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A NOVELTY MODEL OF ONLINE ACCOMMODATION PRESENTATION AND DISCOVERY

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Abstract

Extreme expansion of digital technologies and social networks in recent years has had a huge impact on the travel market and online tourism. Along with the digitalization of tourism and travel business, every day more and more accommodation bookings take place online. Most popular online travel web sites are commonly charging provision for the accommodation booking and don't allow direct contact with the accommodation owners. Today tourists demand more for their money, so they are more likely to find information about their travelling destination on social networks and on destination local web sites. Recent studies also show a growing trend in online bookings through the direct contact with hotels or private accommodation owners. In this paper, we present a new model for online accommodation presentation and discovery. The first novelty in our approach is in the direct contact between the guest and accommodation owner. The second one is that the booking process is free of charge, 0% commission to the owner and to the guest. As a starting point in the

development of web and mobile application based on our model we took the habits of the target group, which makes the decision for accommodation on the basis of photos, free Wi-Fi and the price.

Keywords: mobile application, online travel, startup, tourism, accommodation

1. INTRODUCTION

This paper aims to demonstrate the potential and possibilities of innovative technology solutions to improve the customer experience, as well as a significant reduction in the cost of a modern online passenger. Our approach is based on the direct contact between accommodation owners and guests, and 0% commission for the booking service, both for the owners and for the guests.

Proposed model named Spotie has a modern approach and it is developed with the intention to investigate repetitive and scalable business models with global ambitions and global potential. It is aimed to the business users and to the end users, in this case for the owners of private and hotel accommodation, and guests who use their services. Business-to-Customer service (B2C) involves an organization business activity with end users. Sales of services to end users over the Internet are a basic feature of B2C economy. In the tourism sector, this approach is also called sharing economy. The advantages of this method for planning travel are visible at a first glance: saving time, offering much greater choice and requiring less time for researching alternatives.

What the tourism sector on the Internet differs from other similar B2C solutions is that online booking, often does not save any money, because the prices on many web portals are slightly higher than the prices of the same services on their real locations in the real world. The elimination of intermediate steps and costs in the value chain could significantly lower the cost of travel.

Rapid development of mobile devices and smartphones has irrevocably changed the way guests are planning their holidays. Potential use of mobile devices and smartphones in travel and tourism industry, as well as their impact on potential customer groups is discussed in (Portolan et al., 2011). Recent studies have shown that 51% of travellers have used their smartphone to make accommodation booking, while 47% of them booked flights with their smartphone. This Global Traveller Study (Lorden, 2014) was made on the basis of 4.618 participants. Furthermore, the study shows that 80% travellers take photos with smartphones on their holidays, and 72% use GPS on their phones to find a destination. Nearly all Millennials in the study - 95% use social media for sharing photos, searching for the recommendations and engaging with businesses. In the age group over 50 about 78% also uses social media on their holidays.

2. ONLINE TRAVEL MARKET

Along with the development of digital technologies there is also a rapid development of the online travel market. Every day more and more accommodation and transportation bookings take place on the Internet. Tourist web sites are sites dedicated to tourism and travel. They focus on reviews of tourist destinations, travelling prices or a combination of these two concepts. Online bookings are the largest component of e-commerce, according to Forrester Research. About 70 million users have examined and decided on their travel plans online in July 2006 (Saks, 2006). The transformation of the traditional travel market to the online travel market, as well as from traditional economy to the digital economy can cause impairment of classical structure and organization of the company. Some of the world's largest companies can be taken as an example. The biggest world's taxi company Über does not own any vehicle. World's most popular media Facebook does not create content. The most valuable world's retailer Alibaba does not hold any inventory. Airbnb the world's largest provider of the private accommodation does not own any property.

2.1. The Digital Economy

The digital economy is a new form of economy based on digital technologies (Tapscott, 1997). It is also called the new economy. For most countries digital economy is one of the most attractive growth prospects of their national economy. The presence of digital technologies today has become normal and we see more and more everyday forms in which digital technologies are included in our personal life as well as in our business activities. Digital technologies have become a fundamental element of all efforts for change, but also for the creation of new forms of successful positioning of all participants in the process, from the individual to the country, from global associating to communication in the family, from solutions that are applied locally and those that cover the whole world.

