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# UNIT 17 INFORMATION, TECHNOLOGY AND MANAGEMENT

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## 17.0 OBJECTIVES

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After reading this Unit you **will**:

- become aware of the **organisation** of information technology for collection and generation of specific information,
- learn about the application of information and technology in **the area** of tourism,
- **have** an idea of information handling related to the particular tour using computer,
- have an understanding of information networks in **planning** and execution, and
- know the managerial tasks related to the role of information and technology in tourism.

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## 17.1 INTRODUCTION

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**Until** the 1950s, tourism management focused on **material**, natural **financial** and human potentials without realising the importance of information as a sector of economic value. Information has now become one of the most important links between producers and consumers of tourism services. Information **Technology** (IT) has further enhanced the speed, accuracy and integration of various tourism activities. Information technologies have had considerable impact on the tourism industry. System of Information Technologies affects various components of the tourism systems like the delivery of tourism services, management of tourism, marketing of tourism products, and producer and or consumer relationship. This Unit gives you an idea about the role of information and technology in tourism and the **managerial** tasks involved therein.

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## 17.2 MANAGERIAL ROLES

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Generally, when one deals with management, the emphasis is on human resource development, finance or marketing. However, with the technological **revolution** the management and application of technology has a direct bearing on the success of any enterprise. For example, **in** case of **holding** conventions, Fax, Computers, Xerox, E-Mail etc. are **inbuilt** in the product. Hence, it is essential for both managers as well as entrepreneurs in tourism to take note of what is termed as management of technology. Certain steps can be taken in this regard:

- upgrade your knowledge in relation to information systems and new technology,
- **analyse** their merits and demerits in relation to your own enterprise,

- it is **after** this assessment **that** you should go for adapting your **organisation's policies** in relation to such information and technology,
- you should have trained and qualified people to man the technology,
- ensure that the information and technology is utilised in a productive way and it functions effectively,
- ensure proper maintenance contracts for the technology you are using,
- lastly, and most important is that you have to create such an environment within the organisation where people adapt themselves to technology, accept innovation as normal and do **not** resist the induction and use of technology.

One crucial step, often ignored or forgotten by managers, is to have alternative strategies in case of technology failure. You can guess the chaos that is created when the railway's computerised reservation system breaks down.

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## 173 ROLE OF INFORMATION IN TOURISM

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Information is a vital element of any system or industry to exist and prosper. Tourism industry as a matter of fact requires large amount of information on various areas. The role of information in tourism is vital for everyone. For example, a tourist guide requires historical **and cultural** information of the place; a tour operator requires information on transportation, reservations, accommodations and marketing, a tourist requires information about the destination and so on. As a manager in any segment of the tourism **industry, one** has to know about the wide spectrum of information alongwith the use of information technology and telecommunication for speed and accuracy in handling tourism operations. Besides this, touristic information encompasses many more areas such as personnel information about the **tourist, like** tourists wants and needs, tourist generating markets etc.

Role of information increases when more variety or change becomes important. If a tourist is taking a routine trip some variety might be desirable through change in route or side trips. And to inform potential travellers about attractions and the availability of information to them many tourism enterprises provide information in newspapers, magazines and cable TV or internet.

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## 17.4 INFORMATION MANAGEMENT

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Information Management (IM) is an area where:

- one has to study how to collect information from various sources (such as printed or non-printed),
- the collected information is to be **systematically** processed keeping in view the users requirements, and
- **the processed** information can be printed as information products.

This information collection, information handling, information generation and usage etc. form part of Information Management.

### 17.4.1 Information/Data Collection

A manager must know the difference between data and information.

- Data is raw and unanalysed numbers and facts.
- Information is that data which has been organised and analysed in a meaningful way.

Information gathering or collection of data related to tourism involves lot of interaction with various agencies. For example in **organising** a tour programme one requires data related to places, routes, weather, food, accommodation, transport facilities, attraction etc. All such data have to be obtained from respective sources like places, routes information through historical data related to the area, tourist department of that area, accommodation

information from the hotels from that area or state local tourist offices etc. The information so collected would then be arranged in a systematic way. Here it must be noted that information supplying systems are necessary to support managerial functions of planning, **organising**, leading and monitoring.

