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Improving Tourism Package Configuration in Web Environment

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Abstract

The customers can use numerous specialized services that are available on the Internet, if they want to configure a tourism package. These services can be of lesser or greater complexity but most of them configure an offer from a series of picking lists from which a customer should pick an option. This can often be rather time-demanding and frustrating, especially when the customer has no real knowledge about the offered options. Therefore, this paper proposes the structure of a web-based tourism package offer, which enables the configuration of a tourism package for a specific destination in a time-effective way, accompanied with a case study.

Key words: *Mass Customization, Personalization, Time-effective Configuration, Tourism Package*

1. INTRODUCTION

Customer focus has become a necessity in recent years because the product offer overload forced companies to fight for each individual customer. One result of this attempt is that companies now organize their activities around customers [1]. In order to address the individual needs of customers, mass customization has been introduced as an approach. One implication of this approach is that the variety and complexity of the product offers rises, both for the company and for the customer [2,3]. To be able to manage the ever increasing variety and complexity of products in mass customization, companies have to reorganize their entire business approach, taking into consideration the whole lifecycle of products [4]. Within the product life cycle, particular attention should be directed towards production issues [5,6]. Mass customization also changes the role of the customer from the consumer of a product to a partner in its creation [7]. Active customer participation is crucial for the successful incorporation of customer needs into the product, but it is also important to satisfy the user's experience-related requirements, because experience is created through a chain of human cognitive activities. Therefore, active customer participation is an important design driver for the whole process, which directly influences the final product offering [8,9,10].

To be able to incorporate the customer needs into the product, a system is needed that can translate the customer needs into product specifications, i.e., a specification system is necessary. Therefore, product configurators are used which translate customer needs into product designs in order to deliver a final solution based on product realization knowledge [11].

The involvement of the customer into the configuration of the final product raises several questions that have to be answered, one of which is that despite customers nowadays being knowledgeable in general, they are still far from being experts who can really co-create a product or a service [12]. The fundamental challenge is to avoid the abortion of the configuration process by the customer. In many cases, the customer aborts the configuration on his own due to a lack of customer-desired option values regarding a specific attribute within the system, as well as the inability of the customer to create definite preferences among certain option values. As a result, the customer does not reach the orders-sales phase. Furthermore, if customers are overwhelmed by the configuration task, there is a chance that they may abort the configuration process. Customers usually only want the product alternatives that meet their requirements perfectly; if too many choices are offered, customers can feel frustrated or confused, and therefore become incapable of making proper decisions.

Based on problem analysis regarding customers' involvement in the configuration process, the main areas of investigation to be considered are the minimization of the complexity experienced by the customers and the reduction of the cognitive overhead, considering not only the extent of choice, but the customer's lack of understanding of which solution meets their needs, and also the uncertainties about the behaviour of the supplier and the purchasing process [13].

The fact that the number of IT users is steadily increasing, and that more and more people rely on the Internet to find information and solve their problems, suggests that the Internet is a suitable environment for providing customers with the appropriate products.

The results of analyzing available tourism services on the Internet yielded the conclusion that the offers of tourism packages are extensive (849000000 results on Google for Tourism package on June 27th 2012), i.e., there is a multitude of sites which will give practical information on how to organize a stay at desired locations with hotel packages, on-line booking, calendar of events, city maps, gastronomy, etc., but that they are far from being a personalized service to the customer.

The previously described aspects ask for the development of a web-based product configurator that can configure a personalized tourism package offer in a short period of time, without much effort from the customer.

The remainder of the paper is structured as follows: First, a short background on customer profiling, product configuration and product structuring is presented. Following that, the procedures proposed for the tourism package configurator are presented, as well as the information technologies used for implementation of the product configurator. Next is a case study showing the first test results for the wider area of Severna Bačka, Serbia. Finally, a discussion of the results and conclusions are presented.

2. BACKGROUND

2.1 Customer profiling

To be able to select or filter objects for an individual, information is required about the individual, i.e. profiling the customer is required [14].

The area of customer profiles consists of general information about customers, which usually deals with basic and demographic attributes, information about specific product interests, information about general interests, information about relationships to other customers, information about the buying history and usage/interaction behaviour and ratings of products, product components and certain attributes [15], specific information about customers, which is derived from input questions [16] and contextual information about customers, such as time of the day, the date, etc. [17].

2.2 Product structuring

The proper structuring of the product configuration models is necessary in order to be able to deal with the problems of configuring complex products and reusing the configuration models effectively. The means to structurally represent and reuse domain knowledge is ontology, which is defined as the conceptualization of terms and relations in a given domain [18].