The taxonomy of the digital economy (Bilderbeek, 2013) is shown on Figure 1. Taxonomy is made by experts from METISfiles company, which is engaged in independent market research. This taxonomy represents a wrapper around the classification of industries at traditional economy.

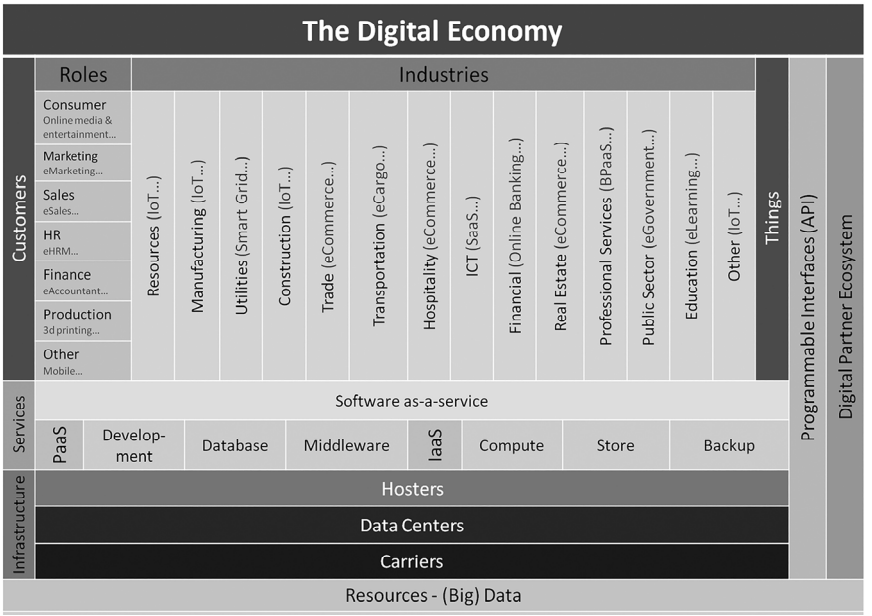

Figure 1 The digital economy taxonomy

Source: Bilderbeek, 2013

Traditional economy is divided into primary, secondary, tertiary and quaternary activities. The digital economy has a similar distribution. In digital economy taxonomy, there are resources in the form of Big Data, infrastructure presented by data carriers, data centres and hosters, services in a form of software (SaaS – software as-a-service), platforms (PaaS – platform as-a-service) and infrastructure (IaaS – infrastructure as-a-service), and clients at the end.

According to the report (Internet Society, 2015) more than 3 billion people around the world are using the Internet. The number of broadband connections in Croatia have reached a number of total 4.195.613 of the latest quarterly report (4th quarter 2015.) of Croatian regulatory authority for network industries (HAKOM, 2015). 986.215 of them are through fixed access communications network, and other 3.209.398 connections via mobile communication networks (UMTS, HSDPA, etc.). Along with the continuous rise in the number of Internet users in Croatia, but also in the whole world, each year has recorded a growth of the digital economy.

European Union strategy Europe 2020 (European Commission, 2010) provides the opening of the 16 million new jobs that will require high qualifications in the European Union by 2020. Given the statistics that says that the annual growth of the digital economy in the European Union by 12% (European Commission, 2014), which is seven times faster than the traditional

sectors of the economy, and that its total value of more than 600 billion euros, we can say that the digital economy equals economy.

2.2. Generation Y (Millennials)

By the 2020, about 50% of the global workforce will be made up of the Millennials, i.e. Generation Y. Millennials are people born between 1982 and 2000 (Howe and Strauss, 2000). This is the first generation to grow up under the influence of technology and for them a virtual world is of equal importance as the one in which they are physically located. Today they are the largest and most diverse generation of the whole human population. By their personal characteristics taken into account they respect society, family and business creativity, and invest in capital much more than the generation before them. As the choice of study programs they usually choose social and applied sciences. With the increasing costs of college enrolment more students are relying on loans to pay for additional education and most of them are exclusively focused on studying, instead of combining work with studying.

