradesh and Tamil Nadu most frequently.

Chennai, Delhi, Mumbai and Agra have been the four most visited cities of India by foreign tourists during the year 2011. Worldwide, Chennai is ranked 41 by the number of foreign tourists, while Delhi is ranked at 50, Mumbai at 57 and Agra at 65 and Kolkata at 99. The World Travel & Tourism Council calculated that tourism generated INR6.4 trillion or 6.6% of the nation's GDP in 2012. It supported 39.5 million jobs, 7.7% of its total employment. The sector is predicted to grow at an average annual rate of 7.9% from 2013 to 2023. This gives India the third rank among countries with the fastest growing tourism industries over the next decade. Healthcare tourism is on the rise in India wherein visitor can avail several private healthcare facilities. The number of tourists visiting India for medical treatment is expected to reach one million by 2012, representing a Compounded Annual Growth Rate (CAGR) of 28.09% since 2007 and is expected to reach about 95 billion by 2015. Throughout its history, Indian Airlines offered efficient, timely and professional services, along with looking after every requirement of passengers. The airline takes several steps to make travelling safe, simple and timely. It offers a range of facilities like baggage allowance, flight status and schedule, which proves beneficial for travellers. These options also include web check in and online ticket booking facilities that save significant amount of time of travellers. All these information assist passengers in planning their trip well; for example, if they know how much baggage is allowed without paying any money, they would pack accordingly. Also, knowing about the status of the flight, either scheduled or delayed, they can leave for airport on-time. Travellers can access all the details on the website as well as contact the customer care in different cities for getting their query resolved or obtaining requisite information.

The Travel & Tourism Competitiveness Report 2013 ranks India 65th out of 144 countries overall. The report ranks the price competitiveness of India's tourism sector 20th

out of 144 countries. It mentions that India has quite good air transport (ranked 39th), particularly given the country's stage of development, and reasonable ground transport infrastructure (ranked 42nd). Some other aspects of its tourism infrastructure remain somewhat underdeveloped however. The nation has very few hotel rooms per capita by international comparison and low ATM penetration. As per the UNWTO World Tourism Barometer, December 2013, India's rank in the World Tourism Receipts during 2012 was 16th and rank in international tourist arrivals was 41. The rank of India was 7th among Asia and the Pacific Region in terms of tourism receipts during 2012.

The Ministry of Tourism designs national policies for the development and promotion of tourism. In the process, the Ministry consults and collaborates with other stakeholders in the sector including various Central Ministries/agencies, state governments, Union Territories and the representatives of the private sector. Concerted efforts are being made to promote new forms of tourism such as rural, cruise, medical and eco-tourism. The Ministry also maintains the Incredible India campaign.

India's rich history and its cultural and geographical diversity make its international tourism appeal large and diverse. It presents heritage and cultural tourism along with medical, business, educational and sports tourism.

### Top 10 States of India Tourism

<b>Share of Top 10 States/<u>UTS</u> of India in Number of Foreign Tourist Visits in 2011 (Provisional)</b>			
Rank	State/Union Territory	Number	Share in %
1	Maharashtra	4,815,421	24.7
2	Tamil Nadu	3,373,870	17.3
3	Delhi	2,159,925	11.1
4	Uttar Pradesh	1,887,095	9.7
5	Rajasthan	1,351,974	6.9
6	West Bengal	1,213,270	6.2
7	Bihar	972,487	5.0
8	Kerala	732,985	3.8
9	Karnataka	574,005	2.9
10	Himachal Pradesh	484,518	2.5
Total of top 10 states		17,565,550	90.1
Others		1,929,329	9.9
Total		19,494,879	100

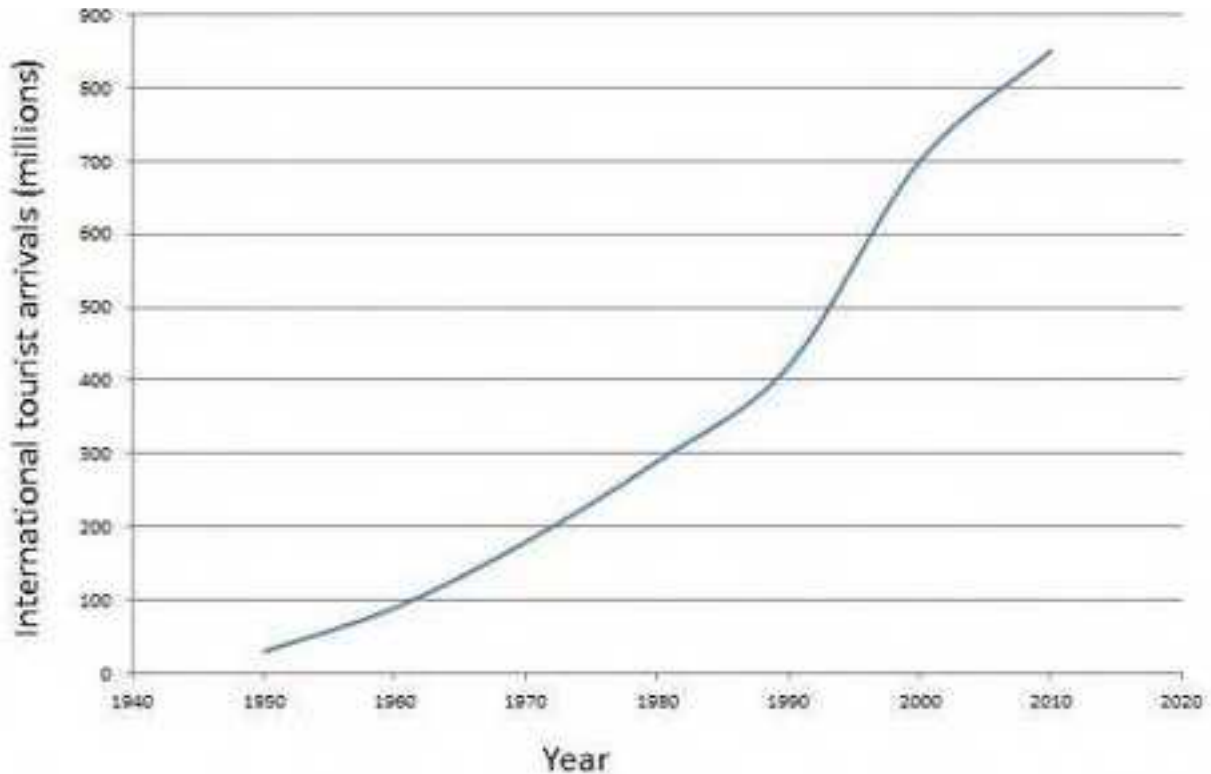
<b>Share of Top 10 States/<u>UTS</u> of India in Number of Domestic Tourist Visits in 2011 (Provisional)</b>			
Rank	State/Union Territory	Number	Share in %
1	Uttar Pradesh	155,430,364	18.3
2	Andhra Pradesh	153,119,816	18.0
3	Tamil Nadu	137,512,991	16.2
4	Karnataka	84,107,390	9.9
5	Maharashtra	55,333,467	6.5
6	Madhya Pradesh	44,119,820	5.2
7	Rajasthan	27,137,323	3.2
8	Uttarakhand	25,946,254	3.0
9	West Bengal	22,256,968	2.6
10	Gujarat	21,017,478	2.5
Total of top 10 states		725,981,871	85.3
Others		124,874,769	14.7
Total		850,856,640	100

(Source: Tourism statistics, GoI)

The sector's performance over the past decade has been quite promising as is evident from the following figures. Foreign Tourist Arrivals (FTAs) in India between January and June, 2000 –2011 are given below.

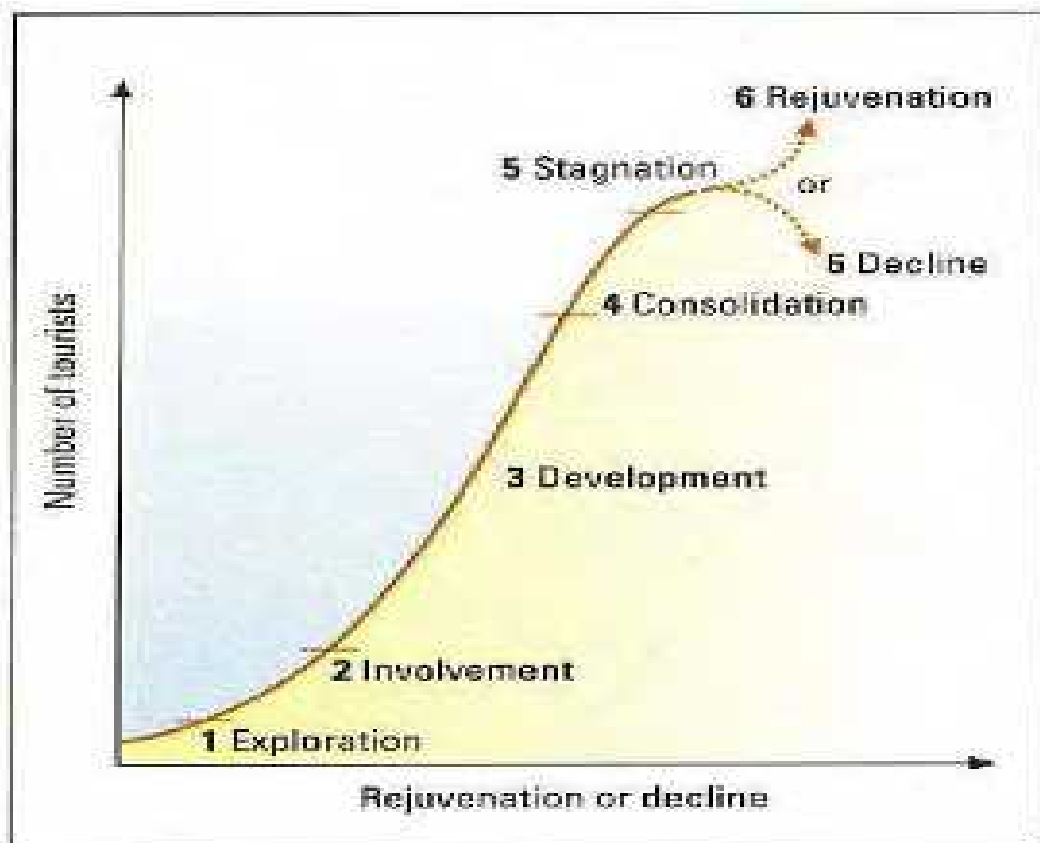
Year	FTAs (in million)	% change over the previous year
2000	2.65	6.7
2001	2.54	-4.2
2002	2.38	-6.0
2003	2.73	14.3
2004	3.46	26.8
2005	3.92	13.3
2006	4.45	13.5
2007	5.08	14.3
2008	5.28	4.0
2009	5.17	-2.2
2010	5.58	8.1
2011	2.92	10.9

(Source: Tourist Statistics, GoI)



The **7 Stages** Of Tourist Development:

1. **Exploration** - A small number of tourists visit the area. The area is unspoiled and few tourist facilities exist.
2. **Involvement** - Local people start to provide some facilities for tourists. There starts to become a recognised tourist season.
3. **Development** - The host country starts to develop and advertise the area. The area becomes recognised as a tourist destination.
4. **Consolidation** - The area continues to attract tourists. The growth in tourist numbers may not be as fast as before. Some tensions develop between the host and the tourists.
5. **Stagnation** - The facilities for the tourists may decline as they become old and run down. The numbers of tourists may decline too.
6. **Rejuvenation** - Investment and modernisation may occur which leads to improvements and visitor numbers may increase again.
7. **Decline** - If the resort is not rejuvenated (stage 6) then it will go into decline. People lose their jobs related to tourism. The image of the area suffers.

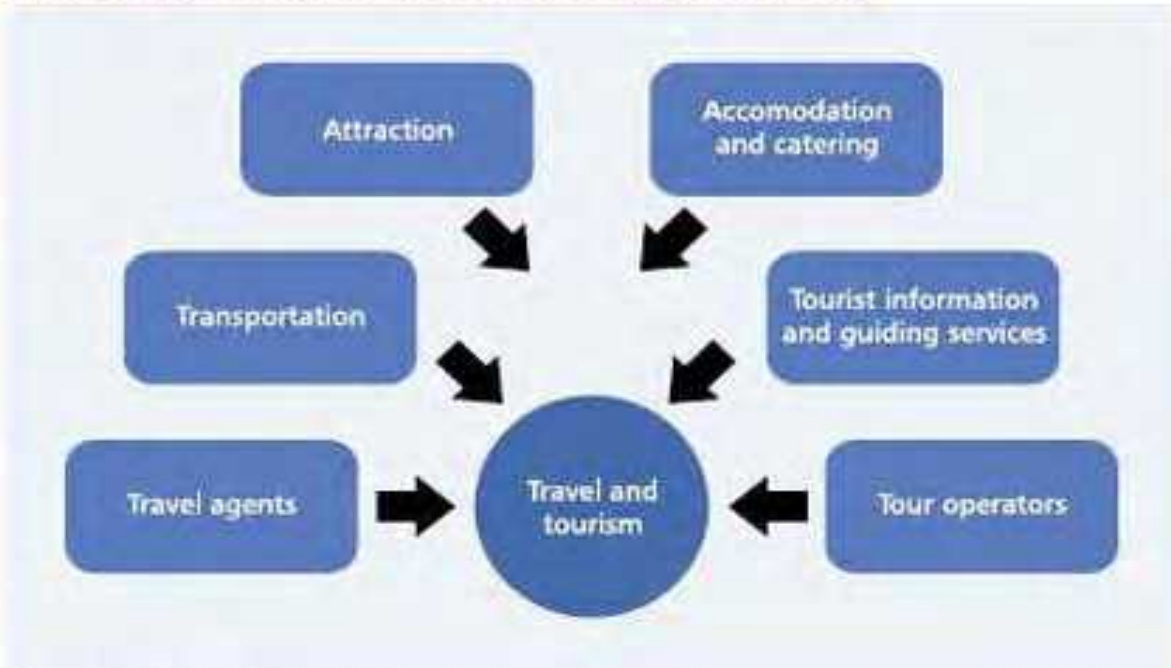


Air-India consistently upgraded its technology both in the Air as well as on ground absorbing the latest state of the technological advancements. At the time of nationalisation in 1953 the world trend was to have two airlines for a nation, one catering to domestic and the other to international traffic. India also followed the same trend. However, technological developments have erased these distinctions and virtually all countries have done away with the two carrier model. The new technology has necessitated creation of new organisational forms. Air transport is heavily dependent on technological developments in communications which in turn is computer based and has global characteristics. Reservation systems and communications have crossed national boundaries into global networks and systems. Huge investments are required for such systems and it is impracticable to have such systems for every airlines. Instead, specific agencies have come into existence providing specialised services at nominal costs to airlines. Thus, technological advancements have compelled the restructuring of Air India along with Indian Airlines and Vayudoot.

Transport service providers could be airlines, cruise lines, car rentals, and rail companies. A tourist's choice of transport would depend on the travel budget, destination, time, purpose of the tour, and convenience to the point of destination. Accommodation could be hotels and motels, apartments, camps, guest houses, lodge, bed and breakfast establishments, house boats, resorts, cabins, and hostels. In addition, tourists also require

catering facilities, which a variety of outlets for food and refreshments offer. These include hotels, local restaurants, roadside joints, cafeterias, and retail outlets serving food and beverages.

Exhibit 1.1: Components of the tourism industry



Source: D&B Research

### The Abc's of Airfares and Airline Management

*“He who does not travel does not know the value of men.” – Moorish proverb*

#### Key Terms used

1. **Travellers:** Travellers are at the centre of the model where all tourism activities are focused. Radiating from the centre are three large bands containing several interdependent groups of tourism participants and organizations.
2. **Tourism Promoters:** Tourism promoters are in the first layer, in close contact with the travellers. Organizations in this layer include tourism boards, direct marketing companies, meeting planners, travel agents and tour operators. The tourism boards and direct marketing companies provide information and marketing services to travelers whereas travel agencies, tour operators and meeting planners provide services such as making travel arrangements and giving professional advice on tourism related matters. All these organizations usually deal directly with individual travellers.



- 3. Tourism Service Suppliers:** Tourism service suppliers, such as airline companies, bus operators, railway corporations, cruise ship operators, hotels and car rental companies, etc. usually provide services to travellers independently. The service suppliers may also collaborate to provide tour packages for travellers by combining the various services such as accommodation, air transportation, theme park entrance ticket, etc. The actual movement of travellers is usually categorized as air, water, road, and rail. Transport is acknowledged as one of the most significant factors to have contributed to the international development of tourism. It provides the essential link between tourism origin and destination areas. It also helps to facilitate the movement of travellers either for leisure or business.
- 4. Round Trip:** Travel from A to B then back from B to A using the same fare basis code. Travel from a point and return thereto which involves only one crossing of the Atlantic Ocean and only one crossing of the Pacific Ocean.
- 5. Routing:** The routing rule lists the allowed connecting cities for travel from A to B for a particular fare. Sometimes this rule indicates that travel must be nonstop. With respect to a passenger, a change of route, fare, carrier, type of aircraft, class of service, flight or validity from that originally provided in the appropriate transportation document.
- 6. Segment:** A segment refers to a single flight with the same flight number. For example, if you travel from A to B, change planes at B, and then travel from B to C, you will have two segments. On the other hand, if you travel from A to C and the flight stops at B, but you don't change planes, then your trip from A to C is one segment from the point of view of fare rules. Note that the US federal segment tax defines both of these scenarios as two segments.
- 7. Stopover:** A stopover is loosely defined as a connection time exceeding 4 hours on a domestic itinerary or 24 hours on an international itinerary. There are exceptions for the last flight at night and also for the next scheduled flight (if none are scheduled within the window), but the rule of thumb above is what holds true 99% of the time. Suppose you were flying from New York to Los Angeles, and you wanted to stop and visit your aunt in Indianapolis on the way. Such a visit would constitute a stopover in Indianapolis. Some fares allow free stopovers, others allow stopovers for an additional fee, and many fares do not allow stopovers at all. Now, your flight might be routed through Indianapolis anyway, and you might even have to change aircraft there. You might think you could "beat the system" by booking a connecting flight for the next day. You usually cannot do so, since if you do not depart your intermediate point (Indianapolis) within 4 hours of your arrival there, it would normally be considered a stopover. Therefore, such an arrangement would not be allowed if the fare did not permit stopovers.



8. **Tourist** - Someone who travels to and stays in a place that is not his or her usual place for a short period of time.
9. **Tourism**: - All the activities that tourists take part in, and the services that support them.
10. **Inbound Tourist**: **Someone** travelling into our country.
11. **Outbound Tourist**: Someone travelling out of our country.
12. **Domestic Tourist**: **Someone** who travels within a country boundary.
13. **International Tourist**: Someone who travels across a country boundary.

### Terms Related to Fare Rules - the Basics

**Booking Code**: What is the booking class required for booking this fare? Using booking classes, the airlines control how many seats on each flight are available for each fare. e.g. F,P,J,C,Y,B,M,Q,V,H,L

**Res/Ticketing**: When must the reservation is made? (e.g. 7,14,21 days in advance) When must the ticket be issued? (e.g. 24 hours after making reservation) Usually the earlier of the two deadlines takes precedence.

**Minimum Stay**: e.g. must stay over a Saturday night (often stated technically as "return travel valid on the 1st Sun after 12:01 am").

**Maximum Stay**: e.g. 30 days, 60 days, 365 days.

**Day/Time**: Some fares are only valid on particular days of the week, or at particular times. For example, some fares are valid Mon-Thu only, or from 7 pm - 6 am only.

**Season**: Some fares, particularly overseas fares, have an associated season (e.g. 15SEP-12DEC). For overseas travel, usually the departure date determines the season for the round trip fare.

**Blackout**: Dates some fare are not valid on certain dates - e.g. over a holiday weekend.

**Eff/Exp: Effective/Expires**: Many seat sale fares must be purchased by a certain date. Find this date in this section of the rules.

**Flt Appl: Certain** fares are only valid for particular flights - e.g. nonstop only, or flight 123 only.

There are a number of different types of transport modes: air, water, road and rail. The various types of transport modes can be subdivided into:

**Business-class** travellers have wide comfortable seats with plenty of legroom. They can also enjoy good food, free drinks, and complimentary newspapers.



**Economy-class** travellers though have narrower seats, still are provided with suitable services and meals.

In general, most of the airlines provide different classes on board; they are first, business and economy class. Some airlines nowadays introduced 'premium economy class'. This class of service offers better individual service (e.g. more comfortable seat) to passengers at a lower price comparing with business class service.

### Types of Flights in Air Tourism

When booking a ticket, regardless of whether it is using a published or unpublished fare, there are letters that are assigned to different fares. These letters indicate the class of service, not simply indicating economy or business class, but rather the type of fare that was purchased.

1. **Scheduled flights:** It refers to those flights operated regularly according to a published timetables and fares. Irrespective to the number of passengers to be carried on any one flight, they serve on a routine basis.
2. **Non-scheduled flights** also known as charter flights do not operate on any set schedule or have predetermined fare structure charter flights could go anywhere and at any time when scheduled service do not covered, and very often they supplement the service on regular routes during peak seasons.

Mode	Carrying unit and capacity	Advantages	Disadvantages	Significance for tourism
Air	<ul style="list-style-type: none"> <li>• Aircraft</li> <li>• Medium to High passenger capacity</li> </ul> 	<ul style="list-style-type: none"> <li>• Speed and range</li> <li>• Suited to long distance journeys</li> </ul>	<ul style="list-style-type: none"> <li>• High fuel consumption</li> <li>• Stringent safety regulations make air transport an expensive mode</li> </ul>	 <ul style="list-style-type: none"> <li>• Speed: shortened the travel distance and reduced the time of travel</li> <li>• Range: Increased accessibility to places, opened up most parts of the world for tourism.</li> <li>• Stimulate the growth of international mass tourism</li> </ul>

## What is an air fare?

There are many types of airline tickets. The consumer can usually choose between economy and first class, and this affects the comfort of the seat and other amenities. Tickets can also be purchased to fly to a single destination and offer no way to return to the original location, or they can be purchased as a round-trip package. When children are flying, they sometimes have the option to sit on the lap of a guardian or sit in a seat, both of which can require different types of tickets.

Economy class tickets are normally the cheapest and most uncomfortable seating option available on a commercial aircraft. Some low-cost airlines do not have a business or first-class seating option, and thus economy class is the only class available. Economy seating is often uncomfortable for people with long legs or an above-average sized body. Some such people find their knees jammed into the seat in front of them or have difficulty sitting in the chair.

Air Fare can be defined as, **“the price a passenger pays in order to travel by air”**

Airfares are most often based on one-way or round-trip travel. Fares may be published, unpublished and/or negotiated fares (corporations, or government agencies/ organizations may have fares negotiated with an airline at a lower rate). Unpublished fares are also known as consolidated fares and are offered by consolidators or bucket shops.

## How Are air Fares Determined?

Add-ons  
Class  
Marketing Decisions  
Maximum Permitted (MPM)  
Mileage  
Profit Motives etc  
Route Assignment  
Stopovers  
The Actual Cost of Service

## Types of ticket issued in air travel

- 1. First Class Ticket:** First class ticket is form tickets that allow travel in first class. First class travelers have access to spacious seating, quality food, drink and other in-flight amenities, these tickets are often the most expensive type of ticket available. First class ticket holders also have access to the airport lounge while waiting for their flight and a variety of entertainment options on-board.
- 2. Business Class Ticket:** This type of ticket allows the purchaser to sit in business class. It is a ticket that provides travellers with a more comfortable travelling experience than coach/economy. For example, one of the benefits of business class is increased leg room. However, it does not have the features or luxuries that are available to travellers carrying first class tickets.
- 3. Coach Ticket:** Coach Tickets are a type of ticket in which fliers travel in coach or economy class. This is the most basic means of travel and it is also the least expensive. Holders of coach tickets are often given limited snacks and drink and other comfort features such as leg room are limited.
- 4. Non-refundable tickets:** This type of ticket is often purchased at a discount and is not eligible for a refund. Travelers who are unable to travel on the date or dates that are specified may request that the carrier transfer the ticket to another time. Rules regarding transferring travel dates with non-refundable tickets may vary from one carrier to another and a re-issuing fee or penalty may apply.
- 5. Refundable ticket:** Refundable tickets are a ticket type that is eligible for a refund. Travelers that request a refund are not charged a fee or penalty.
- 6. Domestic Sector Tickets:** These days the number of domestic flight booking has been increased a lot. Because most of the airlines provide low fares for domestic sectors, so people started to travel by air for domestic travelling. Unlike early years domestic flight booking is much easier now with the use of internet and online domestic flight booking facilities. Passengers have the facility to compare domestic airfares and they can make the most affordable domestic flight booking.



7. **International Sector Tickets:** International air travel is playing a significant role in the growth of Indian aviation sector. Boosted by dramatic economic growth and income level of Indian passenger, the demand for international air travel in India has risen considerably in the past few years.

- 8. Refund of Tickets:** Refund shall be processed as per the mode of payment made. If the ticket has been paid for in cash, refund is by cheque; and if the ticket has been paid for by credit card, a credit slip shall be issued. Tickets issued outside the country will be refunded in the country where the ticket is purchased. The refund with regard to a ticket issued by a travel agent can only be done through that travel agent.

### Airfare Based on Type's Class

Aircraft are split up into different cabin sections, with different prices charged for the product and service delivered. Imagine you were going to a music concert and there were different prices of tickets on offer.

You might just want the cheapest or you might pay more to get a better view. The same principle applies for air travel. The passenger chooses where to sit dependent on how much they want to pay, and what service they require. Features of each cabin section:

The largest section of the aircraft on scheduled flights and normally the only service provided on charter flights.

Adjustable seats.

Complimentary meal service (depending on length of flight).

Complimentary drinks service (drinks are chargeable by many airlines) including charter.

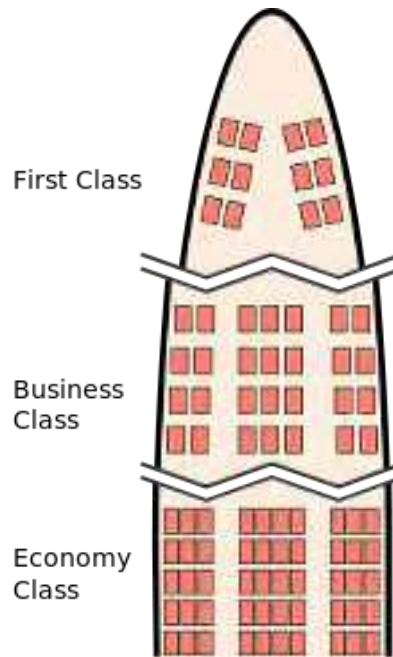
Duty - free shopping on eligible routes (no duty free on flights within European Union anymore).

In flight entertainment on long distance services.

Airlines have 3 travel classes: Economy, Business and First class. Within each travel class there are different fare classes, indicated by letter codes and relating to ticket or reservation restrictions.

Passengers within the same travel class receive the same quality of accommodation; however, the price or restrictions they face for that accommodation will vary depending on the fare class. Fare classes may also vary by how far ahead the ticket must be purchased, or how long the length of stay is.





For example, full fare economy class passengers (Y) are usually able to make changes to their reservation, while discount economy class passengers in the lowest booking code usually have tickets that are non-refundable, non-upgradeable, or non-changeable without a fee.

### Economy Class Codes

Full fare: Y, B

Standard fare: M, H, N

Special or discount fares: G, I, K, L, Q, R, S, T, U, V, W, X

**Below are some examples of our engine participating airlines and their economy classes starting with lowest?**

AA - American Airlines: cons. Q, N, G; published S, N, V, L, M

AC - Air Canada: consolidator N, K ; published N, L, Q

AF - Air France: consolidator Q, L, V, T; published N, Q, L, V

AI - Air India: consolidator G, V, M, L, K, H, B

AS - Alaska Airlines/Horizon Air: published T, K, V, L, Q

AY - Finnair - Finland: consolidator O, T, P; published Q, L

AZ - Alitalia - Italy: consolidator N, T, V; published L, N, T

BA - British Airways: consolidator S, L, M, T; published Q, M, K, H



CO - Continental Airlines: published T, S, L, Q, V

DL - Delta - USA: consolidator L, K, Q, H; published U, L, K

**Lowest class economy consolidator rules, conditions and tips (unless otherwise specified):**

**Capacity limitations:** the number of seats available on a given flight for a specific class will be determined by the carrier best judgment.

**Flights departing** on Monday, Tuesday, Wednesday and Thursday usually offer the lowest fares (midweek fares). As a rule it's more expensive to fly on a weekend than a weekday (25 USD more each way).

**Advance reservation and ticketing:** reservations are required at least 7 days before departure and ticketing must be completed within 3 days after reservation. 4. Most low fares require that you stay over at least one Saturday night before your return flight (or minimum stay 3 days).

**Maximum stay:** return travel must commence no later than 30 days after departure. 3 or 6 month tickets are more expensive.

**Cancellations:** ticket is non-refundable. Ticket may be refunded or used toward the purchase of another ticket if due to illness/death of passenger or traveling companion. A valid medical certificate or death certificate required.

**The following is a list of the main types of published airfares - and are based on round-trip or one-way travel:**

- 1. APEX fares are discounted international fares.** Such fares usually require tickets to be purchased in advance (such as 7, 14, or 21 day minimum advance purchase), and will have other restrictions - non-refundable, change fees are just a few of the possible restrictions.
- 2. Discount Fares** are fares that tend to have a smaller price tag, and are offered for a limited time (seat sales would fall into this category). They usually have a long list of restrictions such as specific travel dates, minimum and maximum stay (for example, a minimum Saturday night stay, a maximum 30 day stay), etc. Unlike most published fares, it is important to make sure that you are aware of the fare rules and restrictions on discount (seat sale) fares. Keep a copy of the rules because seat sale fares come and go quickly, and the rules and restrictions can be harder (sometimes impossible) to retrieve online.

3. **Excursion fares** are lower priced fares that involve restrictions like advance purchase, time of year, minimum/maximum stay, etc. Unrestricted, Flexible, or Full Fares are the titles given to the most expensive tickets.
4. **Published fare:** A fare that is available for purchase to anyone.
5. **Unpublished fares** are an entirely different beast. They may be seats that a consolidator purchased and can offer at highly discounted rates. The fare rules could literally contain anything from absolutely no changes allowed to free changes as long as availability exists. They may or may not allow for advance seat selection or the accumulation of frequent flyer miles.
6. **Bereavement fares:** A discounted fare offered to family members travelling because of an imminent death or death in the family. Most airlines that offer bereavement fares will require information about the situation. It also known as Compassionate Fare. Where bereavement fares are offered for international travel, the value of the discount may only be given upon return with death certificate because information is harder to verify.
7. **Joint fare:** An agreement between certain airlines to charge specific fares when a passenger uses more than one airline. These fares are agreed on by the airlines involved and would be closer to the fares that could be charged if a passenger was only travelling on one airline to get to their destination.
8. Weekend fares are examples of tickets with minimum and/or maximum stays. A weekend fare will typically allow a passenger to begin travel on a Friday or Saturday, and return Monday or Tuesday. In this example, the minimum stay would be a Saturday night, with the maximum stay being the Monday or Tuesday.
9. **Open ticket:** A ticket with no date specified and the passenger books a flight when ready to travel. These are usually full fare tickets, as opposed to a discounted, restricted fare.
10. **Unrestricted fare:** A more expensive airfare that offers greater flexibility (allowing changes, refunds, etc.).

