

Zbigniew Spyra

University of Economics in Katowice
Faculty of Informatics and Communication
Department of Marketing and Market Research
zbigniew.spyra@ue.katowice.pl

FUNCTIONALITIES OF THE VIRTUAL ADVISOR APPLICATION IN THE PROCESS OF MARKETING COMMUNICATION BETWEEN CONTEMPORARY ENTERPRISES AND THEIR MARKET

Summary: For numerous enterprises, processes of communication with the market are important elements of their marketing activities. Expansion of new technologies and possibilities to use different forms of communication with the market understood as a source of competitive advantage encourages enterprises to look for more up-to-date and original solutions to be used while contacting the environment. The article presents functionalities of the virtual advisor (VA) as a new form of communication with the environment. Simultaneously, it is highlighted that dynamic development of new technologies and adaptation of new technology based solutions aimed at marketing communication provide modern enterprises with a lot of new challenges. The very marketing communication is at the same time acquiring features of higher activeness and creativity.

Keywords: virtual advisor, marketing communication, instruments of marketing communication.

Introduction

The very nature of marketing communication is limited to application of different types of solutions that are used while providing the market environment with information about activities undertaken by an enterprise and about this enterprise's offer. At the same time, it is necessary to make sure that feedback transfer is feasible [Kotler, Amstrong, Saunders, 2002, p. 836]. An increase in importance of marketing communication gets intensified by some possibility to use the communication in question to establish bonds and to create relationships. Therefore, while trying to use a method of communicating with a customer

(broadly understood as the market) as a source of competitive advantage, contemporary enterprises more and more frequently look for alternative forms of communication, thus employing more and more up-to-date and original solutions. These solutions make up elements of comprehensively understood marketing innovations. According M. Porter, any success observed on the contemporary market will only belong to enterprises that are able to recognise and adapt new technologies as new opportunities to function on the market in question [Porter, 2001]. Similar conclusions result from the research undertaken by the Economist Intelligence Unit, according to which more and more enterprises believe that their models of functioning, particularly in the context of customer service, sale and marketing, will be mostly affected by operational changes resulting from new technological solutions¹. The article aims at presenting possibilities of using a solution of the Virtual Advisor (VA) as a new form of communication with the environment. Additionally, some influence of technological changes on the manner and scale of communication is to be identified. Article considerations are based on domestic and foreign relevant literature, own observations, up-to-date research results and examples of VA application in business practice.

1. Virtual Advisor – solution essence and application possibilities

VA² is a computer program based on the artificial intelligence methods and techniques³, enabling an ‘intelligent’ conversation with a user in a natural language. It is placed in the form of a virtual character at service websites. It is equipped with speech synthesis and character visualization, and in more elaborate versions there are also elements such as a speech recognition module or a module tracking a human (user’s) eye. Its job is to give customers information, carry out conversations and act as a ‘living’ consultant. The function of conducting a conversation makes VA to carry it out on every topic connected with

¹ Global Study Reveals Customer Empowerment as Chief Driver of Online Business Through 2013 [from Kotler, Caslione, 2009, pp. 53-54].

² In the literature VA is designated by many notions. In English there are about 30 different designations, e.g. chatbot, chatterbot, conversational agent, virtual agent, virtual assistant, virtual human. In some designations there are included VA characteristics, e.g. interactive virtual agent (IVA) or virtual digital assistant (VDA). In the paper, the notion of a virtual advisor (interlocutor) is used interchangeably with a chatbot.

³ Artificial Intelligence (AI) is considered the most common field of computer science including problem solving methods modelled on the natural activities and human cognitive processes simulated by computer programs. Moreover, it raises fascination and controversy among many representatives of other branches of knowledge (philosophers, psychologists, physicians, mathematicians, etc.). In this respect, it can be concluded that it is interdisciplinary [see: Rutkowski, 2009, p. 6].

a company line of business. For this purpose VA uses a knowledge base on a company, its product range, etc. It has also a possibility of gaining information from external sources (other databases, search engines, information websites). There are many other VA abilities, such as: possibility of memorising its interlocutors, the ability to learn from its interlocutors, autonomy based on independent initiation and self-control of own actions, as well as the ability to such a conduct which is goal oriented.

VA solutions are undergoing constant evolution. Their genesis goes back to the 1950s⁴. Eliza is commonly believed to be the first VA – a computer program written in 1966 by J. Weizenbaum from the Massachusetts Institute of Technology. The conversational Eliza was created as the result of the project of human-computer communication (CMC project – Computer Mediated Communications). Its job was mainly to show the possibilities of natural language processing in a computer system. The program allowed to communicate with the user via natural language and was designed to simulate the psychotherapeutic session [Weizenbaum, 1966]⁵ In Poland, the first virtual interlocutor – Marysia – was created in 1973 at the University of Warsaw and another in 1977 – Teresa – at AGH in Krakow [www 5]⁶. The first commercial chatterbot was created by the German company Kiwilogic.com AG in 1997. In turn, the first successful commercial launch of chatbot in Poland was made by Fido company in 2001, using for this purpose the license of the above-mentioned German company.

The year 2000 and the creation of A.L.I.C.E program (Artificial Linguistic Internet Computer Entity)⁷ turned out to be a breakthrough in the VA develop-

⁴ The inspiration for the development of VA was the article *Computing machinery and intelligence* by A. Turing [www 9] and a test, proposed by him in 1950, that had indirectly prove the ability of intelligent machines through effective pretending to be a human in a conversation via text terminal.

