

A COMPUTER-ASSISTED GRAPHICAL MANAGEMENT SYSTEM FOR THE ASSESSMENT OF THE QUALITY OF TOURISM SERVICES BASED ON CUSTOMER RATES

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Abstract: *This paper presents an on-line management system for tourism services management. The system contains a graphical module for monitoring service quality based on customer surveys. The management system is attached to a website www.eurocars.ro. Finally the quality rates, given by the clients who used the transport services provided by this website were analyzed.*

Key words: *car, customer, management, online, tourism.*

1. Introduction

Services are the fastest-growing industry in the world, and tourism is the fastest-growing segment in the service industry. The word *travel* is a keyword in the definition of tourism. Just as there are different types of visitors, there are different forms and categories of travel which take place, varying according to traveler, destination, and motive for travel, such as international vs. domestic travel, intra-regional vs. interregional travel, as well as inbound vs. outbound travel [2].

The most common way of travel in the world, domestic and international, is with the family car. Tourists wanting to travel without using their own cars rent cars for travel. In about 70 per cent of car-rentals, tourists rent at airports. The increase in air travel brought about by deregulation has helped in stimulating the car-rental

business. Most customers are business travelers. Business customers are primarily concerned with how reliable the firm is and how convenient it is to rent the car. The most numerous business transactions occur from Monday to Friday. Because the industry operates on small profit margins, auto-rental firms have gone after the pleasure traveler, especially the weekend ones [1]. This ensures the use of cars that would otherwise stand idle over the weekend. Pleasure travelers also rent cars for a longer period. This reduces the costs involved in selling and servicing the vehicles.

2. The car rental management system

Usually a person rents a car when on vacation. If the tourist flies to their vacation destination, bringing the personal car is not an option. Some areas have public

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transportation that can be used, but getting a taxi service every time the tourist wants to go out can be very expensive.

Because so many travelers use car rental services, most of the country's airports have car rental companies. Airport car rental is a convenient option for tourists. The tourist can make the reservation before arrival and the chosen vehicle will be available for him/her at the airport. Several documents have to be signed and after having paid for the rental car, the tourist is free to use the cars.

In most cases, the tourist uses the Internet to find a car rental supplier. For this purpose they make a reservation on a specific website. The website represents the front office client interface.

Further, the reservation is processed by an on-line reservation management system, which is the back office interface. The on-line car reservation management is a system operated and managed over the Internet [3]. Therefore, it provides a lot of options and advantages as compared to the database systems. The most obvious are: the car rental employees, partners and clients can access the system from anywhere in the world: office, home or when traveling.

The only condition required is possession of a computer connected to the Internet. The system can be maintained in the server of a hosting company.

There are several important modules in the graphical management system presented in the Figure 1.

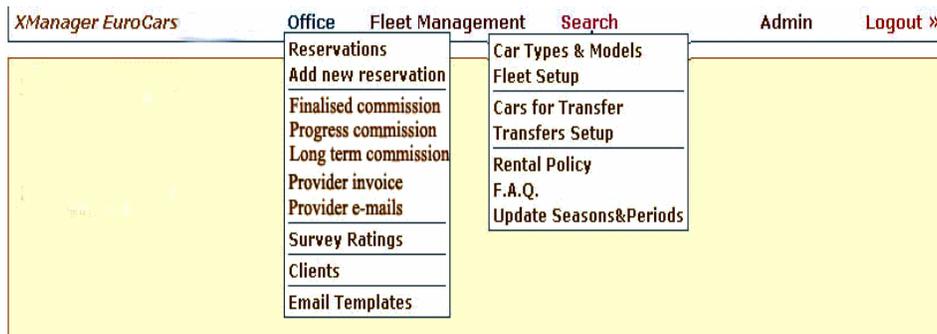


Fig. 1. *The graphical management system modules*

The *office package* provides an efficient management for all the basic rental operations. All the necessary data and administrative tools are available for the instant access to all pertinent information. This module allows editing customer's info, finalize and confirm the reservations and ultimately rent the cars to the customers. Information about any customer can be viewed in the database (clients section): his/her personal data, contacts, vehicle type, rental period, etc.

The *office module* sends automatic confirmations to customers after they make

a reservation by e-mail. This module is adapted for company needs: the program can give an automatic confirmation on the website, after the customer fills the reservation form. Also, this system can send data to the office, where it can be manually confirmed.

Another facility of the system is the possibility to automatically print out a bill or receipt based on the information provided by the customer when he/she makes the reservation [4]. Moreover, if the customer pays via web site, he/she can print out the receipt or have it sent by fax

or mail. Additionally, it can be modified to export data to the existing account program.

The automatic bills are simple to use and save time because they don't require any additional work.