### One Way and Return Trip

One Way (OW): Any journey which, for fare calculation purposes, is not a complete round trip, circle trip, or other than round trip/circle trip. **One-way travel** is when a fare purchased for a seat on an aircraft travel without a return trip.

This is a type of ticket for one direction of travel only. It is ideal for travelers who do not require a return flight or for travelers who do not have an exact return date. Travelers who purchase one-way tickets must purchase a second ticket for return travel. Round-trip tickets are tickets that allow the purchaser to travel to their destination and then back again. This type of ticket is for travelers who have plans to travel on specific dates. When the journey is wholly domestic (all ticketed points on the journey are in the same country), a journey where the destination point is not the same point as the origin. When the journey is international (at least two ticketed points are in different countries), a journey where the destination point is not in the same country as the origin point.

If you are just visiting, go round trip. When is a round trip not a round trip? When it's a circle or open-jaw itinerary. Thanks to the airlines' complicated and arcane fare structures, roundtrip flights almost always cost less than the sum cost of two one-way trips on the same route. (**Discount airlines** are a notable exception to this rule.) And most round trips go from Point A to Point B and back again.

### Round Trip Journey

*“Return Journey”, is defined as (a) travel from one point to another and return by the same air route used outbound whether or not the fares outbound and inbound be the same, or (b) travel from one point to another and return by an air route different from that used outbound for which the same normal, through, one way fare is established.*

A Round Trip (RT) is travel entirely by air from a point to another point and return to the original point, comprising two half round trip fare components only.

A round trip has only two fare components

The outbound fare needs to be equal to inbound fare

The Unit Origin and unit Destination points are the same

For a journey with a single pricing unit, the COC is also the same as destination country

Travel entirely by air from a point to another point and return to the original point comprising two half round trip fare components only, for which the applicable half round trip fare for each component, measured from the point of unit origin, is the same for the routing travelled; provided that this definition shall not apply to round the world travel. If the fares to be used differ through class of service/seasonality/day-of-week/carrier variations, the outbound fare shall be used also for the inbound fare component for the purpose of determining if the pricing unit is a round trip.

A round the world ticket is a plane ticket allowing you to fly around the world, usually over a period of up to a year and with between three and twenty stops at different airports. A round-the-world ticket (also known as round-the-world fare or RTW ticket in short) is a product that enables travellers to fly around the world for a relatively low price. RTW tickets have existed for some time and in the past were generally offered through marketing agreements between airlines on several continents. Now, they are almost universally offered by airline alliances such as Sky Team, Star Alliance and One world, or else by specialist travel agencies that will spend time helping customize a trip to the consumer's needs. An alternative for a round-the-world ticket is a continent pass.

Round-the-world tickets are priced according to travel class, origin of travel, number of continents, mileage (usually between 30,000 and 60,000 km), and sometimes season of travel. The traveller benefits from the large and optimized network of the airline alliance and can often participate in the alliance's frequent flyer programs, although Round-the-world tickets are usually subject to restrictions. The start and end of the journey almost always have to be located in the same country and exactly one crossing each of the Atlantic and Pacific must be included in the itinerary. The number of stops is usually restricted to 5-16, and backtracking between continents (especially Europe/Asia) is often restricted. The dates and journey do not have to be pre-planned, but may be changed en route at a local office of any airline in the alliance (although a change of destinations often results in an additional fee, and if the next flight is left open-dated the booking can be dropped by the airlines' computers).

Around-the-world travel isn't just for the young or the independently wealthy. Students, retirees and even working folks with a few weeks of vacation time can take advantage of the convenient pricing and flexibility of around-the-world tickets. You can travel around the world for nearly any length of time, from a few days to a few years. Your trip can involve a couple of brief stops or dozens of stopovers and side trips. And it needn't cost as much as you might think. Economy-class fares for the most basic around-the-world itineraries start around \$1,500. An around-the-world ticket is a special fare (or a series of point-to-point tickets) that allows you to fly to multiple cities and continents. These tickets are sold through airline alliances and agencies that specialize in around-the-world travel, and they can help you save money and organize your itinerary. Read on for a run-down on where to buy your tickets, how they work and what they cost.

### ***When to Consider an Around-the-World Ticket?***

Consider an around-the-world ticket if you're travelling to multiple continents within the same trip. Plot out your preferred countries or cities, along with a rough idea of

how long you'd like to spend in each place, and then turn to one of the travel agent for help in planning your itinerary.

### ***Who Offers Around-The-World Tickets?***

There are two main types of around-the-world ticket providers: airlines and specialist agencies. Airlines: The three global airline alliances allow you to link together the routes of any member airlines to create one continuous global trip. Each alliance offers at least one around-the-world ticket option. Fares are calculated based on the total mileage of your trip or the number of continents you visit. You are permitted anywhere from 3 to 15 stopovers in a period of 10 days to a year. You will typically need to reserve the first leg of your journey in advance, but after that you may leave your travel dates open. There may be restrictions on which direction you can travel (some fares require that you travel only in a single direction, either east to west or vice versa), or how many miles you can fly.

One advantage of booking your around-the-world ticket through an airline alliance is that you'll be eligible to earn frequent flier miles toward the airline loyalty program of your choice. Rather than buying separate flights from one destination to another, a flexible and sometimes cheaper way of international travel is via Round the world (RTW) tickets. Round the world tickets usually cost far less than the sum of the one-way tickets between each set of individual stops. These tickets are usually slightly more expensive than a return ticket between destinations on opposite sides of the world (London and Sydney for example), but if you were planning two or more stops then you may find that around the world ticket is the cheapest option, and allows you at least a side trip. Many travelers plan entire holidays using a round the world itinerary.

The following are the benefits of using round the world ticket. They are:

1. Creative Opportunities to Travel
2. Freedom and Flexibility
3. Miles and Elite Status
4. One Full Year
5. Tremendous Value

### **Not Quite Round-the-World- Some Airline Service Offer**

If you want to do a long, circular itinerary that isn't quite all the way around the world, there are a number of interesting alternative options also available:

**One world Circle Asia & South West Pacific-** 13,000 to 17,000 miles around Asia and Australasia.

**One world Circle Atlantic-** 17,000 to 25,000 miles around the Atlantic. Travel is between cities in USA, Canada, Mexico, South America and Europe/Middle East.

**One world Circle Pacific-**22,000 to 29,000 miles around the Pacific Rim, covering Asia, Oceania, North America and South America.

**One world Circle Trip Explorer-** A do-it-yourself kind of fare where you pay for the number of continents visited (minimum three, maximum four). Note that a stop in Africa is obligatory.

**Star Alliance Circle Asia-** 15,000 or 18,000 miles all around Asia. Your journey must cover all three regions, defined as “South-West Pacific”, “North Asia” and “South-East Asia.”

**Star Alliance Circle Pacific-** Allows you to loop around the Pacific Rim, for a total trip of 22,000-26,000 miles. Excellent coverage in Asia, but in North America you can only visit Los Angeles, San Francisco, Seattle, Honolulu and Vancouver.

One can understand how it is classified i.e based on region and topography it is fixed. The following table illustrates clearly different region for fare construction. Continents for the purpose of this fare are defines as:

<b>Europe</b>	Europe and the Middle East, including Algeria, Egypt, Morocco, Sudan and Tunisia
<b>Africa</b>	All countries of Africa excluding those listed above.
<b>Asia</b>	All countries in Asia, including the Indian subcontinent
<b>South Pacific</b>	Southwest Pacific, including Australia, New Zealand and Papua New Guinea
<b>North America</b>	North America, including Canada, the United States, the Caribbean, Mexico, Central America and Panama
<b>South America</b>	All South American countries south of Panama

### Circle Trip Journey

A Circle trip (CT) involves travel from a point and return thereto by a continues, circuitous air route, including journeys comprising two fare components but which do not meet the conditions of the round trip definition

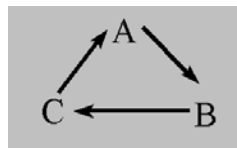


Circle trip may have two or more fare components unless used for special fares

Circle Trip- Special fares cannot have more than two international fare components

For components that ends in the country of origin, use the fares in the reverse direction

Travel from A to B then back from B to A using *different fare basis codes* -OR- Any trip involving a stopover in addition to the ultimate destination (e.g. A→B, B→C then C→A using the same or different fare basis codes).



### Concept of Open Jaw Fare

#### Definition of Open Jaw

“A flight itinerary where the departure city is different on the way out than the return. Or alternatively, the destination city that a passenger arrives in is different than the one that is departed from on the return portion of a flight itinerary”. An example would be a traveler starting at New York’s LaGuardia flying into San Francisco International, and then returning to Washington Dulles airport instead of New York.



**Open Jaw Journeys: Single Open Jaw (SOJ) - Which contains one surface sector**

- A. Turnaround Single Open Jaw: The outward point of arrival and inward point of departure are different
- B. Origin Single Open Jaw: The outward point of departure and inward point of arrival are different

An **open-jaw ticket** is a round-trip ticket in which the traveller does not arrive to the same city of departure and/or does not depart from the same city where he first landed. The path-lines between the airports form an open angle, rather than a closed loop, and the angle resembles an open Jawline. This is sometimes called an ARNK (arrival unknown). The traveller will use some other transport to travel between the airports. It is sometimes also called multi-city, but that might also be a ticket with three flight legs forming a closed loop.

In some cases, this type of arrangement is needed for boat cruises that do not return to the departure city. In other cases, the traveller wishes to explore between two points and not have to worry about using time to return to the arrival city. For example, a traveller might fly from London to Bangkok, travel around Thailand by public transport and fly back home to London from Phuket. Another example would be a traveller flying from New York City to San Francisco but then returning to Washington, D.C. Open-jaw tickets are a flexible and relatively inexpensive way of flying, as such tickets are almost always less expensive than purchasing two one-way flights between the destinations visited.

Another market commonly travelled under an open-jaw itinerary is the one of local one-way tours. Take, for example, a tour of Florida, where a traveller flying into Jacksonville, Orlando, or Miami rents a car or joins a bus tour at their arrival airport, and returns the car or ends the tour in the town from which they will be flying home.

An alternative to an open-jaw ticket is a continent pass, for travel within a continent.

Travel comprising only two international fare components with a surface break(s) which, unless otherwise specified in a special fares resolution, may be between any two points/countries in the area(s) of unit origin and/or turnaround for which the special fare resolution applies and for which the fare is assessed as a single pricing unit using half round trip fares. In this context;

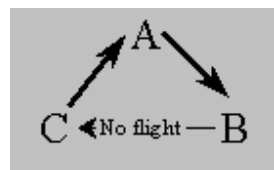
1. For 'turnaround open jaw' the outward point of arrival and the inward point of departure are different, or

2. For 'origin open jaw' the outward point of departure and the inward point of arrival are different, or
3. For 'single open jaw' either a) or b) applies, or
4. For 'open jaw' any combination of the above may apply

### Open Jaw Normal Fare

Travel from one country and return thereto, comprising two international fare components, only and where:

- a) **Origin open jaw:** the outward point of departure in the country of unit origin and the inward point of arrival in the country of unit origin are different. Travel from A to B then from C to A, with no air ticket from B to C. Usually the distance BC must be less than both AB and CA (i.e. the part without the air ticket must be shorter than the shortest distance flown).



An open-jaw flight is one that, in the simplest terms, flies from Point A to Point B, then from Point C back to Point A. Points B and C are often neighbouring airports, or at least in the same general area. A sample open-jaw itinerary might be a flight from Atlanta to Seattle on the way out and from Portland, OR to Atlanta on the way back. Another open-jaw scenario is to fly into and out of the same destination city, but your starting and finishing points are different, thus: Fly Point A to Point B; then fly Point B to Point C. An open jaw is ideal for travelers who are planning to cover a lot of ground during their trip and who don't want to waste time returning to their original airport. Perhaps you fly into San Francisco and then drive down the coast of California to Los Angeles; an open-jaw fare would allow you to fly home out of LAX instead of making your way back up to San Francisco. Open jaws are also useful for cruise passengers whose sailings embark and disembark in different ports. Despite the fact that an open-jaw itinerary isn't quite a classic round trip, most airlines treat it as such and charge you half the roundtrip fare of what each leg of the trip would cost you. So if the Atlanta - Seattle round trip would cost \$400 and the Portland - Atlanta round trip would cost \$500, you end up paying \$200 for the first leg and \$250 for the second leg, for a total of \$450 roundtrip. The resulting total fare will typically offer considerable savings over the cost of two separate one-way flights.

There is such a thing as a double open jaw — Point A to Point B on the way out, and then Point C to Point D on the return. While this is usually more expensive than a traditional open jaw, it may still save you money over two separate one-way flights.

- b) Turnaround open jaw:** the outward point of arrival and the inward point of departure are different.
- c) Double open jaw:** the outward point of departure in the country of unit origin and the inward point of arrival in the country of unit origin are different (origin jaw) AND the outward point of arrival and the inward point of departure are different (turnaround open jaw).

### Normal Fare for Example

A fare established in the Resolution 040/050/060 series for intermediate, first or economy class service and any other fare denominated and published as a normal fare (e.g. C2, F2, Y2). Children's fares and infants' fares which are established as a percentage of the fares referred to above are also considered to be normal fares.

### The Circle

A circle itinerary typically begins and ends in the same city, but includes at least three separate flights that take you to two or more different cities without the overland portions of the open jaw. Example: Fly from New York to Detroit, then Detroit to Houston, then Houston to New York. (Feel free to add Points D, E, F and beyond, but make sure you start and end at your original city — New York in this example.) Circle itineraries usually permit a maximum of two stopovers and are priced as a series of one-way flights. (Circle fares may not save you as much as an open jaw.) Still, circle fares qualify you for discounted fares, and you may even find that the fares on the separate legs of your flight add up to less than a pure roundtrip fare. This is especially true on popular long-haul routes.

### Exceptions and Rules

**Open Jaw:** The most common restriction on an open-jaw itinerary is that the segment of your trip that you don't fly (the Seattle-Portland leg in our example) must be shorter than the shortest leg of the trip that you do fly. So, for example, if you flew from Atlanta to Seattle, then drove cross-country to New York, then flew back to Atlanta, you couldn't qualify for the open-jaw discount, as the distance from Seattle to New York is much greater than the distance from New York to Atlanta.

**Circle Fares:** Restrictions and rules on circle itineraries vary by airline, but usually take one of the two following forms, both a variation on the old “Saturday night stay” rules. The difference between the two is critical: in the first instance, the order in which you visit the cities is extremely important. In the latter instance, it is much less so. If your airline has different rules for different segments of your trip, the whole trip will generally be subject to the most restrictive ones. So, for example, if one fare requires a 14-day advance purchase and the other a 21-day advance purchase, you’ll need to book 21 days ahead in order to get the discounted circle fare.

### How to Find Open Jaw and Circle Fares

Most online booking engines and airline Web sites can recognize a circle or open-jaw itinerary, and price them accordingly; just look for the multi-city search option. It might still be worth checking with travel agent.

#### Points to Ponder

**One-way Trip** – A trip from origin to destination with no return to origin

**Round Trip** – A trip from origin to destination with return to origin. Flights follow same route and use same carrier.

**Circle Trip** – Same as round trip except one flight will follow a different route or use a different carrier

**Open Jaw** – A round trip where the passenger either departs for return trip from a different airport or returns to a different airport.

Open Jaw Travel TO one city, return from another; or travel FROM one city, return to another. For ‘turnaround open jaw’ the outward point of arrival and the inward point of departure are different. At least one segment must be half of a round-trip fare. For ‘origin open jaw’ the outward point of departure and the inward point of arrival are different. At least one segment must be half of a round-trip fare. For ‘single open jaw’ either the outward point of arrival or the inward point of departure are different, or the outward point of departure and the inward point of arrival are different.

At least one segment must be half of a round-trip fare. For ‘open jaw’ both the outward point of arrival and the inward point of departure are different, or the outward point of departure and the inward point of arrival are different. At least one segment must be half of a round-trip fare. For ‘double open jaw’ both the outward point of arrival and the

inward point of departure are different, and the outward point of departure and the inward point of arrival are different. At least one segment must be half of a round-trip fare.

### **Add-On Mixed Class Journey**

A mixed class fare is a fare whereby the client on a through fare travels part of the journey in one class, then changes to another class for the balance of the journey. This change of class cannot take place in midair, but rather must occur at some intermediate point. Consider the following mixed class example, in which there is a change of class in Melbourne.

QF496 Y	MON	21MAR ADL/MEL	0600/0715
QF567 J	MON	21MAR MEL/SYD	1800/1930

As the journey will be completed on the one day and travel via Melbourne is permissible enroute to Sydney, a through fare will apply. The change at Melbourne will cause a special calculation of the fare to be charged, and this calculation is termed a mixed-class differential.

The mixed-class differential is calculated by:

1. Taking the lowest travelled class through fare from the point of origin to the final destination and adding to this fare
2. The difference between the higher fare and the lower class fare over the sector travelled.

### **Example**

Economy Class fare Adelaide to Sydney \$435.60  
Business Class fare Melbourne to Sydney \$433.40 less  
Economy Class fare Melbourne to Sydney \$320.10  
Difference \$113.30  
You would then add \$435.60 + \$113.30 = \$548.90

### **General**

- 1) Mixed class travel is when an itinerary involves travel in two or more classes of service

- 2) In assessing the fare for the mixed class transportation, special fares must not be used
- 3) Any stopover/transfer restrictions applicable to the through fare must be observed
- 4) Differentials are assessed in the same direction as the fare used for the lowest class of service
- 5) When half RT fares are used, differentials are assessed using half RT fares; when OW fares are used, differentials are assessed using OW fares
- 6) Class differential calculation is only subject to the HIP check, no further minimum checks apply
- 7) When comparing normal fares of the "same class of service", in order to determine the fares to be used in a class differential calculation, the following sequence shall apply

If no sleeper seat fare, use first class fare;

If no first class fare, use intermediate/business class fare.

If no intermediate/business class fare, use economy class fare provided where more than one economy class fare is published, use the highest economy class fare.

### Fare Calculation

- 1) Establish the fare for the itinerary in the lowest class of service used applying all applicable fare construction checks
- 2) Establish whether as a result of 1) above the mixed class sector(s)
  - a. Apply within a fare component, or
  - b. Constitute an entire fare component, or
  - c. Constitute an entire pricing unit

If the mixed class sectors are WITHIN A FARE COMPONENT, the differential for the sector(s) travelled in a higher class shall be the lowest of the following

- a. The difference between the lower class fare for the sectors flown in the higher class and the fare for the higher class of travel on those sectors.
- b. The difference between the applicable fare for the fare component in the lower class of service and the applicable fare for the fare component in the higher class of service

## Example

Travel: LON – Y/ BKK – F/HKG – Y/LON

If mixed class sector(s) are consecutive sectors within a fare component travelled in a higher class of service, the difference shall be the lower of a. the difference between the lowest applicable fare for the lowest class of service used and the lowest applicable fare for the higher class of service used, or b. lowest applicable through fare for the lowest class of service used for the sectors concerned and the lowest applicable through fare for the higher class used for such sectors.

**Mixed Class Fare Construction** The procedure for calculating a mixed class fare is in three specific stages:

**Stage 1:** Calculate the through fare, from origin to destination, for the lowest class of travel. When carrying out this calculation apply any mileage surcharge as appropriate.

**Stage 2:** For the sector(s) to be travelled in the higher class, deduct the lower fare, from the higher fare. This gives you the differential. If there are two or more 'higher fare' sectors carry out a mileage check and apply any applicable mileage surcharge.

**Stage 3:** Add the amounts calculated in stages 1 and 2 above to arrive at the total fare.

It is also necessary to apply what is termed a 'Minimum Fare' or 'Through Fare Check' for the total fare, which ensures we are charging the correct fare for a traveller. Simply put, if it is cheaper to travel the whole journey in the higher class then it makes sense to administer this.

It is also necessary to apply what is termed a 'Minimum Fare' or 'Through Fare Check' for the total fare, which ensures we are charging the correct fare for a traveller. Simply put, if it is cheaper to travel the whole journey in the higher class then it makes sense to administer this.



### Example

TPMs	ITIN	FLIGHT DETAILS
	ATH	
2043	DXB	EK 23 AUG F
3035	BKK	TG 28 AUG C
1368	MNL	PR 17 SEP F
1631	SEL	OZ 29 OCT F

Always base the fare on the lower-class travelled, even if there is only one sector.

In this case, you would base the fare on C Class.

<b>ROUTE</b>	ATH – SEL C Class	ATH – DXB F Class - ATH – DXB C Class	BKK – SEL F Class - BKK – SEL C Class
<b>FARE</b>	2912.93	F Class: 1146.34 - C Class: 849.10	F Class: 781.27 - C Class: 633.54 <hr/> Differential: 147.73
<b>RULE</b>	N/A	N/A	N/A
<b>MPM</b>	7148	N/A	2756
<b>TPM</b>	8077	N/A	2999
<b>SUR</b>	15M	N/A	10M
<b>SUB</b>	3349.86	297.24	162.5
<b>TOTALS</b>			
<b>TOTAL FARE</b>	3809.60		
<b>MIXED CLASS CHECK</b>	ATH – SEL F (+15M) = 5360.11 The constructed Mixed Class Fare is lower.		

### Higher Intermediate Points (HIP)

#### Higher Intermediate Points

Construct fares in linear/automated format for one way and returns that include one or more higher intermediate fares (HIFs) using HIF checks *Add on fares*: for one way and/or return normal fare itineraries where add-on fares have to be applied either at original or destination or both; apply rules and restrictions.

*Surface sectors (open jaw)*: within one way and/or return normal fares and/or within special fares as applicable; apply rules and restrictions. A place on an itinerary to which there is a higher fare than the destination or next fare break point.

**HIP check for normal and special fares.** The higher intermediate point check applies to each fare component of all pricing units. (OW/RT/CT/RW/NOJ/OJ) as follows: from fare component origin to each intermediate stopover point, from each intermediate stopover point to each subsequent intermediate stopover point (Note: This is for normal fares only and from each intermediate stopover point to the subsequent fare break point.

**HIP exceptions by countries:** Africa For journeys wholly between Kilimanjaro and Nairobi, HIP check will be for all ticketed points.

India: For traffic originating in India and destined to Canada/ USA, when stopovers are taken in Europe or UK, higher intermediate fares shall not be applicable from points in Europe/ UK to Canada/ USA.

Israel: For travel originating in Israel, HIPs will be checked for all ticketed points from Israel. This does not apply to the HIP check from an intermediate point to another intermediate point or the fare construction point, or to fares with specified routings.

#### Example

Travel: Tel Aviv-Frankfurt-X/London-New York.

The HIP check is TLV-FRA, TLV-LON and FRA-NYC. (LON-NYC is not checked.)

#### Malawi

For journeys originating in Malawi, the HIP check in each fare component shall be applied on all ticketed points in Malawi.

#### Turkey

For travel between the Middle East and Turkey involving more than one point in Turkey, any higher intermediate point in Turkey must be charged whether or not a stopover is taken.

#### Western Africa

For journeys originating in Western Africa, the HIP check in each fare component shall be applied on all ticketed points in Western Africa.

## HIP Check - Normal Fares-General Application

If in any routing permitted at the direct route normal fare there is a higher direct route normal fare of the same class at an intermediate stopover point, the fare for the component must be raised to the level of such higher fare.

### Example

Travel: London- X/ Zurich-Nairobi Y class. No Stopover at ZRH.

### Direct Fare

LON-NBO NUC 1703.16.

No stopover at ZRH so no HIP check is needed.

Total NUC 1703.16 multiplied by NUC Conversion Factor (ROE)

(NUC 1=0.60417) rounded to the nearest GBP 1 = GBP 1029.00.

Where fares are established by season or day of week or flight application, the check will be based on the applicable fare (by season or by day of week or by flight application). Day of week fare level: to establish the day of week fare level to be used for the HIP, the rule for the application of the day of week fares applies only to the sector(s) for which the check is made. The day of travel on such sectors is used to determine the day of week fare level used for the HIP check.

### Example

Routing: A – B – C – D – A

First fare component (A to C).

Fare A-C is a fare established using the day of week of the first international sector A-B

Fare A-B is a non-day-of-week fare.

There are day-of-week fares B-C with the rule that the first international sector determines the day of week fare to be applied.

To establish the day-of-week fare level to be used for the HIP check on the sector B-C the date of travel B to C will be used.

**Second fare component (fare in the direction from A to C)**

Fare A-C is a fare established using the day of week of the first international sector A-D

Fare A-D is a non-day-of-week fare.

There are day-of-week fares D-C with the rule that the first international.

Sector determines the day-of-week fare to be applied.

To establish the day-of-week fare level to be used for the HIP check on the sector C-D the date of travel C to D will be used.

**Seasonal Fare Level**

To establish the seasonal fare level to be used for the HIP, the rule for the application of seasonal fares applies only to the sector(s) for which the check is made. The seasonal rule for such sector is used to determine the fare level used for the HIP check

**Example**

**Routing A – B – C – B – A**

**First fare component (A to C)**

Fare A-C is a non seasonal fare

Fare A-B is a non-seasonal fare

There are seasonal fares B-C with the rule that the first international sector determines the seasonal fare to be applied

To establish the seasonal fare level to be used for the HIP check on the sector B-C the date of travel B to C will be used

**Second fare component (fare in the direction from A to C)**

Fare A-C is a non seasonal fare

Fare A-B is a non-seasonal fare

There are seasonal fares B-C with the rule that the first international sector determines the seasonal fare to be applied

To establish the seasonal fare level to be used for the HIP check on the sector C-B the date of travel C to B will be used

When there is a fare construction surface sector, the HIP check applies to the point of such surface sector that is not the fare construction point.

### HIP Check - Special Fares-General Application

Having established an applicable special fare for a pricing unit, such special fare may be applied subject to the following:

1. Price the fare as a normal fare.
2. Establish the lowest applicable level.
3. If there is no HIP between both fare construction point of the special fare and an intermediate ticketed (stopover) point, the special fare may be applied. If there is a HIP between either fare construction point of the special fare and an intermediate ticketed (stopover) point, the special fare shall not be less than such higher fare, except;
  - o if there is a special fare of the same type at the same level or a lower level on the sector for which the normal fare applies, the special fare for the component may be applied, or
  - o if there is a special fare of the same type at a higher level on the sector for which the higher normal fare applies, the special fare for the component shall not be less than such higher special fare, or
  - o if there is no special fare of the same type on the sector for which the normal fare applies, the fare shall not be less than the lowest of any higher type of special fare within the same column shown in paragraph 4 below
 In defining a 'fare of the same type', the comparison shall be limited to the class of service. If there is more than one special fare of the same type on the sector for which the higher normal fare applies, the fare with the conditions most similar to those of the special fare for the component shall be used in comparison.

- |  |   |   |
|--|---|---|
| (i)<br>a-Late Booking fare,<br>or<br>b-APEX fare,<br><br>or<br>c-PEX fare,<br>or<br>d-Excursion fare | (ii)<br>a-GIT fare<br><br>or<br>b-ITT fare,<br><br>or<br>c-Excursion fare | (iii)<br>a-Public Group fare,<br>or<br>b-Excursion fare |
|--|---|---|

## Higher Intermediate Point Fares (HIP)

There are times when certain anomalies appear in the calculation of airfares.

As an example, look at the following journeys:

Journey 1: SYD/TYO      -The airfare in “Y” class is -NUC 1609.53

Journey 2: SYD/TYO/SEL   -The airfare in “Y” class is-NUC 1485.72

When comparing the 2 journeys above the anomaly is highlighted, which is the fact that a passenger purchasing Journey 1 is not only travelling to the same city (TYO) as a passenger in Journey 2, but also paying a more expensive fare than a passenger purchasing Journey 2?

To balance these anomalies that may occur IATA (International Air Transport Association) has introduced a number of checks know as “Higher Intermediate Point Fare Checks” (HIP checks) which are as follows:

HIP Check 1 (Point of origin to all stop overs): the through normal fare between the origin city and the destination city must not be less than the through normal fare between the origin city to any intermediate stopover city in the same journey.

HIP Check 2 (All cities to destination): the through normal fare between the origin city and the destination city must not be less than the through normal fare between any intermediate stopover city in the same journey to the destination city.

HIP check 3 (All intermediate stop over cities to each intermediate stopover city–cross out the first & last city & check second city to each intermediate city, then the third city the same way, etc until all checked): the through normal fare between the origin city and the destination city must not be less than the through normal fare between any 2 intermediate stopover cities in the same journey.

DO NOT HIP Check transit points to other cities. i.e cities with an “X” in front of them.

HIP Checking must always be done in the same direction as the travel calculation.

HIP Checking is done before any mileage surcharge is applied to obtain the total fare charged for the journey.

IF a HIP is found then this HIP fare replaces the through fare from Origin to Destination.

IF MORE than 1 HIP is found, then the HIP that produces the highest airfare is applied to the journey.

Record the HIP fare details opposite "HIP" on the Fare Calculation Sheet.

Any mileage surcharge (if applicable) is then applied to the established HIP fare that REPLACED the previous through fare.

The final calculated fare (after applicable adjustments) is then recorded opposite "AF" on the Fare Calculation Sheet.

## HIPS and Mileage Surcharges

What happens when there is a mileage surcharge?

Where a fare has to have a mileage surcharge applied, it is applied to the HIP. As an example look at the journey LON-MAN-BRU-ROM.

<b>ROUTE</b>	LON - ROM
<b>FARE</b>	466.17
<b>RULE</b>	N/A
<b>MPM</b>	1077
<b>TPM</b>	1220
<b>SUR</b>	15M
<b>HIP</b>	MANROM 594.04 <b>BRUROM 675.82</b>
<b>TOTAL FARE</b>	777.19

The HIP is increased by 15% to find the total fare.

The Linear fare format is shown like this:

LON BA MAN BA BRU AZ ROM15M BRUROM777.19NUC777.19END ROE0.617797. You might have been surprised to see that BRU-ROM was a HIP. The distance is considerably less than from MAN. In many cases travel from the UK via Belgium (and many other western European countries) will result in a HIP - even for relatively short journeys. Again, with experience you will become adept at spotting these.



## **Higher Intermediate Point (HIP) Processing**

As fare construction rules no longer require the use of international sales indicators, there is a change to HIP processing. The HIP check now *only* applies to stopover points for all transactions, and the point of sale or ticketing is no longer a factor in determining how the HIP check should be performed.

### ***Important Note***

The HIP check no longer applies to connecting points. Previously this was required where tickets were issued outside the country of commencement of travel, formerly SITO or SOTO.