The ontology provides a shared understanding of a domain of interest to support communication among human beings and applications. One of the main advantages of ontology is the ability to support the sharing and reuse of formally represented knowledge by explicitly stating concepts, relations, and axioms in a domain. Ontology has been widely applied in a variety of domains to represent information or knowledge models owing to the fact that its formal semantics can be unambiguously interpreted by humans and machines [19,20,21].

2.3 Product configuration

A system that can automatically or interactively configure a product, while satisfying customer requirements and technical constraints by using a product configuration technology is a product configuration system [22]. Configuration systems include the configuration models describing all legal combinations of components and the knowledge about the structure of the products and knowledge about technical constraints, constraints specified by customer requirements, etc.

Using a problem-solving technology, configuration engines perform inference processes using configuration models and constraints as inputs and then generate a configuration as the output. A configuration consists of the component individuals, the assigned values to properties of these individuals and the connection relations among components.

Various techniques have been suggested to solve product configuration problems such as Genetic algorithm based approach, case-based reasoning method, rule-based approach, constraint satisfaction problem technique, etc. All of these techniques have advantages and disadvantages that are widely analyzed in literature [23,24,25].

3. THE PROPOSED PROCEDURES AND TECHNOLOGIES USED FOR THE TOURISM PACKAGE CONFIGURATOR

3.1 Customer profiling procedure

In order to be able to configure a personalized tourism package offer, the customer needs to be profiled first. Not only is an accurate customer profile needed, but the profiling process also has to be as quick and easy as possible, to make sure that the customer does not feel obliged to spend a considerable amount of time on this activity before a solution is offered.

For that reason, a procedure for collecting and using information about customers is proposed. The customer is given a small set of initial questions that have to be answered at the beginning of the configuration process. The possible answers are defined within a range of, generally speaking, very low to very high. In order to analyze the answers generated by each customer and to use them to form a customer profile, a number of approaches from the field of data analysis may be used, nevertheless the nature of the questions and the answers refer to the use of a non-crisp logic; therefore fuzzy logic is used to determine the appropriate customer profile [26,27,28].

The fuzzy output from the system, i.e. the decision is made in a manner that for a given set of initial questions, different outputs are generated. This output is actually an input to a larger set of questions whose answers are in this way preset to values defined by the built-in logic. In this way, a two-level fuzzy reasoning is used [29]. This step is necessary in order to speed up the profiling process. Preset values can be changed by the customer if they do not reflect the customer's individual requirements, but whether they are changed or not, they are also analyzed using the same fuzzy logic. The output from this fuzzy reasoning is a set of constraints on the values of attributes of the components of tourism offer.

The proposed fuzzy reasoning model is shown in Fig. 1. At the beginning of the configuration process, the customer is asked to answer two questions, about their age and about the type of the customer. The answers to these questions, i.e. the output from the first fuzzy reasoning, are used to preset the answers to the second set of questions, about the customer's budget, expectations, preferred duration of the components of the offer, and preferred level of activity. These answers are used for the second fuzzy reasoning. The result is an output that is used to form the target values of the following component attributes: budget, quality, duration type, and the value for the activity level of the component. This two-level fuzzy reasoning is also used to avoid the potentially conflicting values of the output that could occur if the customer enters values such as high expectations, but very low budget, etc.