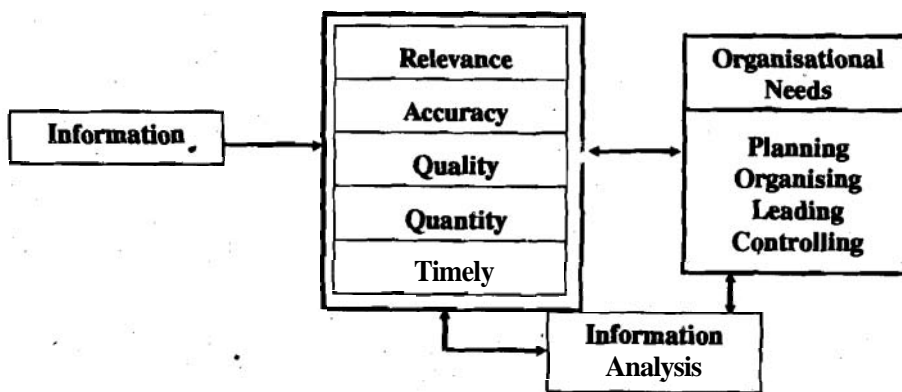
### 17.42 Information Generation

In tourism when you are **getting** lot of information from various source and also collecting lot of information locally, the information base can be used to generate or produce literature specific to the needs of the organisation. For example a brochure containing information on accommodation, **food**, weather, facilities and attractions may be brought out or a pamphlet giving details about visiting places, ethnic background, handicraft, adds to the tourists interest. With the use of technology organisations develop product databases, containing destination data. The C D **Roms** prepared by **Rajasthan** Tourism Department is the best example in this regard. A limited amount of marketing activity using customer database has also been undertaken integrating information networks and communication facilities. Likewise one may generate the Visitor Information System so as to boost the tourist business locally and nationally.

### 17.43 Information Handling

Once the data is collected (on the sheets and as printed leaflets), it has to be **organised** and **analysed** properly so to get any piece of information easily. For example, each tour programme requires specific **organisation** of information under different heads, so that a tour group or an individual will find the required information. The various **access** points to the information and its storage and retrieval can be done using computer with speed and **accuracy**. If the tourist information required by tourist is not available on **the local** computer, there must be facility available to get this information from other computers **using** latest available **Information** Technology (IT).

In fact, for every component of the tourism industry information handling is vital for operations. To what use the information is put to and how, are the important managerial tasks.



#### Check Your Progress-1

1) Differentiate between data and information.

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2) What steps should be taken in technology management

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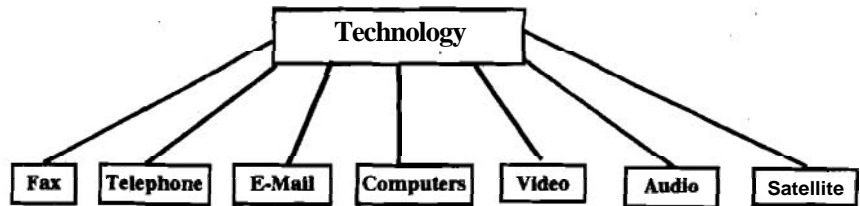
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## 17.5 INFORMATION TECHNOLOGY

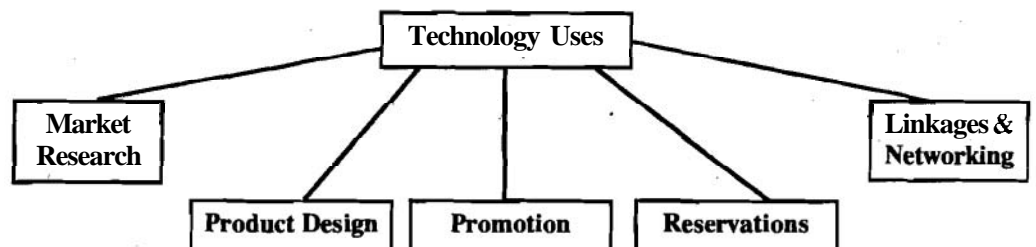
Technology which helps in **information** handling, information generation, communication of information and information viewing is known as Information **Technology(IT)**. The simple automation of information using computer is a preliminary area of IT. Once the information or data is in computer this may be transmitted using networking system. Information communication involves use of **technology** like E-mail, telephone, fax, paging, teletext and teleconferencing etc. Besides computer and communication technologies a tourism personnel should also have knowledge of multi media **handling** and audio and video **interaction** etc.



### 17.5.1 Computer Applications in Tourism

Computer is an electronic machine which helps in storage of information or data. It is manipulated in various ways (see figure) as we do require for our day to day work. Computer also helps to store graphics, pictures and audio clippings, and finally present them as a multimedia **environment** for tourist. Therefore, it is must to have basic knowledge about the software and hardware of this important part of information technology particularly at the managerial levels.

Computer runs on softwares, one has to learn the Operating **Software (OS)** - DOS, Window, UNIX, **NOVELL** etc and then go into the details of Application **Softwares** related to tourism industry. With the help of a simple word processing software - **Wordstar** or **Word Perfect** or **Word** one can create **Data File on different Tourist Spot** - giving information related to the region, people, places, food and facilities etc. From these simple tourist spot file one can create alongwith it the file or database of tourists giving information of marketing activity and these two can result into **Destination Databases**.



