

Formation of a Common Information Space of Hotel Enterprisers

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Abstract: This paper deals with approaches of formation of a common information space of hotel. The first of these approaches involves the introduction of ERP systems, designed to fully automate large enterprises. Implementation of the second approach starts with choosing the PMS by a hotel. In this case, an integrated automation is achieved by acquiring additional systems and integrating them with PMS. An important criterion for choosing PMS is the functional completeness. To carry out a formalized, comparative analysis of functional content of PMS the authors propose to use the technique suggested in [1] and updated in [2]. The essence of the technique lies in obtainment of quantitative estimates of the functional content of PMS with the help of operations on set of functions of comparable systems. Outcome matrixes contain calculated values of mutual similarity or dissimilarity of functional content of pairs of the systems, as well as values of the absorption degree of some systems by other ones in terms of functionality. The basis for using the technique proposed is a list of PMS functions, being the result of analysis of their functional content. Quantitative analysis of functional content of PMS allows hotel to choose a suitable, in this regard, system and provides a software development company with valuable information that can be used to improve the performance of its software.

Key words: PMS • ERP • Functional completeness criterion

INTRODUCTION

The theory of marketing in the hospitality industry devotes a significant role to informational component of hotel product [3], which increases its value and is formed due to the use of new information technologies of hotel management. References [4, 5] show a versatility of use of information technologies of hotel business, resulting in improvement of the hotel effectiveness. We shall consider the ideology of a common information space, i.e. the environment of coordinated interaction of different information and communication technologies, which provides the improvement of the hotel effectiveness.

Rapid progress in the field of information technologies as well as hotel enterprises globalization promote the active implementation of computer ERP-systems to the service sector, which were originally focused on large industrial enterprises, therefore they are adapted ideologically and technically to the common information space of the hotel.

Another approach is the implementation of PMS. References [6-9] deal in details with issues on the structure and functionality of PMS. Since the functional content of the system has its limits, the complex automation of the hotel is provided by the acquisition of the additional software products from different vendors and their integration with each other and with PMS [10]. The current state of the Russian market of specialized software is covered by papers [11, 12]. Wide range of software products faces a user with a problem of selecting a system suitable for specific hotel. This problem is covered, for instance, in the reference [13].

The development of criteria for assessing the quality of PMS from a user's perspective and the development of a system classification for the purpose of a hotel to choose reasonably the optimal system is of particular interest. Functional completeness shall be understood to mean the presence in the system of all functions required by user.

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Techniques: Technique of comparative analysis of the functional content of software systems based on quantitative indicators is applicable in respect of PMS. The basis for its use is the full list of PMS functions.

Let $S = \{S_j\}, j = \overline{1, n}$ - be a set of comparable PMS.
 $F = \{F_i\}, i = \overline{1, m}$, - a set of system functions. Comparison is based on table of functions implemented by PMS considered. Table column headers contain names of systems S_j and table rows contain functions F_i . The table element x_{ij} is equal to 1, if i function is implemented in j PMS and otherwise it shall be equal to 0. For systems S_j and $S_k, j, k = \overline{1, n}$ selected, the absorption coefficient of functional content of system S_j by the system S_k ; H_{jk} ; as well as a degree of similarity and dissimilarity of functional content of systems G_{jk} and R_{jk} shall be calculated. The elements H_{jk}, G_{jk}, R_{jk} form n by n matrices. Analysis of matrices reveals a group of systems, similar to each other by the functional content, defines the systems absorbed by others in functionality and finds the systems differing.

RESULTS

Study of range of software products, designed to automate the hotel business and represented on the Russian market, as well as the characteristics of their implementation into production and business activities of the hotel enterprises made it possible to distinguish two strategies of forming a common information space of the hotel.

Analysis of functional content of the most common PMS on the Russian market allowed compiling a list of functions of systems, selecting the PMS function blocks, defining functions that form the core of PMS.

CONCLUSION

The results obtained provide the basis for the application of the above technique of formalized analysis of functional content of PMS. Using this technique helps reasonably choosing the system.

PMS developers can use these results to improve the quality of its software products through the development of their functional content.

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