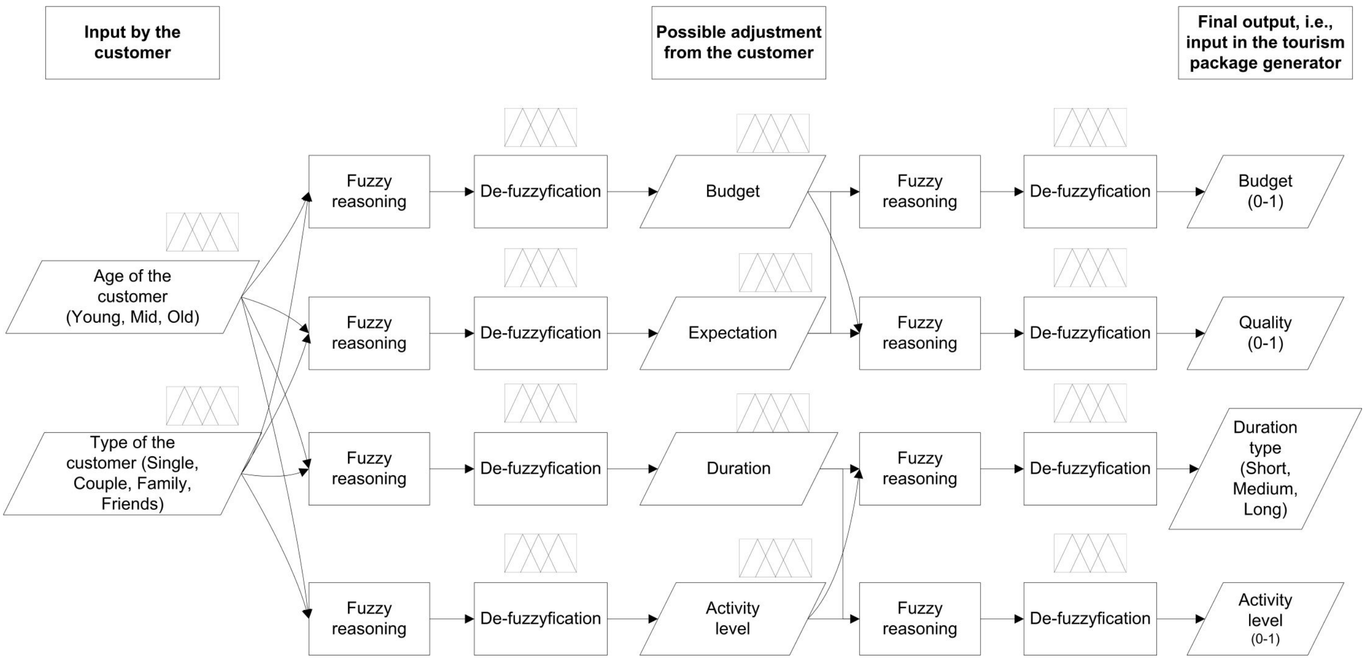

Figure 1. The fuzzy reasoning model

3.2 **Structure of the tourism package**

If one wants to configure a tourism package product, the approach is to define this product as a complex object. Then, the package generation is made by combining a subset of components from a set of predefined ones, while meeting the customer requirements, and other predefined constraints. The proposed product structure is shown in Fig. 2.

The tourism package complex object consists of one or more 'day' objects, which are complex components as well. The range of the possible cardinalities for the duration of the tourism package is expressed by the interval (1:4), which means that the tourism package could last from one to four days. The 'day' complex component consists of four different type components. Components are places, sights, museums/galleries and restaurants. Cardinalities for 'lunch' and 'dinner' are 0 or 1, which means that there can be a restaurant component if the customer asks for it. Cardinalities for the other components range from 0 to m, n and k. 0 means that there is no component at all in the configured package, whereas m, n and k depend on constraints and requirements defined by the customer and by the developed configurator.

The structure of the components is defined as a hierarchical classification. The overall structure is previously defined [30]. At this time, for the purpose of this particular solution, only a part of the structure is used, which is shown in Fig. 3.

3.3 **The configuration procedure**

The structure of the configuration procedure for the tourism package configurator is shown in Fig. 4. The first predefined process selects the places, sights and museums/galleries based on the input parameters obtained from the customer, and data from the components' database. The selection is made by picking the components one by one, until the time frame is filled.

The second predefined process is used for choosing the appropriate restaurants that serve as a basis for the inclusion of restaurants into the final configuration. Restaurants are also selected based on the input parameters obtained from the customer, and data from the components' database. The number of chosen restaurants is larger than needed for the customer to be able to select the appropriate restaurants which are not too far away from selected components. After all components for the tourism package are defined, the package generator activates the final predefined procedure. This procedure optimizes the order of the components. As the result of the final procedure, the generated tourism package is determined. It contains all the necessary data (sequences of events, durations, travel durations, etc). All procedures function in a way that one component can be selected only once.