### ***Normal Fares***

The HIP check applies to all normal fare transactions for each fare component. You must check for higher fares within each fare component, in the direction of the fare applied from:

- Origin of the fare component to each intermediate stopover point
- Each intermediate stopover point to another intermediate stopover point
- Each intermediate stopover point to destination of the fare component

### ***Special Fares***

The HIP check applies to all special fare transactions for each fare component. You must check for higher fares within each fare component, in the direction of the fare applied from:

- Origin of the fare component to each intermediate stopover point
- Each intermediate stopover point to destination of the fare component

### ***Points to Ponder***

HIP checks are first processed for normal fares in the same class of service. No special fare HIP is required if there is no HIP at the normal fare level.

There is no requirement to check for a HIP between two intermediate points in a fare component.

## HIP Check VS CTM Check

HIP procedures vary according to where the ticket is sold or issued for SITI / SOTI fares. If in any routing permitted at the direct Rout normal fare of the same class between any 2 ticketed points, the fare for the component must be raised to the level of such higher fare. Where fares are established by season or day of week or flight application, the check will be based on the applicable fare. Mentioned below contains exceptions to the higher intermediate point rule. Higher rated specified "Via HIP" points may be disregarded when computing a fare between the appropriate points listed below. However, the following conditions must be complied with:

1. Any expenses incurred by the passenger at the via HIP point (s) will not be absorbed by the carrier.
2. No stopover is permitted at the via HIP point(s)
3. Passengers and baggage must be booked beyond the via HIP point(s)

## Circle Trip Minimum Check (CTM)

A. The applicable fare for a circle trip (excluding any side trip which has been charged as a separate pricing unit) must not be less than the direct rout normal or special RT fare (as appropriate) for the highest rated pair of points applicable to the class of service used from the point of unit origin to any stopover point on the rout of travel.

## B. Different Global Indicators (GIS)

1. When there are RT fares with different global indicators from the point of unit origin to any stopover point, the fare to be used for the CTM is the fare applicable to the flown itinerary.
  2. When the flown itinerary includes different global indicators (including round the world travel), the fare must not be less than the lower of such RT fares from the point of unit.
- C. When RT fares from the point of unit origin to any stopover point differ according to carrier (s) used outbound and inbound, the fare to be used for the CTM is the lower of such RT fares.

## What is Round the World Minimum Check (RWM)?

The fare for a round the world trip (Excluding any trip which has been charged as a separate pricing unit) must not be less than the direct rout normal or special RT fare (as

appropriate) for the highest rated pair of points applicable to the class of service used from the point of unit origin to any stopover point in the rout of travel. When there are RT fares with different global indicators from the point of unit origin to any stopover point, the fare to be used for the CTM is the fare applicable to the flown itinerary. When the flown itinerary includes different global Indicators. The fare must not be less than the lower of such RT Fares from the Point of unit origin. When RT fares from the point of unit origin to any stopover point differ according to carrier (s) used outbound and inbound, the fare to be used for the RWM is the lower of such RT fares.

### **Exceptions**

The RWM check is not required for round-the-world travel originating in Australia/ New Zealand.

### **Country of Origin Minimum Check (COM)**

When OW pricing unit are used and travel on the second or subsequent international OW pricing Unit is routed via the country of unit origin of a previous OW pricing Unit, whether or not a stopover is made in that country, the fare for such PU must not be less than the highest international fare from any ticketed point in the country of unit origin of a previous PU to any other ticketed point in such pricing Unit.

### **Directional Minimum Check (DMC)**

The DMC applies to SOTI / SITO / SOTO transactions.

Normal OW fare components:

The applicable fare to be charged must not be less than the direct route OW fare for the highest rated pair of points applicable in either direction for the class of service used between any ticketed points within the fare components.

Where more than one normal fare is published for the carrier and class of service used, the lower / lowest level may be used.

### **Fare Calculation: Steps Involved**

Find ticket point mileage (TPM) of whole itinerary and add them.

## Fare Check Rules Adopted

Check origin / Destination Fare (O/D), No HIP/HIF involved.

Check Origin / Intermediate fare, if the intermediate fare is higher than One-way backhaul / Backhaul check (OBC/BHC) check is mandatory.

Note: if OBC / BHC is applied then check 3 & 4 is not required

Check Intermediate / Intermediate (I/I) point fare.

Check Intermediate / Destination point fare.

Calculate the fare

Take Difference of higher class sectors.

Make FCR if difference of sectors

Calculate the fare of these sectors (2nd FCR)

OW RT

1. TPM 1. Check for Turnaround point
2. FCR 2. Division of Outbound / Inbound
3. Fare Calculation 3. Add Ticketed Point Mileages.
4. Make Ticket 4. Apply Fare Check Rules.
5. Fare Calculations

### **ONE WAY JOURNEY**

***Example of: Direct Route***

Routing: KHI PK DXB TKTG

Point Mileage - KHI - DXB 740

**Fare Calculation:** Reflection on Ticket

From / To KHI Carrier Fare Cale DXB PK 207.73

IROE PKR 60.30463

Total Fare Cale 207.73 - Total PKR 12530

**One Way Journey - Indirect Rout**

**Example of: Mileage Principle without Surcharge**

Routing: NYC vs LON PAR pk KHI

**TPM Calculation** - TKTG Point Mileage NYC LON 3458 PAR 220 KHI 3807 Total 7485

**Fare Calculation** - ISI SITO, FCP NYCKHI, NUC 1358.00 YOW, RULE NIL MPM 9101 AT, TPM 7485, EMA NIL, EMS NIL, HIP NIL, HIF NIL, RULE NIL AF 1358.00, CHECK NIL, TOTAL 1358.00, IROE 1.00 LCF 1358.00 X 1.00, 1358.00, USD 1358

**One Way Journey - Indirect Rout**

**Example of: Excess Mileage Allowance**

Routing: BGO YY OSL YY CPH YY BRU

**TPM Calculation** - TKTG Point Mileage, BGO, OSL 188, CPH 306, BRU 469, Total 963

**Fare Calculation** - ISI SOTI, FCP BGOBRU, NUC 644.63 YOW, RULE NIL MPM 783 EH, TMP 963-195=768, EMA 195, EMS NIL, HIP NIL, HIF NIL, RULE NIL AF 644.63, CHECK NIL, TOTAL 644.63, IROE 6.66271, LCF 644.63 X 6.66271 4294.98 R5, NOK 4295.00

**Reflection on Ticket** - From / to BGN Carrier Fare Cale, OSL YY E / \*\*\*, CPH YY M BRU YY 644.63, IROE 6.6627, Total Fare Cale 4294.98, Total NOK 4295

**One Way Journey - Indirect Route**

**Example of: Excess Mileage Surcharge**

Routing: TYO JL SEL KE TPE PR MNL

**Fare Calculation** - ISI SOTO, FCP TYOMNL, NUC 876.39 YOW, RULE NIL, MPM, EH 2254, TPM 2401, EMA NA, EMS 10M, HIP NIL, HIF NIL, RULE NIL, AF 964.029, Check NIL, Total 964.029, IROE JPY 120.131767, LCF 964.029 X, 120.131767, 115810.507 R10, JPY 115900

**Reflection on Ticket** - From / To - TYO Carrier Fare Cale, SEL JL, TPE KE 10 M, MNL PR 964.029, IROE JPY 115900, Total Fare Cale 832.86, Total JPY 115900

**TPM Calculation** - TKTG Point Mileage, TYO, SEL 759, TPE 911, MNL 737, Total 2401

### Formula to Calculate Extra Mileage Surcharge

Divide the sum of TPM by MPM if result is over but not higher than Surcharge fare by

1.00	1.05	5	%
1.05	1.10	10	%
1.10	1.15	15	%
1.15	1.20	20	%
1.20	1.25	25	%

If over 25 % use lowest combination

### Back Haul Minimum Check (Bhc)

#### Definition of Backhaul Check

It can be defined as, "In airline ticketing, the process of checking fares to all stops on an itinerary to make sure that the highest possible fare is charged. This is done to prevent passengers from booking a flight to a cheaper destination via a higher priced destination and then deplaning at the higher priced destination". Also it is referred to as *one-way backhaul check*.

The backhaul check in airfares is about the following: when you travel from your origin city via another city to your final destination and this other city is farther away from your origin than your final destination, the chance exists that the airfare to that other city is more expensive than the fare to your destination. In airfare construction your initial fare is calculated between origin and destination.

So you could 'cheat' the airline by buying a ticket from London to Hamburg via Berlin (Berlin is farther from London than Hamburg and the fare is probably more expensive). So when you leave the plane is Berlin, you have flown that at the fare London - Hamburg. However, the airlines do know this trick also, so they have devised the back-haul check (in full the One-Way Backhaul Check): If there is between your point of origin (London) and your final destination (Hamburg) a point in your itinerary with a higher fare (Berlin), than this higher fare must be charged. This rule applies only when you make a stopover (interruption of your journey of more than 24 hrs) in that intermediate city.

**This IATA rule states that.....**

“For a one-way journey with a HIP from origin, the fare charged must not be less than:

The applicable one-way fare to the HIP from origin (without surcharge) PLUS  
The difference between the HIP from origin, and the origin to destination fare (both un-surcharged). The minimum fare to charge for a one-way journey including a HIP from origin is not published, so we have to carry out a further calculation to establish it. This is known as is the one-way backhaul check **(BHC)**.

Thus, it makes sure that the fare was purchased at the higher price for that routing when a roundtrip ticket connects through a HIP city. Whereas, the minimum fare to charge for a one-way journey including a HIP from origin is not published, so we have to carry out a further calculation to establish it. Despite the capital investments on aircrafts, hotels and attractions, it is the people (the service providers) that make the difference.

*One-way backhaul check rule (OWB or BHC):* construct fares for one way journeys with one or more higher intermediate points where the higher intermediate fare check (HIP) results in a HIP from the point of origin resulting in the application of the one way backhaul check rule (OWB or BHC)

*Circle trip minimum fare check rule:* construct fares for return journeys with one or more higher intermediate points where the higher intermediate fare check (HIP) results in a HIF from the point of origin resulting in the application of the circle trip minimum fare check rule (CTM)

### **Indirect Travel Limitation**

The first part of this rule states:

A fare component must not include more than:

- a. One departure from the point of origin
- b. One arrival from the point of origin, or
- c. One stopover at any one intermediate ticketed point



These three limitations refer to a fare component. The first limitation says that it is possible to have only one departure from the point of origin in a fare component. Consider the following economy journey:

### **Sydney – Melbourne – Sydney – Honolulu**

The first limitation prevents us from making the complete journey in one fare component, as we are making a second departure from Sydney, after having stopped over in Melbourne. In order to maintain this itinerary, we would have to break it into two components, namely:

### **Sydney – Melbourne & Melbourne – Honolulu**

In both components, the direction of fare is the same as the direction of travel. To clarify, for the first component, we would calculate the fare from Sydney to Melbourne and for the second, Melbourne to Honolulu. The second limitation states that we are only allowed to have one arrival at a destination. Consider the following economy journey:

### **Sydney – Paris – Amsterdam – Paris**

The second limitation would not allow us to do this itinerary as one component, from Sydney through to the second stop in Paris. Again, in order to do the itinerary, we would have to create two components, as follows:

### **Sydney – Amsterdam and Amsterdam – Paris**

In both components, the direction of fare is the same as the direction of travel.

The third limitation restricts us to having only one stopover at any one ticketed point in a fare component. Before we consider this, let's just clarify some of the terms we use. You must ensure that you understand the difference between the following:

Ticketed points

Stopovers

Transfer points

Ticketed points are any points that actually appear on a ticket (ticketed points always appear as part of the fare calculation)- they can be either stopovers or transfer points. A

stopover occurs when a passenger breaks the journey at an intermediate point and is not scheduled to depart on the day of arrival, or within 24 hours of their arrival at that point. A transfer occurs when a passenger breaks the journey at an intermediate point, changes aircraft and departs within 24 hours of arrival. For Canada and USA and for Denmark, Norway and Sweden to be considered one country, this rule does not apply.

### **General Limitations**

A fare component must not include more than:

- One departure from its point of origin, or
- One arrival at its point of destination, or
- One stopover at any one intermediate ticketed point

Additional limitations at the origin point

### **For Journeys Originating in Area 1**

A fare component within Area 1 must not include more than one international departure and one international arrival at any ticketed point in the country where the journey originates.

### **Example**

POA-BUE-SAO-NYC: there are 2 international departures from Brazil, the use of through fare is not permitted.

**Additional limitations at intermediate points:** For TC1 or TC31 (via the Pacific) fare components, no more than one arrival and one departure at any intermediate ticketed point may be included, regardless of where travel commences.

### **Additional Limitations by Country**

Brazil (except journeys wholly within South America)

For a pricing unit commencing in Brazil a component from a point in Brazil must not include more than 2 domestic sectors in Brazil.

## Examples

1. BSB – RIO – NYC at a through fare BSB – NYC is permitted
2. POA – RIO – SSA – LIS at a through fare POA – LIS is permitted
3. FLN – X/CWB – IGU – X/SAO – LON at a through fare FLN – LON is not permitted.  
The first international fare component must be assessed from CWB and FLN – CWB charged separately.

## Germany

For a pricing unit originating in Germany a fare component from/to a point in Germany must not include more than 2 domestic sectors in Germany.

## Journey

A journey on a ticket or conjunction ticket, at the time of original issue or when reissued, must not include more than four international arrivals and four international departures in any one country; provided for the counting of arrivals and departures surface sectors are considered to be flown. Example: AMS-CAI-RTM-LON-AMS-DXB-AMS-JNB-AMS-BAH. This journey is not allowed to have five international departures from the Netherlands

## Round the World Fare –Examples From Star Alliance Airlines

Dream of flying around the world? Enjoy a day in Prague and then show up for dinner in Paris. Why not visit a tailor in Hong Kong for next week's business luncheon in Mexico City? Now there's a better way to actually make it happen. With SkyTeam's Go Round the World, you'll only need one ticket to fly around the globe. Use the Round the World Planner to plan and book your trip.

## Company Adopted with Some Terms and conditions Namely

Flight Applicability

Fare calculation and booking classes

Surcharges on selected flights and routes

Upgrade/Downgrade of Round the World fare

Surcharges on selected flights and routes

Special Booking Classes

Reduced fares for children

### ***Flight Applicability***

Star Alliance Round the World fare applies for round the world travel from and to countries which are served by the following Star Alliance member carriers: Adria Airways, Aegean Airlines, Air Canada, Air China, Air New Zealand, ANA, Asiana Airlines, Austrian, AviancaTaca, Brussels Airlines, Copa Airlines, Croatia Airlines, Ethiopian Airlines, EVA AIR, EGYPTAIR, LOT Polish Airlines, Lufthansa, Scandinavian Airlines, Singapore Airlines, Shenzhen Airlines, South African Airways, SWISS, TAM Airlines, TAP Portugal, THAI, Turkish Airlines, United and US Airways. Round the World fares are offered on all Star Alliance operating and code-shared flight numbers including flights operated by regional partner airlines. Our member airlines do however have the right to exclude single flights from the Round the World fare.

As Star Alliance member carriers can limit the number of passengers carried on any given flight travelling on a Round the World fare, the flight you wish to take may be sold out for this fare. Please note that, due to U.S. government restrictions, a ticket that includes travel to/from/via Cuba may not be sold in the USA nor originate in the USA nor include flight segments for travel on United or US Airways operated or marketed flights. Such ticket cannot be sold to US citizens and cannot be issued on United or US Airways ticket stock. Destinations in Cuba cannot be purchased online via the Star Alliance Book and Fly tool. Residents of Cuba, Ghana, Nigeria and Venezuela are asked to contact a member airline or a travel agent as Star Alliance Book and Fly does not support these countries.

### **Fare Calculation and Booking Classes**

The applicable Round the World fare is determined by the total number of miles of your planned trip as well as the country where your journey begins (country of origin). The number of miles is based on IATA industry (International Air Transport Association) standards (Ticketed Point Mileage Table): The Normal Round the Word fare includes up to 29 000, 34 000 or 39 000 miles. The Special Economy Round the World fare includes up to 26 000 miles. Please note that the Special Economy Round the World Fare is not offered for travel originating in Japan. Applicable fees, taxes and surcharges will be added to the selected Round the World fare. Round the World fares are available in First, Business and Economy Class.

## Upgrade/Downgrade of Round the World fare

When a customer chooses to book a flight or a flight segment that is only available in a lower cabin class than the desired cabin class (for example downgrading from First to Business class or from Business to Economy class) no discounts or refunds will be applied to the total price of the ticket. When a customer chooses to book a Round the World ticket in Business class, but on a flight or a flight segment only a First class cabin is offered for Air China, United or US Airways, an upgrade to First class free of charge will be offered should there be seats available in the First class cabin. Round the World tickets may be upgraded to a higher Round the World fare upon payment of the difference in fare, recalculated from the point of origin plus an applicable rerouting fee.

Exception: On sectors within/between USA and Canada or within China where Business Class is not offered, business passengers will be accommodated in First Class subject to availability of seats at the time of booking. In case First Class seats are not offered or not available, the passenger will be offered to choose an Economy Class seat. In that case, no refund will apply.

## Surcharges on Selected Flights and Routes

The following surcharges will be included in the total fare calculated by the Book and Fly tool, where applicable: An Air Canada Business Class surcharge (Q-surcharge) of USD 300.00 per sector is applicable for passengers booked in Z Class on Boeing B772LR or Boeing B773ER when travel is between Montreal and Frankfurt / Paris. -Toronto and Hong Kong / Paris / Frankfurt / Shanghai / Tokyo / Beijing/ London / Sydney-Vancouver and Sydney / Hong Kong / London / Beijing / Shanghai / Tokyo.

A Singapore Airlines First Class surcharge is applicable for passengers booked in a reduced First Class (A Class) on Airbus A380 and will be levied on First Class Round the World passengers travelling on Singapore Airlines Airbus A380.

<b>Route between</b>	<b>Surcharge per sector</b>
Singapore and Hong Kong	700 USD
Singapore and Shanghai	700 USD
Singapore and Melbourne/Sydney	1100 USD
Singapore and Tokyo (NRT)	1100 USD
Frankfurt and New York	1100 USD

Singapore and Paris (CDG) / Frankfurt / London (LHR) / Zurich (ZRH)	2000 USD
Tokyo (NRT) and Los Angeles	2000 USD
Singapore and New York (JFK) / Los Angeles (LAX)	2700 USD

A Singapore Airlines Business Class surcharge is applicable for passengers booked in a reduced Business Class (D Class) on Airbus A380, Boeing B773ER or Airbus A340-500 and will be levied on Business Class Round the World passengers travelling on Singapore Airlines Boeing B773ER, Airbus A380 or Airbus A345.

<b>Route between</b>	<b>Aircraft type</b>	<b>Surcharge per sector</b>
Singapore and San Francisco / Los Angeles / Houston / Sao Paulo / New York	B773ER/A380	600 USD
Singapore and Los Angeles / New York(EWR)	A345	900 USD
Tokyo and Los Angeles	B773ER/A380	500 USD
Seoul and San Francisco	B773ER/A380	500 USD
Hong Kong and San Francisco	B773ER/A380	500 USD
Moscow and Houston	B773ER/A380	500 USD
Frankfurt and New York	B773ER/A380	500 USD
Barcelona and Sao Paulo	B773ER/A380	500 USD
Singapore and Paris / Milan / Barcelona / Zurich / Frankfurt / London / Moscow / Manchester / Munich / Amsterdam	B773ER/A380	500 USD
Singapore and Delhi / Mumbai	B773ER/A380	300 USD
Singapore and Hong Kong / Beijing / Shanghai	B773ER/A380	300 USD
Singapore and Tokyo / Seoul	B773ER/A380	300 USD
Singapore and Melbourne / Sydney / Auckland	B773ER/A380	400 USD
Munich and Manchester	B773ER/A380	300 USD
Singapore and Dubai	B773ER/A380	400 USD

An Asian Airlines Business Class surcharge (Q-surcharge) of USD 620.00 per sector is applicable for passengers booked in D Class on Boeing B772LR or Boeing B773ER when travel is between Seoul and London / Los Angeles / San Francisco / New York.

## **Special Booking Classes**

SAS Round the World Economy Extra Class surcharge of USD 500.00 is required for passengers booking in the full fare Economy (S class). This surcharge does not apply for passengers holding a First or Business Class Round the World ticket.

Air New Zealand's Pacific Premium Economy Class can be booked by passengers with a Round the World Economy Class ticket for a surcharge of USD 400.00 for each sector in booking class O except for USD 500.00 for each sector Auckland –Los Angeles and Los Angeles – London and USD 1000.00 for the sector Auckland – London.

Please note that all booking classes and all aircraft types are displayed in the Book and Fly tool at the time of flight selection before proceeding to payment. The Book and Fly tool offers you various options to choose from (if available) and indicates if any of the above mentioned surcharges will be required.

## **Reduced Fares for Children**

Economy Class Fare discount: Children (age of 2-11 years) pay 75% of the applicable adult Round the World fare. Proof of age is required at the time of ticketing. The first infant under 2 years not occupying a seat pays 10% of the adult fare plus fees, taxes and surcharges.

First and Business Class Fares discount: There is no child discount. Infants under 2 years not occupying a seat pay 10% of the adult fare plus fees, taxes and surcharges. In case infants turn 2 years old during the Round the World journey, the adult Round the World fare will be applied to the Round the World ticket. Children and infants must be accompanied on all sectors in the same cabin by an adult passenger paying the full Round the World fare.

The Star Alliance Book and Fly tool does not allow for purchasing infant fares. Please contact the Star Alliance Customer Service Centre, one of the Star Alliance member carriers or any travel agent.

## **Planning your journey-Start and End**

Your journey has to start and end in the same country (the “country of origin”), but not necessarily in the same city.



According to IATA industry standard the Round the World fare divides the world virtually into 3 zones (Traffic conferences):

TC1: North America, Central America, South America, Greenland, Caribbean, Hawaiian Islands

TC2: Europe (West of the Urals), Azores, Iceland, Middle East, Africa, Seychelles Islands

TC3: Asia (East of the Urals), Oceania, (Australia, New Zealand and South Pacific Islands)

On your Round the World journey, your travel must follow one global direction only (East or West) and each Traffic Conference must be crossed only once:

1. The Atlantic and the Pacific must each be crossed exactly once. Only one crossing between Europe, Africa/Middle East and Asia is allowed.
2. First crossing between continents of this fare may not be a surface sector..
3. Within the zones mentioned above the direction can be changed.

### **Stopovers and Transfers**

A stopover is defined as a stay of more than 24 hours. You have to include 3 or more stopovers in the normal Round the World fare. The maximum number of stopovers for this fare is 15. For the Special Economy Round the World fare, you have to include between 3 and 5 stopovers. Both, of the Round the World fare and the Special Economy Round the World fare allow a maximum of 1 stopover in any one city and no more than 3 stopovers in any one country (exception USA: max. 5 stopovers). For travel originating in USA/Canada: The number of stopovers taken in continental USA/Canada must not exceed 4 (not more than 3 per country). For travel originating in Europe: The number of stopovers taken in Europe must not exceed 5 (not more than 3 per country). Transfers, which are defined as a stay of less than 24 hours, are allowed in any city, however not more than 3 in any one city. Travel through the city of origin is not permitted. The number of international transfers is limited to 4 in any country except in the country of origin, where not more than 2 domestic transfers and not more than 2 international transfers are permitted. Exception: If travel starts in USA/Canada/Thailand/Norway, no more than 4 domestic transfers and no more than 4 international transfers are permitted in the country of origin.

### **Surface (Non-Air) Sectors of your Journey**

You may include 5 non-air (“surface”) sectors at your own expense. The mileage for such sectors will however be included into the mileage calculation. Non-Air sectors are counted as flight coupons. If the time allocated to a surface sector exceeds 24 hours, it is considered to be a stopover. The maximum number of flight coupons is limited to 16 per ticket. Surface sectors and multiple airport cities are counted as flight coupons.

### ***Minimum Stay***

The travel on the last international sector (intercontinental sector, if travel started in Europe) must start no earlier than 10 days after the first international sector (intercontinental sector, if travel started in Europe) started. For travel starting in Australia and New Zealand there is no minimum stay required for First and Business Class Fares. For Economy Class Fares the travel on the last international sector must start no earlier than 7 days after the first international sector started.

### ***Maximum Stay***

All travel must be completed within one year after departure from the fare origin.

### ***Determining your Routing***

The destinations of your Round the World journey must be stated at the time of purchasing the ticket, before departing from the country of origin. Travel dates may be changed free of charge at a later point in time, routing changes will result in a fee of USD 125.00. If purchased online via Book and Fly, all flights must be booked and confirmed at the time of purchasing the Round the World ticket though you may change your original travel dates at any time free of charge.

If purchased offline via a Star Alliance member airline or a travel agent the following applies:

For travel originating worldwide except in Europe, flights must be booked and confirmed up to including the first international sector. For travel originating in Europe, flights must be booked and confirmed up to including the first intercontinental sector. All remaining flights may be left open, i.e. without confirmed flight numbers and dates and can be booked at any time prior to their departure.

## **Change of Plans**

Prior to Departure: Changing travel dates/carriers/flights leading to rebooking/revalidation of any sector is free of charge. Changes that require a rerouting (including adding stopovers) will result in a fee of USD 125.00 per case. No refund applies if the total mileage of a rerouted itinerary would qualify for a lower fare than the fare paid. Please note that the fare, taxes and surcharges are only valid as of the day a ticket is purchased and are subject to recalculation in case of any changes to the itinerary requested by the customer. Additional fees may be levied by an airline or travel agent fulfilling such voluntary changes to a ticketed itinerary.

After Departure: Change of travel dates, carriers or flights is free of charge. Changes that require a rerouting (including adding stopovers) will result in a fee of USD 125.00. No refund applies if the total mileage of a rerouted itinerary would qualify for a lower fare than the fare paid. Please note that the fare, taxes and surcharges are only valid as of the day a ticket is purchased and are subject to recalculation in case of any changes to the itinerary requested by the customer. Additional fees may be levied by an airline or travel agent fulfilling such voluntary changes to a ticketed itinerary.

### ***Exception***

In the event of death of the passenger, members of the passenger's immediate family or accompanying passengers may reroute the remainder of the journey without charge. Relevant documents will be required.

### ***Cancellations***-Prior to Departure

Cancellation of your journey before departure results in a cancellation fee of USD 150.

Exception: In the event of death of the passenger, family member or accompanying passengers, no charge applies. Relevant documents will be required.

### ***After Departure***

As the routing is no longer a Round the World travel the refund will be the difference between the fare paid and the applicable fare for the journey travelled plus a cancellation charge of USD 150.00.

### ***Baggage Allowance***

For your Round the World Fares, the piece concept will apply for the entire journey. In economy class you may allow for one (1) piece of baggage at the weight of 20kg, business class travel allows for two (2) pieces at a combined weight of 30kg and first class two (2) pieces at a combined weight of 40kg may be checked free of charge for the whole itinerary/ journey. In some instances individual carriers may apply a higher free baggage allowance. Please refer to individual carriers for potential baggage charges and more information should you require additional allowance.

### ***Data Protection***

In order to issue your Round the World ticket, you will be asked to provide personal information to the ticket issuing Star Alliance member carrier. Please note that the data protection guidelines of the respective Star Alliance member carrier apply with respect to collecting, processing, storing, using, and sharing of your personal information.

### **How Much do Around the World Tickets Cost?**

This question really depends on who you are and how you intend to travel. Depending on your plans and desired level of comfort, for around the world tickets you could spend a fortune or a pittance.

It follows that longer trips will cost more than short ones, but it doesn't mean that long trips have to be expensive. And while the price of a trip with more stops will cost more overall, on a day-by-day basis the airfare expense ends up being cheaper relative to the cost of everything else — you spread the price out over more days.

***The average AirTreks around the world or multi-stop plane ticket is between \$2500 and \$3500 per person.***

Some go above this and it's certainly possible to get under, and even though the overall cost of your trip depends on its complexity and the number of flights this is a good number to go on in the planning phase.

To keep the price on the low end it's important to be open to connection flights, longer layovers, and airlines that may not have huge marketing budgets.

One thing you can guarantee is that your around the world tickets will be a set price, paid for in a lump sum and removed your travel budget numbers once that's done. Daily expenses are something you need to keep your eye on because this can be what forces you to do something like cut your trip short if you run out of money.

For insight into how much the total trip will cost read our article about how much an around the world **trip** costs.

Calculate the total trip cost by designating each place you're going, consider how much you'll be spending there per day, multiply that by two (as a buffer for incidentals), add it to your airfare quote and you should have a good idea how much your total trip will be.

### **What is generally included in the cost of a round-the-world trip?**

There are really only a few archetypical things that people spend their money on when they travel and can be summed up easily:

**Plane tickets** – getting from region to region. The average cost of an AirTrek tends to be in the \$2500 – \$3500 range per person including taxes. Over the last 20 years this number has actually remained pretty stable.

Tag a price on your budget spreadsheet around \$3300. If your trip comes in lower, that's a bonus!

**Accommodations** – where you stay. These can range from the most barebones dormitory-style hostel to a fairly luxurious hotel or resort. Of course you can mix and match and you will over the course of your trip. After plane tickets, accommodations will be the most expensive part of your travel budget.

Plan on \$20 – \$40 per night in inexpensive regions and \$90 – \$150 in expensive ones. (Less if you plan to sleep in hostels every night.)

**Food/Drink** – what you eat every day. This item can range from supermarket picnicking to street food to restaurants. This will vary from meal to meal. The less you spend every meal on food the cheaper your RTW trip will be.

Plan on \$1 – \$5 per meal per person in inexpensive regions and \$5 – 20 per meal per person in expensive ones.

**Activities** – also known as what you do with your time besides eating. These are things like tours, museums, adventure activities (rafting, zip lining, Zorbing), elephant riding. Of course you are going to spend money on doing things.

Can range from \$5 – \$200 each depending on the activity.

**Ground transportation** – that which gets you from place to place and is not an airplane. This includes buses, trains, ferries, taxis, moto-rickshaws, regular rickshaws, tuk-tuks, barges, giant catapults.

Costs vary depending on how far you're going and how fast.

### **Here is how much a RTW will cost\***

It's a general consensus from people who have done these trips that a year on the road costs somewhere between \$20,000 and \$30,000 total.

Let's just say \$25,000 for the sake of argument. If you break that down monthly, **a RTW trip will cost one person around \$2000 per month accommodating everything.**

***\*This cannot and should not be taken as a hard and fast number since the variables for your particular travelling style are numerous.***

Keep in mind that the longer the trip, the less you spend on a daily basis simply because you don't need to fill each day with stuff. There will be days you don't spend as much money because you're not driven to be active.

This is the reason why we've said that longer trips can actually be *cheaper* on a relative basis.

If you want some further hard numbers on how much a round the world trip cost, there is a selection of travel bloggers who have posted their numbers online for all to see, to compare and to evaluate. The travel blog Jack and Jill Travel has compiled some of the best of them.

The blog **RTW Expenses** put together a yearlong tally of their personal costs for a RTW trip (updated for this year's pricing).

(source:<http://www.skyteam.com/en/your-trip/Round-the-World-Planner>)

Let us find some of the different methods by the airlines Round the World Flight Tickets are being used by travellers, facilitating them to take direct flights and cheaper fares. This is due to the alliances of different airlines with one another.

