THE DEVELOPMENT OF KNOWLEDGE AND INFORMATION NETWORKS IN TOURISM

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ABSTRACT: The development processes in information and communication technology and the internet particularly, have revolutionized the entire tourism industry, generating new models of business, changing the structure of distribution channels used by tourism industry and redesigning all processes connected to this industry and last but not least, influencing the suppliers with touristic packages, destinations and stakeholders. The E-tourism is joining some of the fastest growing technologies such as the communications and information technology the hospitality industry and management, the marketing and the strategic planning.

KEY WORDS: e-tourism, destination, electronic commerce, technologies, web site, reservation system

E-tourism is the keyword that brings out the effects and consequences of the tourism industry which we have not expected a few years ago. "E" indicates the state of electronic and represents “e-marketplace”, where the e-business meets the e-consumers, the e-governance, the e-partners and many others e-business sites on electronic platforms.

The E-tourism is a part of area “operations” of electronic commerce, and has a grown number of travel agencies and tourism enterprises in global, national and regional levers that provide travel services through online transaction. They offer to the users’ hotel information, flights, trains and restaurants in order to help them to plan their business and holidays.

Currently, is gaining ever more the ground reconstruction present tourist destinations, and “placing” in the circuit of tourist destinations and moments disappeared with the help of VR (virtual reality) technologies, thanks to PC ‘s technologies, and some accessories - headset and glove - cyber glove, CAD technology - to create virtual models, the boom (binocular Omni-orientation monitor), CAVE (Cave Automatic Virtual Environment), VRLM - Virtual Reality Modelling Language, and

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3D glasses and thanks to a great reconstruction work from many specialists such as architects to developers [7].

The largest companies (including those in Romania) use the PC reservation systems (CRS - computer reservation systems, Galileo International, Sabre, Amadeus, World span, System One, Abacus), which are characterized that they unify the information systems, reservations and sales systems. The tourist who appeals to an agency which uses such kind of system benefits from a tour of safe, high quality and an optimal rate.

With the introduction of the first computerized reservation systems (Computer Reservation System-CRSs) in the early of 1960, there have identified four stages in the application of the information technology into tourism.

These are the following [9]:
- the data processing era, from 1960;
- the era of information systems for management, from 1970;
- the era of strategic informational systems, from 1980;
- the era of network systems, from 1990.

Due to the development of information technology, many of these systems have changed their native form. As a consequence, new technological tools have developed to use arising advantages in management, communication, marketing and promotion of products and offers.

The fast expansion of the Global Distribution System (GDS) and the reservation via PC (CRS), are the reflection of today advanced technology. Unlike other tourism related services where a physical presence is required, GDS and CRS are characterized by a bid-based international service. The CRS is the typical system used to verify the availability of the fights the reservation and, often the issue of the tickets. The same system is often used to reserve book hotels rooms or to rent a car [7].

On the other hand, GDS are the system used to group and display neutral information from a specified domain of the CRS system. Some holders of the Global Distribution System have expressed concern that their data could be forged or presented in a subjective manner, so different codes of utilisation have been issued to protect both the integrity and the neutrality of the data contained inside the GDS [2].

An additional problem is that some CRS are presumed to have one-way rights over the distribution and thus prevent the distribution of certain product through GDS. The international tourism development is based on effective marketing of tourism products to consumers in the countries issuing travel. Most of the countries with touristic attractions are developed countries with full access of technology and use the constant computerized reservation system and the internet.

The Global information networks and distribution-CRS-Computers Reservation System, GDS-global distribution system and the internet play a decisive role in international tourism because they put in contact the producers and the consumers of tourism products. These systems are the backbone of international information networks, which offer to the tour operators, travel agencies, airlines, facilities to obtain and process the information, make reservations and sell the products.
If in the beginning the CRS sites were developed (1970) by the large airlines to process flight reservation, have subsequently evolved and were developed to provide additional services related with air transportation such as: the storing of information in a word basis, the issue of the tickets, marketing - by informing the passengers about the costs, cut-offs and other specific conditions, or setting the products and services.

They cover today, among the services offered by airlines those on the ground which offer to the tourist travel packages (transportation accommodation meals sightseeing’s and performances) or car rental. Due to broadening of the range of services they become known as global distribution systems which allow the significant improvement of the business efficiency of travel agencies. Because of strategic alliances and other forms of cooperation they occur on the most important markets and allow the minimizing of the costs, reducing the need for the direct trade.

On the international tourist market are in use some global distribution systems well recognized and with an international prestige, their number of users and services provided evolve permanently.

We will stop of some of the most important [4].

- **AMADEUS** - provides marketing - distribution service, and sales tools for all companies from the transport industry. It was established in 1987 with the following founding members: Air France, Iberia, Lufthansa and SAS. There are 155,000 agents connected to its system.

  Amadeus is the only system that allows airlines to use the facilities for sale, of the airports. It offers to its clients the process management and sale softwares and the network of agents. Amadeus is a leader in Europe and Shout America, with a major share on the US market, Asian and African.