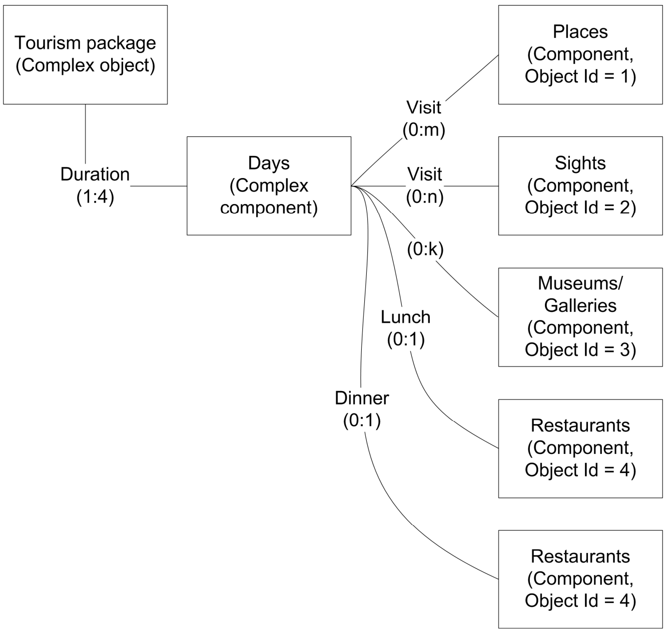

Figure 2. Product structure

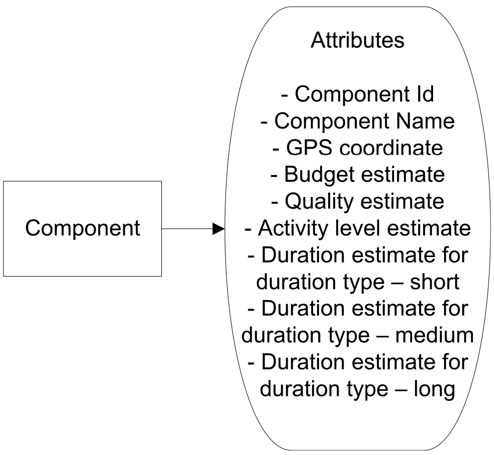

Figure 3. Component structure

3.4 Used information technologies for implementation

In order to be able to implement an on-line configurator for the tourism package configuration, several information technology tools have to be used. The overview of the used technologies is presented in Fig. 5. PHP is used for data manipulation from the input and from the MySql database. The manipulated data is then transmitted to javascript. Javascript communicates with Google maps through Google maps API v3 to visualize the transmitted data to the map. In addition to mere visualization, there is a need for trip optimization. The used tool is Optimap [31]. The tool calculates the best possible roundtrip route and displays it on the map. During the restaurant insertion, the Haversine formula is used to make the decision, which restaurant to insert from the set of selected ones [32].

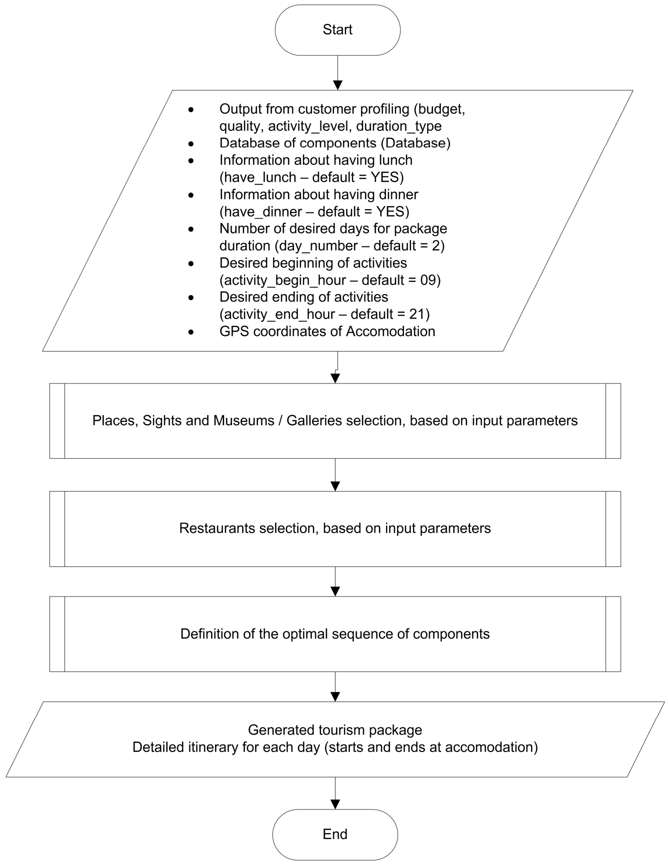

Figure 4. Configuration procedure

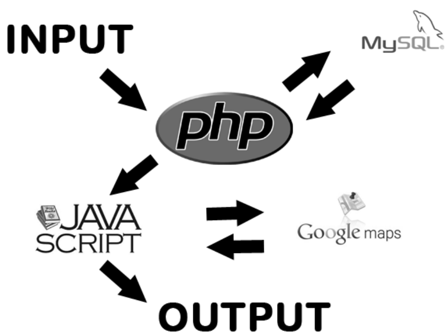

Figure 5. Used information technologies

4. CASE STUDY

The tourism package configurator is tested by configuring a package for the wider area of Severna Bačka, Serbia, to attain feedback on the developed approach. The case study tested three variations of input parameters that are presented in Table 1. The data whose values were varied are shaded. As an example, the visualization of input parameters for the 1st variation of input parameters is presented in Fig. 6. The output from the second-level of profiling for the input parameters is presented in Table 2. This output is not visible to the customer.