*One world fares mentioned are for travel covering 3 continents*

Round The World (Airlines)	First Class	Business Class	Economy Class
KLM / Northwest / Malaysian Airlines / Continental / Emirates / Kenya Airways / South African Airways	NA	357160 + Taxes	153070+ Taxes
Star Alliance UA/TG/LH/NH/AN/SK/AC/RG/SQ/OS	782810+Taxes	438200 +Taxes	177650+Taxes
One World CX/AA/BA/IB/QF/AY	605060+Taxes	360850+Taxes	143470+Taxes

(Source: [http://www.primetravels.com/rtw\\_fares.shtml](http://www.primetravels.com/rtw_fares.shtml))

## Special Fares

For many travellers, the main factor influencing the decision of which flights to book will be the fare charged for the journey. This is particularly so for leisure travellers who are paying for the ticket themselves, but also increasingly important for business travellers as many companies are trying to reduce travel costs.

When checking availability, each booking code represents a different cabin class or fare type. On all flights a variety of fares are offered.

Highest fares which are flexible are termed normal fares. Those which are lower and less flexible are special fares. Within each of these categories, there are different types of fares.



**Best Deals on Flights** »»»

- New York-Delhi-New York for USD 635
- Boston-Mumbai-Boston for USD 715
- Richmond-Chennai-Richmond for USD 815
- Birmingham-Delhi-Birmingham for GBP 175
- London-Mumbai-London for GBP 175
- Delhi-London-Delhi for INR 11000
- Delhi-New York-Delhi for INR 23000

\*Taxes Extra



The general features of the most frequently seen fare types are listed below. These are general guidelines, and restrictions of each fare may vary, depending on the route flown.

The rules of each fare should be checked and passengers advised of any restrictions. Some of the practical examples will help us to understand the concept in detail.

**Special Fare by Kingfisher Advertisement**

**Singapore Airlines Offers Special Fares to Australia**

**Advertisement by Jet Airways**

**LOW AIR FARES** Jet Airways has introduced four slabs for one-way fares based on travel distance

DISTANCE	FARE	SECTOR
Up to 750 kms	₹2,250	Delhi to Srinagar/Varanasi
750-1,000 kms	₹2,850	Delhi to Ahmedabad/Patna
1,000-1400 kms	₹3,300	Delhi to Kolkata/Bangalore
Above 1,400 kms	₹3,800	Delhi to Chennai/Guwahati

\*Fares inclusive of all taxes

# A smart strategy

- SpiceJet was the first this season to come up with cheap fare offer for one million seats
- Smart strategy because travel under the scheme was valid from Feb to Apr
- This is the lean season when airlines fly with over 30% empty seats
- SpiceJet mobilised ₹165 crore in three days, including ₹141 crore through the sale of seven lakh tickets at ₹2,013 each
- Jet as a full fare carrier has now done the same thing across both Jet Airways and Jet Konnect

Similar schemes have also been launched in the recent past by other airlines to boost their passenger loads. Air India had slashed fares significantly in November with its 'Jaldee Jaldee' sale, though short-haul flights were cheaper then. IndiGo, too, had cut its fares at the time.

One can easily understand how competition leads to adoption of different marketing strategies. This ad is given to manage the concept of Price war which prompts company to place advertisement



ONE-WAY AIRFARES				TRAIN FARES				
Destinations	Fares during Dec 2012	Current Fares (OTHER AIRLINES) (Feb 1-April 30)	SpiceJet Bonanza Fares (Feb 1-April 30)	Rajdhani routes	(Old rates)		(New rates**)	
					AC-I	AC-II	AC-I	AC-II
DELHI-MUMBAI	Upto ₹18,920	Upto ₹5,942	₹2,013	NEW DELHI-MUMBAI	₹3,357	₹1,937	₹3,595	₹2,186
DELHI-KOLKATA	Upto ₹14,140	Upto ₹5,993	₹2,013	NEW DELHI-HOWRAH	₹3,276	₹1,971	₹3,421	₹2,082
DELHI-CHENNAI	Upto ₹18,048	Upto ₹5,774	₹2,013	NEW DELHI-CHENNAI	₹5,165	₹3,140	₹5,365	₹3,260
DELHI-BANGALORE	Upto ₹18,048	Upto ₹5,744	₹2,013	NEW DELHI-BANGALORE	₹5,510	₹3,215	₹5,710	₹3,335
DELHI-TRIVANDRUM	Upto ₹18,400	Upto ₹5,839	₹2,013	NEW DELHI-TRIVANDRUM	₹6,485	₹3,755	₹6,685	₹3,875
DELHI-GOA	Upto ₹24,580	Upto ₹7,224	₹2,013	NEW DELHI-MADGADN	₹5,075	₹2,960	₹5,275	₹3,080
DELHI-SRINAGAR	Upto ₹11,000	Upto ₹5,831	₹2,013	NEW DELHI-JAMMU Tawi**	₹2,160	₹1,290	₹2,360	₹1,410

(\*) To cover into effect from Jan 27; (\*\*) For Srinagar trains available till January 2013

(Source: <http://www.dailymail.co.uk/indiahome/indianews/article-2261425/Alls-fare-love-war-As-airlines-battle-slashing-prices-Indias-travellers-come-winners.html>)

Singapore Airlines and Tourism Australia recently joined forces to tempt British tourists to book flights tickets for holidays to Australia. The airline is offering special fares on its flights between London Heathrow and Australia via Singapore. Additionally, Singapore Airlines will offer vouchers to its travellers booking business and economy

classes flights tickets enabling them to upgrade their airport experience at Changi Airport so that they may continue the second leg of the journey refreshed after their stopover. On arrival, travellers with flights tickets to destination in Australia may also get great value car hire available at all of the airports.

Normal fares are flexible, and there are no routing, stopover, advance purchase or refund restrictions. They may be re-routed without restriction and purchased on a one way or round trip basis. Generally normal fares are valid for one year. The class of service normally appears on its own as the fare basis, e.g. Y, C, F, R, although Y1 or J1 may be used to indicate the highest fare level, and YOW or YRT to identify one way or round trip fares.

**Note:** The class of service may be followed by a seasonal indicator, e.g. YL (economy low season)

### **Example**

*Enter: FD1JUNLONNYC/BA-OW*

### **Short Note on the Following:**

#### **A). Point To Point Fares**

Point to point fares may be seen in any class and allow the passenger who wishes to travel directly from point A to B to do so. There are usually no advanced booking requirements, or refund restrictions. Routing is usually limited to direct flights, although connecting flights may be available, providing no stopovers are made. Fares may be sold on a one way or round trip basis. Round trip fares are normally valid for a year provided there are no seasonal restrictions. The code 2 or 3 may appear at the end of the fare basis, e.g. Y2, C3, SLX2.

### **Example**

*Enter: FDMIASCL/AA-OW*

#### **B). Excursion Fares**

Reservations for excursion fares may normally be changed, subject to minimum and maximum stay requirements. They may normally be purchased at any time, and sold on a return basis. Routing and stopover requirements are generally flexible, and there are usually

no refund restrictions. The code E or EE is found at the end of the fare basis followed by the maximum stay in terms of days or months, e.g. YLEE14 or BEE3M.

**Example**

*Enter: FD1JUNDELHKG/CX*

**C). APEX Fares**

Reservations for Advance Purchase Excursion (APEX) fares usually may not be changed without a penalty, and there is often some type of refund restriction. Usually no stopovers are allowed and direct flights are used. They are normally sold on a return basis, and have a minimum and maximum stay requirement. The codes AP, AN or AB are normally included in the fare basis.

**Example**

*Enter: FDMIAPPT10JUN/DL*

**D). PEX AND Super-PEX FARES**

These are Public Excursion fares and have the same restrictions as APEX fares but may be purchased at any time. Usually no stopovers are allowed and direct flights are used. There are minimum and maximum stay requirements, and they are normally sold on a return basis.

The codes PX or SX are included in the fare basis.

**Example**

*Enter: FDDXBPRG01JUN/OK*

**Interpreting Fare Basis Codes**

A fare basis code may be made up of different alpha/numeric elements. Not all fare basis codes contain all elements. The following codes may apply:

Class code

Day of the week code

- Fare and passenger type code
- Fare level identifier
- Maximum stay
- Miscellaneous code
- Seasonal code
- Time of the day code

### Class Code

The first letter of a fare basis code is the class code. It indicates the class of service and the location in which the passenger will sit on the aircraft. The following codes apply:

Code	Identifies
P	First class premium
F	First class
A	First class discounted
J	Business class premium
C	Business class
D	Business class discounted
W	Economy class premium
S, Y	Economy class
B, Q, H, T, K, V, L, M, N and any other letters	Economy class discounted

### Seasonal Code

A fare may vary depending on the time of year travel takes place. Seasonal codes are as follows:

Code	Identifies
H	High or peak season
L	Low or basic season
K	High shoulder season
O	Mid shoulder season
J	Low shoulder season
F, T, Q, Y	Variations on the shoulder season



### Day of the Week Code

A fare may vary depending on which day of the week travel takes place. The following day of the week codes apply.

Code	Identifies
W	Weekend travel
X	Midweek travel

### Fare and Passenger Type Code

A fare basis code may include a fare type or passenger type code. The following codes apply.

Code	Identifies
AP	Advanced purchase fare
AB	Advanced purchase fare (lower level)
AN	Non refundable advanced purchase fare
PX	PEX fare
SX	Super PEX fare
EE	Excursion fare
BB	Budget fare
BD	Budget fare discounted
SS	Super saver fare
UU	Standby fare
OX	One way excursion fare
OW	One way fare
RT	Round trip fare
CH	Accompanied Child fare
IN	Infant fare (Not occupying a seat)
CD	Senior citizen fare
SC	Ships crew fare
ZZ	Youth fare
SH	Spouse fare
ST	Spouse fare (accompanying)

With Airline tickets every person on a flight may have paid a different price to fly. The airlines have a seemingly secretive formula to constructing airfares. Knowing types of airfares and how they apply may not mean that airfares make sense, but you can make sense of them. *Special fares using mileage*: construct special fares within 25M mileage; apply rules and restrictions. *Special fares with stop-over charges*: apply stop-overs charges on a return special fare itinerary.

### Types of Special Fares

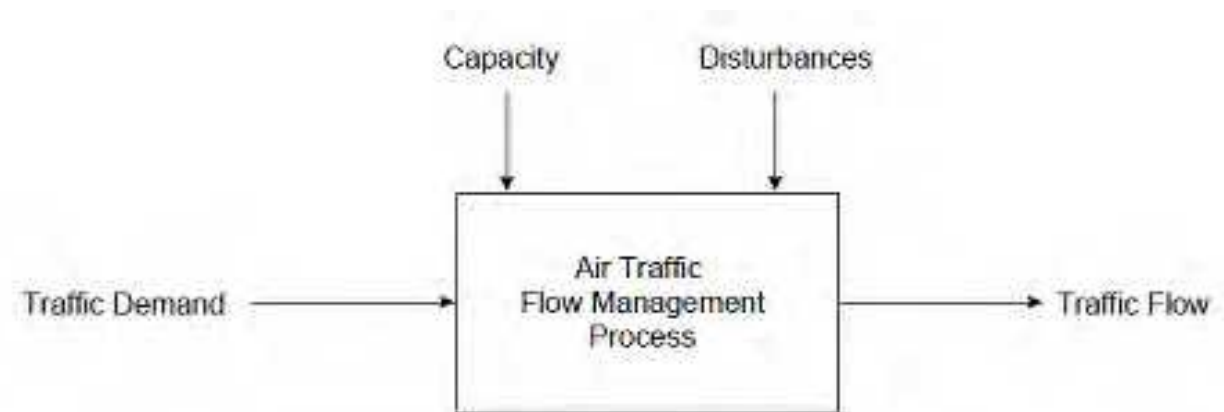
Excursion Fares: Expense fare but with least restrictions

Purchase excursion Fares: Intermediate fare

Advance purchase fare: Lowest fare with lot of restrictions

Late booking fare: Last minute booking involving internet charges

We need analyse air traffic position to manage the growing importance of air transport. This involves various other coordinating agencies to support to ever changing demand of passengers. This depends on the following:



### Chapter Summary

Technology and innovation continue to enable a new era of air travel, making the industry more dynamic than ever before. We need to harness IT and innovation to empower all players in the industry's complex and interdependent ecosystem, and to drive new efficiencies and approaches to create the ideal journey. Collaboration - more than ever before - is the smart way forward. Collaboration will determine the shape of air transport tomorrow. It will join up our thinking, enabling us to meet the expectations of 21st century consumers and travellers. India will be more efficient, more competitive and more profitable. Only new thinking, bold innovation and a collective approach will get us there. An analysis of the views expressed during the survey on the long-term challenges in air



transport identified 16 principle challenges facing the European air transport infrastructure. These are internal and external challenges. Internal challenges involve planning actions for infrastructure development. External challenges involve anticipation of, and preparation for, risks or opportunities. This unit helps you to understand the different agencies involved in air operations, and fare systems adopted from time to time, factors affecting the air pricing, calculation methods, procedure for selection right travel plan.

These principal challenges are:

- fuel & ticket prices
- environmental awareness
- restrictions on fossil fuel for aviation
- security issues
- planning and understanding future travel needs
- sovereignty and civil-military cooperation
- liability issues
- the EC "market led" economic regulation model
- financing the air transport system infrastructure
- network de-fragmentation
- scarcity management
- changing role of the human operators in the ATM system
- safety of complex ATM systems (safety culture, legal risks, system of systems)
- lack of competent resources in the transition phase
- standardization issue
- innovation in ATM.

### Closing Thought

*"The passenger is at the core of our 2050 thinking. Over the last four decades the real cost of travel has fallen by about 60% and the number of travellers increased tenfold. We must continue to provide this great value to individual consumers and to society. To do so we need the right technology, efficient and sufficient infrastructure. And we need financial sustainability. Nobody has all the answers or a crystal ball to see the industry in 2050. But there was consensus among all present that there is strategic value in thinking together. And there was general consensus that one of the industry's biggest challenges is to evolve from the financial disaster of a partial deregulation that has created fierce competition among airlines but without giving them the normal commercial freedoms to do business. The industry is sick. To protect the value that aviation delivers to consumers, companies, countries and the global economy, we need a common vision to change as we move forward"- Giovanni Bisignani, Singapore, 12 February 2011*

The past, present and future of tourism are, in a sense, continuous. We can predict aspects of the future with confidence, but unpredicted trends and events will occur and will shape tourism in ways we might not even imagine today. "All travel has its advantages. If the passenger visits better countries, he may learn to improve his own. And if fortune carries him to worse, he may learn to enjoy it." – Samuel Johnson

## Case Study No.1

The air transport sector in India has undergone massive changes in the last decade. The Air Corporation Act 1953 led to nationalization of the airlines services. Consequently the assets of nine existing companies were transferred to two entities in the aviation sector controlled by the Government of India – Indian Airlines and Air India. For many years, air travel in India was perceived as an elitist activity and there was restricted growth in the industry.

In 1986, private sector players were permitted as air taxi operators. This led to entry of Jet, Air Sahara, NEPC, East-West & Modiluft. With the passing of the Air Corporation Act 1994, this sector was opened up and private carriers were permitted to operate scheduled services. While six operators were granted license only Jet and Air Sahara were able to start their services.

However, the year 2003 marked a watershed in the history of civil aviation in India with the entry of low cost carriers like Air Deccan and Spice Jet. This was followed by entry of other private airlines, large and small on to the market, including Kingfisher Airlines, Paramount and Go Air. From the year 2003 onwards the perception of air travel changed. Aviation became more affordable. There has been a large increase in passenger traffic. Also there has been intense price competition that has resulted in discounted fares, promotional offers and introduction of flights to newer destinations. The co-existence of full service carriers and low cost carriers has also given the consumer a wide choice of service on the market.

However, this intense price competition led to losses for the airlines. The total industry losses for the year 2006-07 were over USD 500 million. As a result, the market structure in the air transport sector is undergoing rapid changes. There appear to be major corporate restructuring measures underway in this sector mainly in the form of mergers and acquisitions (M&As).

The recent mergers of Indian and Air India, Kingfisher and Air Deccan and Jet and Sahara have led to an industry structure which is sufficiently concentrated to raise a fundamental question about whether the operation of market forces are adequate to prevent the abuse of market power. Thus as a result of the ongoing M&As, from being till recently an industry with around twelve players involved in stiff competition, the industry is now left with nine players of which three are big players and the remaining are small ones. The changing market structure has provided a new competitive dimension to the industry. It is expected that as a result of the M&As taking place and resultant scale economies,

efficiency and productivity will increase, thereby leading to enhancement of profits. It is in fact argued that such consolidation is needed in order to ensure efficient and sustained functioning of the airline operators.

However as a result of the M&As, the nature of the market, which was earlier open to many players thereby enhancing competitiveness, is now changing. It is perceived that this may lead to anti competitive practices on the market with some large players dominating the market. The competition assessment of M&As in the air transport sector is generally more complex than in many other economic sectors because of the nature of the industry. The role of the Competition Commission becomes important in the current scenario in this sector in the sense, that there is need for assessing whether the changing market scenario, and the benefits of the combinations in terms of 'efficiency mergers' outweigh the costs or adverse effects in terms of anti competitiveness. Thus while on the one hand, combinations like M&As currently occurring in the sector may improve efficiency in the sector in the form of higher productivity and lower costs, on the other, they may lead to abuse of market power and anti competitive effects.

Price war is "commercial competition characterized by the repeated cutting of prices below those of competitors". One competitor will lower its price, and then others will lower their prices to match. If one of them reduces their price again, a new round of reductions starts. In the short term, price wars are good for buyers, who can take advantage of lower prices. Often they are not good for the companies involved because the lower prices reduce profit margins and can threaten their survival.

For example, **Air India** has finally joined the price war initiated by **SpiceJet** earlier this week as it announced a 30% discount on fares for travel during March 29 and September 30. The discount offered by Air India, spread across 115 flights operated by the airline is, restricted with only on select domestic and the domestic leg of international flights. The bookings will also have to be made between February 27 and March 1, to avail the offer. Fares under the discounted scheme, start from as low as R1,586 for Goa-Mumbai, R1,889 for Delhi-Lucknow, R3,470 for Mumbai-Kolkata and R2,557 for Trivandrum-Mumbai, exclusive of taxes.

Whereas another low-cost carrier **SpiceJet** initiated few steps and it has triggered a price war by offering up to 75% off on base fare and fuel surcharge relative to last minute fares, for travel between April 1 and June 30, applicable for bookings made till February 26. Other no frills carriers like IndiGo and GoAir quickly announced similar schemes within hours of SpiceJet's announcement. It is a third time the Chennai-based airline shelled out discounted fare in the last two months.

Jet Airways, entered the price war and later it launched a three-day sale of 60 days and 30 days apex fares on domestic flights operated by Jet Airways and JetLite. Travel under this offer is valid from March 27 to September 30, 2014.

According Jackson Fernandez, "Airline operators are looking to fill their seats that are currently running below optimum capacity. But additionally, with Air Asia soon entering the scene, current operators are preparing for the tight competition in prices it will bring," -MD travel portal Wego.com. He also made statement that "By coupling with distribution channels airlines can reach out to intended audiences who are looking to avail these discounts."

Travel operators say that demand for air tickets to key leisure destinations like Goa and Kerala have increased tremendously after the announcement of the fare cuts.

According to Sharat Dhall "We are already seeing strong demand on the key leisure destinations like Goa and Kerala and bookings have more than doubled after the announcement. We expect other airlines to follow suit with similar discounts as these prices are sure to strike a chord with leisure travellers," -President of Yatra.com.

According to Rajesh Magow, "Our website has witnessed a three-fold growth in visitors and we sold over 60,000 tickets on Tuesday alone. Delhi, Mumbai and Bangalore continue to be the top-selling routes, while leisure sectors like Goa and Srinagar have also seen a big spike," -Co-founder & CEO India, MakeMyTrip.

"These promotions have definitely fuelled summer-holiday breaks for larger groups (such as families) since we saw a higher proportion of group-bookings compared with single-passenger bookings. Also, a higher proportion of return bookings indicated planned leisure and business travel," he added. "Indian consumers are evolving and seeing the pattern from last year, they have begun expecting such discounts more often. Typically, what we have observed so far is that whenever an airline has dropped fares or offered discounts on advance booking, other carriers have matched their pricing to keep their market share," added Vikram Malhi, GM, Southeast Asia, Expedia.

### **Question for Discussion**

1. What are the driving forces of air line operators? List down the strategies adopted by the company.
2. Do simple PEST analysis to describe the emerging scenario with reference to India?

## Case Study No.2

In recent years, the sport of golf has been developing rapidly in the Asia-Pacific region, motivating golf enthusiasts to travel overseas to play. Because of its geographical proximity and convenient transport links, the number of Japanese and Korean golf enthusiasts who choose to play in China has been increasing rapidly in recent years.

In China, the domestic golf tourism market is still a middle and upper class consumer market in which the sport functions as a way to improve one's quality of life and as a symbol used to show off one's status and position. To a certain degree, price is no longer a major factor that influences the travel motivations of these high-level consumer tourists. What they demand is to experience a feeling of relaxation in which they are at one with nature.

Sports tourism can be divided into (1) participants, whose main intention is to participate in sports, such as canoeing, skiing, golf, etc.; (2) spectators, including those who travel to watch sports events, such as the Olympic Games and the World Cup Football Tournament, etc., or travellers who visit sports museums or are involved in sports-related industries, such as the Sports Hall of Fame and sports fields and stadiums, etc. (Quote from Liu Xiang Xing, 2007)

### Question for Discussion

1. Analyze the travel motivations of golf tourists in the Asia-Pacific region.
2. Discuss how sporting events and sports can stimulate people's travel motivations.

### Self Assessment Questions

1. List down different types of Airfares followed by airline operators.
2. Briefly explain the concept of One Way and Return Trip with suitable examples
3. What is Circle trip journey? Explain in detail the basics of airfare are fixed in this category.
4. Define Open Jaw. Explain with normal fare and special fare. What are the factors to be considered in fixing airline pricing?
5. Write short note on "Add-on mixed class journey". Give examples
6. What is HIP check? Illustrate with suitable examples.
7. What do you understand the term Back Haul Minimum Check (BHC)? How airfare is constructed.

8. List down the steps involved CTM check?
9. Enumerate the importance Indirect Travel Limitations in fare construction.
10. Examine the fare construction procedure and rules involved in “Around the World fare” with reference to any of one the airline operations.
11. What is Special fares?. State the importance in yield management? Briefly explain the problems associated with different airline operators.
12. Write short note on the following:
  - a. Round Trip
  - b. Stopover
  - c. Inbound Tourist
  - d. Outbound Tourist
  - e. Published and unpublished fare
  - f. Bereavement fares
  - g. Open ticket
  - h. Round trip journey
  - i. Double open jaw
  - j. Surcharge
  - k. Directional minimum check

\*\*\*\*

## UNIT - V

---

### Ticketing System, Procedure, Travel Plan, Travel Card and BSP

---

#### Learning Objectives

*After completing this module, you will be able to:*

Identify types of ticket

Identify booking classes / classes of service.

Identify booking codes.

List airline codes.

Define the different types of trips.

Frequent Flyer Programs

Travel considerations for children and infants, pets, and special requirements

Types of tickets

Fares and Fare Basis Codes

Voids, exchanges, and refunds

LTA / PTA / MCO

Issue of manual ticket

Reservation procedure

MPD

Air Travel Plan

Types of air travel cards

Billing and Settlement Plan (BSP)

#### Introduction

The term 'Tourism' is often associated with leisure / holiday visitors. It therefore needs to be clarified that in the context how many involved in this process of the tourism industry. It the term 'tourist' includes several segments of visitor arrivals as explained below.



The definition of tourism is, "Activities related to persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes". (Source UN / WTO 1993). This would therefore include: Domestic tourism, involving residents of the given country travelling only within the country; on business or leisure. Inbound tourism, involving non-residents travelling in the given country on business, leisure or Visiting Friends & Relatives (the VFR segment that includes NRI's). Outbound tourism, involving Indian residents travelling to another country on business, pleasure or for employment (Overseas Foreign Workers - OFW).

### **Air Transport & Tourism-Contributions to Economy**

Air transport key enabler of tourism growth

Annual aircraft departures to grow from 30 million (today) to 60 million (2030)

Employs more than 50 million persons worldwide

Represents 3.5% of global GDP (would rank 19th if was a country)

(Source: ICAO, ATAG 2012)

Employs 1 in 12 people worldwide

Contributes 30% of worldwide service exports

Development/regeneration of regions

Diversification of economy/tax revenues

Represents directly 5% of global GDP

Tourism generates US \$1.3 trillion in exports for countries visited

(Source: UNWTO)

82 million jobs

\$6.9 trillion in GDP in 2030

(Source: ICAO, ATAG 2012)

In a rapidly changing environment, airports have to adapt to economic downturns, technological changes, market changes, airline commercial deregulation, and the worldwide trend to convert airports from government organisations to more business-like entities. These pressures have or have had or are having significant effects on the way airports do business, not only from a financial perspective but also from an operational standpoint. In these challenging times, and with emerging competition from other airports and other modes of transportation, it is of the utmost importance that airports recruit and provide employees and managers with the best available knowledge and skills.

- Contributes 30% of worldwide service exports
- Development/regeneration of regions
- Diversification of economy/tax revenues
- Represents directly 5% of global GDP

Travel and tourism is the world's biggest industry, accounting for nearly 200 million jobs, and over 10 per cent of world GDP, more than US\$ 3,500 billion. It is a "**High-Multiplier Effect**" industry - it employs large numbers of people, and requires large amounts of local inputs for ongoing operations. WTO's '**Tourism 2020 Vision**' forecasts that international arrivals are expected to reach over 1.56 billion by the year 2020 of which 1.18 billion will be intra-regional and 377 million will be long-haul travellers. It is expected that, that long-haul travel worldwide will grow faster, at 5.4 per cent per year over the period 1995-2020, than intra-regional travel, at 3.8 per cent. Details on forecasts by WTTC (*Tourism Satellite Accounting Research*) for India's Travel & Tourism Industry are provided below.

- (a) In 2003, India's Travel & Tourism Industry is expected to generate ` 529.4 billion (US\$ 10.5 billion). 2.0 per cent of Gross Domestic Product and 11,093,100 jobs, representing 2.7 per cent of total Employment. The travel and tourism Economy (direct & indirect impacts) is expected to generate.
- (b) ` 1,274.6 billion (US\$ 25.3 billion), 4.8 per cent of Gross Domestic Product, 23,839,800 jobs, 5.8 per cent of total Employment, ` 234.5 billion (US\$ 4.6 billion) of Exports, services & merchandise, 5.9 per cent of total Exports;
- (c) ` 412.9 billion (US\$ 8.2 billion) of Capital Investment - 7.0 per cent of total investment;
- (d) ` 32.5 billion (US\$ 0.6 billion) of Government Expenditures - 1.0 per cent share;
- (e) The forecast for Travel & Tourism demand is expected to total 7.4 per cent real growth in 2003, and 8.8 percent real growth per annum between 2004 and 2013. This assumes no constraints in airline seat capacity (Source: Impact of Civil Aviation Policies on Tourism in India, Ministry, GOI) and
- (f) Airliner capacity has grown significantly over the last 60 years to a seating capacity of 525 and a maximum load of 338 tons for the freight version. By 2020, Tourism in India could contribute Rs 8, 50,000 crores to the GDP. (Source- WTTC).

## Issue of Air Ticket

Three types of sheets for ticket are widely used in the world: an automatically copied ticket, an automatic coupon ticket with a boarding pass, manual form. The rules of IATA (International Air Transport Association) require that the ticket issued by a single agent should be understandable by any other agent, wherever in the world he is. Therefore, each ticket contains detailed information about all the details of the flight, route, fare and restrictions imposed by these fare for transportation. The most widely used form with four flight coupons. If the route has less flights, then on the "extra" coupons on the line "Itinerary" (2) the word "VOID" is printed (not valid for transportation), and the coupon is "pulled" out by the agent. The last coupon (usually white) is a passenger copy and is left for you for the report, but only after you fully use the ticket (the ticket without the passenger coupon is not valid).

The Internet has helped transform the travel industry. It helps educate the consumer by providing vast amounts of information about destinations and different travel options. Both consumers and travel professionals have benefited from the Internet, which makes the possibility of travel to exotic places more imaginable. It has helped consumers see in full colour and, in some cases, real time, where they would like to visit. The Internet gives travellers the ability to do comparative shopping for attractive deals or packages. It also has helped many travel agencies, hotels, resorts and other travel-related suppliers flourish by bringing in business through Web sites. The leisure travel industry has changed from being an option of the upper class to one open to all segments of society - in fact, travel has become an everyday part of life whether for a meeting across the country or a last minute trip to a nearby city. Over time it has become price driven. Many people today base a large part of their travel buying decisions on cost and convenience of travel. People are booking closer in to their travel dates.

With a history spanning more than 100 years and being India's oldest Airlines, Air India is the where the Indian Aviation industry started long back in 1911. With a service spanning the world and Indian domestic destinations, Air India is India's national carrier and a beacon of pride. Founded by visionary and the father of Indian Aviation J.R.D Tata, Air India was born with his flight in a single engine Puss Moth from Karachi to Mumbai. Since then, Air India has come a long way both in terms of Fleet size as well as passengers moved and is known for its reliability, cost effective and value for money service.

## History of Airindia

After an iconic flight piloted the noted aviation personality J.R.D Tata, the real start of Air India happened post World War II where Air India expanded their routes to include

new destinations. Although competition was stiff, Air India was known for its exceptional customer service standards which saw innovations like issuing humorous booklets that encouraged passengers not to steal cutlery and refrain from stuffing children in back seat pockets. Other than that, the unique brand of Indian service was extremely popular in places as far away as New York and also back home in India. Air India also had a number of firsts like being the first Asian airline to serve New York City in 1960. It was around this time only that the now famous “Maharaja” mascot was conceptualized and became the identity of Air India. Growing at a quick pace, the fleet of Air India now has 48 aero planes from Boeing and Airbus with operations across the country and the world. Air India IC flies to 49 domestic destinations across the country along with 26 international destinations and 19 countries across Asia. The popular routes include Delhi, Mumbai (Bombay), Kolkata (Calcutta), Chennai, Bangalore and more.

### **Tracing the history of ticket in airline**

Paper tickets date back to the 1920s. Each airline used a different form with varying rules. Airlines soon recognised the need for standardisation of traffic documents, regulations and procedures to support the growth of an industry that spanned the world. In 1930, the IATA Traffic Committee developed the first standard hand-written ticket for multiple trips. These same standards served the industry into the early 1970s.

The first ticketing revolution occurred in 1972 with automation. The IATA Billing and Settlement Plan (BSP) for travel agents began in Tokyo that year. This led to the birth of the IATA neutral paper ticket. For the first time the IATA logo appeared on the cover of tickets that could be used by any travel agent to ticket journeys on almost any airline in the world.

The next revolution took place in 1983 when the system was further automated with a magnetic stripe on the ticket back. This allowed all of the ticket information to be stored electronically on the ticket itself and it could be used as the boarding pass as well. At its peak, 285 million of IATA neutral paper tickets (both versions) were printed in 2005.