Generation Y "owns" the Internet, and has a high purchasing power. Way of thinking of this generation is managing the way to address them. Communication with them requires an extremely high amount of creativity and freshness, because this generation is already used to the incredible speed and flow of information. In the communication saturation they have learned to ignore the information that they are not interested and keep the ones that have informative or educational strength. In addition Millennials appreciate the honesty and accuracy of the presented data. Business transparency is one of the key factors to be taken into consideration when purchasing. Their experience gained by purchasing will share with many friends and colleagues with whom they are in daily contact.

Given the above, it is clear to conclude that the Millennialsare not only an integral part of digital economy, but they shape and create the economy of the future. Members of Generation Y expect quick answers to their questions and suggestions because they were raised largely on the new web technologies that include global access and high-speed communications. These principles work also in the context of social networks in which Millennials acquire new friends, have casual talks, and share their lessons learned for certain life situations and seek for the new knowledge and experiences.

2.3. Consumer 2020

Consumer 2020 expects offer of the best options on the market, personalized products and services, as well as continuity upgrading of the same (Joyce, 2010).

It is anticipated that mobile commerce will become the only imperative. Whether it is a contactless NFC technology (Gardiner, 2010) or the use of optional geo locating in order to find targeted discounts, mobile commerce will become a showcase store of the future. Smartphones now use only 32% retails for communication with end customers, and 43% retails believe that by 2020 they will become the most important channel that will overtake stores, computers, call centres and direct mail (MasterCard Inc., 2012).

Instant troubleshooting and individual customer support 24/7 will be necessary in all aspects of commerce. That includes intuitive customer service, pro-active thinking about users' needs, as well as seamless communication through all information channels.

2.4. Digitalization Trends

Big Data is a set of data, whose size is beyond the capabilities of traditional software tools for database to record, store, manage and analyse such data (Gahane, 2013). Big Data does not represent a single technology, but a combination of new and old technologies that help companies to gain effective access to the processed data. Big Data represent the ability to manage large amounts of different data at reasonable speed and in an appropriate time frame to allow analysis of these data in real time.

Further, with the increase of the wearable technology such as Google Glass and other gadgets like smart watches and fitness trackers, the term Internet of Thing (IoT) is entered into dictionaries. IoT is in ITU-T Y.2060 recommendation defined as a global infrastructure for the information society, which enables advanced services by merging the physical and virtual things on the basis of existing things, as well as including interoperable information and communication technologies (ITU-T, 2012). IoT refers to a variety of devices that communicate and share data between each other, in the way that devices operate with each other and make our lives easier.

Industry 4.0 (Kagermann et al., 2013) includes digitalization of concepts and processes in production, a combination of services, industrial automation, new technologies and IoT to make the whole process of production and supply transformed.

Sharing economy (Puschmann and Alt, 2016) is a socioeconomic system built around the sharing of human and physical resources, and includes joint development, production, distribution, trade and consumption of goods and services.

2.5. Online Travel Market Analysis

As a starting point in the analysis of the online travel market, we used study from an international agency specialized in marketing through digital channels in telecommunications, e-commerce, travel and finance, S.T.A.R. Digital Group, which we gained directly on our request as well as permission for using it in our research. The study shows the unique way of online accommodation booking for the average German tourists. The analysis was made on a sample of 20.000 German tourists, which were consciously tracked via cookies, allowing collecting information about their unique way of searching for accommodation. From the study it is easy to conclude that the booking process is much more than just a couple clicks on one website.

Most of the guests start searching on a local website, expecting recommendations and advises of local experts. After that they visit web search engine and search for the next relevant local portal where they can find more information about the desired destination and its tourism offer. Among several local portals, one step is visiting the social network Facebook, where they seek advice from friends, or even acquaintances from the desired destination. Rarely, but nevertheless they decide to add a local consultant as a friend for sending him direct inquiries. Next social networks after Facebook in the process of exploring destination are Instagram and YouTube, because they are rich with visual media content, unique photos and videos from the selected destination. Another brief overview of local media web pages and they move on to the website for online booking. By the end of the booking process, the average German guest is manoeuvring between the local media websites and the online booking site. There are several reasons for it. Guests are comparing prices from the local forums, blogs and media with those on online booking websites for finding the best offer. Also, based on the recommendations they decide for them calmer or more compatible suburbs, which results in changing search queries. Third, but the most important for our analysis, they are seeking direct contact with hotels and private accommodation owners. In that purpose they use a combination of local media websites, the Google web search engine and web pages for online booking which are blocking transparent communication prior the payment.