Table 1. Input parameters

Input parameter	1st var.	2nd var.	3rd var.
Age of the customer [Y]	40	40	20
Type of the customer	Couple	Couple	Alone traveler
Budget	Auto. (0.58)	Auto. (0.58)	Auto. (0.17)
Expectation	Auto. (0.64)	Adapted (0.9)	Auto. (0.17)
Duration	Auto. (0.56)	Auto. (0.56)	Auto. (0.50)
Activity level	Auto. (0.64)	Auto. (0.64)	Auto. (0.83)
Have lunch	Yes	Yes	Yes
Have dinner	Yes	Yes	Yes
Begin activities [hour]	08:30	08:30	08:30
End activities [hour]	20:30	20:30	20:30
No. of days	2	2	2
GPS of accommodation	46.099067, 19.773417	46.099067, 19.773417	46.099067, 19.773417

Table 2. Output from the second-level of profiling for input parameters

Output parameter	1st var.	2nd var.	3rd var.
Budget	0.56	0.82	0.28
Quality	0.56	0.82	0.26
Duration	Medium	Medium	Short
Activity level	0.52	0.52	0.50

The component database currently consists of 79 records. 24 records are 'Places', which have attribute values for 'Budget' between 0.0 and 0.5, values for 'Quality' between 0.2 and 0.8, and for 'Activity level' between 0.2 and 0.9. 21 records are 'Sights', which have attribute values for 'Budget' between 0.1 and 0.9, values for 'Quality' between 0.2 and 0.8, and for 'Activity level' between 0.1 and 0.8. 12 records are 'Museums/Galleries', which have attribute values for 'Budget' between 0.1 and 0.7, values for 'Quality' between 0.3 and 0.9, and for 'Activity level' between 0.2 and 0.8. 22 records are 'Restaurants', which have attribute values for 'Budget' between 0.4 and 0.9, values for 'Quality' between 0.2 and 0.9, and for 'Activity level' between 0.1 and 0.3.

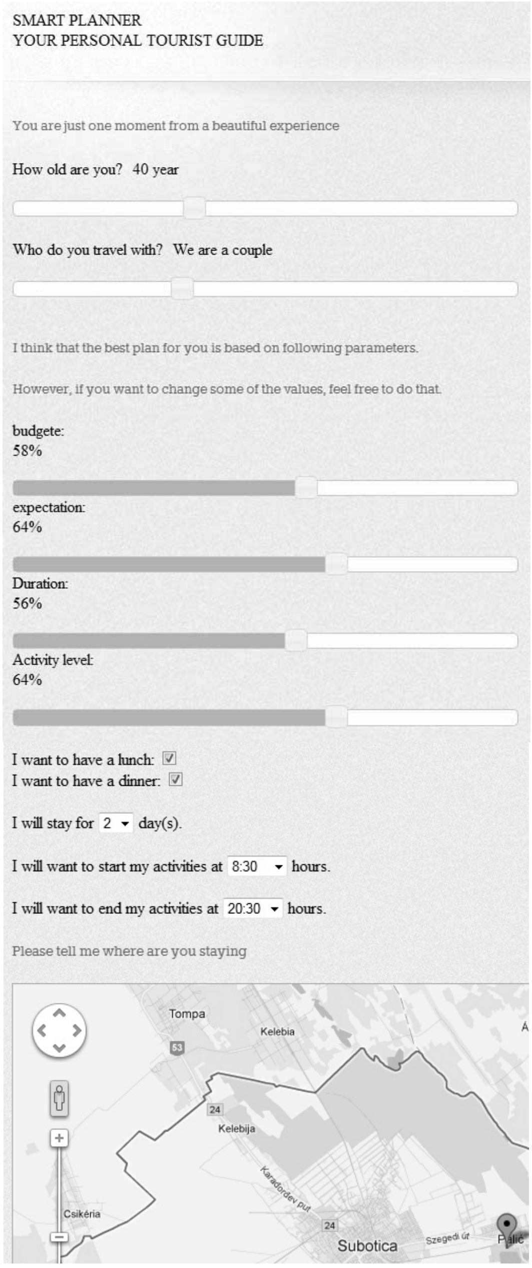

Figure 6. Input parameters

The selected components in the case of the 1st variation of input parameters are shown in Fig. 7, while the selected components in other cases are presented in Fig. 8 and Fig. 9 respectively.

As an example, the geographical locations of the selected components in case of the 2nd variation of input parameters are shown in Fig. 10. At this time, the presented components are neither optimized by day nor by order. Also at this time the restaurants are not included either. This output is not visible to the customer.