- **SABRE** - was established as a holding company (Sabre Holding Corporation) taking the system with the same name from American Airlines adding through the purchase of 35% of shares the distribution system ABACUS from Asia.

  This holding sells touristic arrangements and software for the agents in work with. Sabre also owns the Travelocity site which provides on line services for potential consumers.

- **GALILEO INTERNATIONAL** - originally were the name Apollo, being the propriety of Covia company from U.S.A. Covia was allied with the European consortium Galileo (the four founding members were: Alitalia, British Airways, KLM, Swissair), then merged and formed Galileo International.

  Soon after Canada has been associated in consortium, in 1997, the 11 companies of the Galileo system sold 35% of the company, the company became a public society. Galileo offers booking services, information and other products such as Wireless Galileo, Galileo e-cruise, XML, Select and Galileo View Trip. Galileo provided the Rail Master service which is an arrangement of reservation on French railways last year.

- **WORLDSPAN** - is another global distribution system which offers a huge range of additional service connected with air travel. The holder system is organized in such a way that it can conduct three types of activities: the
distribution itself of the travel and tourism service, e-commerce and consulting service offered to the travel agencies.

The Worldspan reservation system offers travel information for more than 20000 travel agents and users around the world. Worldspan is the leader in the sale in transport industry it sales are 50% of online sales. This system, relatively recently created (1990) has 3200 employees and its activity is spreads in 70 countries.

The born of Destination Management Systems (DMS) at the end of years 1980 has enable the new comprehensive complex and updated information on various tourist destination and offered optimal opportunities for planning, management and marketing for regional companies and travel agencies in this way. DMS is an important tool of promotion distribution and operation for travel agencies.

Buhalis [2] took the DMS concept further and has introduced the Destination Integrated Computer Information Reservation Management Systems (DICIRMS), a strategic tool used to maximize economic benefits, social, cultural and environmental tourist destinations. It stressed the fact that the DICIRMS systems are easier to use, having a friendly interface, easier access and more advantageous to purchase products and services. The information technology and the database infrastructure are used by touristic management organizations to support a wide range of activities and services.

The informational services are used for booking and other services from the system can be accessed and operated by web users. Today, the tourism is one of the most important applications on the World Wide Web. Initially, the access to the Internet appeared to be related to young people and those with training in the field. Today, there is a wide range of user who wants to know travel information or to purchase travel services using the Internet. As a fact, the era of networks modifies the importance of location and of quantities in the delivery process of the products.

As is known these information systems come to manage the activities of travel agencies or individual agents globally. It is good to late into account that at present, the “bulk air transportation is directed to the business travel or for the pleasure. People travelling for business do so for economic reasons and expenses are supported by the companies for which they work. As a result, there is a need for flexibility in achieving an arrangement taking into account that may be willing to be treated as “friendly” [6]. To know these are required more complete information, faster and easier to perform. All these are offered by information systems that use the Internet.

The Internet has the potential to have a major effect on how the hospitality and tourism product are distributed, redefining the modality in which the tourists discover and buy tourist products. It has the potential to overcome many problems associated with the traditional electronic distribution. Addressing to the consumer directly, it bypasses the GDS, giving rise to much lower costs and making possible the distribution of cheap products.

The absence of requirements in terms of structure gives the flexibility to distribute heterogeneous products, while the simplicity and the general acceptance of the user interface introduces consistency in how the information is accessed a necessary prerequisite in tourism [6]. The freedom of entry, low costs and the fact that one does not need any special equipment to make it attractive as a medium distribution
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for the small tourism operations while the multimedia capabilities and global scope make it very effective as a marketing medium. Its potential has been officially by the tourism sector. It has predicted that the Internet will be the key of leadership future in the national tourism sector.

Only those operations that will exploit the technology to properly identify the consumers’ needs and provide proper products will survive. The entrepreneurs’ market in tourism it is not a small one and they know to use informational solutions and applications. The Internet is the main virtual gate which enterprises can promote their services and attract customers but the extent to which it is operated is still a little one [3].

Thus, one can say that, at present, the tourism is partially on-line. Few of the companies on the Internet offer real functionalities even at the booking on-line level. Neither in terms of selling things are not better, the situation is similar with the existing one in on-line commerce, in that area are running a large number of e-shops, which can be proud that they overcame the “virtual window” level, but not the “online delivery” level. It is obvious that the Internet has become for most tourist operators in Romania as a catalyst for promotion and branding. These companies begin to understand the great benefits of online direct marketing and direct communication with potential customers. This thing becomes an advantage for any tourism company if the image that is created on its site is impeccable [1].

Many firms are wrong if they believe that only a website which is good-looking is sufficient for their image on the Internet. For a website to reach its purpose it must provide structured information about the offers of travel agencies and about individual providers in the branch and to have a correct, index to make it known and in this way to attract so many more visitors. The visitors mean potential customers and they mean a source of revenue for the region. This means that the website has achieved its aim of the promoter of tourism and the region.