By its approach, this study has confirmed the fact that even 25% of all bookings are done by direct contact, and pointed out the opportunity of making the web and mobile application of this type. For application is conveniently to be positioned at any stage of a unique path of online booking. The ideal would be at the beginning (for a quick overview of the offer), in the middle (at the time of making decisions) or at the end (when the booking is realized).

3. RELATED SYSTEMS

Most popular and best known world online systems that are offering online accommodation presentation and discovery are: Airbnb, Booking.com and TripAdvisor. All three systems are based on taking commissions for accommodation booking.

3.1. Airbnb

Airbnb is a website for the people who rent and for the people who are looking for accommodation. It contains more than 2 million accommodation units in more than 34.000 cities in more than 190 countries around the world, and more than 60 million guests have reserved accommodation through their system (Airbnb, 2016).

Users must register and create their personal profile before using the site. Each accommodation unit is connected to the private profile that includes other user advices, reviews and enables the exchange of messages between users.

Company Airbnb Inc. was founded in 2008 as a startup company. In July 2011, Airbnb has collected $112 million investment from investment funds: Russian Internet investor DST Global, General Catalyst and Andreedden Horowitz (Austin, 2011). Additional $450 million they have collected in April 2014 from TPG Capital Group, and are estimated to be worth a total of $10 billion (Spector et al., 2014). The company received new investments in March 2015, and the value of the company increased to more than $20 billion (Clampet, 2015). After finalizing one of the biggest private-funding rounds, raising $1.5 billion in 2015, the value of a company is estimated at $25.5 billion (Demos, 2015).

Airbnb is direct competition to our model by their system mode and by enormous sums of investment. It is hard to overcome them on the online travel market because of their strong community. However, considering that their system works with high commissions (3% - 18%) and takes a large fee for each booking, there is a chance for the new application of online accommodation presentation and discovery without commission. In addition, communication between users on Airbnb is very limited before they realize payment for the booking. Airbnb is censoring postal addresses, phone numbers, links to accommodation websites, as well as the names and surnames of the accommodation owners. This hardens the communication that is not completely transparent, and slows down the process of the booking, because users have to make a lot of steps in the payment process before open communication with accommodation owners.

Payment prior communication also prevents Airbnb system to enable voice calls between guests and accommodation owners, for which our model has great intentions in the future, as it would many times speed up communication and booking of accommodation.

3.2. Booking.com

Booking.com with its brand is still the leader in the online travel market, mostly because they started the system in 1996, but also because their name represents booking, apropos booking.

Currently their system has over 908.000 active units in 223 countries and territories around the world, with over 1 million bookings on a daily basis. Booking.com is available in more than 40 languages (Booking.com, 2016). Because of the big expansion and rapid growth of Airbnb in November 2015 Booking.com for the first time released a report with a number of bookable rooms in their system. The total number of 21 million rooms is identified as 14.4 million bookable hotel rooms, 1.8 million bookable holiday rental rooms and 4.8 million bookable rooms in other unique categories of places to stay (Cafferty, 2015). In the same report they stated that in the last 12 months accommodation rentals on their system have increased by 66%, accommodating 285 million guests and over 1 billion guests since their inception.

Considering the years they held a monopoly on the online travel market, they were not heavily invested in the modernization of their product. Just in 2014 Booking.com appeared in the form of mobile application. This fact, as well as that Booking.com lack social integration and the implementation of communication tools between accommodation owners and guests, helped Airbnb for slowly catching them up and taking over the online travel market.

Given that Booking.com also has a high commission (15% for the accommodation owners) new application of online accommodation presentation and discovery without commission has an excellent opportunity to attract a variety of users from Booking.com system. On the other hand, the new application will very difficult go through the marketing "curtain" considering that Booking.com only to Google advertising is investing millions of dollars a year.

3.3. TripAdvisor

TripAdvisor is a website that provides users access to travelling related content reviews and interactive travelling forums. It has more than 6.5 million properties and businesses in over 136.000 destinations, which includes 775.000 holiday rentals and 1 million hotels, B&Bs and other specialty lodgings (TripAdvisor, 2016).