Computers are of great help in the area of reservation be it a travel reservation or hotel. The airline Computer Reservation Systems are the most notable example of change. The first Information and Reservation Systems were developed during mid 1970s in the United States. In 1987 AMADEUS was developed by Lufthansa, Air France, Iberia and Scandinavian Airline System; and GALILEO was developed by British Airways, KLM, Swissair. At the end of 1970 airlines in the Asian/Pacific also developed their own Information and Reservation System. ABACUS is based on software technology of the American systems PARS and was founded by Singapore Airlines, Cathay Pacific Airways, China Airlines and Royal Brunei Airline (ABACUS). FANTASIA was developed by Japan Airlines and Qantas. For making air-reservation on your PC one has to connect it through modem using telephone line to concerns airline office. The PC at travel office has special software, Delta Software (P) Ltd developed a software, **TravelEase** which helps to connect to SABER system using SITAR and after connectivity is made one can go for registering itinerary details of the traveler.

Hotel reservation system though based locally later goes into wide area frame. In India Information Systems Division, ITC limited has developed Hotelier - a comprehensive solution for hotel management. It performs various services like reservation, **Check-in**, Outlet services, housekeeping and Check-out. And, it helps to keep tracks of tourist business performed with upto the minute information on all the business entities in the hotel.

### CD-Databases

CD-ROM (Compact Disk Read Only Memory) has similar functions as a normal music CD except that it also contains text, pictures and graphics etc. By means of CD-ROM all kinds of destination criteria that can be of interest to tourist are listed; description of an area or town, climate, water, temperature, sporting activities and location, service, availability of rooms, and price of hotels. Thus it can be a individual travel product fit for the tourist. The only pre-condition for travel offices in order to use CD-ROM databases as a new marketing tool is to have a Personal Computer (PC) equipped with a special CD-ROM drive. Multimedia CD-ROM are also available in India on various Indian tourist places and historical monuments. (one made by INTACH on Humayun Tomb)

### Online Travelling

This is the final frontier of information technology the online Travelling using the concept of virtual reality. Travelling in virtual reality using computer and a special spectacles to a place which is not there and yet it is right in front of you - and behind below and above. This is the working glass creating new worlds, or re-creating "real world environments. VR technology/online Travelling is likely to have a major impact on the future tourism industry. It may potentially redefine the nature of tourism as we understand it today. One can virtually travel to his destinations and can have the feel about it. Computer - generated graphics and special effects in movies such as Star Wars and Jurassic Park are of early developments in VR. Tourist will soon be able to enjoy the VR or online travelling experiences such as flying and reaching Taj Mahal in India. And moving on the steps to the Taj and passing through the walls and minarets, all within a realistic, but simulated environment.

## 17.5.2 Information Networks

Data or information networks involves the connectivity of computers to each other for accessing or exchange of information. The computers so connected result into various computer/information networks the basic ones are Local Area Networks (LAN), Metropolitan Area Networks, and Wide Area Networks (WAN). To communicate with another computer at a distance, it will be necessary to take into account the available communication links, the interface device (e.g. modem) and the communication protocol to be used.

Integrated Tour operating Digital Network Services (ITDNS), sponsored by European community is making use of personal computers already existing in travel offices. Through specially installed ITDNS cables travel packages and all kinds of touristic information offers can be electronically transferred, or tele ordered, between each party of the itinerant trade.

After being transferred, the data will be filed in a database of a PC in order to be available when needed. In India we have to build up **Tournet**, to improve tour package and service better.

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## 17.6 COMMUNICATION IN TOURISM

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Communication technologies in tourism industry provided opportunities for business **expansion** in the geographical marketing and operations sense. India, being a tourist **destination**, it becomes more important that tour operators and individuals interacting with tourists should have the basic skill of using telecommunication devices, such as telephone, mobile phone, fax, electronic mail, telex, phonogram, paging, **teleconferencing**, teletext etc. They can also be well versed with audio and video interaction along with multimedia facilities. As a tourist personnel **at least** you should have the knowledge about the common communication instruments. Now the telephone has many important features like pulse dialing, tone dialing, **Redial**, Mute, in-use indication etc. In Delhi, the Mahanagar Telephone Nigam Limited has provided many more facilities to the customers like, Dynamic locking facility for STD (Subscriber Trunk dialing) and ISD (International Subscriber Trunk Dialing") Phonogram (dial 185) Wake up call (dial 173), Time (dial 174), **Lightning call** (dial 189) which is eight time charge than a **normal** call. Cordless telephone instrument as the name indicates it consists of two units one as Base Unit **fixed** near telephone Rosette and main 220 V AC along with 12 volts DC **adaptor** another remote instrument or cordless instrument works in around a range of 100 meters from its Base Unit. Mobile Phone or cellular phone is latest additions in India. It is a device similar to wireless, a total cordless telephone service which works anywhere in the city area. One can receive and dial the call to any place, but the costs are high. There is another device, Paging, which help in passing the messages. Paging means passing a message (Number or Text) to a person who is on the move and who cannot be contacted on telephone. It is only a one way communication from the sender to the person on move with the Pager. The sender of the message calls the Network Operators on a telephone and gives to the Network operator the Pager Number of the person to be connected and the message on its Transmitters. The message is transmitted using FM RDS (Radio Data System). The person on the move receive the message on its pager.