The role of a website must not stop here. The idea of a website is not only the full presentation of travel offers but their actual sales to customers. Thus the implementation of solutions that allow the user to buy online the offer saw on the website is the great advantage that a travel agency or on enterprise from this branch can obtain from on website. This means the full using of the resources that posting on the Internet can be offered.

The firms seen to realize (as the dynamic online presentation of the offer in recent years) with the idea that the migration to online is beneficial, but the practice continues to leave desired. At the moment, most website of this king offers to the clients only the possibility of the study online of the offer which is on the market and to compare with the competition. The payment and other services are unfortunately still in the classic way.

A little better is the chapter of online bookings, but, in this case the processing of the application (or the necessity of telephone confirmation) makes that the advantage of operation processing in real time to be lost. The website that accepts credit cards can make reservations in real time.

Well, to realise this system, each king of accommodation which is on website must have an installed system witch is transmitting in every moment how many free
rooms there are (how it is, in every country, even in the touristic offers of our neighbour’s Bulgarian people).

Only in this way one can make reservations in real time. Most of them have application forms in which the command is transmitted by e-mail and the hotel/tourist agency rings the client. The non-use of maximum benefits brings on relationships with other agencies and companies from abroad and deepens the gap between the companies from and outside.

The western companies have adapted the new trend requires adding more touristic services in one online package:

- booking the air ticket;
- hotel booking;
- the confirmation of reservation;
- payment;
- rent a car, etc.

According to specialists, the customers whom access this king of offsets are the category of Internet users with a minimum experience of two years in terms of shopping online. Therefore the actual situation existing in Romania e-commerce and in the region, the launch of such offers by local tour operators could mean targeting a limited number of customers.

The initiative may be considered as one with low profitability only if the offer is viewed from the perspective of attracting customers exclusive from the county, and not abroad, more familiar with the purchase of such products. In this case also, the mechanism of money collection is quite complicated. For example, a foreign tourist, he paid the money to the company by bank transfer is much greater.

One of the factors considered to be the basis of the limitation of the development of the online tourism in Romania is the poor understanding of the benefits that online credit card payments offers. There are 7.1 million cards in Romania, there are a billion of users of the Internet in the word and foreign buyers are educated in payment for travel services online. In these circumstances it is not clear that backs request. The agencies and companies from the region put the blame on the trading commissions which they like at the level of transactions through the POS.

Conclusions. The future of tourism seems to belong entirely to the Internet. According to a recent estimation of the main actors from American tourist market in maximum 10 years the online companies will be majority, the tourism will practically became the biggest industry on the Internet [5]. A forecast justified by the scale on which the Internet has became in recent years in the tourism industry all over the world not just overseas.

Even if Americans are leaders in e-tourism, the Europeans have not left behind. Europe has quickly adapted to new trends, the constant increase of the number of internet users worldwide, the expanding capacity of distance payment instruments having a direct impact on this international industry. Even so, it is estimated that Europe will reach the level of American online tourism in 3-5 years.

The offer that the IT companies have for tourism is varied and starts with dedicated websites to internal applications. One of them is ARoBS Transylvania Software which has completed the implementation of informational solution for
Eximtur SA, the biggest travel operator in Transylvania [1]. The solution is that created a complete automat reservation system which manages the whole process from a travel agency, from contracting places to money collection.

All subsidiaries of the Eximtur agency from the country and also the resellers successfully use the online booking of tickets. Epicor Software Romania by Epicor iScala Hospitality meet the requirements of hotel industry offering an ERP solution with a great capacity of adaptability and flexibility, being able to cover a very wide range of actives, from those of catering, to warehouse management, service, accommodation, etc.

Epicor iScala Hospitality is an ERP solution fully integrated, which include the financial management, the management of materials, multiple sites financial consolidation and tool instruments for budget and report.

The system also includes interfaces with the main systems Property Management System (PMS) and Point of Sales (POS). Epicor iScala Hospitality is developed starting from iScala solution, with additional functionality to meet the unique requirements of the Tourism Industry. The application has demonstrated its utility, being used by 14 of the 20 top hotels in the world, more than 300 hotels in over 60 countries, as well as local restaurants and independent locations.

In terms of website Software Generator provides a website dedicated to tourism business. Thus, www.pensiunituristice.ro became an instrument of business development for those who have got hostels all over the country. What is more along whit this is added the development of dedicated web sites, assistance and consultancy for the companies in the field.

There is not a unique technology (such as computers, internet, phones, and videotext) which is widespread in the tourism sector, but a whole system of these technologies. In addition, the technology is not only used by airlines, hotels or travel agents, but all of them. The developments in the application of development technologies in tourism sectors are made in a fast way. However, these subjects seem not to attract the imagination of the tourism industry, which in some limits, been overcome by the development of technology.

REFERENCES:


[9]. *** - WTO - Hotel Industry Think Tank Reveals Extent of Internet Revolution, 2007