In the *Client* section from the office module there is a graphical interface for accessing the customer quality survey. Assessing service quality is not always clear and objective enough, because it has a higher degree of subjectivity, difficult to quantify. When quality does not meet the customers' expectations, they immediately express their displeasure, while perhaps

satisfied customers do not always take the time to express their satisfaction.

Figure 2 presents an example of the measured results for some reservations provided by a company named Anita Prodimpex using the website www.eurocars.ro. In the picture below, the reservation numbers are noted as BB followed by some numbers (BB-0227). By Q1...Q9 the question numbers are indicated.

Under the questions, the rates for every question provided by the customer are presented. In the comment section some comments made by clients are presented.

Anita Prodimpex

Res	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Comment
BB-0227	5	5	5	4	5	5	4	4	5	...
BB-0444	5	5	4	3	4	4	3	4	4	...
BB-0265	4	5	4	4	5	5	5	4	5	pneomatici invernali...
BB-0306	5	4	5	4	4	4	4	4	5	thank you (as always) also because you seen that t...
BB-0565	5	5	5	3	2	5	4	5	5	...
BB-1010	5	5	5	4	5	5	5	5	5	perfetto tempismo su tutto complimenti per il serv...
BB-1055	5	5	4	3	4	5	4	5	5	...
BB-1036	5	5	5	5	5	5	5	5	5	...
BB-1337	5	5	5	5	5	5	5	5	5	Cu siguranta vom mai colabora pe viitor...

Fig. 2. The clients' quotes in the client module

Another important module is *fleet management*, containing several sections. If it is necessary to add or delete cars from the database, the section *car types and models* is used. Moreover, the description and details of the car fleet might also change and this module allows making any of these necessary changes in the existing information (fleet setup section). To mention some of the items in the database: car photo, ID number, factory number, damages, other details etc. Also from the fleet management module the car prices can be modified as well as the rental policy or FAQ (frequently asked questions).

3. Analyzing Procedure

For this paper the quality of transport services was analyzed based on customer ratings provided by the website www.eurocars.ro.

EuroCars, the owner of the above mentioned website, is the top on-line provider for tourist transport services in Romania. The services provided are: car rental with or without driver, minibuses and limousine rental. From the beginning, the target segment of customers was foreign tourists.

The tourists make a reservation on the website www.eurocars.ro. The reservation

is processed further by an on-line computer-assisted management system, attached to the mentioned site. After all the rental details are clarified with the customer, the on-line system sends them to the department that performs the actual rental which means: signing the rental papers, taking the car and using it by the tourist.

As we talk mainly about foreign tourists, their requirements in terms of quality of service are very high. EuroCars Romania managed to adapt to these conditions, and therefore the number of customers has grown exponentially from year to year. For a successful management of this large car rental request, Eurocars began to offer apart from their own services, the tourist transport services of some national suppliers. They work under the Eurocars brand and agree to assume responsibility for the quality of the provided services under a contract signed with Eurocars.

This change involved a serious risk in relation to the quality of service because Eurocars had to guarantee the service quality of these providers in relationship with its clients. This risk was reduced by monitoring the quality of services provided by the national rental suppliers, based on assessments made by the customers. In this sense, a module was developed in the computer assisted graphic on-line system, in order to evaluate the service quality for each Eurocars partner, based on customer evaluations that had benefited from the service.

4. The results

In this paper the customer evaluation results for one year are presented. Results regarding the quality of services offered to tourists by EuroCars partners were obtained using the computer assisted system. After the rental period, customers received a questionnaire to assess the main components of the received services using 9 questions noted with Q1...Q9: the agent's *punctuality* (Q1), the agent's *professionalism and solicitude* (Q2), *the time* spent to get the rental car (Q3), the quality of the rented car (Q4), *cleanliness* of the car (Q5), service when the car is returned (Q6), was the car the one from the offer (Q7), the overall service provided (Q8), the *willingness* to rent a car again from Eurocars.

The results were tabulated/centralized using the graphical on-line monitoring system. Further, the information was analyzed in order to improve the service quality and increase customer satisfaction. Customers had the chance to assess the quality of the car rental service by giving marks from 1 to 5 (1- disastrous, 5- excellent). The clients evaluated, by means of questionnaires, 24 Eurocars partner companies from Romania that offer rental services under the brand EuroCars.

In Table 1 below, the results for several companies are presented as an example. The "partner" column presents ten Eurocars partners described by numbers from 1 to 10.

