

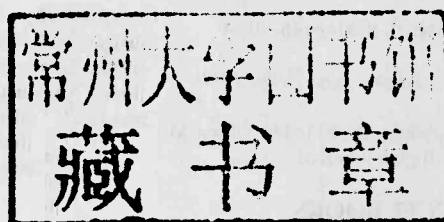
Information SYSTEMS IN TOURISM



DILEEP M R

Information SYSTEMS^{IN} TOURISM

DR. DILEEP M R



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Preface

Tourism, one of the largest industries in the world, has become part and parcel of the modern society. It has expanded and grown exceptionally well in the post World War era, to become a major force in the economy of the world. Information technology is another sector that has grown at a rapid pace in the same era. Both the sectors offer employment to millions and millions of people world over and generate business of billions. The expansion and development in each sector was complementary and the happy co-existence of them led to many changes and development in the society at large. The application of Information Technology in Tourism is now extensive due to many reasons and has become the lifeblood of the system of tourism, as suggested by Pauline J Sheldon. In addition to the advantages and benefits, IT applications instigate new opportunities and challenges and threats to the various players in the tourism sector. The experiences in different sectors in tourism reveal that those who fail to exploit the opportunities and cope up with the challenges posed by IT, will face issues, even to exist. The strategic use of IT gives better competitive advantage in this dynamic business era. Against this backdrop, this book has been prepared in a manner to give a comprehensive idea on tourism, information technology and their mutually beneficial coexistence. Efforts have been taken to discuss in detail the advantages, benefits and impacts of IT application in Tourism, with focus on Information systems, which form the core of IT application in businesses.

Who will benefit from this book?

Tourism and Information Systems are basically multi-disciplinary subjects and hence, the book will be useful for persons who belong to many areas. All those who deal with Tourism, operation and management of tourism organizations, information technology and information systems will be benefited by this book. They include students of various subjects such as management, computer science, information systems, travel and tourism, hotel management, etc.; managers and executives at all levels in tourism organizations; researchers in IT, MIS and Tourism; Tourism policy makers and planners and the like. For IT experts, this book will throw some light into a new area of IT application. Altogether, the book will be useful for all those who wish to know more about the use of IT and information systems, particularly in a service industry like Tourism.

Organization of the Book

As mentioned earlier, this book gives a comprehensive idea on nature and processes in Tourism industry and how does it embrace Information Technology for more effective operation, managing and marketing. The book takes a positive stand towards technology, in general. Its contents are structured into four sections such as Tourism Industry, Information System, Information Technology in Tourism and Information Systems in Tourism. The first

section deals with Tourism, its nuances, characteristics, components and trends in detail. The first chapter introduces the concept of tourism, gives definitions, and history in a nutshell. The second chapter discusses in detail the motivation in tourism, tourism demand and the way demand is measured. Following it, the next chapter deals with various aspects of tourist destination, which is the most vital component of tourism system. An overview of various industries in the tourism sector is the content of the following chapter. As tourism is a sensitive and international industry, variety of organizations are working at different levels, from the local to the global. The fifth chapter deals with the focus and activities of them. The last chapter in the first section discusses the current trends in Tourism, like the trends in tourist arrivals, influence of technology and the like.

Introduction to Information System, its concept, uses, components and trends constitute the second section. The first chapter focuses on the concept of Information system and the evolution of it through various decades. This is followed by a chapter on introduction on Information Technology, which involves the concept, components, Internet and the recent trends. After introducing Information systems and information technology, an attempt is undertaken to link the concept of them with business management, in the next chapter. Importance of information and information systems in management, its role and relevance, and the need of information systems for managers and in decision making are dealt with in it. It is followed by a comprehensive chapter on various types of information systems used in large business organizations, at different levels, functions and contexts. Overall, this section gives a clear view on the concept of information system, its elements and components and its role and relevance in business organization for better operation, management and marketing. While the first section lays platform for understanding Tourism, the second section attempts to introduce information systems in the context of business management. Hence, it would be easier for a learner to understand the application of IT in Tourism and the use of Information systems in its different industries.