The entire website is based on content created by users, which is sometimes very good, for example, when you get real and honest advices from local people. But quite often it is bad because the owners of local businesses and attractions with false accounts write fake positive reviews. On the TripAdvisor's side, it is very difficult to maintain and control which reviews are false and which are not.

TripAdvisor has only 3% commission on the bookings, but it continues to block completely transparent communication between accommodation owner or providers of tourist services and the guests. New application of online accommodation presentation and discovery without commission can use TripAdvisor as a strategic database and gradually collect users, especially in the future when newer version would support the advertising of tourist services.

3.4. Problems of Renting Private and Hotel Accommodation

As shown in the overview of the most popular and best known world online systems that are offering online accommodation presentation and discovery, every accommodation owner is faced with high commissions from 3% to 18%, which costs them every year several thousand euros. Some systems in addition to taking a commission from the accommodation owners, are also taking commission from the guests. At Booking.com commission is 15% to the accommodation owner, Airbnb depending on the amount of the transaction takes 3 – 18% from the accommodation owner and from the guest, while TripAdvisor takes 3% both, from the guest and from the accommodation owner.

Furthermore, guests' habits have changed and most of our target audience, especially the younger population, so called Millennials, makes decisions during the trip and choose appropriate accommodation on the basis of photos, free Wi-Fi and prices. Also, more and more booking system users use last minute bookings, because they know that there is a plenty of accommodation available for booking on the Internet.

The next problem that appears on the online market of private and hotel accommodation is the impossibility of direct contact with the owner or agent of the property. Guest to come into contact with the hotel needs to decide and choose the desired accommodation, based on previous guest experiences and the accommodation description. Airbnb system allows communication between the guest and accommodation owner before booking, but it is limited and highly censored. Censorship works automatically and blocks all the names, postal addresses, phone numbers, email addresses and links to host website. At a time when everything is transparent and free of charge this problem is obvious. In tourism there is no solution that enables completely open and transparent communication without charge. This means that within all the existing solutions for the online travel market user must register in the system, enter his details, including his credit card number to get in touch with the owner or agent of the property to complete booking.

4. CONCEPTUAL MODEL OF ONLINE ACCOMMODATION PRESENTATION AND DISCOVERY

After a thorough review of the online travel market size and the analysis of the same, we came to the conclusion that there is enough space for a new application for online accommodation presentation and discovery without commission to the accommodation owner and to the guest. Our new application based on the proposed model is called Spotie. It is developed as a startup (Blank and Dorf, 2012), which means it contains the basic features of this approach: the use of high technology, the product is new and has an unknown business model. By its nature, it has the great potential for growth. In most cases product can be quite cheap to produce and to reproduce. The startup growth model must be scalable, because it cannot happen if you increase the volume of users that you must increase the number of employees at the same rate.

4.1. Description of the Solution

Two main characteristics and novelty of our proposed conceptual model of online accommodation presentation and discovery are shown in Figure 2. First one is the direct contact between accommodation owner and the guest, and second one is 0% commission on the accommodation rental service for the accommodation owner and for the guest.

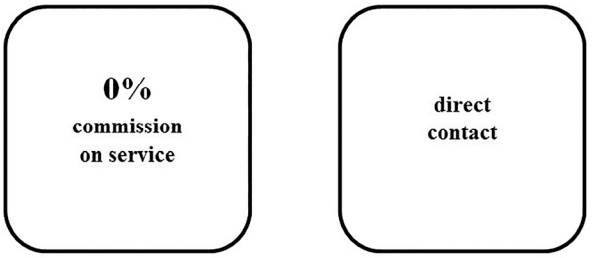

Figure 2 Characteristics of conceptual model of online accommodation presentation and discovery

If this completely free of charge on booking accommodation service, type of application came to life on the market it would be mutually beneficial to the accommodation owners, but also for the guests. Accommodation owners should earn more money with their current offer, regarding the cost of commission could be implemented in their own price, or if leaving the price untouched, they could save for the amount of commission to other online accommodation services. Guests would then be sure that it is the lowest price for

the selected accommodation which can be found on the Internet, and that there is no extra fee for the booking accommodation service.

On the other hand, application Spotie would also be a mobile platform where the accommodation owners can offer their accommodation to the guests with a direct contact, uncensored and completely transparent.