Type	Name	Budget	Quality	Activity level	Duration
Places	Centar grada Subotica	0.5	0.6	0.2	1
Sights	Franjevacka crkva Subotica	0.5	0.6	0.1	0.5
Museums/Galleries	Toranj Senta	0.4	0.4	0.4	0.5
Places	Jevrejsko groblje Senta	0.4	0.6	0.4	0.75
Sights	Gradska kuca Kanjiza	0.5	0.6	0.3	1
Museums/Galleries	Muzej Zobnatica	0.7	0.3	0.5	1
Places	Strand Kanjiza	0.3	0.5	0.3	2
Sights	Pravoslavna Crkva Svetog Vaznesenja Subotica	0.4	0.6	0.1	0.5
Museums/Galleries	Gradski muzej Subotica	0.4	0.9	0.3	1
Places	Zoo Palic	0.2	0.7	0.3	2
Sights	Vinarija Tonkovic Backi Vinogradi	0.7	0.6	0.4	1
Museums/Galleries	Institut za kulturu Kanjiza	0.3	0.6	0.3	2
Restaurants	Denis Subotica	0.6	0.6	0.1	2
Restaurants	Alaska Hajdukovo	0.5	0.6	0.1	2
Restaurants	Nepker Subotica	0.6	0.5	0.1	2
Restaurants	Restoran Banja Kanjiza	0.5	0.6	0.1	1.5
Restaurants	Nirvana Subotica	0.5	0.5	0.1	2
Restaurants	Vinski Dvor Hajdukovo	0.6	0.6	0.2	2

Figure 7. Selected components in the case of 1st variation of input parameters

Type	Name	Budget	Quality	Activity level	Duration
Places	Centar grada Subotica	0.5	0.6	0.2	1
Sights	Vinarija Zvonko Bogdan Palic	0.9	0.7	0.4	2
Museums/Galleries	Spomen skola Senta	0.5	0.4	0.5	1
Places	Ergela Subotica	0.4	0.8	0.4	2
Sights	Vinarija Tonkovic Backi Vinogradi	0.7	0.6	0.4	1
Museums/Galleries	Gradski muzej Subotica	0.4	0.9	0.3	1
Places	Strand Kanjiza	0.3	0.5	0.3	2
Sights	Muhadzir Dzamija Subotica	0.6	0.5	0.4	0.5
Museums/Galleries	Toranj Senta	0.4	0.4	0.4	0.5
Restaurants	Galerija Subotica	0.8	0.8	0.1	2
Restaurants	Riblja Carda Palic	0.9	0.9	0.1	2.2
Restaurants	Gurinovic Subotica	0.9	0.7	0.1	2.2
Restaurants	Glorija Subotica	0.8	0.7	0.1	2
Restaurants	Mala Gostiona Palic	0.8	0.8	0.1	2
Restaurants	Restoran Zobnatica	0.8	0.7	0.2	1.6

Figure 8. Selected components in the case of 2nd variation of input parameters

Type	Name	Budget	Quality	Activity level	Duration
Places	Groblje Kanjiza	0.2	0.3	0.4	0.5
Sights	Katolicka crkva Backa Topola	0.3	0.2	0.3	0.25
Museums/Galleries	Zeleznicka stanica Subotica	0.1	0.6	0.2	0.25
Places	Mlecna pijaca Subotica	0.2	0.5	0.3	0.5
Sights	Pijacni Trg Kanjiza	0.2	0.4	0.4	0.3
Museums/Galleries	Likovni susret Subotica	0.1	0.6	0.2	0.25
Places	Strand Kanjiza	0.3	0.5	0.3	1
Sights	Sencanska Crkva Subotica	0.3	0.5	0.1	0.25
Museums/Galleries	Institut za kulturu Kanjiza	0.3	0.6	0.3	1
Places	Pescana plaza Palic	0.4	0.3	0.7	0.5
Sights	Kerska Crkva Subotica	0.3	0.5	0.1	0.25
Museums/Galleries	Zeleznicka stanica Senta	0.1	0.7	0.2	0.5
Places	Istocno groblje Backa Topola	0.2	0.4	0.4	0.5
Sights	Gimnazija Senta	0.2	0.5	0.4	0.25
Museums/Galleries	Zeleznicka stanica Palic	0.1	0.8	0.2	0.25
Places	Staro groblje Kanjiza	0.1	0.4	0.4	0.3
Sights	Zeleznicka stanica Backa Topola	0.1	0.2	0.2	0.25
Museums/Galleries	Gimnazija Subotica	0.1	0.8	0.2	0.25
Places	Narodna basta Senta	0.1	0.6	0.2	1
Sights	Vidikovac Auto Put Supljak	0.1	0.2	0.2	0.25
Museums/Galleries	Galerija Vinko Percic Subotica	0.3	0.8	0.3	0.5
Places	Jevrejsko groblje Senta	0.4	0.6	0.4	0.5
Sights	Glavni trg Senta	0.1	0.4	0.3	0.5
Museums/Galleries	Toranj Senta	0.4	0.4	0.4	0.25
Places	Park Prozivka Subotica	0.1	0.6	0.5	0.5
Sights	Pravoslavna Crkva Svetog Vaznesenja Subotica	0.4	0.6	0.1	0.25
Museums/Galleries	Gradski muzej Subotica	0.4	0.9	0.3	0.5
Places	Jezero Backa Topola	0.1	0.6	0.7	1
Sights	Glavni Trg Backa Topola	0.2	0.3	0.4	0.3
Museums/Galleries	Muzej Zobnatica	0.7	0.3	0.5	0.5
Places	Obala Tise Kanjiza	0.1	0.6	0.8	1
Sights	Crkva Svete Terezije Subotica	0.4	0.7	0.1	0.5
Museums/Galleries	Spomen skola Senta	0.5	0.4	0.5	0.5
Places	Zoo Palic	0.2	0.7	0.3	1
Restaurants	Restoran Morrison Backa Topola	0.4	0.3	0.1	1
Restaurants	Pub Palic	0.4	0.4	0.1	1
Restaurants	Restoran Ceri Backa Topola	0.5	0.4	0.2	1
Restaurants	Nirvana Subotica	0.5	0.5	0.1	1
Restaurants	Restoran Banja Kanjiza	0.5	0.6	0.1	1
Restaurants	Jazz Caffe and Pizzeria Hajdukovo	0.4	0.2	0.2	1