The first e-ticket was issued in 1994. By 1997 IATA had adopted global standards for e-ticketing. But the evolution was slow and by May 2004, only 19% of global tickets were electronic.

**Manual Form of Ticket**

Today an internet booking engine (IBE) is an application which helps the travel and tourism industry support reservation through the Internet. IBE providers keep adding new features to internet booking engines such as Multiple Search Options so that a customer can book the flight in a manner that suits his/her requirements. If the customer is “schedule sensitive” or needs to adhere to specific travel dates, the IBE offers ticket fares giving priority to the travel calendar. As many passengers are very concerned about the ticket price, the IBE of an airline shows a comparison between the low and high ticket fares, with the services included in each. A user may be able to access a seat map and reserve a preferred seat which is available. The selection of a front row, aisle seat, or window seat is possible. This feature, which is known as Web Check-in, allows a passenger to check-in online and print their own boarding pass. Online travel bookings will represent almost a third of worldwide volume by the end of 2012, according to yStats.com «**Global Online Travel Report 2012**» report.

**Hand Written Flight Coupon- Specimen**

**PASSENGER TICKET AND PASSENGER CHECK**  
SUBJECT TO PROVISIONS OF CONTRACT OF CARRIER

**BIMAN BANGLADESH AIRLINES**

ORIGIN: TOKYO  
DESTINATION: SINGAPORE  
CARRIER: BG  
FLIGHT: 073  
CLASS: Y  
SEAT: RT

FARE BASIS: Y  
FARE: 4 RT  
TAXES: 4 RT

AGENCY: HIS

NON-REFUNDABLE

© 997 4202405280 3 0

JPY 244,100

(source:[http://en.wikipedia.org/wiki/File:Handwritten flight coupon Biman Bangladesh Airlines](http://en.wikipedia.org/wiki/File:Handwritten_flight_coupon_Biman_BangladeshAirlines))

Earlier period since devices for printing tickets are very expensive, as probably all highly specialized devices; this type of forms is not widely spread in the agencies. Besides, it is impossible to print tickets of different airlines from one printer, so if you buy a ticket at the agency, it is likely that the flight will be written exactly in the manual form. Airlines

also have an “emergency” manual tickets reserve for the case of shutdown or malfunction of the printer. The most widely used are forms with 2 or 4 coupons. Each coupon is equipped with a photocopier layer, so any coupon contains information about all the others. If the number of flights on your route is less than the number of coupons in the form, then the word “VOID” is written on the “extra” flight coupons, and the coupons are “pulled out” of the ticket. The last coupon is a passenger copy and is left for you for the report, but only after you fully use the ticket (the ticket without the passenger coupon is not valid).

## The Basics Airline Price System

The most familiar and well developed example of revenue management in practice is the Airline industry where:

**SEGMENTED MARKETS:** Demand is segmented into business and leisure market segments using discount fare restrictions. Relatively price insensitive business travellers are charged higher fares than more price sensitive leisure travellers.

**FIXED CAPACITY:** The number of seats on a flight is fixed once schedules are set.

**PERISHABLE INVENTORY:** Once a flight has departed, the unsold seat inventory has no value.

**LOW MARGINAL SERVICING COSTS:** The out-of-pocket cost of adding a passenger to a flight is very low.

**ADVANCE SALES:** Booking requests are tendered in advance of departure and can be evaluated using logic programmed into the computerized reservation system. Fares can be changed on short notice.

**UNCERTAIN DEMAND FORECASTS:** Passenger demand varies by season, day-of-week, and time-of-day and can be forecast by flight and fare category, but not precisely.

In the travel industries, the business travel segment of the market is less sensitive to price levels than the leisure segment. Service providers offer discounts to the leisure segment of the market. Business travellers are largely precluded from taking advantage of these discounts through the imposition of advance purchase and length-of-stay requirements. Travel companies know that these restrictions do not suit normal business travel characteristics. The price of any airline ticket consists of a number of things.



***Baggage- Base Fare- Food- Fuel Surcharge- Seat Selection-  
Service Fee To Issue-Applicable Taxes And Airport Fees***

The last four are sometimes optional (especially for low-cost airlines) where you pay for them on top of the ticket price if you want them included. With the older, more traditional airlines, and for long-haul flights, these things are usually included in the ticket price. The question of Why do prices change? Prices change due to seat availability and demand. The cheaper booking classes might be sold out even if there's still 3 months before you leave. There are some dates of the year where there is simply higher demand. When a lot of people have to fly somewhere (and even more when they want to go to the same destination or area), airlines will set their prices at a higher level. Christmas, Thanksgiving and school vacations are the busiest times.

### **Understanding the Rule of Thumb**

Airline competition is also an important factor contributing to ticket price. If there is a lot of competition (i.e. a lot of airlines flying there), prices will be significantly cheaper. This doesn't only apply to certain regions but also certain routes between two cities (i.e. Los Angeles – New York, New York - London). If there's a lot of airline competition, this also means there's a lot of passenger competition, meaning more people want to fly to a particular destination. Therefore, competition play vital role and competing for those cheaper booking classes. As a general rule of thumb, the earlier you book, the better.

### **Rise And Fall Kingfisher Airlines Airline Business –Learning Curve**

Indian Aviation Industry is one of the fastest growing markets in the world. But nowadays it is in the news due to different reason. And that is the failure of one of the leading aviation player - Kingfisher Airlines. The airline has been facing financial issues for many years. Till December 2011; Kingfisher Airlines had the second largest share in India's domestic air travel market. However due to the severe financial crisis faced by the airline, it has the fifth largest market share currently. Even the company have no funds to pay the salaries to the employees and is facing several other issues like fuel dues; aircraft lease rental dues, service tax dues and bank arrears. This case outlines the financial turmoil of the Kingfisher in detail.



Kingfisher Airlines Limited was an airline group based in India. Its head office is in Andheri (East), Mumbai and registered office in UB City, Bangalore. Kingfisher Airlines, through its parent company United Breweries Group, has a 50% stake in low-cost carrier Kingfisher Red. The airline had been facing financial issues for many years. Until December 2011, Kingfisher Airlines had the second largest share in India's domestic air travel market. However due to a severe financial crisis faced by the airline at the beginning of 2012, it has the lowest market share since April 2012. The airline had shut down its operations when on 20 October 2012 the DGCA suspended its flight certificate. The suspension had been due to failure to give an effective response to the show-cause notice issued by DGCA. However, the airline had locked out its employees for several days before this suspension. On 25 October 2012, the employees agreed to return to work. In February 2013 the Indian government announced the withdrawal of both domestic and international flight entitlements allocated to the airline. The CEO has quit on 17 Feb 2014.

#### **Kingfisher Airlines –Milstones**

Best New Airline of the Year Award for 2005 by Centre for Asia Pacific Aviation (CAPA) Award in the Asia-Pacific and Middle East region.

Best New Domestic Airline for Excellent Services and Cuisine by Pacific Area Travel Writers Association (PATWA).

Buzziest Brands of 2005 by agency faqs and The Brand Reporter.

King Club has won the Freddie Awards 2008 in the following categories: Best Bonus Promotion-Best Customer Service-Best Member Communications (First Runner-up)-Best Award Redemption (First Runner-up)-Best Elite Level (Second Runner-up)-Best Website (Second Runner-up) and Program of the Year (Second Runner-up)

Kingfisher Airlines frequent flyer programme, King Club has won Top Honours at the 21st Annual Freddie Awards in the Japan, Pacific, Asia and Australia region.

Kingfisher Airlines has received three global awards at the Skytrax World Airline Awards 2010-NDTV Profit Business Leadership Award for Aviation.-Rated India's Second Buzziest Brand 2008 by The Brand Reporter-Ranked amongst India's Top Service Brands of 2008 by Pitch Magazine-Voted as India's Favourite Airline-Rated as Asia Pacific's Top Airline Brand-Brand Leadership Award-

Economic Times Avaya Award 2006 for Excellence in Customer Responsiveness-  
India's No. 1 Airline in customer satisfaction by Business World-Rated amongst  
India's most respected companies by Business World-Rated amongst India's 25  
Innovative Companies by Planman Media in 2006-"The Best Airline" and "India's  
Favourite Carrier' in a Survey conducted by IMB for The Times Of India.

Listed in the top 100 most trusted brand in The Brand Trust Report.

Ranked third in the survey on India's Most Successful Brand launch of 2005 under  
the Brand Derby Survey conducted by Business Standard.

Rated amongst the top ten in the Best Television Commercial Jingles by NDTV.

Rated amongst the Top Ten Internet Advertisers by Yahoo.

Service Excellence 2005-2006 for a New Airline by Skytrax.

## Classification of Air Ticket

**Airline Ticket:** "An airline ticket is a document, issued by an airline or a travel agency, to confirm that an individual has purchased a seat on a flight on an aircraft. This document is then used to obtain a boarding pass, at the airport. Then with the boarding pass and the attached ticket, the passenger is allowed to board the aircraft. There are two sorts of airline tickets - the older style with coupons now referred to as a paper ticket, and the now more common electronic ticket usually referred to as an e-ticket".

Purchasing airline tickets has been greatly simplified by the widespread use of online reservation services. Travellers can compare prices and routes on various airlines using online booking sites and make reservations with just a few mouse clicks. The most important skills that you will need are a small dose of Internet savvy and the organizational awareness to plan ahead for the best fares. Airfares are lower than ever these days, but you still have to be savvy to get the best deal. In addition to the basics there are six secrets to winning the increasingly opaque airfare game.

1. Search at the Right Time
2. Check a Broad Range of dates
3. Use Aggregator Sites
4. Book Award Tickets Early—and On-Line
5. Book through an Airline's Web Site
6. Don't pay too much for change fees

IATA announced that as of June 1, 2008, IATA-member airlines will no longer issue any paper tickets. A ticket is generally only good on the airline for which it was purchased. However, an airline can endorse the ticket, so that it may be accepted by other airlines, sometimes on standby basis or with a confirmed seat. Usually the ticket is for a specific flight. It is also possible to purchase an <open> ticket, which allows travel on any flight between the destinations listed on the ticket. The cost for doing this is greater than a ticket for a specific flight. Some tickets are refundable. However, the lower cost tickets are usually not refundable and may carry many additional restrictions.

The carrier is represented by a standardized 2-letter code. In the example give below, Thai Airways is TG. The departure and destination cities are represented by International Air Transport Association airport codes. In the example given, Munich is MUC and Bangkok is BKK. The International Air Transport Association is the standard setting organization. Only one person can use a ticket. If multiple people are travelling together, the tickets are linked together by the same record locator or reservation number, which are assigned, if the tickets were purchased at the same time. If not, most airlines can cross-reference the tickets together in their reservation systems. This allows all members in a party to be processed in a group, allowing seat assignments to be together.

**A Flight Coupon for thai Airways**



An airline ticket is an essential part of travel and it has become a common everyday document to travellers. There are many types of airline tickets. The consumer can usually choose between economy and first class, and this affects the comfort of the seat and other amenities. Tickets can also be purchased to fly to a single destination and offer no way to return to the original location, or they can be purchased as a round-trip package. When children are flying, they sometimes have the option to sit on the lap of a guardian or sit in a seat, both of which can require different types of tickets.

### Understanding Class and Ticket in Airlines

The flight airfare keeps on varying from time to time these days according to the economic circumstances. All different kinds of airlines commence extraordinary deals and make it achievable for the travellers to get cling to the lowest air fare. It is usually witnessed that lowest airfare attracts people of all class and nature and has enormously changed the approach they move around from one destination to another.

Class	Types Of Ticket
Economy class (Economy seating is cramped and less expensive.)	Tickets are normally the cheapest and most uncomfortable seating option available on a commercial aircraft. Some low-cost airlines do not have a business or first-class seating option, and thus economy class is the only class available. Economy seating is often uncomfortable for people with long legs or an above-average sized body. Some such people find their knees jammed into the seat in front of them or have difficulty sitting in the chair.
First-class (First class seats are comfortable and spacious.)	Airline tickets offer access to the most comfortable and spacious seats on a commercial aircraft. In addition to the actual seat itself, other amenities are available to first-class passengers that are not available to cheaper ticketed passengers. For example, the seats might be further apart from each other so that every first-class passenger has more space surrounding themselves than lower-classed passengers. If meals are served, they are often of a higher quality in first class and accompanied by an alcoholic beverage for adults. At times, special clubs in airports are available to first-class passengers, and the in-flight entertainment is of higher quality. This type of ticket allows the purchaser to sit in business class. It is a ticket that provides travellers with a more comfortable travelling experience than coach/economy. For example, one of the benefits of business class is increased leg room. However, it does not have the features or luxuries that are available to travellers carrying first class tickets.

	<p>First class tickets are a form of one-way or round-trip tickets that allow travellers to travel in first class. Because first class travellers have access to spacious seating, quality food, drink and other in-flight amenities, these tickets are often the most expensive type of ticket available. First class ticket holders also have access to the airport lounge while waiting for their flight and a variety of entertainment options on-board.</p>
Child tickets	<p>Child tickets are sometimes not necessary if the child is very young, usually around two years of age or less. In this case, the child can sit on his or her guardian's lap, or the guardian can purchase a seat for the child if he or she does not want to hold the child during the entire flight. Some situations may require a child to have a ticket, however, such as international flights or cases where the child is older. In these cases, the guardian must purchase another seat, though it is usually offered at a discounted price.</p>
Round-trip tickets	<p>Round-trip tickets let a person fly to his or her destination and then fly back at a later date. It is a complete round trip back to where he or she started. Often, it is less expensive to purchase round-trip airline tickets rather than two one-way tickets to the same places.</p>
One-way airline tickets	<p>One-way airline tickets allow a person to fly to one destination with no ticket back, unlike round-trip tickets. Once the person reaches his or her destination, he or she must purchase another ticket to fly back or find another way. At first glance, one-way tickets are typically cheaper than round-trip tickets, but only because it is one flight instead of two.</p>
Refundable ticket	<p>Refundable tickets are a ticket type that is eligible for a refund. Travellers that request a refund are not charged a fee or penalty. Refundable, where there is a possibility of getting a full refund of the fare (minus some minimum deductions / charges) in the case of modification or cancellation and non-refundable tickets, where the airline does not give passengers any refund in the case of changes made to the booking.</p>
Non-refundable tickets	<p>This type of ticket is often purchased at a discount and is not eligible for a refund. Travellers who are unable to travel on the date or dates that are specified may request that the carrier transfer the ticket to another time. Rules regarding transferring travel dates with non-refundable tickets may vary from one carrier to another and a re-issuing fee or penalty may apply.</p>

Coach Ticket	Coach tickets are a type of ticket in which fliers travel in coach or economy class. This is the most basic means of travel and it is also the least expensive. Holders of coach tickets are often given limited snacks and drink and other comfort features such as leg room are limited.
Open Airline Ticket	An 'open' ticket is a ticket which allows one to travel on any flight between the destinations listed on the ticket with no guarantee of being able to travel. The cost of the open ticket is greater than a ticket for a specific flight.

Just we will have a look at how many class and services offered by various service providers. This list is not exhaustive. Many airlines provide different customer oriented services to meet out the competition in the globalized world. Few examples were given, one can understand difference in services segment which are available in airline ticketing.

**Standard Economy**



**Economy plus**



**Economy minus**



**Premium Economy**



**"Premium" class**



**Business class**



**International business class** **First class**



What ever be type of ticket, all tickets contain details of the following information. They are: An air ticket contains the following margins:



1. **Issued By** this margin contains the name of an airline which ticket you buy. In **Nd r se n s / R s ri ions** Margin you find the information regarding fare restrictions under this ticket and the possibility of handing over the passenger to another carrier. For example, if the margin contains SU/KL ONLY then this ticket is valid for the flights of "Airflot» (SU) and KLM (KL) and if the tariff allows you can change the aircraft from one company to another according to the ticket you have. If your tariff allows any changes it will be mentioned in this margin. For example, RES CHG USD 50 or ONE INBOUND REB FREE means «THE CHANGE OF RESERVATION WITH IMPOSING A FIRE OF 50 USD» or «ONE CHANGING OF RETURN DATE FREE OF CHARGE».
2. **Tour Code** Is the notation for group and confidential tariffs (more often it is specified in the upper part of the ticket).
3. **Origin/Destination** is a three-letter notation of the point of origin and the destination point through the whole route.
4. In the **Airline Data** margin you can see an alphanumeric number of reservations (PNR CODE).
5. **Issued In Exchange For.** If the ticket is issued in exchange for another one then the number of primary ticket is put down in this margin.
6. **Conjunction Tickets.** If according to the ticket the route includes more flights than the number of flight coupons in the form, then such a ticket is issued on several papers and in column 6 of each one the number of conjunction ticket is marked. These several forms are considered to be one and the same ticket and even if you have accomplished the whole flight under one of them do not throw it away till the end of the journey.
7. **Date and Place of Issue** contains a unique stamp of agency with agency's name, its address, unique office number, alphanumeric reference of the agent who issued the ticket, date of issue. This information you can see in middle lined margin.
8. **Name of Passenger** is pointed out in Latin transcription only. The first letter of the name or the whole name and sex follow the surname (MR – mister, MRS/MSS – miss or misses). According to the international standards this margin allows to have not more than 3 mistakes without phonation distortion (is pointed out either in the head or middle part of the ticket).
9. In the **From/to** margin you can see all the origin and destination points. If there are several airports in the city then a three-letter code of the airport follows the name.



10. **Carrier.** Here you can find a two-letter code of the carrier airlines. The codes are standardized by the International Association of Carriers and can be either quite evident: LH – Lufthansa, AF – Air France, – British Airways or not quite so: Y – Finnair, UN – , Z – Alitalia.
11. **Flight margin** contains the number of flight.
12. **Class.** It's important not to mix it up with the class of passengers' location. The first class is usually marked with letter F or J, business class – by letter C, other letters signify an economy class.
13. **Date** – date of departure.
14. **Time** – time of departure (always local).
15. **Status of reservation/STATUS** usually looks like OK/HK – reservation confirmed, PQ/HL – waiting list/for free seats (inquiry of place on registration). In a ticket for infants (under 2 years old) flying without separate seat status NS is pointed out.
16. **Fare Basis** contains an alphanumeric marking of the fare according to this coupon.
17. **Not Valid Before / Not Valid After** contains the date before which and after which accordingly you may not fly under this air ticket (if the rules of the fare allow the changing of dates).
18. The norm of free of charge luggage/**ALLOW** shows either weight in kilogram's or the number of seats. It can be seen in the lower part of the ticket.
19. **Fare** – airlines' fare for the transportation.
20. **Equiv. Fare PD** – the equivalent of the fare in the currency of the issuing point (if the currency of the point of issuing differs from the currency of departure point). The conversion rate should be specified in margin 1 or 23.
21. **Tax** is a two-letter notation and the amount of airport taxes in the currency of the issue point.
22. **Total** – the total cost of the ticket (fare plus airport fees) in the currency of the departure point or other currency.
23. **Fare Calculation** contains a detailed calculation of the ticket's cost.
24. **Form of Payment.** The most widespread are CASH, INVOICE or INV, CC (credit card).

In India, Airline Tickets are quite easy to search and book, since the country has a vast network of different airports and many airline operators across the region. In fact, tickets booking are now such an easy task that almost every internet user now uses online ticketing sites to book travel airline tickets. There are multiple airlines in India, few of which sell cheap air tickets on their own sites, and there are also more than 12 Indian travel sites which compare cheapest ticket availability across all the flight ticket providers, including international airline tickets. There are different types of ticket formats that are standardized in accordance to the International Air Ticket Association (IATA) format. There are three major types of ticket formats. Air ticket is an essential part of air travel, yet it has become a common everyday document to the travellers. It is broadly classified as:

- (a) Off-Premise Transitional Automated Ticket (OPTAT)
- (b) Automated Ticket / Boarding Pass (ATB)
- (c) Electronic Ticket (E-Ticket / ET)





Passenger ticket and baggage check are the official contract between the passenger and the airline carriers. Passengers without tickets cannot be taken on the flight; in addition, for each passenger a ticket must be issued. On the white pages of the ticket cover you'll find the "Terms and Conditions of an Agreement", as well as additional information. There are different types of ticket formats that are standardized in accordance to the International Air Ticket Association (IATA) format. There are three major types of ticket formats that are offered and sold.

### Off-Premise Transitional Automated Ticket (OPTAT)

1. **Paper Ticket:** OPTAT is an Off-Premise Transitional Automated ticket sold mostly through International Air Transport Association (IATA)-licensed Travel Agencies. It is a standard universal travel document that is issued by airlines to passengers. The ticket is in a format of four flight-coupons. The valid segment of the journey in the coupon is highlighted by a brighter colour against the other invalid portion segment. The valid flight coupon segment will be taken upon check-in according to the routing portion of the journey. The ticket also consists of light coupons, passenger receipt coupon and the cover, which are attached with notices as well as other information related with the air passage.
2. **Automated Ticket / Boarding Pass (ATB):** Automated Ticket Boarding Pass or ATB is an airline ticket stock with a series of cards that print the control, flight, seat assignment and passenger data. It consists of valid flight coupons per sector and the passenger receipt. ATB2 is an ATB with a magnetic stripe. The principal carrier issues an ATB. An ATB has two portions, the flight coupon (left side) and

the passenger coupon (left side), which can be used as boarding pass, both separated by a perforation. The passenger receipt shows the complete itinerary and various ticketing data on the coupon and can be retained by passengers.

- 3. Electronic Ticket (E-Ticket / ET):** An E-ticket is a paperless ticket. All the ticketing data is stored electronically. Upon check-in at the airport, the traveller will have to provide a valid picture ID and then they will be issued a boarding pass for that part of their trip. In principal an e-ticket is the same as an Off-Premise Transitional Automated Ticket (OPTAT) or Automated Ticket / Boarding Pass (ATB). The Electronic Ticket (e-ticket / ET) format is a paperless ticket. Another difference is that upon check-in the flight coupon is provided electronically. E-ticket has many advantages compared to the other types ticket formats and will gradually replace the two other formats in the future.

To issue e-tickets, airlines must have a database that is integrated with an airline's passenger service system. That is then connected to all other partners -- airlines, airports, ground transportation and travel agencies, for instance -- to share real time information.

To book themselves on a flight, travellers can visit any number of Web-based ticketing sites. Once there, they can view the options available and use a credit or debit card to pay for their ticket. After placing the order, the electronic record of the ticket goes into the airline's database, where it holds the passenger's spot.

The electronic ticket is particularly convenient since it confirms the purchase of a ticket without the need of any printed document. The airline with which one travel, stores all the details of the ticket in its central system of reservations.

This means that no need to show a printed ticket in order to get on the plane and no worry about forgetting or losing the ticket. Having an electronic ticket, allows to go directly to the check-in counter holding with passport or identity card and a copy of the e-mail booking confirmation.





**E-ticket display**

**Electronic Ticket Display**

TRF: 724 2267058102    Connection class:    CRS: 1A    CTR:    Loc: 2700KQ  
 OD: ZRITLY    B    FCM: C    POI: TLY    DO: 28MAY06    CI: 37200049

Passenger: CNRNDOM-ML ADT

#	Seq	City Origin	City Destination	Airline	Flight Number	Class	Date	Time	Status	Fare Basis	Coupon Status	Inclusive Indicator	Not Valid Before	Not Valid After	Baggage Information
1		ZRH	ILM	LX	554	Y	27MAY	09:48	OK	YK00Y	0				20K

Item	Unit	Rate	Amount
Fare	F	CHF	7020.00
Equip		USD	1682.00
Tax		USD	28.86YR
Tax		USD	28.80CH
Tax			0
<b>Total</b>		<b>USD</b>	<b>1739.48</b>

Fare Calculation: ZRHLX TLY1547.51N001547.51END ROR: 30550

Form of Payment	Method	Type	Amount	Company	Credit Card Number	Exp. Date	Approval Code
New	CASH						

Conditions: ONLY LXL FARE RESTRICTION APPLY

Buttons: ETKT History, Refresh, Full Refresh, Void, Revalidation, Display PNR

**PNR update with ticket number**

Agents: GPR AGY    Responsible: TLY02135    Calling: TLY02136    Company: 1A    Resid: home: 2700KQ

Main: 1 BNYN DARI31  
 AT TLY 572 8 320 99 99 - UNIFORMS ISSUED LYS - 1  
 TR OK 28MAY 120182186 BT LX

Itinerary:  
 1 2 ZRH ILM 554 Y 28M 27MAY 09:48 TOL 27MAY 14:02

Insurance: MCO

Address:

Fare elements:  
 FA TAX 724-2267088802/BTLY/USD1738.48/28MAY06/TLY02136/37000949 /01/82  
 FB TAX 2400000026 TLY/37/07 OK BTY0887 /01/82  
 FC TAX ONLY LX/CH FARE RESTRICTION APPLY /01/82  
 FD TX  
 FE CASE ✓

Services: ↑ ↓ ↺ ↻

Remarks: ↺ ↻

Security: 🔒

**E-ticket void**

**Electronic Ticket Display**

ORG: CA 260 8990    Compensation    ORG: TA    ORG  
 OO: ZRH TLV    SI    PCW: 0    TO: TLV    DOI: 22MAY08    ICI: 37200248

Passenger: DITK06MEL ADT

#	Step	City	City	Airline	Flight Number	Class	Code	Time	Status	Fare Basis	Order Status	Inventory Indicator	Net Paid Before	Net Paid After	Payment Information
1		ZRH	TLV	LX	264	Y	27AUL	08:45	OK	YDEOM	Y				20K

Fare	F	CAP	2025.00				
Fare		USD	1870.00			BSR	Business
Tax		USD	25.00YR				
Tax		USD	29.90CH				
Tax			C				
Total		USD	1778.48				

**Fare Calculation:**  
ZRH LK TLV 1847 SI KJG 547 5180 PGM 20030

Commission	Form of Payment	Class	Type	Amount	Company	Credit Card Number	Tour Code	Equip Code	Approval Code
	New		CASH						

Endorsements / Payment Restrictions: ONLY EXHAUST FARE RESTRICTION APPLY

Settlement Authorization Code: 7242407061 834

Buttons:

**PNR display after Void**

Windows Vista desktop environment. The browser window displays the PNR details for the voided ticket, including flight information, fare breakdown, and payment details. The status of the ticket is clearly marked as voided.

Browser address bar: [http://www.firstranker.com/.../PNR/37200248](#)

Page Title: PNR 37200248

Content:
 

- ORIGIN: CA 260 8990
- OO: ZRH TLV
- Passenger: DITK06MEL ADT
- Flight: 1 ZRH TLV 08:45 LX 264 Y 27AUL 08:45 TLV 2700E 14:05
- Fare: F CAP 2025.00
- Fare Basis: YDEOM
- Payment: New CASH
- Restrictions: ONLY EXHAUST FARE RESTRICTION APPLY



**E-ticket refund**

Refund record

Enter values to modify the refundable record:

Agent code: 37200000 Agent sign: 156084672006 Refund number:

Date of issue: 21/04/2008 Refund status:

Passenger name: ENIBACUJEL

Document number	Class	Check digit	C	O	I
774 2267000077			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Companion ticket			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Companion ticket			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Companion ticket			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Companion ticket			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Companion ticket			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Fare paid: USD 1662.00  
 Fare used: USD 0.00  
 Fare refund: USD 1662.00  
 Cancellation fee: % Amount:   
 Max. amount:   
 Tax refund: USD 28.88  
 Total refund: USD 1738.48

Contract:  Amount:   
 Reference:  Amount:   
 Contract condition: % Amount:   
 Ending:

Form of payment	TYPE	AMOUNT
CASH		1738.48

**E-ticket display after Refund**

Electronic Ticket Display

Ticket: 774 2267000077 Connection class: JDE TA JDE Loc: 190000  
 DO: 2008/04/21 ST: PCAR 0 FOR: 156084672006 DO: 2008/04/21 CI: 37200000

Passenger: ENIBACUJEL AD

Sl	Class	City	Origin	Dest	Class	Fare	Time	Status	Fare Basis	Coupon Status	Interline	End Valid	Refund	Percentage
1	FBI	TLV	JY	774	J	1662.00	09-05	OK	YOCJWA	0				27%

Fare	Equi	Tax	Tax	Tax	Total
FBI	USD 1662.00	USD 28.88	USD 28.88	0	USD 1738.48

Fare Calc: 2807  
 2807 US TLV 1547 014831 047 01 040 0001 308850

Cancellation	Contract Payment	Contract	Type	Amount	Complete	Credit Card Reason	Tour Code	Form Code	Approval Code
OK	OK	OK	CASH						

Endorsement & Payment Restrictions: ONLY EXLH FARE RESTRICTION APPLY  
 Schedule/Aviation Code: 7242 0700 044



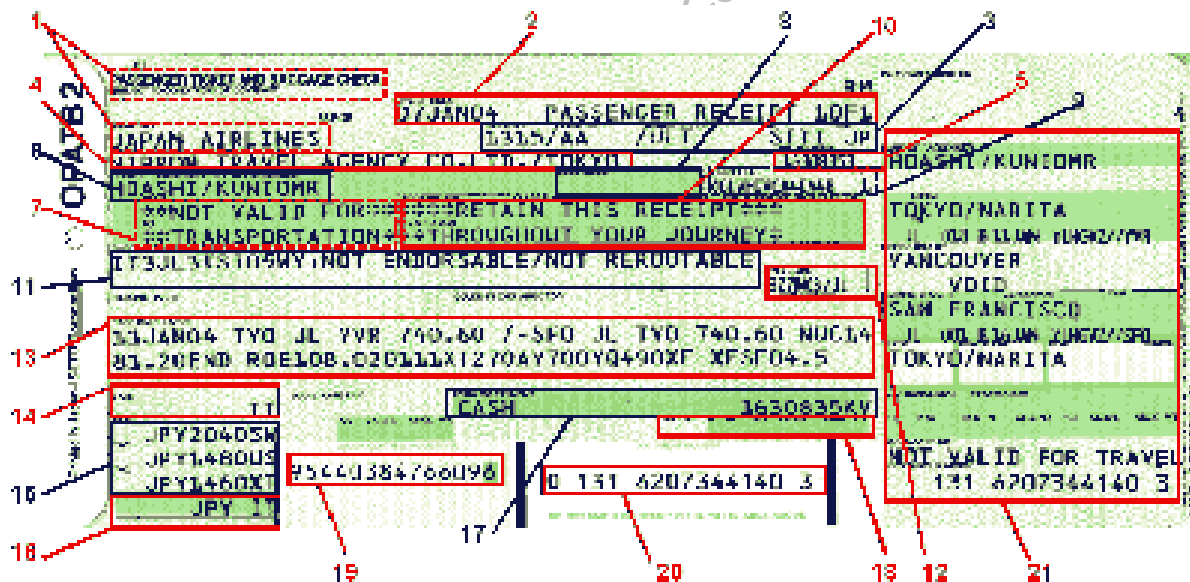
**Conjunctive Tickets:** Conjunctive tickets are two or more tickets issued on the same itinerary for the same passenger. It is a continuation of the itinerary of the previous ticket. Conjunctive tickets may contain up to four ticket numbers. The conjunctive ticket indicator is a dash ( - ), and is placed after the coupon numbers of the first conjunctive ticket, followed by the last three digits of the last conjunctive ticket number.