The third section gives an exclusive discussion on IT application in Tourism sector. The first chapter of it consists of the importance of information in tourism and the role of IT in it, in general. This is followed by a detailed discussion on how IT is incorporated by various sectors in Tourism industry, particularly Transportation, Hospitality, Travel agencies and Tour Operators, and Destinations. Marketing is an important area in business management and the next chapter on electronic marketing of Tourism deals with the concept of online marketing, various aspects associated with it, role of IT in travel product distribution and various tools used to market tourism products globally. The following chapter gives an introduction to the current and emerging trends in Tourism information technology.

The fourth section is dedicated to the use of various types of Information Systems in different sectors of Tourism, which is the ultimate objective of this book. The first chapter involves discussion of various information systems used in transportation sector. The case studies given at the end of the chapter, particularly on exert systems, flight scheduling system and crew scheduling function are useful to get better knowledge on systems used in air transportation sector. The following chapter gives a clear picture about various systems used by travel agencies and tour operators. Examples, like VIA Voyager, would be very much useful and the cases given would be effective in understanding the use of information

systems in the intermediary environment. The next chapter discusses travel distribution systems like CRSs and GDSs. Hotels also use a variety of information systems for the effective and competitive survival. The following chapter deals with various types of Information systems used by the Hospitality sector. Suitable case studies are added to learn the usage of systems in the hospitality environment. Destination management agencies also rely much on information systems to managing and market destinations efficiently. The last chapter in it deals with information systems established by destinations and the aspects associated with it. Useful case studies are also given along with suitable examples to know the concept better and to use the theory into practice.

To know the real situation, a detailed case study on application of information system, based on a field study undertaken in Kerala, is given at the end. It will give information about the type of information systems used by various sectors, the benefits of using such system by them, comparison of the usage with international standards, how good is the information provision by tourism industry, and the reasons for why many organizations are yet to incorporate information systems in their business environment. Also, a framework is given for the improvement of use of information systems at the destination level to manage and to market the destination internationally.

DR. DILEEP M R

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About the Author

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Dr Dileep, being one of the most experienced teachers in Tourism in India, acted as Joint Secretary of Indian Tourism Congress (ITC), which is the apex body of academicians in the country. He has published a number of papers in national and international journals, of which two have been published in journals such as *Asia Pacific Journal of Tourism Research* (APJTR) and *Tourism Recreation Research* (TRR). He is a member of the Board of Studies in a number of Universities and has presented several papers in national and international seminars and conferences. Also, he is a listed supervisor (external) for PhD programmes with School of Tourism and Hospitality Services of IGNOU.

Dr. Dileep also worked as the Associate Editor of *Indian Journal of Tourism and Hospitality Management* and Executive Editor of newsletters published by KITTS. He has organized more than 30 training programmes for working professionals as part of capacity-building programmes of Dept. of Tourism, Govt. of Kerala, and has undertaken a few research programmes on different areas of Tourism. Throughout his career, he has actively participated in academic, curricular and co-curricular activities.