Figure 9. Selected components in the case of 3rd variation of input parameters

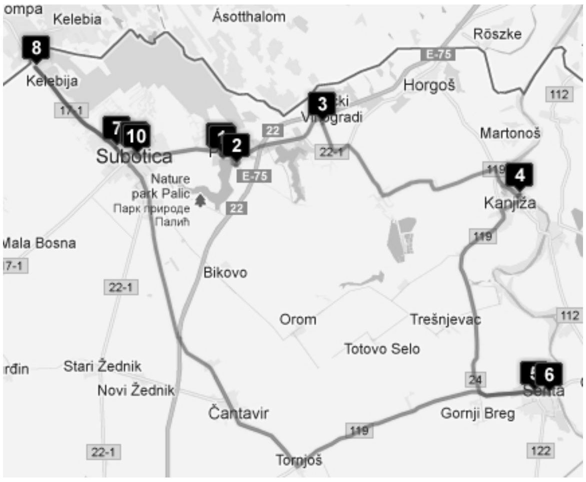

Figure 10. Geographical locations of the selected components prior to final optimization

Also, as an example, the final configuration in case of the 2nd variation of input parameters is shown in Fig. 11, Fig. 12, Fig. 13, and Fig. 14 respectively. The final configurations in other cases are not presented in the paper due to constraints regarding the length of the paper.

Nm.	Name	Duration [h]	Start [h]	End [h]
1	start	0	8.5	8.5
	Trip:	0.25	8.5	8.75
2	Vinarija Zvonko Bogdan Palic	2	8.75	10.75
	Trip:	0.75	10.75	11.5
3	Strand Kanjiza	2	11.5	13.5
	Trip:	0.75	13.5	14.25
4	Mala Gostiona Palic	2	14.25	16.25
	Trip:	1	16.25	17.25
5	Spomen skola Senta	1	17.25	18.25
	Trip:	1.25	18.25	19.5
6	Riblja Carda Palic	2.2	19.5	21.7
	Trip:	0.25	21.7	21.95
7	Vinarija Tonkovic Backi Vinogradi	1	21.95	22.95
	Trip:	0.25	22.95	23.2

Figure 11. Sorted components of the final configuration for day one

Figure 12. Sorted geographical locations of the final configuration for day one

Nm.	Name	Duration [h]	Start [h]	End [h]
1	start	0	8.5	8.5
	Trip:	1	8.5	9.5
2	Toranj Senta	0.5	9.5	10
	Trip:	1.25	10	11.25
3	Muhadzir Dzamija Subotica	0.5	11.25	11.75
	Trip:	0.25	11.75	12
4	Gurinovic Subotica	2.2	12	14.2
	Trip:	0.25	14.2	14.45
5	Ergela Subotica	2	14.45	16.45
	Trip:	0.25	16.45	16.7
6	Gradski muzej Subotica	1	16.7	17.7
	Trip:	0.25	17.7	17.95
7	Centar grada Subotica	1	17.95	18.95
	Trip:	0.25	18.95	19.2
8	Galerija Subotica	2	19.2	21.2
	Trip:	0.25	21.2	21.45