**Ticket less Travel:** Ticket less travel is accelerating as more passengers are boarding an airplane without a paper document in hand. Instead, passengers claim their reservation at the airport, showing a credit card and picture identification at the check-in counter to receive a boarding pass. Ticket less travel is now accepted by most airlines domestically and internationally as well. Interline electronic tickets are being developed to make it easier to adapt to complicated itineraries. The passenger information is shown below:

<b>TKT NBR:</b>	<b>Ticket number including airline code. No check digit shown.</b>
ORIG/DEST	Origin / Destination, here AMS/AMS
NBR of TKTS issued	In this case, only one ticket is issued, no conjunction ticket.
TTL NBR of SEGS	Total number of segments, in this case 2.
CP	Coupon
S	Status, in this case O(pen) for use
ER	Endorsements / restrictions
Fare Calculation	Calculation in NUC. The Rate of Exchange (ROE) and the XT-taxes.
Fare Calc Indicator	Pricing Indicator. 9 tells you the booking is auto priced.
TKT Fare Data	Fare Information as shown on the Passenger Ticket
Auditor	Net amount to be paid
FOP	Form of Payment
NAME	Passenger name
FA: 1P/....	File Address (Worldspan Locator)
FA: 1A/....	File Address (Airline Locator)
Ticketing AGT ID	Sine in of ticketing agent
SID	Subscriber ID (pseudo)
DATE	Date of ticket issuance
IATA NBR	IATA Number
Name/Place of Issue	Issuing Agency name and address
Free BAG	Baggage Allowance (not guaranteed)

Ticket Data Display (TDD)	Coupon Status Display (CSD)	Definition:
<b>O</b>	Open For Use	Open for use, not yet used.
<b>A</b>	Airport Control	Under airport control - the operating carrier has secured the ET coupon prior to the scheduled departure.
<b>C</b>	Checked	The passenger has checked in for the flight.
<b>L</b>	Lifted	The passenger has boarded the aircraft.
<b>E</b>	Exchanged	The value of the ET coupon has been used as payment for a new transaction.
<b>F</b>	Used	The flight has been completed.
<b>R</b>	Refund	The e-ticket record has been refunded.
<b>V</b>	Void	The e-ticket record has been voided.
<b>U</b>	Unavailable	The validating carrier has determined that the coupon is no longer available for use as ticketed.

An e-ticket is nothing more than a reservation in an airline's computer system, one that advises them you have a ticketed seat confirmed on a particular flight.



When you're issued an e-ticket there's **also** an e-ticket receipt that's printed out afterward. The e-ticket receipt looks similar to an old-style paper ticket but doesn't need to be presented at the check-in counter on the day of your flight. It only serves as proof that your ticket was issued. To check in with an e-ticket you need only to provide a valid



passport or government issued ID so the agent can pull up the record in their system. The check-in agent then provides your boarding pass to take to the gate. It is recommended however that you take the e-ticket receipts with you on your trip as it serves as proof of your reservation in the event of a computer snafu or major electronic meltdown. Travelling with e-tickets gives the added benefit of not having to have valuable paper tickets with you along your travels, thereby circumventing the risk of theft, damage or loss.

**Paper Tickets**

There are airlines in the world, not many that still issue paper tickets for their flights, mainly because updating their outdated ticketing system would not provide any savings over leaving it as it is. Airlines still using paper-only ticketing systems are generally smaller operations and/or are low-cost local carriers. It has nothing to do with the airline's quality or safety record. Paper tickets sometimes, but rarely, need to be used when combining more than one airline on the same ticket. This is becoming increasingly unlikely, but there are occasions where the best fare does require a paper ticket. If Air Treks needs to issue a paper ticket for any leg in your journey, we'll send you those tickets free of charge no matter where you are in the world. We'll also make sure you know which legs of the trip have been issued that way and remind you that you'll need to bring the tickets with you to the airport.

**How to Read an E-Ticket?**

E-ticket receipts can be tricky to decipher – there's a bunch of hieroglyphics on any given one.



- A – Validating carrier
- B – means that this document can't be used to board your flight
- C – place and date of issue

- D – electronic ticket number
- E – passenger name
- F – departure airport code
- G – arrival airport codes
- H – airline code and flight numbers
- I – class of service and travel dates

Fare and fare basis codes are some of the most difficult things to understand about the travel industry. How can someone sitting next to me on the plane have paid \$250 less than I did? Why my ticket refundable and theirs is not? These questions can be answered by determine what fare was booked for the ticket and what fare basis codes were used for each flight.

### 1. Unrestricted Fares and Restricted Fares

Based on booking classes, fares can be divided into two categories: (i). Unrestricted or Normal Fares (ii). Restricted, Excursion, Special, or Discounted Fares. An unrestricted fare is a higher fare for a ticket offering maximum flexibility. Typically, unrestricted fares require no advance purchase, no Saturday night stay, no roundtrip purchase, and are fully refundable without penalty or fee. Restricted fares can possibly require an advance purchase, a minimum and maximum stay; they are mostly non-refundable fares that have change fees that apply. They have routing restrictions and require that the same carrier be used in both directions. In short, there are certain restrictions to be followed if these fares are to be availed.

### 2. Fare Basis Codes

A fare basis code consists of two basic elements – the booking code and the applicable fare elements. Together they make up a fare basis code that will be up to, but no longer than, eight (8) characters in length. The booking code refers to the letter representing the class of service in which the fare has been published and the inventory that you will use to confirm the booked flight segment. In general, the following table lists the most commonly used booking codes and the classes of service they represent (these may vary per airline).

<b>P, F, A</b>	First Class
<b>J, C, D</b>	Business Class

<b>Y, S, W</b>	Economy /Coach - Unrestricted
<b>B, H, K, L, M, N, Q, T, V, X</b>	Economy / Coach - Restricted

Let's take a look at some examples of fare basis codes & their explanations.

V30X7MN	Booking class V, Midweek, 30 days AP, 7 Day Max, Non Ref
ME14NQ	Booking Class M, Excursion fare, 14 day AP, Non-Ref
V14X77NN	Booking class V, 14 Day AP, Midweek, 77 days Max Non-Ref
V14W77NN	Booking Class V, 14 Day AP, Weekend, 77 days Max Non-Ref
VA0GNR	Booking Class V, One Way, Non-Ref
YUP6	Pay Coach fare Upgrade to First or Business Class
F10BIZN	Discount First Class fare, 10 day AP, Non-Ref
B26	Un-restricted coach fare, limited number of seats available.

### **Voids, Exchanges, and Refunds**

When an itinerary either needs to be changed or cancelled, the original airline ticket will not be usable. If changes are made to the itinerary, another ticket has to be issued for the new itinerary, so the original ticket will be exchanged for this new one. If an itinerary needs to be cancelled, but the passenger will not be rebooking, then the ticket either needs to be refunded, voided, or held by the passenger for a future exchange. In this section, we'll discuss each of these terms and when they are used.

1. **Voids:** A void is a cancelled ticket where the charge to the customer's credit card is removed & is never even seen by the customer. It's as if the charge never went through. A void can only be done within the voiding period.
2. **Voiding Period:** The current voiding period within the United States is the next business day. Each agency needs to verify their voiding period or they face debit charges from the airline for the amount of the original ticket. For example, if the voiding period is the next business day, and a ticket was issued on Sunday, then it needs to be voided by EOD (6:30 PM) of Monday. A ticket cannot be voided after departure.
3. **Exchanges:** An exchange is a new ticket that is purchased against the value of an old ticket (or any other ARC / BSP document that is accountable). The travel agent will have to determine the fare(s) used on the original ticket and look at the fare rules to determine what flights, airlines; routings, etc. can be used for the new ticket.



The new (exchange) ticket will have a different ticket number and will hold all the restrictions of the new fare.

4. **Refunds:** A refund is the process of returning money to the passenger for unused portions of a ticket. If a ticket has a refundable fare, the part(s) of the ticket that was not used and has been cancelled, will be refunded to the customer.

A full refund means that the customer cancelled all parts (flights) of a ticket and will receive all moneys back and a partial refund means that the customer used a portion of the ticket (some of the flights) but has cancelled the remaining portion and will receive only the worth of that cancelled/unused portion.

### **Note on LTA/ PTA /MCO**

These are different types of accountable documents that can be issued to a customer. That means that they are issued to a specific person and can only be used by that person, they hold a certain monetary value, and they have to be reported to ARC/BSP.

#### **Lost Ticket Application (LTA)**

Passengers who lose their tickets and wish to obtain a refund must complete a Lost Ticket Application (LTA), which may be obtained at any Airport Ticket Counter, City Ticket Office or by calling the airline's Passenger Refund Department. The LTA must be received by the airline within 12 months after the date of issuance of the lost ticket. To verify that the ticket has not been used, Lost Ticket Applications are subject to a holding period of up to 90 days before the refund is processed.

#### **Prepaid Ticket Advice (PTA)**

PTA means that one person (Buyer) can prepay the travel of another person (Passenger) at one agency, and the Passenger can acquire the ticket at another agency. can be used as a means of pre-payment for:- carriage (tariffs and charges). At an agency operating PTA payments, Buyer must produce an ID, fill and sign a PTA for air tickets/ excess baggage. Buyer pays the tariffs and charges, the PTA fee (which is defined by the sales agency) and receives a document confirming the payment ( , 95). The payment form (cash, money order, etc.) is defined by the sales agency. Buyer should inform Passenger on the time and place of ticket issuing. At the defined day, Passenger should come to the defined agency to acquire the ticket.

The agent checks if the payment was correct, checks the Passenger's ID, and issues the ticket. If any extra money is needed, Passenger may pay it himself, or he can make a request to the selling agency (in this case the payment is made by Buyer). If Passenger failed to use the services paid by PTA (or used it partially), the PTA selling agency shall refund the paid amount (exclusive of deductions) to Buyer and issue a confirming document ( ).

You can use a Prepaid Ticket Advice (PTA) when you purchase a ticket on behalf of someone who needs to pick it up at an airport or somewhere other than the place of purchase. If you issue it for a journey that commences outside an agency's home country, it involves two currencies. PTAs detail passenger travel data, form of payment, and sponsor information. It is an ARC document used to pay for a ticket in one city that is to be issued and picked up in another city. This would be used when the itinerary does not permit the issuance of an electronic ticket. Most airlines charge a \$100.00 fee to issue a prepaid ticket.

#### Miscellaneous Charge Order (MCO)

A Miscellaneous Charges Order (MCO) is an ARC-accountable document that records charges when standard ticket stock cannot be used. Issued by an agent or airline as proof of payment for accommodations, ground transportation, or special services, or as a credit toward future air transportation. TRX mainly uses the MCO as travel voucher for exchange differentials. An MCO is alternatively termed as a Multi Purpose Document (MPD).

*Definition:*

*The abbreviated form of Miscellaneous Charge Order, used by airlines and travel agencies. It is widely known for its use as a travel voucher. Can also be used for collecting miscellaneous charges such as excess baggage and change fees. A MCO is a miscellaneous charge order issued by either the airline or agency to process the payment of travel arrangements, usually to pay for services other than airfares. (i.e. can be used for residual balance for future travel, paper ticket fees, tour payments, etc.)*

A miscellaneous charges order (MCO) is an accountable IATA document, similar to an old-style airline ticket, used to process the payment of travel arrangements. They are issued by airlines, but normally pay for services other than airfares. A MCO may be used to purchase most services offered by airlines, hotels and tour operators.

**Coupons:** In common with older airline tickets, MCOs had a number of passenger coupons, (typically 1, 2 or 4), as well as valueless coupons for the agency's records and the airlines' interline clearing house. There were two main types of MCO, those with a specific value for each coupon, and those with the residual value moving to the next coupon. These were often used where the cost of a service would not be known in advance – such as paying for excess baggage. Typically the passengers' copies on the second type would not show any value, allowing payment for inclusive tours without the services' prices being known to the passenger. **MCO issue:** Travel agency MCOs were printed blank without airline information, and were endorsed to the airline providing the service (or its local agent if the airline was not represented locally). Like tickets, they were valid for a maximum of one year unless otherwise endorsed for a shorter time. **Future usage:** As most MCOs are now issued electronically like e-tickets, they are sometimes referred to as VMCOs (Virtual Miscellaneous Charges Order) MCO's are being phased out and replaced with Electronic Miscellaneous Documents. Airlines authorize travel agencies to issue an MCO when an airfare refund is due to the traveller. This is in lieu of returning the money to the traveller's credit card.

### Miscellaneous Charge Orders [MCO]

Miscellaneous Charges Order (MCO): A Miscellaneous Charges Order (MCO) is an ARC-accountable document that records charges when standard ticket stock cannot be used. Issued by an agent or airline as proof of payment for accommodations, ground transportation, or special services, or as a credit toward future air transportation. TRX mainly uses the MCO as travel voucher for exchange differentials. An MCO is alternatively termed as a Multi Purpose Document (MPD). A document issued by a Carrier or its Authorized Agent. It is worth the price written on the MCO, and is used for payment for the types of service written on the MCO. When an MCO is issued and/or honored for air transportation and related charges, applicable currency regulations shall apply. e.g.) 'FOR FURTHER TRANSPORTATION AND/OR EXCESS BAGGAGE'-may be used for payment of ticket or excess baggage ticket for the person named in the MCO.'FOR REFUND ONLY' may be used for application of refund the place of purchase of the original ticket against which such MCO.

### MCO Guidelines

Does not accept manual or handwritten MCOs.

MCOs cannot be used to pay debit memos or to collect/report cancellation penalties or exchange fees.

Only one MCO can be issued per ticketed passenger. Cross reference the ticket number on the MCO in the “reason for exchange” line.

Travel agents should refer to the ARC industry agent’s handbook for instructions on the completion and reporting of MCO exchange coupons.

Travel agents in should refer to the Passenger Sales Agency Agreement and Travel Agent’s Handbook for the instructions on the completion and reporting of MCO exchange coupons.

Miscellaneous Charge Orders (MCOs) may not be used to process tour payments

### **Approved MCO Uses**

An MCO can be used when standard ticket stock cannot be used. See list below for approved transactions for air travel and related services:

#### **Additional Collections**

Deposits/down payments that include air transportation

Excess Baggage Fees

Future Administrative Service Charge & Penalty Fees

Land arrangements for inclusive tours

Lost Ticket Applications (LTA)

Pet Transportation Charge

Pre-paid Ticket Advice (PTA) Fee

Sky Club memberships

Unaccompanied Minor Escort Fee

Unspecified Future Travel and or Service

### **MCO Issuance for Paper Ticket Fee**

A non refundable fee applies to each paper ticket requested for all e-ticket (ET) eligible itineraries.

Travel Agencies will continue to have the ability to issue paper tickets for any non-ET eligible transactions and to issue paper miscellaneous charge orders.

International travel agencies participating in a Bank Settlement Plan (BSP) are restricted from issuing paper tickets and paper miscellaneous documents.

International agencies have been advised to issue a Virtual Multi-Purpose Document (VMPD) in lieu of paper tickets and paper miscellaneous transactions.

International travel agencies who do not participate in BSP will continue to follow their normal ticketing procedures. All customers, including SkyMiles members, who voluntarily request a paper ticket, will be charged a paper ticket fee. The fee applies to all fare types and will be charged via all ticketing channels, including tickets originally issued, reissued or converted by a travel agent.

### Exceptions

- Infants travelling internationally require a paper ticket. Therefore, the paper ticket fee will be waived for an adult travelling with an infant internationally if they prefer a paper ticket
- Travel agencies outside the (e.g U.S., Canada and Bermuda) who are currently not able to issue an ET
- Non-ET eligible cities or code share partners

### Guidelines for Issuing MCOS

**Name of Passenger** – The MCO may be issued only in the name of the passenger on the original unused ticket.

**Type of Service** – An MCO may be issued for the following types of service: air travel and related services, including lost ticket application, Crown Room membership, excess baggage fee, pet transportation charge, unaccompanied minor escort fee, future administrative service charge, and PTA service charge fee.

**Endorsement Restrictions**- Non refundable/non reversible. The endorsement box of any ticket issued in exchange for the MCO must contain the non-refundable amount including taxes.

**Validity :** An MCO is valid for one year from the date of issue and must be presented for a ticket within that period. Once the MCO is exchanged, the ticket issued then becomes valid for one year from the date of issue. MCOs are not replaceable if lost or stolen. Travel Agencies cannot accept Delta-issued MCOs. Whenever an exchange coupon of an MCO is reissued, all prior endorsements or restrictions appearing on the original MCO must be carried forward to the new MCO. Use specific GDS entries below for information on MCOs.



**Major features provided by the system are:**

Flight Enquiry (The system allows the user or member to perform flight inquiry including flight scheduling, seats availability status, fare details, etc).

User Registration (It allows the user to register in order to be a member of the organization. User is then granted a privilege to book or cancels flights).

Flight Reservation (The system allows the member to book the flights as per his/her requirements. The member is prompt to enter the passenger details and credit card details). The member then receives the unique PNR No. and E-ticket.

Flight Cancellation (The functionality is used by the member to cancel an existing reservation made by the member earlier).

**Airline Reservation System (ARS):**

**“A computerized system containing information about schedules, availability, fares and related services and through which airline inventory is maintained, reservations can be made and/or tickets issued. Typically, only airline offices (ATO, CTO, CRC, etc) or their General Sales Agents (GSAs) utilize the ARS”.**

There are many ways that helps you in making flight reservations on the net. One can make use of number of travel sites to find out what prices are obtainable for the tour itinerary. Some of the travel websites will allow us to choose the fare we are eager to shell out and then help us find the tickets for that price. To have the flight reservation we can also contact the airlines directly. It has made the method of air travel very easy and less costly for all the people.

**Reservations Services Manual [RSM]**

A reference and training manual illustrated with real-life, easy-to-follow examples to better understand reservations rules and procedures. It contains all internationally agreed upon reservations, rules and interline reservations message procedures and addresses every possible reservations scenario. All of the products and services that can compose a customer's entire journey are today being distributed through a number of marketing channels, utilizing professional agents and personal data services. This manual also explores the relationship and technology that exists amongst airlines, customers, marketing media and service provides.



This manual is a great supplement to the Reservations Interline Message Procedures – Passenger (AIRIMP), for a much broader understanding, usage and acceptance of standard reservations procedures, and to enable airlines and other travel industry organizations to conduct their everyday business in the most efficient and economical manner with a more effective response to customers.

#### **Users of RSM**

Airlines  
Airports  
Computer Reservation Systems (CRS)  
Global Distribution Systems (GDSs)  
Government Agencies  
Reservations agents or trainees  
System Providers  
Travel Agencies

#### **Automated Ticket**

A form of Passenger Ticket and Baggage Check designed for issue in various printing devices for which data is computer generated. "AUTOMATED TICKET/BOARDING PASS (ATB)" is the form of automated ticket and boarding pass described in Resolutions. It is a single copy non-carbonised ticket (normally on card stock) with each coupon imprinted separately. Each coupon used for air transport is comprised of a flight coupon and a detachable passenger coupon and boarding pass for a specific flight. One coupon is issued as the passenger receipt which together with all passenger coupons and boarding passes builds up the passenger copy of the passenger ticket and baggage check.

#### **What is booking?**

Action of reserving space on a flight for a passenger, e.g., inventory space or physical seat. Equivalent to the term "Booking" means the allotment in advance of seating or sleeping accommodation for a passenger or of space or weight capacity for baggage, cargo or mail. This term is also applied to hotel, car and other types of travel services. Equivalent to the term "Booking", means the allotment in advance of seating or sleeping accommodation for a passenger or of space or weight capacity for baggage, cargo or mail.

Almost all important cities in India have their own domestic airport. There are more than 8 international airports in India and more than 65 domestic airports. Each airport has airline counters where last-minute airline ticket deals can be found. Similarly there are many air-line reservation systems used for domestic ticketing and one can logon to the respective sites of the carriers to find more information about the fare pricing and availability of cheap options for your plane yatra. There are three types of domestic airlines tickets that can be found in the Indian subcontinent:

Economy Class Airline Tickets

Business Class Air Tickets

First Class Air Tickets

For all these three types, there are refundable and non-refundable travel airline ticket options. The best part about flying on in India is that tickets for any airline are available for buying from multiple places. There are LCCs, low cost carriers who are experts at internet booking engines that sell their airline tickets and there are FSCs (full service carriers) which compete on value and service. You can book their airlines tickets directly at airport airline counters, from an offline travel agent, from an online tickets agent, from the airlines ticketing site, or on the phone with the airline call centre. Each channel has different airfares and smart travellers usually compare multiple ways of booking before deciding where they will buy.

India has sustained a rapid growth in travel industry after globalization and privatization. Due to symbiotic association between technology and growth the standard of living has also been improved. Today, a large number of people fly daily between several domestic destinations for leisure and business purposes. As a result almost all major cities in India are well connected with each other. Unlike olden days, when travelling was a cumbersome affair, today with the increasing number of domestic airlines in India travelling has become a lot easier. In modern era, where people are juggling to balance the fine line between profession and personal life, a little help from technology, certainly is a respite. Boom in low cost airlines and online booking has made domestic airlines booking affordable and convenient. To save time, people are selecting faster routes, thus the demand for cheap domestic airlines in India has increased many folds in the recent years. Due to a large number of domestic airlines in India with stiff competition among themselves several lucrative discounts and offers are also given to customers. Most domestic airline tickets now include the cost of delicious food served on-board, along with excellent customer service that will win your heart. Some of the main cheap domestic airlines in India are Air India Express, Kingfisher Red, Jet Airways, JetLite, Paramount Airways etc.

**Booking by Computer: Booking Class and Classes of Service**

There are only three sections (and sometimes only two) of a plane: First, Business, and Coach / Economy. These are referred to as First class, Business class, and Coach Class. When flights are booked in a reservation system, they are booked in a specific class of service for the section of the plane that was requested. The passenger always has a choice of what section of the plane to sit in, but what section they choose will have an effect on the price (fare) of their ticket. Now, since there are only three sections of a plane, you would think that there are only three fares that the customer can be charged. There are many different fares for every flight. The fare depends on many factors, one of which is the class of service.



Pricing of airlines tickets is a complicated matter handled by sophisticated yield management systems which ensure that flights can fill their seats with optimal load and profitability. Airfares are therefore very dynamic and liable to change very often. This is why you need a site to search across all price possibilities for airlines tickets. When booking a ticket, regardless of whether it is using a published or unpublished fare, there are letters that are assigned to different fares. These letters indicate the class of service, not simply indicating economy or business class, but rather the type of fare that was purchased.

For the sake of profits, airlines will not offer every seat on an aircraft at the seat sale fares, or excursion fares. As flights fill, the least expensive fares disappear regardless of how far in advance it is. Unless you are on a full fare ticket you can be certain that there will be any number of restrictions involved with your airfare - minimum/maximum stay; time of day; weekday, weekend price differences; change fees; mileage (on through fares you may be restricted to a certain number of miles to get you to your destination), advance purchase; youth/child/senior rule differences; etc.. So many fare types, even more fare rules. Considering that airline tickets are contracts between passengers and airlines it is important to know what you are signing up for. There are several tools available to help the airline traveller make informed booking decisions. In addition to providing a list of flight options, most booking engines also provide the aircraft each airline will be flying and what seats are still available for each flight. Taking a few extra minutes to examine all this information can have a significant impact on travel plan.

1. Look beyond price
2. Compare seat pitch and width dimensions
3. Compare in-flight amenities
4. Compare seat availability



- (a) **First Class: First** class seating is generally located right behind the cockpit of the aircraft. The seats in First Class are wider than coach class. They also have wider armrests between the seats so that people are not sitting so close to each other. Complimentary alcoholic and non-alcoholic beverages and meals are served to First Class passengers. The meals are usually a little more substantial than the meals served in coach class. First class passengers also receive complimentary headsets if a movie is shown on the flight. On long (usually overseas) flights, some airlines offer fully reclining seats that allow passengers to rest more comfortably.

### Classes of Service

P	First class Premium
F	First class Jet
A	First class Discounted

- (b) **Business / Executive Class:** Business class is normally located directly behind the First class section of the plane. It is designed for the business traveller. The seats are bigger than those in coach class are and there is plenty of room to do paperwork or work on the computer. Complimentary drinks and meals are served in this section. Not every plane has a Business class section. Usually, overseas and transcontinental flights will have a Business class section.

### Classes of Service

J	Business class Premium
C	Business class
D	Business class Discounted

- (c) **Coach / Economy Class:** This is the largest section of the aircraft. The seats in this section are narrower than those in First or Business class. Complimentary non-alcoholic beverages and (sometimes) light meals are served. Alcoholic beverages are sold and headsets can be rented for a fee.

### Classes of Service

Y	Full coach – not restricted
B	Coach class – (usually) not restricted

M	Restricted Coach class
H	
Q	
K	
L	

Airlines differ in the use of booking codes to define their fare structure. The booking class indicates whether the fare is discounted or not.

### Booking Codes

While there are only three sections of the aircraft, there are many booking codes in which a traveller can be reserved. There are several booking codes for the coach section of the aircraft. Each booking code corresponds to a different fare. Therefore, passengers may pay different fares for their ticket even though they are sitting right next to each other. The first step in understanding the different fares is to know about the booking code hierarchy. Generally, the codes listed first (reading from left to right) are the most expensive. As you move to the right, the fares get less expensive.

Example

**1 DL 1202 F3 C0 Y9 B9 H9 Q7 K4 L0**

DL1202 offers booking codes F, C, Y, B, H, Q, K and L. The numbers following each booking code indicate the number of seats available to sell for that particular code. A9 indicates nine or more seats are available to sell at that code. Any number less than 9 indicates only those many seats are available to sell at that code. The screenshots below show all the different classes of service that a customer can book in the coach section of an airline.

```

4FPNSCLT-US NLX FARES
PNSCLT-US 10OCT02 $$ CO DL NW
US TAXES VARY * SEG/PFC/FUEL CHARGES MAY APPLY
LINE FARE RT FARE TRAVEL DATES TKT DTE RTG AP MIN/ BKG
NBR CODE OW USD EFF DISC FST/LST NBR DT MAX CDE
1 #UX914AN R 132.00 30CT2 12FEB3* - 33 ## SUE 30 UUN
2 UX914ANN R 147.00 40CT2 28FEB3* - 33 ## SUE 30 UUN
3 UX914ANN R 147.00 29APR3 - - 33 ## SUE 30 UUN
4 UX914ANN R 177.00 1MAR3 28APR3* - 33 ## SUE 30 UUN
5 #UW914AN R 150.00 30CT2 12FEB3* - 33 ## SUE 30 UUN
6 UW914ANN R 167.00 40CT2 28FEB3* - 33 ## SUE 30 UUN
7 UW914ANN R 167.00 29APR3 - - 33 ## SUE 30 UUN
8 UW914ANN R 197.00 1MAR3 28APR3* - 33 ## SUE 30 UUN
  
```



9	#UX9E14SN	R	161.00	30CT2	12FEB3*	-	33	##	SUC	30	UUN
10	UE30L7NN	R	169.00	40CT2	28FEB3*	-	33	##	SUC	7	UUN
11	UE30L7NN	R	169.00	29APR3	-	-	33	##	SUC	7	UUN
12	UE30L7NN	R	199.00	1MAR3	28APR3*	-	33	##	SUC	7	UUN
13	U14X77NN	R	169.00	40CT2	28FEB3*	-	33	##	7/	7	UUN
14	U14X77NN	R	169.00	29APR3	-	-	33	##	7/	7	UUN
15	U14X77NN	R	199.00	1MAR3	28APR3*	-	33	##	7/	7	UUN
16	#UW9E14SN	R	180.00	30CT2	12FEB3*	-	33	##	SUC	30	UUN
17	UE30H7NN	R	189.00	40CT2	28FEB3*	-	33	##	SUC	7	UUN
18	UE30H7NN	R	189.00	29APR3	-	-	33	##	SUC	7	UUN
19	UE30H7NN	R	219.00	1MAR3	28APR3*	-	33	##	SUC	7	UUN
20	U14W77NN	R	189.00	40CT2	28FEB3*	-	33	##	7/	7	UUN
21	U14W77NN	R	189.00	29APR3	-	-	33	##	7/	7	UUN
22	U14W77NN	R	219.00	1MAR3	28APR3*	-	33	##	7/	7	UUN
23	#UE14SN	R	198.00	30CT2	12FEB3*	-	33	##	SUC	30	UUN
24	UX9E14NN	R	224.00	40CT2	28FEB3*	-	33	##	SUC	30	UUN
25	UX9E14NN	R	224.00	29APR3	-	-	33	##	SUC	30	UUN
26	UX9E14NN	R	254.00	1MAR3	28APR3*	-	33	##	SUC	30	UUN
27	KW9E14NN	R	244.00	40CT2	28FEB3*	-	33	##	SUC	30	KKN
28	KW9E14NN	R	244.00	29APR3	-	-	33	##	SUC	30	KKN
29	KW9E14NN	R	274.00	1MAR3	28APR3*	-	33	##	SUC	30	KKN
30	HE14N	R	340.00	40CT2	28FEB3*	-	33	##	SUC	30	HHN
31	HE14N	R	340.00	29APR3	-	-	33	##	SUC	30	HHN
32	HE14N	R	370.00	1MAR3	28APR3*	-	33	##	SUC	30	HHN
33	HE14NNR	R	383.00	40CT2	28FEB3*	-	33	##	SUC	-	HHN
34	HE14NNR	R	383.00	29APR3	-	-	33	##	SUC	-	HHN
35	HE14NNR	R	413.00	1MAR3	28APR3*	-	33	##	SUC	-	HHN
36	HE7N	R	393.00	40CT2	28FEB3*	-	33	##	SUC	-	HHN
37	HE7N	R	393.00	29APR3	-	-	33	##	SUC	-	HHN
38	HE7N	R	423.00	1MAR3	28APR3*	-	33	##	SUC	-	HHN
39	ME7N	R	443.00	40CT2	28FEB3*	-	33	##	SUC	-	MMN
40	ME7N	R	443.00	29APR3	-	-	33	##	SUC	-	MMN
41	ME7N	R	473.00	1MAR3	28APR3*	-	33	##	SUC	-	MMN
42	BA3US		426.00	16AUG2	-	-	33	3	-	-	BBN
43	B8US		476.00	16AUG2	-	-	33	-	-	-	BBN
44	Y8P		526.00	16AUG2	-	-	33	-	-	-	YYN
45	Y		704.00	3AUG2	-	-	33	-	-	-	YYN
46	Y1		704.00	3AUG2	-	-	3	-	-	-	YYN
47	F8		626.00	16AUG2	-	-	33	-	-	-	FFN

### Booking Procedure Followed by Airline Orenair

Agency has a right to impose service charge (Agency Commission) for the tickets.

Bank cards VISA International, MasterCard/Euro card – you can pay for e-tickets and additional paid services.

On-line booking is free of charge and secure.