4.2. Concept of the solution

Carrying out our research, we have noticed that the guest habits have changed a lot in the last decade, and that most of the target audience, particularly the young, make their decision for accommodation booking on the basis of photos, free Wi-Fi and the price of the accommodation (Figure 3). We took those three facts as a starting point in creating the concept of the solution.

Figure 3 Concept of the solution of online accommodation presentation and discovery

The simplicity of the application and website should be provided immediately at first sight, making it clear to whom it is intended and for what it is used. On the one side, it should be intended for the guests who travel, and on the other side to the business subjects that are offering hotel and private accommodation.

Therefore, in order to simplify adding new accommodation units for accommodation owners, and to simplify selection of places to stay for the guests, the first version of the application will focus on three essential items: up to five best photos of accommodation unit, information about lowest price and information about free Wi-Fi.

In order for the product to be effective and to follow modern trends on the Internet, it must contain four main determinants. The product must be: functional, inexpensive, attractive and simple.

4.2.1. Product Functionality

The functionality is the primary concern of every product today. Regardless the attractiveness of the product design, it must allow all the functionality for which the product is aimed. The goal of the product is to allow a quick search for accommodation, and to allow users after only one search to select accommodation unit for a potential booking. Also, after selecting the accommodation unit user must be able to get in direct contact with the accommodation owner after a single click.

4.2.2. Product Price

In order for a product to be attractive it should also be useful and inexpensive. The basic model of the product will be free for all, for the guests and for the accommodation owners. It will also offer free hotel and private accommodation presentation. In addition, the main idea of the product is that it works with 0% commission for the guests and for the accommodation owners. With that fact, it is many times cheaper, respectively free to the other competitors on the market. Extra charging options will be carried out on the model of premium services, as well as additional features at a price of ninety-nine cents.

4.2.3. Product Attractiveness

The focus of the product is big photos of the accommodation units, which further facilitates the question of perspicuous and modern design. The product will follow modern trends in mobile and web application design, so-called metro design (Lal, 2013), intelligently using colours aiming to the minimalism and simplicity. The product will also be attractive by its possibilities, because within its offer, it will contain the lowest price on the market, given that price does not include the commission of the system.

4.2.4. Product Eases of Use

The product will be easy to use, which means that users do not have to register or to give their credit card number for contacting the accommodation unit owner. On the other hand, it will be very easy to add accommodation units, since the focus is on just up to five photos, information about free Wi-Fi and the information about the lowest price of the accommodation unit.

4.3. Proposed Model Architecture

Spotie is designed as a web application that consists of the client and server side, as shown in Figure 4.