The average rates for ten companies Table 1

Partner	Survey number	Question number								
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
1	46	4.26	4.26	4.17	3.67	4.26	4.07	3.88	4.07	4.16
2	43	4.81	4.74	4.67	4.29	4.14	4.64	4.52	4.67	4.55
3	77	4.68	4.64	4.68	4.08	4.51	4.62	4.43	4.52	4.68
4	50	3.92	4.38	4.27	4.15	4.46	4.15	4.27	4.23	4.08
5	48	4.45	4.47	4.5	3.55	4.13	4.39	4.05	4.16	4.26
6	45	3.44	3.96	3.88	3.52	3.6	3.68	3.64	3.44	3.72
7	42	4.28	4.14	4.34	3.59	3.97	4.1	4.1	4	4.21
8	41	4.71	4.71	4.82	4	4.41	4.76	4.24	4.53	4.71
9	34	4.19	4.13	4	3.69	3.94	3.88	4	3.75	3.94
10	31	4.21	4.5	4.07	3.57	4.07	4.5	4.21	4.29	4.21

The similarly recorded situation, however for 24 partners and 1534 questionnaires, is illustrated in Figure 3.

From the chart situation presented, it results that the minimum rate was 3.60 and the maximum was 4.50 for all the questions (Q1...Q9). Also it can be observed that the lowest average rate is

given for question 4, concerning the quality of the rented car and the biggest rate is given for question 2, which refers to the staff that interacted directly with the client.

The average rating for all the service components was of 4.26 on a scale between 1 and 5.

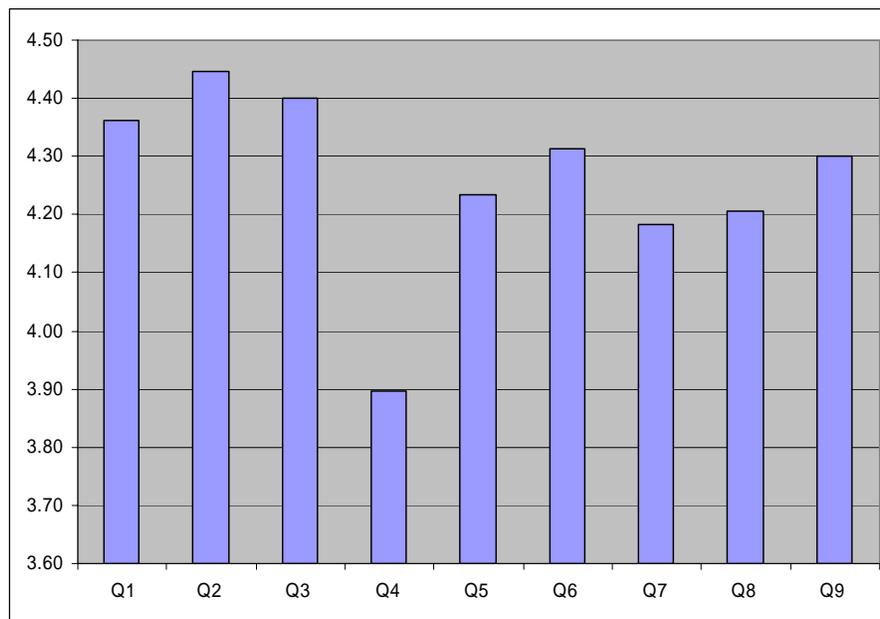


Fig.3. The quality results for 24 companies

5. Conclusions

Although customers can have a positive attitude towards a company and its services, buying behavior can be unpredictable. It is therefore very important for businesses to have a system to shorten the reaction time to customer requests, providing quality support and services.

Implementation of an on-line graphical management system contributes to improving the company's relationships with its customers.

Customer relationship management philosophy consists in recognizing that a long term relationship with customers can be one of the most important assets of an enterprise, providing competitive advantages and improved profitability.

From the information presented it results that a lot of improvements have to be made in the car quality direction. In Romania, the rental industry operates on small profit margins and the expenses with car maintenance grow higher year by year.

The roads aren't always in the best conditions and this affects car quality and costs. On the other hand the clients are

more interested in car quality because it is connected directly to their safety and for this reason they are not very generous when it comes to rate question Q4.

References

1. Dănilă D.M., Gaceu L., 2009. Monitoring the tourism services using online instruments. In: Challenges in Higher Education and Research, Sozopol, Bulgaria, June 2-5, p. 374-378.
2. Dănilă D.M., Gaceu L., 2009. Online evaluation method for assessing the variation of the tourist number interested in car rental. In: Bulletin of the Transilvania University of Braşov, vol. 2 (51), Series II, p. 75-78.
3. Nechita A.I., Dănilă D.M., 2012. Contributions on segmenting customers who rent cars through online systems and assessing the quality of services received. In: The International Conference on New Research in Food & Tourism, 24-26th May 2012, BIOATLAS, Brasov, Romania, p. 286-288.