### Airline Codes: Few Examples

Airline	Airline Code
AirTran Airlines	FL
Alaska Airlines	AS
America West	HP
American Airlines	AA
American Trans Air	TZ
Continental Airlines	CO
Delta Airlines	DL
Northwest Airlines	NW
Southwest Airlines	WN
United Airlines	UA
US Airways	US

### On Line Air Tickets Reservation

The process of reservation of air tickets reservation 1 day before travel. This system of reservations does not allow you to make reservation of tickets with date of departure that will abstain least from 1 day. The process of reservation is exceptionally simple, sure and fast. In few steps you can select and keep the ticket that serves you better itinerary and interest price. Few steps involved in this process are:

Step -1	Select if the air ticket that you need [one way or with return round trip multy leg trip] Select the departure airport and the airport that is your final destination Select your date of departure also the date of your return Supplement how much passengers (adults, children or infant ) max 7 passengers
Step -II	Select your itineraries and their prices
Step -III	Click on book basket
Step -IV	I would like to book without registering. And click to continue
Step -V	Supplement the all elements , given name , surname , the email, telephone etc
Step -VI	On next page: you can see the total cost .

Step –VII	<p>Electronic Ticket (E-Ticket) Description for E-ticket process Payed only via Credit card</p> <p>You can click to E-ticket request and Pay via Bank money transfer</p> <p>E-ticket The reservation is found in the system of air company</p>
Step-VIII	Choose the type of pay mode (credit card/bank ) etc
Step-IX	Making payments
	<p>CLICK ON Accept rules</p> <p>Next Step : click on Complete Booking in order to is completed your reservation, you print out the page. Automatically you will receive an email with all the reservation details and Reference code (ticket no will be sent via email).</p>

### Overview of The V-MPD

The V-MPD is: -

- A virtual representation of the paper MPD/auto MCO;
- An instrument of exchange;
- A record of a transaction of payment for a service or collection of a fee;
- Issued in *BSPlink*;
- Drop down menu boxes look like a manual document;
- Email message upon completion to the airline service point;
- Airlines see their copy and act in accordance with their standard internal procedures for processing Prepaid Ticket Advices (PTAs).

It should be noted that IATA is continuing to examine additional functionality that meets the needs in order to minimise disruptions to the operations and welcomes feedback and comment. The V-MPD is a viable alternative to paper MPDs and is available globally for BSP participating airlines to deploy market by market. A multi-purpose document, or MPD, is a document that contains the necessary data to provide information as several different points during the flow of a process. The document is normally divided into sections, and may also feature coded areas that are scanned for faster processing. The MPD is used in a number of different business and industry settings, including freight services and air transportation.

There are two main reasons why the use of an MPD is helpful in some settings. First, there is the matter of speed. Using the MPD means there is less shuffling of paperwork to

locate necessary data at each step of a process. Because the document is usually simple and straightforward in structure, locating the necessary data takes much less time. The end result is the ability to increase productivity by allowing more incidences of the process to take place in a given period of time. Along with speed, an MPD also helps to increase efficiency. Since all the necessary data is arranged and easily identified at each point in a process, the chances for data entry errors are minimized. In addition, any coded areas included on the document allow quick scanning, which means less manual entry altogether. With the margin for error reduced, use of an MPD format means fewer exceptions or delays in processing. One of the growing applications of an MPD is found with the airline industry. As a means of reducing print documents in booking and boarding processes, many airlines are moving to what is known as a virtual multi-purpose document. Like the MPD, this newer virtual MPD organizes information in a simple format that is easily scanned. At the same time, the virtual document also can be called up to verify all sorts of pre-payment transactions. By applying a virtual solution to boarding, baggage, and other processes associated with travelling by air, the hope is to minimize delays in boarding, as well as to minimize the chances for lost luggage and other common issues that consumers sometimes experience. It is anticipated that more airlines will adopt a virtual PMD, or VPMD, approach in the years to come.

#### What is a MPD?

A MPD is essentially a gift voucher from service provider. It arrives looking like an old school paper ticket usually with a letter from QF saying sorry for some sort of mess up on their behalf. Under name of Passenger on the MPD it will say "Gift Voucher". A MPD is essentially cash or as the name says a gift voucher which can be used to book travel in anyone's name within the specified valid period (typically 1 year from issue). The voucher is typically valid for limited period.

#### **The Virtual Multi Purpose Document (vMPD)- Defined**

The Virtual Multi Purpose Document (vMPD) provides international travel agents with an automated method for issuing a paperless Multi Purpose Document (MPD). The vMPD is only available to international travel agencies who report via an approved Bank Settlement Plan (BSP). It is not available for domestic U.S. travel agencies or international agencies who do not report via a Bank Settlement Plan. The vMPD will be used by the international travel agency community until such time as Delta's ticketing transactions are 100% ET eligible and the Electronic miscellaneous Document (EMD) is fully implemented.

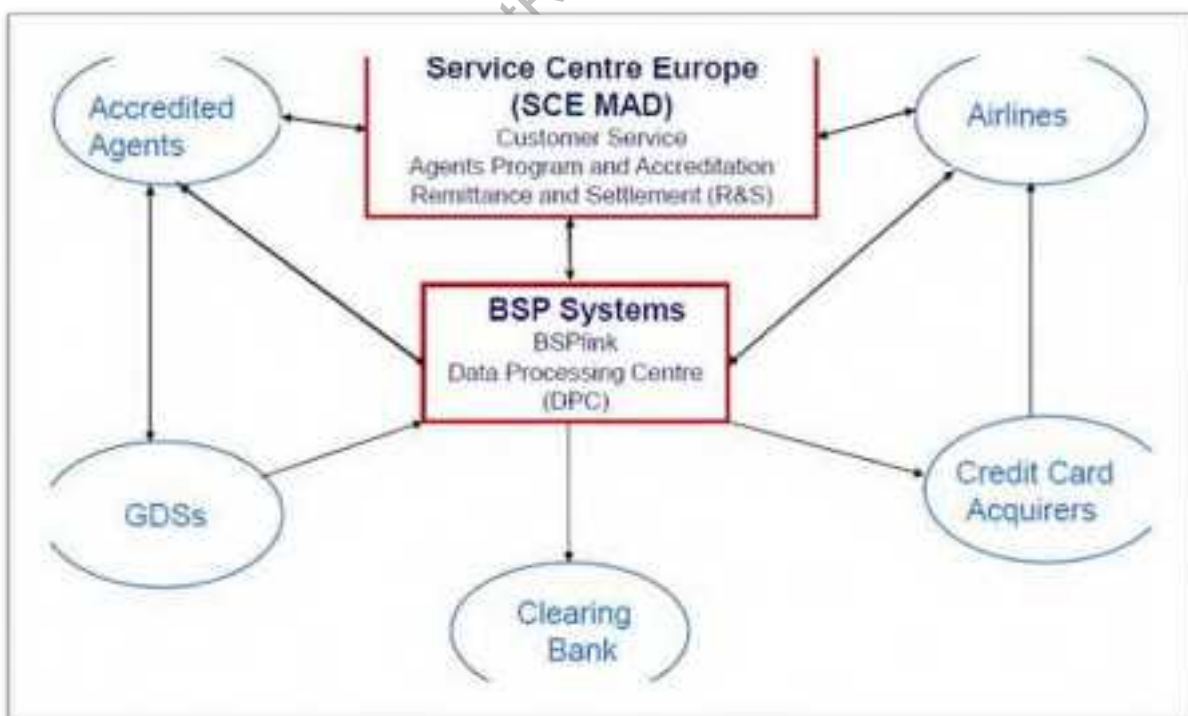
## Billing and Settlement Plan [BSP]

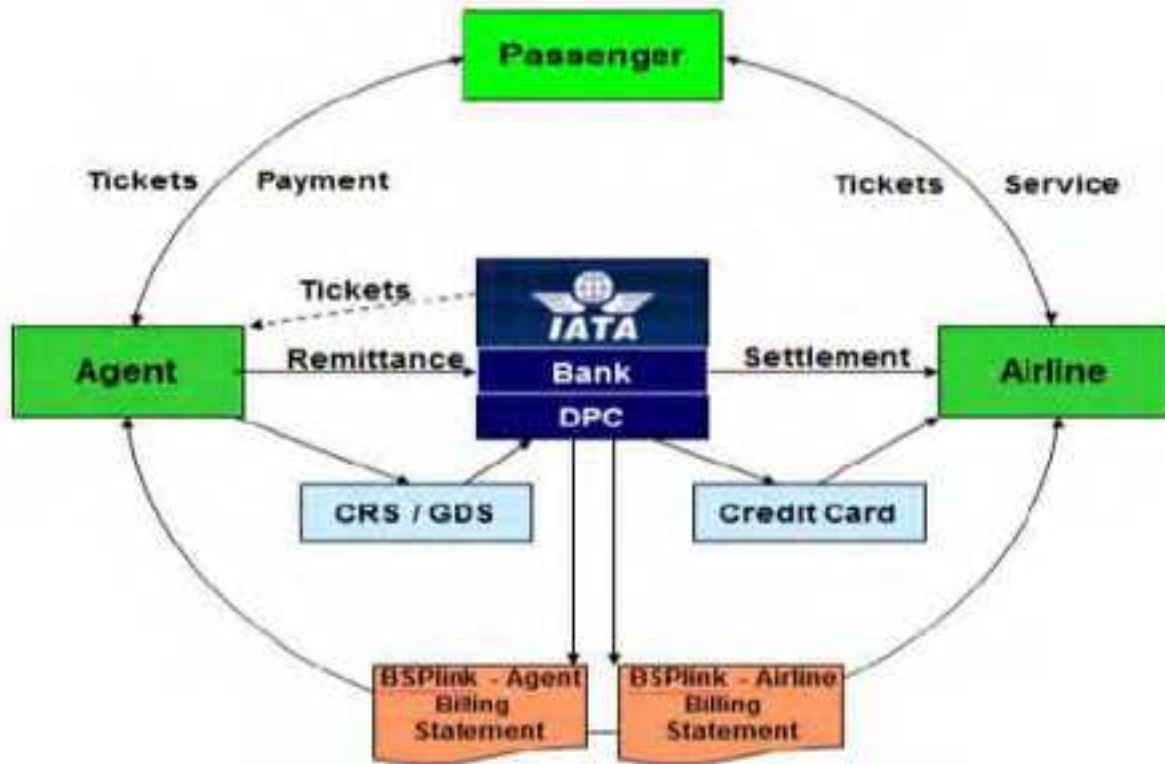
Billing and Settlement Plan is essentially the same as ARC, but is mostly used internationally. It is a system designed to facilitate and simplify the selling, reporting and remitting procedures of IATA Accredited Passenger Sales Agents, as well as improve financial control and cash flow for BSP Airlines.

### What is BSP?

1. Billing and Settlement Plan – A carrier neutral reporting / accounting system run by IATA
2. Use of neutral traffic document (STD) and one single reporting point
3. BSP Reports are official accounting documents
4. A network of approved Agents who issue Traffic Documents on behalf of the Airlines
5. Agents Accreditation – System of financial guarantee / Criteria control
6. Airlines Ticketing Authority
7. A clearing instrument to reconcile the sales by Agents to the Airlines that own sales
8. Passenger Sales Agency Agreement (PSAA) (Resolution 824) – Monies in trust

### How does the BSP work?





### Benefits

- Reduction in processing costs
- Speed, security and reliability (eliminates paper fraud)
- The information is encrypted
- Airlines no longer are required to distribute Carrier Identification Plates
- Agents and Airlines can view the document at any time
- Airlines get an automated e-mail alert to inform of an V-MPD issued/cancelled

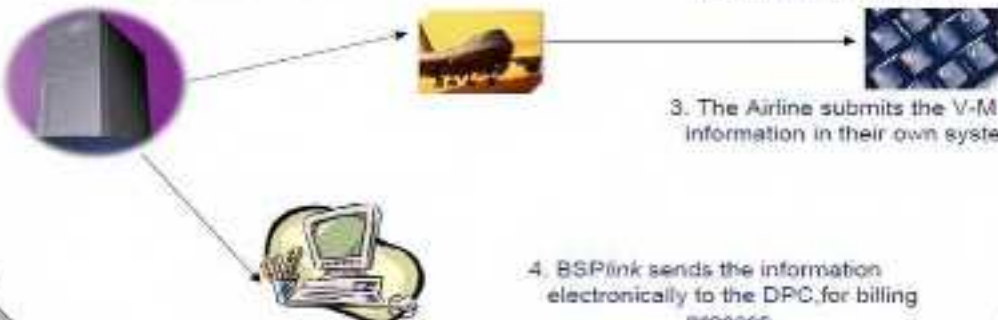
### Process flow

1: The Agent accesses BSPlink and issues a V-MPD

2: The Airline is notified by e-mail and can view the V-MPD

3: The Airline submits the V-MPD information in their own system

4: BSPlink sends the information electronically to the DPC for billing process.







### Virtual Multiple Purpose Document (V-MPD) for BSP

To avoid paper technologies it is necessary to replace ticket stock and MCO by electronic version of such documents. Electronic tickets have been implemented. But newly adopted Electronic Miscellaneous Document (EMD) will not enjoy widespread implementation. To address this need IATA has developed and implemented an electronic (internet) version of the (paper) MPD – Virtual MPD. The V-MPD is available for use in all BSPs on global basis, but its implementation is by carrier request per market. The V-MPD is a Virtual representation of the Manual MPD and Automated MCO (MD50 transaction) completed online (in *BSPlink*), allowing for a paperless transaction. The purpose of V-MPD is to allow the (nowadays there are no paper alternatives...) pre-payment for such items as: PTAs, excess baggage, ground transportation etc. It provides Agents with an automated method for the issuance of MPD transactions via *BSPlink*, which are then included in the standard BSP billing process.

#### V-MPD Main menu

The following options can be found for Virtual MPDs in the main menu:

#### Virtual MPD

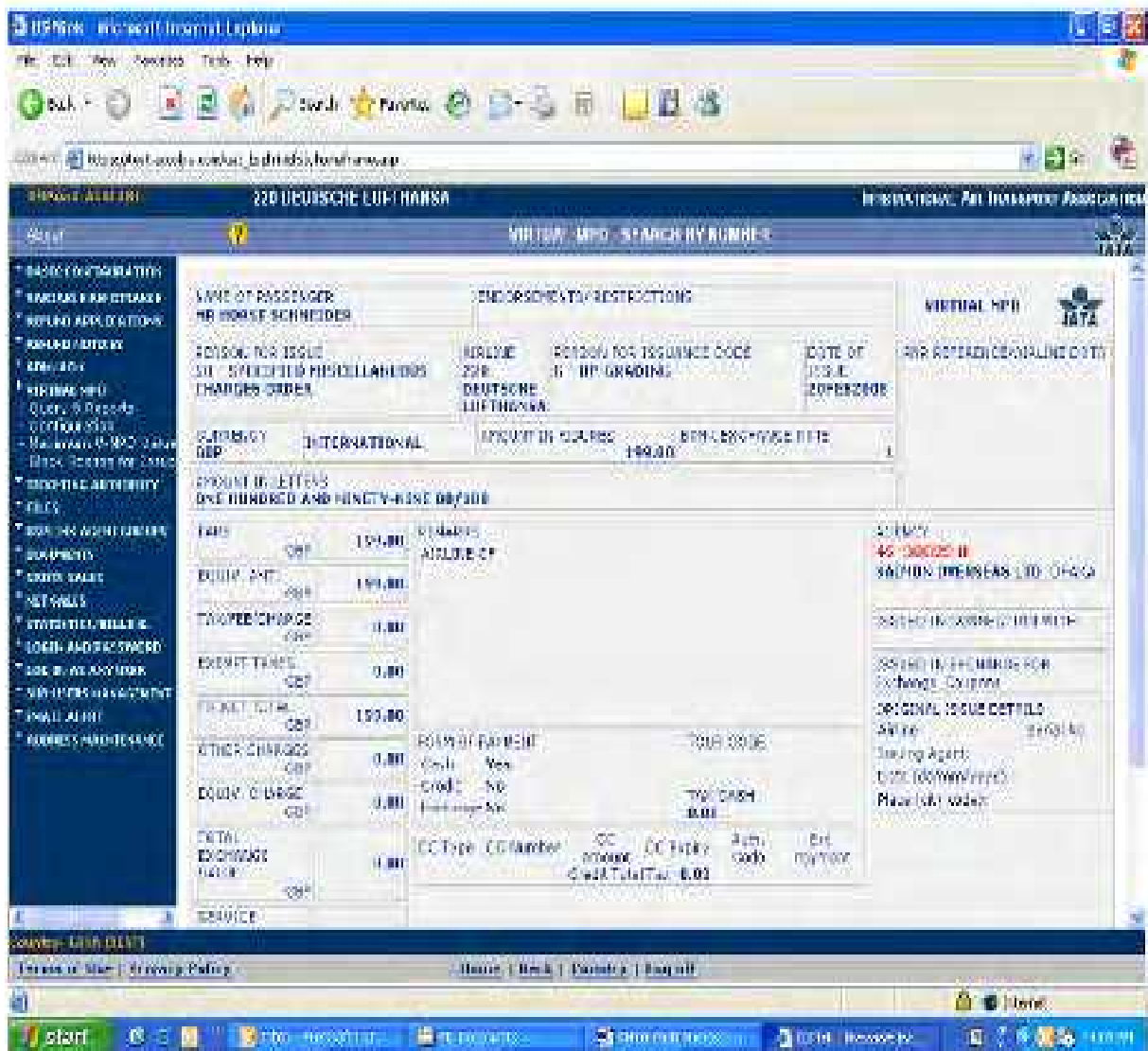
- Query & Reports
- Configuration
- Maximum V-MPD Value
- Block reason for issuance code

### Query & Reports - Search by V-MPD number

Insert a V-MPD number into the field and click query. The page will show information related to V-MPD such as type, document, Agent, currency, amount, and issue date, status and settlement period. Clicking the document number will show a facsimile of the document.

### Query & Reports – Daily Reports

Select a date from the drop down list and click query. A list of all V-MPDs issued during that date will be shown. Also the Agent code and V-MPD type can be selected.





## Query and Reports – Report by period

Select a period from the drop down list and click query. A list of all V-MPDs issued during that period will be shown. Also the Agent code and V-MPD type can be selected.

## Query and Reports – Void Request

In markets where Agents are not allowed to cancel V-MPDs on the same day as the day of their issue, Agents have to send void requests to the appropriate Airlines within the issuance day of the document. Airlines can query those V-MPD void requests and take necessary action. Click on Submit button to query Void Requests made during the day by the Agent. In order to void a V-MPD the Airline can select it V-MPD or mark to select all V-MPDs to be voided and click Void Selected Virtual MPDs. Message displayed: “Document will be voided” or “Selected documents will be voided” Document numbers are displayed. The document(s) is/are voided by the system. In order to void a V-MPD, the Airline can also click the document number to query the details of the V-MPD and then void it. Click VOID button to void the document or AIRLINE COPY to print the document. A new parameter has been added in the BSP browser, enabling BSPs to change the number of days (from 0 to 3) for Airline action of void requests, according to market rules or requirements. Use links Mark as Used, Mark as used and Clean Up or Print marked documents as per requirement. Use the link Cleaned up Documents to query the documents previously cleaned up during the day. After confirmation, an automated email alert will be sent to the Agent concerned if the Agent has configured the email alert option under “Configuration”.

## Cancellation Parameters for V-MPD

It is **not** possible for the Agent or the Airline to modify a VMPD after issue.

- 1) If the “V-MPDs cancellation by the Agent” parameter under BSP “Basic Configuration” option is set to “Yes”, then Agents will have the possibility to void the VMPD on the same day the document was issued.
- 2) If the “V-MPDs cancellation by the Agent” parameter under BSP “Basic Configuration” option is set to “No”, then Agents have the possibility to request a void from the Airline. Number of latency days for void request is set by the BSP (up to a maximum of 3).

Note on Issue Date : if the Agent requests to void the V-MPD and the “latency days for void request” value is > 0, BSPlink defines the issue date of the V-MPD as the issue date + number of “latency days for void request” (max 3).

If and when the Airline voids the V-MPD, issue date in BSPlink will be date of voiding by the Airline, meaning not necessarily up to maximum number of “latency days for void request”

### **V-MPD – “Mark as used” function**

Once the V-MPD has been used, main user or any sub-user has the possibility to “Mark as used” the V-MPD. This new status is visible to all users of the airline to ensure there is no duplication of action or use.

### **Virtual MPD Configuration – Email & Language**

A user can set email addresses to receive email alerts for issued, voided, void requested V-MPDs. Add in the email address field the recipients’ email address separating each email address using a semi-colon (;), this field contains a maximum of 85 characters. Click “Submit” in order for the operation to be carried out.

Users can chose between - Basic e-mail alert (IATA Agent Code, Agent Name, Country, City, Document #, Reason for Issuance) or - Enhanced e-mail alert (basic features + Name of Passenger, Reason for Issuance Code, Total Amount, Currency, Remarks, Issued in Connection with, Issued in Exchange for, Original Issue Information, PNR Details). Users can also select in which language(s) e-mail alerts are to be received. Click arrow to see languages available. Clicking on “submit” will register the selected changes.

### **Maximum V-MPD Value**

The user can configure the maximum value allowed when issuing a Virtual MPD.

This option will only be available whenever the BSP or the Airline has activated it via BSP’s or Airline’s basic parameters.

1. **Enter** the maximum value allowed per currency.
2. **Click** the *Submit* button in order to save the values.

The user has to define a maximum value per currency registered in the BSP. If the user leaves a currency blank, the system will not validate the V-MPD value when issuing the transaction. If the value has decimal characters, they will be separated with a dot (.)

As previously explained, the values set via this option will affect the issue of Virtual MPD. This means that if the user issues a V-MPD with a value superior to the value defined via this option, the issue is not permitted.

## **Universal Air Travel Plan**

The biggest benefit of having a travel money card is that you have more control over exchange rates and can lock in the rate when it's most advantageous to you, rather than just having to take pot luck on a certain day. The difference can have quite an impact on how much money you have left to spend on your holiday. Shop around for your card well in advance of your trip to get the best exchange deal. Think carefully about the allocation of currencies on your card, as you will be charged a currency conversion fee if you spend in a currency other than what is on the card.

## **Types of Air Travel Cards**

Types of air travel cards the need for a different method of dealing with foreign currencies is behind the popularity of the multi-currency travel money card, a bespoke product that allows travellers to carry the right currency for major countries on their travel agenda.

## **Travel Money Card**

A card that allows you to preload the currency of your choice to meet your travel expenses while overseas. Basically you can lock in the exchange rate when you purchase and load the card.

1. Must allow you the ability to lock in your exchange rate before travel
2. Must have the ability to load multiple foreign currency in a single travel money card
3. Ability to load card with your own funds – no Credit or borrowing allowed
4. Must provide online exchange rate for comparison

Multi-currency travel money cards are specially designed debit cards that you load up with foreign currencies prior to travelling. The advantage of pre-loading the card with your choice of currency is that you can do so when the exchange rate is at its most favourable. For the traveller going to one country or several, this is the next best thing to carrying cash or travellers cheques.

## What is Travel Card?

A travel card is a ticket usable on more than one journey, route or mode of public transport within a specific area using bulk or discounted payment; some systems only cover travel by disabled or elderly people. Their validity is generally for a fixed period from the time of issue, such as to the end of the day or for longer periods up to one year.

A ticket that allows you to use any bus or train in a specific area for a period of time. The American word is pass.” **Credit good only for the purchase of airline tickets, sponsored usually by an airline”.**



The key benefit of using a travel money card is being able to load the card with selected currencies and lock in the exchange rate at the same time. This allows us to know exactly how much foreign currency we have to spend. Also, there is no transaction fee applicable to purchases made on the Travel Money Card if you have the currency of the transaction loaded on the card.

## Making Travel Easier

Easy top up your card balance at over different locations.

Global access

Is convenient

No queues

One can travel on any place bus, train or ferry service, any time and across all zones.

The card automatically calculates your fare when you touch on and touch off.

Travel Card Rules: Travel cards may be used only for official travel-related expenses while in a TDY travel or relocation status. The travel card may be used to charge travel-related expenses such as lodging, meals, car rentals, and approved miscellaneous expenses. During relocations, these official travel-related expenses may also include the expenses of family members travelling. The travel card may also be used to obtain cash advances from an Automated Teller Machine (ATM).

### Travel Card Issued by ICICI Bank



**Travel Card on  
VISA Network**



**Travel Card on  
MasterCard**



**American Express  
Prepaid Travel Card**

### Features of this Card

ICICI Bank Travel Card is a pre-paid foreign currency card that makes foreign trip totally hassle-free and convenient. One can load this pre-paid card with foreign currency in India and use it to withdraw cash in the local currency from VISA / MASTERCARD / AMERICAN EXPRESS ATMs and merchant establishments accepting VISA / MASTERCARD / AMERICAN EXPRESS Flag cards. The Card is sold through ICICI Bank branches and select money changers. The Card also comes with never before features including travel insurance, emergency assistance, advanced account management features.

The **Travel card** is an inter-modal travel ticket for unlimited use

Travel cards can be purchased for a period of time varying from one day to a year

Depending on where it is purchased, and the length of validity, a Travel card is either printed on a paper ticket with a magnetic stripe or encoded onto a reusable contact less electronic smart card, known as an Oyster card.

The cost of a Travel card is determined by the area it covers and, for this purpose, London is divided into a number of fare zones.

Before the introduction of the Travel card, tickets for the London Underground were purchased on a 'point-to-point' basis between two stations, either as a single, return

or season ticket; and were priced according to distance travelled.

Tickets for travel on TRAIN and BUS were purchased separately.

The introduction of the Travel card was intended to increase patronage particularly during less busy times and to speed up the boarding of bus services.

Travel cards entitle the holder to a SPECIFIED discount on scheduled Services.

In addition, holders of annual travel cards receive a «gold record card» which offers savings on off-peak travel

The Travel Card provides an easy and cost-effective payment option.

There are two types of Travel Cards, and the choice of card depends on its purpose of use.

1. **A personal Travel Card** can only be used by the owner of the card. It is the most economical option: as the HSL area municipalities and neighbouring municipalities subsidize the public transport journeys of their residents, the residents can buy Travel Card season tickets that are cheaper than general or multi-user season tickets.
2. **A multi-user Travel Card** is well-suited for joint use, for example, for companies and families as well as for residents of other municipalities. A multi-user Travel Card can be used by anyone holding the card who belongs to the same customer group.
3. **Season ticket and value on the same card:** You can either travel with a season ticket loaded on your card or pay your fare with value, i.e. money loaded on it. Loading a season ticket is recommended if you use public transport regularly, for example for commuting. Loading value is a good option for occasional users of public transport. Value tickets bought with a Travel Card are cheaper than single tickets bought from the driver or conductor.





## Easy Purchase

Through ICICI Bank branches or select authorized Money Changers. For a location nearest one can call up our 24 hour Customer Care centre. Pay in Rupees, buy across the counter ICICI Bank Travel Card in the currency of your choice. You can also buy ICICI Bank Visa Travel Card online and it will be delivered at your doorstep. Presently, the delivery of ICICI Bank Visa Travel Card is available only in Bangalore, Chennai, Delhi, Hyderabad, Mumbai and Pune subject to RBI regulation and on submission of necessary documents.

### Travel Benefits

- Easy Cash Withdrawal
- Easy Refund
- Easy Reload
- Easy Replacement
- Easy Shopping
- Replacment Card
- Easy Statements
- Easy Travel Insurance\*
- Emergency Medical and Travel Assistance
- Internet Transactions
- Medical assistance services:
- Preferential Exchange Rates
- Remote Reloading
- Security Features
- SMS Alerts ▶ Online Account Access
- Travel assistance services

## Added Features

ICICI Bank Travel Card on VISA network provides you the option of 9 currencies to choose from, namely US Dollars, Australian Dollars, Canadian Dollars, Swiss Francs, Euros, Pound Sterling, Singapore Dollars, Arab Emirates Dirham and Japanese Yen. You can enjoy the convenience of the wide network of more than 1 million VISA ATM's and 27 million merchant establishments. ICICI Bank Travel Card on VISA network also makes available to the customers a more secure and safe card with the **ICICI Bank Chip Travel**



**Card** on VISA Platform. This also called EMV (Europay Master Visa) card. The chip inside the Travel Card will change the way customers make payments while overseas. The chip inside the Travel Card makes payment at merchant even more secure. This makes the chip card more secure against card fraud than cards that rely only on data encoded in a magnetic stripe on the back of the card.

- 1. Choice of Currency:** Visa Card is available in US Dollars, Australian Dollars, Canadian Dollars, Swiss Francs, Euros, British Pound, Singapore Dollar, Arab Emirates Dirham and Japanese Yen.
- 2. Convenient, Secure & Worldwide Acceptance:** No more hassles of finding Money Changers and encashing Travelers Cheques. Customers can also shop at over 27 million merchants who accept VISA Flag throughout the world.
- 3. Replacement Card:** To take care of emergencies abroad, a Replacement Card is given free of cost as part of the Travel Card Kit.
- 4. SMS Alerts & Worldwide Assistance:** SMS alerts are sent after every transaction to Indian mobile number updated by the card holder. The Travel Card also provides a comprehensive travel and personal accident insurance to cover the card holder. ICICI Bank's 24 hour customer care is also available to assist the customer.
- 5. Online Access:** Both customer and corporate can get online access to card details, including statements and balance.
- 6. Internet Transactions:** The ICICI Bank Travel Card can be used to transact over the Internet.



Thus, as technology advances, payment systems and business opportunities will continue to evolve. The challenge for consumers is to stay informed, read the terms for any prepaid card carefully, and know the fee structure.

### Advantages of a Travel Money Card

1. Your travel funds are locked into the foreign exchange rate of the country you plan to visit on the day you pick up the card. So if the exchange rates take a dive while you're on holidays, you won't suffer a loss of funds.

2. A variety of currencies (such as USD, EUR, GBP, AUD etc.) can be added to your account but you can also make purchases in a different currency and have your funds converted on the fly. This opens up your spending options.
3. Your travel card can be used for most standard debit transactions, either online or in store.
4. There's no need to carry around copious amounts of cash or out-dated travellers cheques.
5. Withdrawing money is painless at a large number of ATMs across the globe.
6. You can keep track of the money left on your card through internet banking.
7. If you need a top-up, transfer funds online from your bank.
8. Most travel cards come in pairs so you can keep one in your wallet and the other in the safe at your hotel.
9. A travel card is not connected to your transaction account so, in the event of skimming or theft, potential losses are restricted.

### **Disadvantages of a Travel Money Card**

1. Locking your funds into a certain currency means you miss out in the event of the Aussie exchange rate suddenly spiking.
2. A card from your own bank may prove cheaper if you compare your bank's wholesale exchange rate to the travel money card company's exchange rate.
3. You will be charged a currency conversion fee if you spend in a currency other than what is on the card.
4. Travel money cards will not be accepted by a vendor who only deals in cash transactions.
5. ATM charges vary across the world and you will be charged for use by ATM network provider.
6. Internet banking is not always "real-time" so you could accidentally spend over your budget if you're not careful.
7. Cards reloaded by BPAY can take up to 2-3 days for the funds to be credited.
8. Some cards charge a fee to refund the unused money after you return home.
9. If the card is inactive for 12 months, you may pay a monthly inactivity fee on the remaining balance.

10. If your account is inactive and your card expires during that time, you may either forfeit the unused money on the card or the money will be kept in trust until it is claimed.