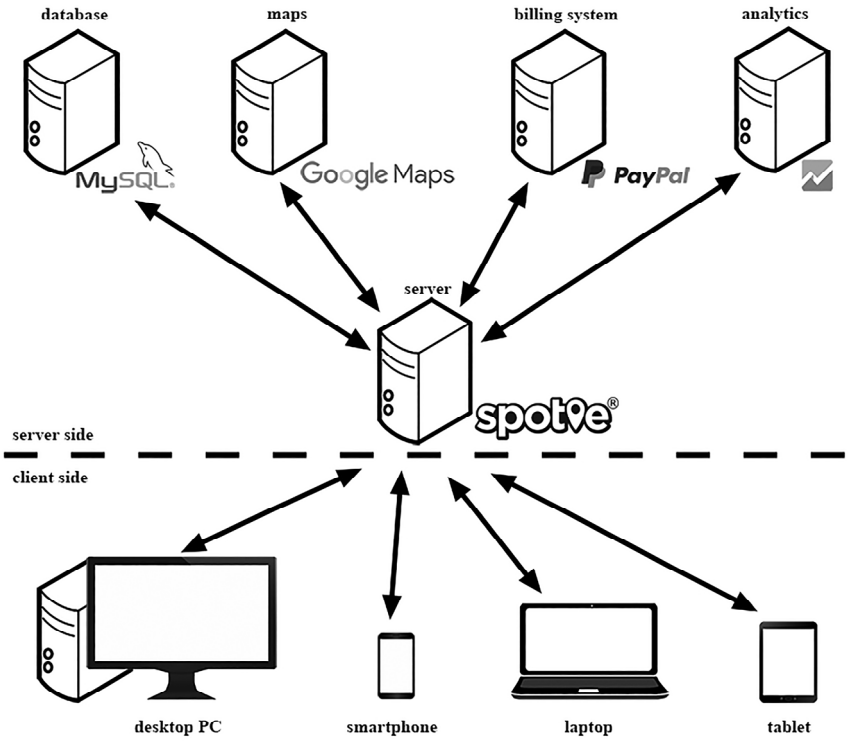

Figure 4 Proposed model architecture

The server side of the web application would use Google Maps API for creating and storing map with accommodation unit locations, PayPal Express Checkout API for charging additional features and premium services, Google Analytics Embed API for detailed tracking of user activity in order to make advanced analytics, and custom programmed server application for presentation and discovery of information on accommodation units in the system. On the client side users access this web application using a web browser on their computer, laptop, smartphone, and tablet or through a Spotie mobile application. Presentation side of the web application is implemented using client technologies like HTML, CSS and JavaScript. As a platform for the database MySQL is used, with which the server communicates during almost every single query.

5. CONCLUSION

The use of innovative application solutions appears in all segments of the personal and business life in order to improve the efficiency and productivity of the same. Hotel managers and owners of private accommodation units must be

accompanied by modern and new trends in order to maintain occupancy of their accommodation units at a high level. The younger generation is more easily adapted to the more attractive and more modern solutions and at the same gain confidence easier and find the desired service.

What is happening or has already happened in certain industries, like music or gaming industry is that in the beginning they function on the business model of direct payments with the sale of products (albums or video games). After that, subscription approach is introduced, for which users pay on a monthly basis for the service. Lately we have witnessed that these models have lost most of the audience, and that almost all of the most popular online systems are free models (freemium). What costs in those models are purchases within an application or system itself, additional features that improve your experience of the usage, or are giving you a significant improvement over other systems' users.

Big OTA services like Airbnb and TripAdvisor are reducing their rental fees, and in the coming years they will almost certainly reach their complete elimination. At that point, their business model will have to find an alternative. As long as these services have at least 1% of commission, this means that their users before communications have to perform detailed registration and payments. Our mobile and web application Spotie there has a great chance that should be effectively realized within the next two years in order to perceive the effect and the idea among accommodation owners and guests. This will be achieved by attracting new customers, continuous development and improvement of the model, and a series of investments in the future.

Anyway, online travel is the largest eCommerce and still is on the rise. It will be interesting to observe what will happen in the future by commercialization of modern technologies such as smart watches, smart glasses and virtual reality equipment, which is going to be implemented in different ways in all segments of today's life and business, as well as in online tourism and travel.

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NOVI MODEL *ONLINE* OGLAŠAVANJA I PRONALAŽENJA SMJEŠTAJA

Sažetak

Ekstremno širenje digitalnih tehnologija i društvenih mreža posljednjih godina imalo je veliki utjecaj na tržište putovanja i online turizam. Uz digitalizaciju turizma i putovanja, svakodnevno se sve više rezervacija smještaja odvija online. Najpopularnije internetske stranice za putovanja obično naplaćuju rezervaciju smještaja i ne dopuštaju izravan kontakt s vlasnicima smještaja. Danas turisti traže više za svoj novac, zato će informacije o odredištu lakše pronaći na društvenim mrežama i na lokalnim web stranicama odredišta. Novija istraživanja također pokazuju rastući trend u online rezervacijama putem izravnog kontakta s hotelima ili vlasnicima privatnih smještaja. U ovom radu predstavljamo novi model online oglašavanja i pronalaženja smještaja. Prva novost u našem pristupu je u izravnom kontaktu između gosta i vlasnika smještaja. Druga novost je da je proces rezervacije besplatan, 0% provizija vlasniku i gostu. Kao polazište u razvoju web i mobilne aplikacije temeljene na našem modelu koristili smo navike ciljane grupe, koja donosi odluku o smještaju na temelju fotografija, besplatnog wirelless povezivanja i cijene.

Ključne riječi: mobilna aplikacija, online putovanje, startup, turizam, smještaj.

JEL klasifikacija: C88, L86, M13, M37, Z32