Abbreviations

AAI	: Airport Authority of India	DICIRMS	: Destination Integrated Computerized Information Reservation Systems
ADSL	: Asymmetric Digital Subscriber Line	DSS	: Decision Support Systems
AGVA	: Automated Guided Vehicles	DPAS	: Document Printing Agency System
AI	: Artificial Intelligence	EBB	: Electronic Bulletins Boards
ARC	: Airline Reporting Corporation	EDI	: Electronic Data Interchange
ARINC	: Aeronautical Radio Incorporated	EIA	: Environmental Impact Assessment
ASP	: Application Service Provider	EFT	: Electronic Fund Transfer
ATC	: Air Traffic Control	ENIAC	: Electronic Numerical Integrator and Computer
ATM	: Automated Ticket Machines	ERP	: Enterprise Resource Planning
ATM	: Automated Travel Machines	ETP	: Electronic Travel Planner
ATMS	: Automated Traffic Management Systems	FECP	: Front End Communication Processors
AVL	: Automated Vehicle Location	F & B	: Food and Beverage
B & B	: Bread and Breakfast	FHRAI	: Federation of Hotel and Restaurant Association of India
B2B	: Business to Business	FIDS	: Flight Information Display Systems
B2C	: Business to Consumer	GDS	: Global Distribution System
BHS	: Baggage Handling System	GHG	: Green House Gas
BITE	: Built-In Test Equipment	GIS	: Geographic Information System
BPR	: Business Process Reengineering	GPS	: Global Positioning System
C2C	: Consumer to Consumer	GTP	: Gross Travel Propensity
C2B	: Consumer to Business	GUI	: Graphical User Interface
CSD	: Commission on Sustainable Development	HR	: Human Resource
CRM	: Customer Relationship Management	HTML	: Hyper Text Mark up Language
CRO	: Central Reservations Offices	IATA	: International Air transport Association
CRS	: Computer Reservation System	IATO	: India Association of Tour Operators
CRT	: Cathode Ray Tube	ICAO	: International Civil Aviation Organization
DBMS	: Database Management Systems	ICT	: Information and Communication Technology
DIS	: Destination Information Systems		
DMIS	: Destination Marketing Information System		
DMO	: Destination Management Organization		

IDTV	: Interactive Digital Television	SEO	: Search Engine Optimization
IP	: Internet Protocol	SMDR	: Station Message Detail Recording
IPTV	: Internet Protocol Television	SEO	: Search Engine Optimization
ISDN	: Integrated Service Digital Networks	SITA	: Society for International Telecommunications Aeronautique
ITDC	: India Tourism Development Corporation	SME	: Small and Medium Establishments
IT	: Information Technology	SMS	: Short Message Service
ITO	: Inbound Tour Operator	STEP	: Sustainable Tourism-Eliminating Poverty
ITS	: Intelligent Transportation Systems	TAAI	: Travel Agents Association of India
LCD	: Liquid Crystal Display	TALC	: Tourism Area Life Cycle Concept
LED	: Light Emitting Diode	TDR	: Tourist Destination Region
MAP	: Metropolitan Area Networks	TFT	: Thin Film Transistor
MICE	: Meetings Incentives Conventions and Exhibitions	TGR	: Tourism Generation Region
MIS	: Management Information System	THISCO	: The Hotel Industry Switch Company
MRP	: Manufacturing Resource Planning	TO	: Tour Operator
NTTO	: National Tourist Offices	TQM	: Total Quality Management
NTP	: Net Travel Propensity	TRR	: Transit Route Region
OIS	: Organizational Information Systems	TSA	: Tourism Satellite Account
OR	: Operations Research	TRS	: Travel Recommender Systems
OTA	: Outbound Travel Agency	UFIS	: Universal Flight Information System
PATA	: Pacific Asia travel Association	UFTAA	: United Federation of Travel Agents Association
PBX	: Private Branch Exchange	UGC	: User Generated Content
PC	: Personal Computer	UPS	: Uninterruptible Power Supply
PDA	: Personal Digital Assistants	URL	: Uniform Resource Locator
PNR	: Passenger Name Records	UNWTO	: United Nations World Tourism Organization
PMS	: Property Management Systems	VFR	: Visiting Friends and Relatives
POS	: Point of Sales Systems	VIP	: Very Important Person
PPC	: Pay Per Click	VR	: Virtual Reality
QFD	: Quality Function Deployment	WAP	: Wireless Application Protocol
RAM	: Random Access Memory	WAN	: Wide Area Network
RCC	: Remote Communication Concentrators	Wi Fi	: Wireless Fidelity
RGS	: Route Guidance System	WiMax	: Worldwide Inter-operability for Microwaves Access
RMS	: Revenue Management Systems	WLAN	: Wireless Local Area Networks
ROM	: Read Only Memory	WBST	: Web-based Staff Terminal System
SABRE	: Semi-Automatic Business Research Environment	WTTC	: World Travel and Tourism Council
SCM	: Supply Chain Management		
SCS	: Sales and Catering Systems		

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