### **BILLING AND SETTLEMENT PLAN (BSP)**

The BSP Manual for Agents forms part of the Passenger Sales Agency Agreement and contains the basic rules and procedures for participation in a BSP. By virtue of this Agreement, all Approved Locations of IATA Accredited Agents are bound to apply such procedures in countries where a BSP is implemented. The BSP reduces Airline distribution costs and at the same time provides Agents with a cost-effective system for selling the products and services of those Airlines that elect to participate in the BSP. The existence of a BSP enables Airlines and Agents alike to save on administrative overheads, whilst streamlining their services to the customer. It provides more time for BSP participants' selling activities since the administrative burden on management is greatly reduced by the simplification of the issuance, control and reporting of sales and settling of monies due.

#### ***The Billing and Settlement Plan (BSP)***

“The Billing and Settlement Plan (BSP) is a system designed to simplify the selling, reporting and remitting procedures of IATA Accredited Passenger Agents on behalf of BSP Airlines”

The first BSP developed by IATA was launched in 1971 in Japan. Today BSP is a worldwide system covering over 170 countries and territories. In 2010, more than 55,000 Agents and 400 Airlines participated in the BSP network, generating gross sales through the BSP of over US\$ 221 billion. A key feature of the BSP is the use of the neutral electronic Standard Traffic Document (STD).

### **Benefits of a BSP**

<b>Billing Settlement Plan (BSP)</b>	
Simplification	Agents issue one sales report and remit one amount to a central point Airlines receive one settlement covering all agents Simplifies and reduces work through the use of electronic ticketing on behalf of all BSP Airlines Agents' sales are reported electronically

Savings	<p>Less resources required for billing and collection</p> <p>Electronic distribution of billing reports, and generation of debit/credit memos (ADMs/ACMs) via BSPlink</p>
Enhanced Control	<p>Increased financial control thanks to centralization and grouping</p> <p>Consolidated document flow, permitting accelerated quality controls</p> <p>Overall process monitoring by a neutral body</p>
Automation Potential	<p>Automation of back office functions is rendered by a single accounting system.</p> <p>BSP enables and encourages the use of the most modern automated ticket issuing devices, thereby economising in time and money, whilst presenting the customer with an attractive and legible ticket.</p>
For the Agents	<p>The advantage of for the agents:</p> <p>Data Processing Centre (DPC)</p> <p>Provides a set of Standard Administrative Forms (SAFs) to be used on behalf of all BSP Airlines</p> <p>Provides access to over 400 Airlines participating in the BSPs worldwide using neutral electronic Standard Traffic Documents</p> <p>Provides one supply source of ticket numbers for electronic tickets</p> <p>Reduces overhead costs by replacing multiple sales reports with a single point of contact - a central BSP</p> <p>Simplifies remittance procedures by establishing one point for Agents' payments</p> <p>Simplifies staff training through courses organized locally specific to BSP procedures</p>

### Process Involved in BSP

“The Billing Settlement Plan (BSP) is a standardised system for airlines and agents, providing them with a simplified approach to the selling, reporting and administration of passenger air transportation. It is established under the general jurisdiction of the Passenger Agency Conference (PAConf), delegated to the BSP Committee (BSPC) and co-ordinated by the Agency Administrator/Plan Management”. **The process involved can be understood that with the help of sequential steps....**

The Agent's TSP transmits the information regarding the issued tickets daily to the DPC. Once the DPC receives the data from the TSP, the DPC

Processes all relevant data and produces an 'Agents Billing Analysis' for each Agent. This analysis is compiled from the information of one or more reporting periods.

Forwards to each BSP Airline an analysis of sales made by Agents on its behalf. The Agent makes a single net periodic remittance covering all its BSP transactions, made on behalf of all BSP Airlines. The BSP preferred method of payment is by electronic funds transfer (EFT) or direct debit (DD).

The Accounts Department of each BSP Airline audits incoming data and addresses accounting memoranda

BSP is a system designed to facilitate and simplify the selling, reporting and remitting procedures of IATA Accredited Passenger Sales Agents, as well as improve financial control and cash flow for BSP Airlines. A truly worldwide system: at the close of 2013, there were 88 BSPs, covering 179 countries and territories serving about 400 airlines, while gross sales processed amounted to USD 259 billion. New BSP Rwanda was implemented in 2013.

### **Mechanism and Working of BSP**

Receives a range of electronic ticket numbers for ticketing from the Ticket System Provider (TSP)

Receives Ticketing Authorities from Airlines allowing the Agent to issue tickets on their behalf

Receives access to BSP *link* including instructions on the issuance of electronic administrative forms such as Refund Request and Virtual MPDs

### **BSP — Agent/Airline Relations**

A BSP Manager represents IATA Management in each area of BSP operation. The Manager ensures that adequate assistance, guidance and information at the local level is available to all parties concerned in the BSP and that proper control is exercised. The administrative simplification offered by the BSP permits Airlines and Agents to devote more time to marketing activities. Agents continue to have direct access to BSP Airlines at all times. On a day-to-day basis, Agents may contact the local BSP office or make an enquiry through the Customer Services web site.

## Management of a Billing and Settlement Plan

### Roles and Responsibilities of BSP manager:

1. Coordination
2. Informs the Agency Administrator of irregularities and defaults.
3. Informs the Agents regarding Customer Service procedures
4. Manager advises Agents
5. Notify Agents of a temporary change to established BSP procedures.
6. Provides Agents with access to *BSPlink* and instructions on how to use the system.

### Participation in a BSP

1. Airlines
2. Clearing bank
3. Data processing centre (DPC)
4. Electronic ticketing system provider (TSP)
5. General sales agents (GSAS) and airport handling agents (AHA)
6. IATA accredited agents
7. Other travel and tourism industry sectors

#### **Responsibilities of Data Processing Centre (DPC)**

1. Capturing, recording and validating the data supplied by the TSPs
2. Controlling the timely receipt of data from the TSPs
3. Monitoring and identifying any discrepancies
4. Notifying BSP Airlines and the BSP Manager of the number of transactions processed and providing them with statistical data as agreed in the contract
5. Notifying the Clearing Bank and the BSP Manager of amounts due by Agents
6. Preparing and dispatching billings to Agents and BSP Airlines through *BSPlink*
7. Producing a Hand-Off Tape (HOT) or data transfer in accordance with the Data Interchange Specifications Handbook (DISH)
8. Reporting discrepancies.

### **mechanism of BSP by airasia**

It is a strategic move for Air Asia to participate in the Billing Settlement Plan (BSP) and we are proud to provide this facility as an additional payment option for travel agents. Travel agents, who are already participating in BSP is encouraged to register with us as you can further utilise this ultimate facility through our internet booking protocol – Sky Agent. The registration is a simple process. From the drop down menu of other services, go to travel agent choose register now and it will prompt you a registration page menu. Please fill up all the blanks and press submit button. AirAsia will verify the data you have submitted. Once your application is successful, you will receive an appointment letter with a master user ID and password.

Travel agents, who are not participating in BSP, can still register with AirAsia and enjoy the benefits of Sky Agent. The payment options will be limited to credit card, direct debit and pre-payment – AG only.

For those BSP travel agents that have registered with AirAsia need not to register again. However, you will have to advise us of your interest in the scheme and we will arrange for the cutover into the scheme with a pre set BSP allotment level for you to utilise. After cutover, you will be able to see the BSP Allotment option when you are in the payment option mode. The BSP allotment amount will be set by our office and the amount will be based on your current bank guarantee against your sales performance.

As AirAsia is a low fare, ticket-less airline, we will not be utilising the STD and CIP as provided for in BSP. Our participation will be confined to the billing and settlement part of the BSP scheme. Once a reservation and payment has been made through our Skyagent system with the BSP payment option, the transaction will be captured by our system and at the end of each day, an electronic file will be generated and sent to BSP data processing centre for their processing. In accordance to the respective billing cycle, the travel agent will receive their billing and payment will be made to the clearing bank accordingly by the travel agent. For AirAsia sales, the transaction will be captured by BSP as an Agency Debit Memo (ADM) and not as a ticket issue in the conventional way. The data that will be available in the ADM field will be an ADM number, total payable amount and PNR reference.



Please find a sample of the report below:

Document Number	Transaction Values Cash Credit	Tax Values Cash Credit	Late Reported	Commission Rate Amount	Taxon Commission	Balance Payable	Comments
* * ADMS							
6507313110	2714.90	0.00	0.00	0.00	0.00	2714.90	E6RHHBN
6507332767	361.98	0.00	0.00	0.00	0.00	361.98	O6NELX
6507335900	398.99	0.00	0.00	0.00	0.00	398.99	AEHREQ
6507336294	214.99	0.00	0.00	0.00	0.00	214.99	P6LNDR
6507346064	1465.96	0.00	0.00	0.00	0.00	1465.96	U6MYBQ
6507346307	309.98	0.00	0.00	0.00	0.00	309.98	H6D9BW
6507346557	469.98	0.00	0.00	0.00	0.00	469.98	K6N7BQ
6507347103	259.98	0.00	0.00	0.00	0.00	259.98	C6RQDS
6507347291	199.98	0.00	0.00	0.00	0.00	199.98	G74JCN

(Source: <http://www.airasia.com/my/en/login/skyagent-bsp.page>)

**Self Assessment Questions**

1. What is air ticket? What are the information are made available in Manual ticket.
2. What is e-ticket? State its merits.
3. Briefly explain the different types of air ticket. Illustrate with examples.
4. What are the procedures adopted in the issue of air ticket?
5. What are drawbacks of "Manual Form of Ticket"?
6. What do you understand the term conjunctive tickets?
7. What are the basics airline price system? Give suitable examples.
8. Define the term flight coupon?
9. Define the term OPTAT.
10. What is booking? Briefly explain different booking classes of service.
11. What is the usefulness of airline booking codes?
12. List any FIVE airline codes. Give examples.
13. Define the different types of trips or journey available for a tourist.
14. What do you understand the Frequent Flyer Programs (FFP)?
15. What are travel considerations and concession for children and infants?
16. How do you cancel the air ticket? What are the considerations?
17. Write short note on the following: (a) Voids (b) Exchanges and (c). Refunds
18. Write short note on the following on (a). LTA (b). PTA and (c). MCO
19. What is the system adopted in Reservation procedure?
20. What is airline reservation system (ARS)
21. Define the term MPD
22. Define the term V-MPD
23. Select any tourism location you like in India and prepare air travel Plan.
24. What is Travel Money or card?
25. What is different air travel cards used in India?
26. What are its benefits of Air travel card?
27. State the usefulness of universal air travel plan?
28. What is BSP? How does the BSP work? Illustrate with suitable diagram
29. What are merits of BSP?

## 1. CASE STUDY

Thomas Cook Travel Group, a leading international leisure travel group, manages a portfolio of strong brands worldwide, most with their own websites. Thomas Cook has worked with Sitecore in the past to improve their online presence with sites including Neckermann.nl, vrijuit.nl, and more than 1,000 other co-branded sites. When the focus of their online innovation turned to their main ThomasCook.be site, they once again chose Sitecore to help them meet their goals. Thomas Cook Travel Group is a leader in the Belgian travel industry. The company represents a tour operator (Neckermann, Thomas Cook and Pegase), a travel distribution network (Neckermann Vakantiewinkels & Thomas Cook Travel Shops) as well as an airline company with one million passengers a year. The Thomas Cook website used to be a classic tour operator website. As the online travel sector is changing ever more rapidly and since Thomas Cook decided to fundamentally increase the share of e-commerce in its multi-channel approach, the company decided to transform its online presence into a more useful travel portal, uniquely combining an online travel agency with updated content, an interactive community and targeted advertising. In addition, Thomas Cook wanted to offer customers the possibility to find all the necessary information in one place, instead of having to conduct extensive searches on multiple and inconsistent sites.

Thomas Cook Travel Group chose The Reference, a Sitecore partner, to help them strengthen their internet presence with a strong focus on quality of service, experience and inspiration. Three key objectives for the project were: to position Thomas Cook as the undisputed leader in “e-leisure” travel; to raise online bookings by a considerable margin by 2010; to significantly increase the “ticket only” (no hotel booking) share in online bookings. For this project, The Reference selected Sitecore as their content management solution of choice. Thomas Cook has had success with Sitecore in the past, and they knew it would allow them to reach their goals. Because of Sitecore’s architecture, flexibility, and extensibility, it allowed The Reference to seamlessly add the following features to the site: The new Thomas Cook website puts a strong emphasis on content personalization through user preferences, including “My Profile”, “My Travel Agent” and “My Brochure”. For example, the “My Brochure” feature allows users to build their own catalogue by collecting favourite destination items in a single repository. In addition, the website uses Google AdSense to provide targeted and useful advertising to the site visitors. ThomasCook.be has become a “social travel” networking platform. Travelers can write reviews of their trips and let other members comment and rate them. They can also upload and rate travel pictures. Members can pinpoint visited, booked, favorite places, and “visit” destinations on the world map using Google Maps. The OTA is the travel shop within the portal. This online travel shop enables the customer to search, browse and book in an easy and custom-friendly way a

set of trips based on several criteria, such as location, name, etc. Reference implemented the Sitecore Newsletter Module, and an HTML newsletter is sent on a regular basis to registered members. In addition to the newsletter, ThomasCook.be also provides an RSS-feed delivering the latest Thomas Cook news. Site visitors can search for travel agents based on a set of preferences, such as location, name, specializations and opening hours. They can also find out which tour operator or airline company offers trips or flights to particular locations.

Ogone is the European leader in online payment processing systems. The Reference successfully implemented the Ogone solution to process the transaction between the end user and the back-office of Thomas Cook. The new site went live in May 2008, and Thomas Cook has been able to effectively connect the four major stakeholders in the travel industry—tour operator, online travel agent, consumer and advertiser—to provide their customers with a genuine win-win situation on an innovative platform.

According to Anja Cappelle, Managing Director of The Reference, “We truly enjoyed the challenge of putting all of our skills together to not only create a positive user experience, but to optimize the conversion ratios of this website, as online bookings are of utmost importance to Thomas Cook. We turned their website into a travel 2.0 portal, and Sitecore allowed us to do this in an extremely elegant and flexible way.”

### Case Questions

1. What are strategies adopted by the company?
2. Briefly describe the different techniques adopted to make more popular of the site.

### Closing Thought

Tourism is a dynamic and growing worldwide industry, People with different abilities and older persons are now becoming a growing group of consumers of travel, sports and other leisure-oriented products and services. In order to develop tourism in India in a systematic manner, the potential of this group should be tapped properly. Tourism development can be a major engine of economic growth and through it unemployment and poverty eradication is possible in sustainable manner.

The size of tourism as a global industry doubles every 15 years.

It is the biggest growth industry, employer and source of revenue in the world!

## 2. Case Study

### **PREPARE PEST ANALYSIS IN INDIAN AVIATION INDUSTRY**

PEST analysis of the airline industry involves a study of political, economic, social, technological, legal, and environment aspects of the airline. Terrorism has played a great role in affecting the aviation industry. Passengers still realize that the very real possibility of airlines being hijacked or blown up in mid air, and this has put a negative impact upon aviation industry. Oil prices have a big significant impact on the airline industry. People are using more airlines to fly to their favourite holiday destinations. There is an open competitive market. The changing travel habits of people have very wide implications for the airline industry. In a country like India, there are people from varied income groups. The airlines have to recognize these individuals and should serve them accordingly. Air India needs to focus on their clientele which are mostly low income clients & their habits in order to keep them satisfied. The destination, kind of food etc all has to be chosen carefully in accordance with the tastes of their major clientele. Especially, since India is a land of extremes there are people from various religions and castes and every individual travelling by the airline would expect customization to the greatest possible extent. For e.g. A Jain would be satisfied with the service only if he is served Jain food and it should be kept in mind that the customers next to him are also Jain or at least vegetarian.

Considering the case of South West Airlines which occupies a solid position in the minds of the US air travelers as a reliable and convenient, fun, low fare, and no frills airline. The major element of its success was the augmented marketing mix which it used very effectively. What South West did was it made the environment inside the plane very consumer friendly. The crew neither has any uniform nor does it serve any lavish foods, which indirectly reduces the costs and makes the consumers feel comfortable. Select any one of the airline operations in India and do PEST analysis after reviewing the concept and emerging scenario. Before creating business plans or making decisions, it is important to 'scan' the external environment. This can be achieved through a PEST analysis, i.e. an investigation of the Political, Economic, Social and Technological influences on a business. In addition it is also important to be aware of the actions of your competitors. These forces are continually in a state of change. List down the problems faced by the company in terms of resource utilization, capacity constraints, human resource advantage, financial health of the company, Market viability other considerations.

**IDENTIFY THE FACTOR THE IN WHICH IT CREATES POSSIBLE IMPACT IN INDIAN AVIATION INDUSTRY AND LIST DOWN INTO FOUR COLUMNS:**

The impact of technology would be that of AAI, wherein with the help of technology it has converted its obsolete and unused hangars into profit centres. AAI is now leasing these hangars to international airlines and is earning huge profits out of it. AAI has also tried to utilize space that was previously wasted installing a lamination machine to laminate the luggage of travelers. This activity earns AAI a lot of revenue.

A proposal for restructuring the existing airports at Delhi, Mumbai, Chennai and Kolkata through long-term lease to make them world class is under consideration. This will help in attracting investments in improving the infrastructure and services at these airports. Setting up of new international airports at Bangalore, Hyderabad and Goa with private sector participation is also envisaged.

After the September 11 incidents, the world economy plunged into global recession due to the depressed sentiment of consumers. In India, even a company like Citibank was forced to cut costs to increase profits for which even the top level managers were given first class railway tickets instead of plane tickets.

Air India also provides many internet based services to its customer such as online ticket booking, updated flight information & handling of customer complaints.

An unstable political environment causes uncertainty in the minds of the air travellers, regarding travelling to a particular country.

Another aspect is that in countries with high corruption levels like India, bribes have to be paid for every permit & license required. Therefore constant liasoning with the minister & other government official is necessary.

Business cycles have a wide reaching impact on the airline industry. During recession, airline is considered a luxury & therefore spending on air travel is cut which leads to reduce prices. During prosperity phase people indulge themselves in travel & prices increase.

Especially, since India is a land of extremes there are people from various religions and castes and every individual travelling by the airline would expect customization to the greatest possible extent. For e.g. A Jain would be satisfied with the service only if he is served jain food and it should be kept in mind that the customers next to him are also jain or at least vegetarian.

SARS outbreak in the Far East was a major cause for slump in the airline industry. Even the Indian carrier like Air India was deeply affected as many flights were

cancelled due to internal as well as external problems, which has been discussed later.

International airlines are greatly affected by trade relations that their country has with others. Unless governments of the two countries trade with each other, there could be restrictions of flying into particular area leading to a loss of potential air traffic.

Recent political environment has been largely unstable due to international events & continued tension with Pakistan.

South West Airlines which occupies a solid position in the minds of the US air travelers as a reliable and convenient, fun, low fare, and no frills airline. The major element of its success was the augmented marketing mix which it used very effectively. What South West did was it made the environment inside the plane very consumer friendly. The crew neither has any uniform nor does it serve any lavish foods, which indirectly reduces the costs and makes the consumers feel comfortable.

The airline industry is very susceptible to changes in the political environment as it has a great bearing on the travel habits of its customers.

The airlines have to recognize these individuals and should serve them accordingly. Air India needs to focus on their clientele which are mostly low income clients & their habits in order to keep them satisfied. The destination, kind of food etc all has to be chosen carefully in accordance with the tastes of their major clientele.

The changing travel habits of people have very wide implications for the airline industry. In a country like India, there are people from varied income groups.

The increasing use of the Internet has provided many opportunities to airlines. For e.g. Air Sahara has introduced a service through the internet, wherein the unoccupied seats are auctioned one week prior to the departure.

The loss of income for airlines led to higher operational costs not only due to low demand but also due to higher insurance costs, which increased after the WTC bombing. This prompted the industry to lay off employees, which further fuelled the recession as spending decreased due to the rise in unemployment.

The most significant political event however has been September 11. The events occurring on September had special significance for the airline industry since airplanes were involved. The immediate results were a huge drop in air traffic due to safety & security concerns of the people.

The recent Gujarat riots & the government's inability to control the situation have also led to an increase in the instability of the political arena.



The state owned airlines also suffers from archaic laws applying only to them such as the retirement age of the pursers & hostesses, the labour regulations which make the management less flexible in taking decision due to the presence of a strong union, & the heavy control & interference of the government.

The state owned airlines suffer the maximum from this problem. These airlines have to make several special considerations with respect to selection of routes, free seats to ministers, etc which a privately owned airline need not do.

These technological changes in the environment have an impact on Air India as well. Better airport infrastructure, means better handling of airplanes, which can help reduce maintenance cost. It also facilitates more flights to such destinations.

USTDA is funding a feasibility study and workshops for the Airports Authority of India as part of a long-term effort to promote Indian aviation infrastructure. The Authority is developing modern communication, navigation, surveillance, and air traffic management systems for India's aviation sector that will help the country meet the expected growth and demand for air passenger and cargo service over the next decade.

**PEST ANALYSIS**

<p style="text-align: center;"><u>POLITICAL FACTOR</u></p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p> <p>5. _____</p>	<p style="text-align: center;"><u>ECONOMIC FACTOR</u></p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p> <p>5. _____</p>
<p style="text-align: center;"><u>SOCIAL FACTOR</u></p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p> <p>5. _____</p>	<p style="text-align: center;"><u>TECHNOLOGICAL FACTOR</u></p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p> <p>5. _____</p>

### 3. CASE STUDY ABOUT LOW-COST AIRLINE AND CARRIERS

A low-cost carrier or low-cost airline (sometimes it is also known as a no-frills, discount or budget carrier or airline) is an airline that offers generally low fares in exchange for eliminating many traditional passenger services. A low cost airline generally has many features that differentiate it from the traditional carriers. These features include ticketless travel, online ticket sales, no international offices, no frequent flyer points, no free food and beverages, no in-flight magazines, no club lounges, use of secondary city airports.

Not all low cost airlines have these features, and not all airlines that have some of these features are low cost airlines. For example, Virgin Express is a low cost airline, but it still offers complimentary coffee and in-flight magazine, and they are based at Brussels primary airport. Low-cost carriers are one of the most significant developments in air transport in recent years.

With their innovative business model they have reduced both the fares and levels of service on routes. At the same time, they have increased the number of people who have access to air travel and greatly increased the range of airports available for holiday travel. Yet the jury is out as to whether low-cost carriers are a true revolutionary concept or simply an evolutionary development in air transport.

The low cost airline industry has changed the definition of airlines that air travel is a luxury and it is only for the upper segment of the population. The key objective of low cost carriers is to increase their reach and provide the services to a large segment. In India, low cost carriers came into existence in 2003 when Air Deccan launched its first low cost airline and that was the first move to open the doors of the airlines industry for middle class. Another major driver is the booming tourism industry in India.

However, the low cost airline segment is facing challenges of increasing competition, rising fuel prices and inadequate infrastructure. For example Air Deccan is the market leader, holding the maximum share in LCC market, followed by Jetlite, Air India Express, GoAir, and Indigo, who are making the competition stiffer. Air Deccan enjoys the first mover advantage in terms of access to a large number of overnight parking spaces and landing & take-off slots during the peak period.

Considering another factor that another airline namely SpiceJet is an Indian low-cost airline owned by the Sun Group of India. It has its registered office in Chennai, Tamil Nadu, and a corporate office in Gurgaon, Haryana. It began service in May 2005, and by 2012, it

was India's third largest airline in terms of market share, ahead of Air India, Kingfisher Airlines, and GoAir. SpiceJet operates aircraft configured with a single passenger class.

Along with passenger services, SpiceJet also offers cargo services on the same flights. The service is available on flights connecting Ahmedabad, Agartala, Amritsar, Bagdogra, Bengaluru, Chennai, Coimbatore, Delhi, Goa, Guwahati, Hyderabad, Jaipur, Jabalpur, Kochi, Kolkata, Kozhikode, Madurai, Mumbai, Pune, Visakhapatnam, Tiruchchirappalli, Tuticorin and few international cities. Between 2 to 3.5 tons of cargo is ferried on each flight ensuring maximum utilisation of the aircraft. The following description will help you to understand the various offer and product and services by different operators.

Product features	Low cost carrier	Full service carrier
Brand	One brand: low fare	Brand extensions: fare + service
Fares	Simplified: fare structure	Complex fare: structure + yield mgmt
Distribution	Online and direct booking	Online, direct, travel agent
Check-in	Ticketless	Ticketless, IATA ticket contract
Airports	Secondary (mostly)	Primary
Connections	Point-to-point	Interlining, code share, global alliances
Class segmentation	One class (high density)	Two class (dilution of seating capacity)
Inflight	Pay for amenities	Complementary extras
Aircraft utilisation	Very high	Medium to high: union contracts
Turnaround time	25min turnarounds	Low turnaround: congestion, labour
Product	One product: low fare	Multiple integrated products
Ancillary revenue	Advertising, on-board sales	Focus on the primary product
Aircraft	Single type: commonality	Multiple types: scheduling complexity
Seating	Small pitch, no assignment	Generous pitch, offers seat assignment
Customer service	Generally under performs	Full service, offers reliability
Operational activities	Focus on core (flying)	Extensions: e.g., maintenance, cargo

As mentioned above the customer needs keep changing, the future is unknown. The customers may be looking in for more frequent inexpensive air travel, something like air taxis, supersonic speed. This decreases the time thus reducing the cost. Pricing Strategies. With the advent of the low-cost airlines in the Indian aviation industry, a different low-cost flying concept has come up. Since these low-cost airlines are trying to woo the customers by providing air travel in exceptionally low prices, a price-band kind of pricing has to be designed.

In low-pricing strategies, the airlines provide very low prices for the flight tickets. Also, they prices are made cheaper by booking the tickets long before the flight date. For example

Spice jet operations can be seen and their growth pattern from the table value given below

**SPICEJET-REVENUE PASSENGER KILOMETRES**

YEAR	TRAFFIC
2008	4397
2009	4819
2010	6807
2011	8639
2012	10322

(Source: <http://en.wikipedia.org/wiki/SpiceJet>)

Low cost carriers have re shaped the competitive environment within liberalised markets and have made significant impacts in the world's domestic passenger markets, which had previously been largely controlled by full service network carriers.

**Low Cost airline operation**

<u>Pros</u>	<u>Cons</u>
1. _____	1. _____
2. _____	2. _____
3. _____	3. _____
4. _____	4. _____
5. _____	5. _____

**Case questions**

1. Draw up a list of the key elements used for the development of business model.
2. Draw business model adopted by the Airline operator. Briefly sketch out different business strategies adopted by the company practices to boost marketing.
3. Fill the column given above the pros and cons of low cost airline business operation.
4. What are the critical factors in the low cost airlines in India?

**Acronyms used in this unit**

<b>ACRONYM</b>	<b>DEFINITION</b>
ADM	Agency Debit Memo
ARC	Airline Reporting Corporation (US BSP equivalent)
ATO/CTO	Airport Ticket Office/City Ticket Office
BSP	Billing and Settlement Plan
CP	Change Proposal
CR	Change Request
CTS	Central Ticketing System/Server
DCS	Departure Control System
DPC	Data Processing Centre
EMATE	Electronic Market Ticketing Expansion
EMD	Electronic Miscellaneous Document
FOID	Form of Identification
FOP	Form of Payment
GDS	Global Distribution System
ETS	Electronic Ticketing Server
GDS	Global Distribution System
IATA	International Air Transport Association
IET	Interline Electronic Ticketing
MCO	Miscellaneous Charge Order
MPD	Miscellaneous Purpose Document
PNR	Passenger Name Record
PTA	Prepaid Ticket Advise
RET	Reporting Tape
RECLOC	Record Locator
SOR	Statement of Requirement
StB	Simplify the Business (IATA initiative)
SU	System User
UETTR	Unused Electronic Ticket Tracking Report
Amadeus Virtual MCO	Virtual Miscellaneous Charge Order (Amadeus solution)
VMPD	Virtual Miscellaneous Purpose Document (IATA solution via BSPlink)
WO	Work Order

## Key Terms Used

**Itinerary:** A full-length itinerary document includes all active air and non-air segments of the travel plan/program.

**Invoice (Itinerary/Invoice):** A full-length itinerary/invoice document includes all active air and non-air segments. An itinerary/invoice will have a value printed on it. If this document is issued at the same time as an Electronic Ticket the name of this document changes to a Passenger Itinerary Receipt.

**Frequent Flyer Programs:** These are programs set up to lure travellers to book on a particular airline on a regular basis by offering them awards.

**Automatic teller machine (ATM) card:** A form of debit card used to withdraw money from a cash machine when the user punches in a unique code called a personal identification number (PIN). Withdrawn money is electronically deducted from the cardholder's bank account.

**Closed-system card:** A merchant-specific card that can be used only at a particular merchant or chain of merchants (e.g., Sears or JC Penney).

**Credit card:** A card that represents an agreement between a lender—the institution issuing the card—and the cardholder: The cardholder may charge purchases (or borrow money), usually up to a specified limit. The lender pays merchants directly for the charged amounts. The cardholder, in turn promises to pay back the lender in full plus interest. Credit cards may be issued by banks, savings and loans, retail stores, and other businesses.

**Credit:** The granting of money or something else of value in exchange for a promise of future repayment.

**Debit card:** A card issued by banks to bank-account holders. The card may be used for point-of-sale transactions in place of cash or checks. Transaction amounts are deducted electronically from a cardholder's bank account.

**Electronic benefit transfer (EBT):** An electronic system that allows a recipient to receive financial benefits from the government via a debit card. The recipient uses the EBT card to make purchases from retailers.

**General-purpose reloadable (GPR) card:** Prepaid cards that are branded "general purpose" reloadable (GPR) cards. Prepaid GPR cards allow customers to reload the cards with additional funds and even set up direct deposits to the cards.

**Gift card:** A non-reloadable prepaid card often given as a gift. Transaction amounts are automatically deducted from the balance of the card. The card may be used until the balance on the card is zero.

**Network branded card:** A prepaid card issued by a specific payment network, such as Visa or MasterCard, branded with a logo and usable at any merchant within that network.

**Non-reloadable card:** prepaid cards that can be used until the balance is zero and cannot be reloaded.

**Open-system card:** A prepaid card, associated with a major electronic payment network such as Visa or MasterCard that can be used any place these networks are accepted.

#### REFERENCES

1. Air Tari Book
2. **Geoper et al**, 'TOURISM PRINCIPLES & PRACTICES, *Pearson Edn., New York, 2006*
3. **Goldener, C & Ritchie, B**, 'TOURISM PRINCIPLES, PHILOSOPHY, PRACTICES, *John Wiley, New York, 2006*
4. **Jagmohan Negi**, 'AIR TRAVEL TICKETING AND FARE CONSTRUCTION', *Kanishka, New Delhi, 2005*
5. **Jagmohan Negi**, AIR TRAVEL TICKETING AND FARE CONSTRUCTION, *Kanisk, Delhi,*
6. **Khan, M. A. (2005)**, INTRODUCTION TO TOURISM, *Anmol Publication Pvt.Ltd, New Delhi.*