Telex - A combination of Telephone plus Typewriter can be presumed as a Telex. In which you dial local, STD or ISD Telex Number, on maturity of call you start typing manually or stored message processed on perforation or on an electronic telex machine for its transmission. Similarly you can receive the messages.

Facsimile (FAX) is a compact electronic machine that uses advanced telephone and computerized image sending technology to send copies of your documents any where in the World. For sending a fax gently insert the loading edge of the document upside down into the loading slot until you hear a beep tone and the machine has begun to grab the document. The unit display 'Document Loading'. After the document is secured the unit displays the standby mode. The document is now loaded and ready to send and dial the number of the remote fax machine you want to send.

### Audio and Video Interaction

Audio and Video Interaction (AVI) facility for business travelers is highly useful, teleconferencing is one such area where people sitting at different places can interact with each other getting both **picture** and sound. Teleconferencing require a high-tech hardware a studio with Camera, Television and mike, Earth station, Satellite Transponder space at one end and the similar facility at other places as to have live interaction. Colour television to the tourist make him more relaxed after a day outings. Colour television with **multi** channel, cable net and teletext adds to further entertainment during relaxation hours. Teletext service provided by Delhi Doordarshan and National Informatics Centre provides information related to national and international news Arrival and departure - air and train news, train **reservations status, weather in major cities, and shares points etc.**

**Check Your Progress-2**

1) Discuss the **role** of telecommunications in tourism.

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2) How do you perceive the role of technology in future tourism operations.

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## 17.7 LET US SUM UP

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Information and Technology are vital to the development and growth of tourism industry. In a way these operations have become an additional management function. This Unit made you aware of certain aspects related to the managerial roles vis-a-vis information and technology. It also **familiarised** you with various technological users in tourism. More and more **organisations** are adopting technology for product design (Essel World, Electra City, etc.), linkages, market research promotion, sales and information sharing, etc.

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## 17.8 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

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**Check Your Progress-1**

- 1) Data is raw **unanalysed** figure and facts. Information is that data which is **organised and** analysed in a meaningful way.
- 2) See **Sec. 17.2** for your answer.

**Check Your Progress-2**

- 1) See **Sec. 17.6**.
- 2) Use your imagination to answer their question keeping in view the role and uses of technology.

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## SOME USEFUL BOOKS FOR THIS BLOCK

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H A Rogers and J A Slinn	Tourism: Management of Facilities, London, 1993
J A F Stoner and R E Freeman	Management, New Delhi, 1992
Philip Kotler	Marketing Management: Analysis, Planning and Control, London, 1984
Tom Baum	Human Resource <b>Issues</b> in <b>International</b> Tourism, Oxford, 1993
<b>Mahmood</b> A Khan et. al (ed.)	<b>VNR's</b> Encyclopedias Hospitality and Tourism Management, Newyork, 1992
All India Management Association	How to Manage Money, New Delhi, 1991 How to Manage Your Pesonnel, New Delhi, 1991
IGNOU Management Courses	MS-4-Accounting and Finance for Managers MS-5-Management of Machines and Materials
S.N. Maheshwari	: ' Principles of Management Accounting, New Delhi, 1996.

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## ACTIVITIES FOR THIS BLOCK

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### ACTIVITY 1

Suppose you are managing a tourist transport agency. What qualifications will you lay down for appointing drivers ? Also design a training programme for upgrading their skills.

### ACTIVITY 2

Suppose you are a manager in a travel agency. Design a Performance Appraisal Form for your employees.

### ACTIVITY 3

If possible, visit a tour operator. Try to know from him or her what kind of a marketing plan he or she has adopted for the organisation.

### ACTIVITY 4

Suppose you are a manager of a travel agency whose operations are totally manual. What kind of technological changes you suggest to improve the **efficiency** and quality of service in your agency.