Figure 13. Sorted components of the final configuration for day two

Figure 14. Sorted geographical locations of the final configuration for day two

5. DISCUSSION OF THE RESULTS

Differences in customer profiling for the 1st and 2nd set of input parameters due to variation of the input parameter ‘Expectation’, results in differences regarding the chosen components (Fig. 7 and Fig. 8). ‘Places’ are more or less similar. This can be explained by the fact, that for ‘Places’, the attribute values in the database for ‘Budget’ are between 0.0 and 0.5, because of which, in spite of differences in customer profiling, similar components are chosen, as the predefined process in the first pass selects the components based on the attribute values for ‘Budget’. However, other components differ to a greater extent because the attribute values for other component types are defined in wider ranges. The same result can be observed for the 3rd set of input parameters, but due to the output result for ‘Duration’ the number of selected components in this case is considerably higher than in the 1st and 2nd case. The results for restaurant selection show differences in each case, because the attribute values for restaurants are defined in wide ranges.

The insertion times of the restaurants for lunch are 14.25h for the first day and 12h for the second day (Fig. 11 and Fig. 13). Differences occur, because the predefined optimization process does not allow for lunch to start before 12.00h. Regarding dinner, this limit is set to 19.00h, therefore the restaurants are inserted at 19.5h for the first day and at 19.2h for the second day.

The end of the activities is set to 20.5h (Fig. 6), but the configured sequences of the sorted components are finished at 23.2h and at 21.45h (Fig. 11 and Fig. 13). Set time is only theoretical, because it occurs before the component selection, when the information about the duration of both the components and of travelling from one to another component is not known. Besides, travel durations times are rounded up to 15 minutes, and that can lead to significant prolongation of time, especially if the number of selected components rises. This problem could be reduced by rounding up travel times to the nearest five minutes.

Regarding the sequence of components, at first, it appears that the final configuration for day one is not optimized (Fig. 12). However, the presented configurations are in fact the optimal solutions, keeping in mind the restrictions defined by the configurator. The problem lies in the fact, that the selected restaurants are located a bit far away from the components. This problem could be solved by defining a wider range of available restaurants in the area.

6. CONCLUSION

The idea and need of being able to offer each customer a personalized tourism package, but without much effort and time spent by the customer on the configuration process, resulted in the development of an on-line product configurator. The proposed solution for the tourism package configurator is based on a customer profiling procedure, and a configuration procedure. The developed solution generates a detailed tourism package for each day of the package, based on inputs from the customer and procedures, which are developed for the configurator.

The developed configurator is tested on a case study for the wider area of Severna Bačka, Serbia, to attain the first feedback on the configuration results, which will serve as a guide for future development.

Based on configuration results, it can be concluded that, by defining a very small number of input parameters, a complete tourism package can be configured. If the customer is satisfied with the profile defined after the first-level of profiling, and if they accept the default values of the package, the number of input parameters is only three. These are information about the age and type of the customer, and the location of accommodation.

Certain issues arise from the fact that the presented configurator generates the tourism package this way.

One of the problematic points is that the configuration does not take into consideration, whether the customers have specific requests regarding some tourist attractions or restaurants. Furthermore, customers do not have the opportunity to suggest new and adapt existing components, which could be used for new tourism package configurations. Also, there is no possibility for a feedback on customer profiling and on configuration results. In terms of directions for possible future research, this points towards the involvement of customers in picking the desired existing components, defining new and adapting existing components, by suggesting, grading, or voting. Also, feedback on customer profiling and on configuration results should be considered. This would likely turn this configurator into a comprehensive solution for tourism package offers.

The refined configurator is to be implemented into an overall internet service for tourism offerings of the area, to serve as a means to facilitate finding the appropriate tourism offer in a captivating, easy, and quick way. It is assumed that this way the interest of tourists in a given region will increase and that the increase of interest will lead to increased profits from tourism.

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Unapređenje procesa konfigurisanja turističkog aranžmana u internet okruženju

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Rezime

Kupci na raspolaganju imaju mnoštvo specijalizovanih internet servisa, koji im omogućavaju konfigurisanje željenog turističkog aranžmana. Ovi servisi, mogu biti manje ili više kompleksni, ali u većini slučajeva kupac konfiguriše aranžman izborom odgovarajućih opcija na osnovu liste ponuđenih mogućnosti. Ovakav način konfigurisanja, može biti vremenski zahtevan i frustrirajući, pogotovo u slučaju kada kupac ne poseduje odgovarajuća znanja potrebna za donošenje ispravnih odluka o izboru na osnovu ponuđenih opcija. Usled ove činjenice, u radu je prikazan predlog strukture konfiguratora turističkog aranžmana u internet okruženju, koji omogućuje brzo i jednostavno konfigurisanje turističkog aranžmana za datu destinaciju. Rešenje je testirano na studiji slučaja.

Ključne reči: *Kastomizacija, Personalizacija, Turistički aranžman, Vremenski efikasno konfigurisanje*