⁵ It is worth noting that although the program consisted of only 240 lines of code, it was able to understand the structure of questions, analyse keywords and formulate questions based on them, as some psychiatrists suggested that it may even be an acceptable alternative to psychological therapy. This situation inspired Wizenbaum to undertake considerations of the philosophical aspects related to the mechanization of human traits and abilities.

⁶ Teresa – a conversational agent was a kind of response to Eliza from MIT and, like the prototype, it served as a program that simulates a psychiatrist.

⁷ The creator of A.L.I.C.E. is R. Wallace. It is the first program that uses conversational language AIML. R. Wallace and A.L.I.C.E. system are winners of several Loebner's contests. In this competition, organised since 1991, the Turing test is used and prizes are awarded for the system that best imitates a human conversation. During the test a group of judges, for a certain period of time, conduct conversations on the prepared computer terminals, behind which 'hide' people or chatbot-like systems. Each of the judges, after the conversation takes place, assesses it on a scale of 'least human' to 'most human'. The list of winners, each year since 1991, is presented on the official website [www 8]. It is worth noting that as the first 'honest pass a Turing Test' is recognised a test carried out in June 2014 at the premises of the Royal Society of London. The test was organised by researchers at the University of Reading to mark the 60th anniversary of

ment. Three generations are identified in the VA invention to date [more on the evolution of VA see: Adamczyk, 2009; [www 5](#)]. Their analysis leads to the conclusion that the evolutionary development of VA can be assessed at two levels: the linguistic level, where the ability to use natural language and reasonability of utterance are taken into account and the non-linguistic level including criteria such as: VA appearance, its facial expressions, gestures and intonation of utterance [Granström, House, 2007]. It is worth noting that creators of modern VA want to give it as many human characteristics as possible, e.g. possibility to smile, move its mouth, lip synchronization with speech, showing surprise, naturalness of spoken text, speech intonation, enriching the form of impatience signs, approvals or other emotions in the form of nonverbal gestures and so on. Often, for example, VA at the lack of contact with the user gets ‘bored’, trying to get the interlocutor interested in its own person, drinking coffee, etc. All this is to increase its ‘personality’ credibility in the user’s eyes, contribute to a better understanding of the VA intentions and give the impression of greater user interaction with the program. It could be said that VA has ‘its own character’ and the ability to demonstrate emotional states. The next step in the VA evolution can be recognition of user emotional states and prediction of their future behaviour based on the modulation of voice, gestures observation by installing appropriate cameras and sensors that are able to analyse: pulse, breathing rhythm or muscle tension and so on.

According to the data service [chatbots.org](#) monitoring the implementation of VA, currently over 1100 chatbots operate in the world (data includes 42 countries). In this ranking Poland takes the third position with 126 implemented projects, following the USA (234) and the UK (134), and before the Netherlands (117) and Spain (76). Furthermore, a well-developed market of chatbots exists in France (72) and Germany (53) [[www 1](#)]⁸. Simultaneously, a further, though less and less dynamic, growth in the use of this type of technology can be seen. One of the leaders of completed VA implementations, both in the Polish and global market, is Stanusch Technologies SA company [[www 10](#)]⁹.

A. Turing death. The computer program, which has passed the Turing test, claimed to be a 13-year Eugene Goostman, a boy from Odessa in Ukraine. The program received a score of 33%, which means that on so many instances it was able to convince people that it is a human. Some scientists believe that this first ‘fair passing’ of Turing test is a milestone in human-machine communication [[www 6](#)].

⁸ It is worth noting that there are many other interesting websites dedicated to VA e.g. [www.simonlaven.com](#), [www.aidreams.co.uk](#), [www.internetvraagbaak.nl/chatbots.htm](#).

⁹ The Stanusch Technologies S.A. company is an innovative enterprise involved in the research and development of the use of artificial intelligence in business management. It leads projects related to natural language processing (NLP) and semantic information retrieval (WEB 3.0). According to the portal [chatbots.org](#) this company is recognised as one of the fastest growing companies in the VA category in the world [[www 10](#)].

Although VA as a technological solution was initially dedicated to companies that have a large number of individual customers, it is worth noting that virtually there are no sector restrictions when it comes to its use. Therefore, it is currently, mainly used in the sectors of finance and insurance, telecommunications, pharmaceuticals, tourism¹⁰, by companies in the retail sector, in public administration, in the automotive industry (car rental), as well as educational programs on sites dealing with knowledge management, diagnostic systems or as a tool for entertainment, and even in political marketing (Interesting examples are quoted by M. Herma [2013]) and so on. VA can be an interesting solution for all highly specialised companies to support services as an expert system [www 11].

2. Virtual advisor vs. instruments and functions of marketing communication

The nature of modern enterprises is expressed in the communication process with the market environment¹¹. It seems that under today's increasingly competitive pressure and connected with it instability of a market position, increased market complexity and uncertainty, and changes in the environment, it can be assumed that in order to attain basic objectives of the company, which help achieve a competitive advantage and a profit, significantly increases the role of marketing communication, understood as a dialogue between the company and the market. Marketing communication acquires here the characteristics of bigger and bigger activeness and creativity. As manifestations of this activeness and creativity can be regarded reaching by enterprises not only to the classical set of instruments, but also their continuous expansion (for more information about the instruments of marketing communications see, e.g. [Wiktor, 2013]). An important factor that 'revolutionises' the system of marketing communications of today's companies is the development of new technologies. Since technology creates new challenges for the marketing communication system and a new quality of communication, and often sets new standards. At the same time, it is considered as an important driver of change in today's market. The main rationale which guides the company while introducing new technologies into the marketing communication is primarily striving to reduce costs, shorten the time required to conduct communications with customers, especially in the case of

¹⁰ E.g. a mobile version of the virtual advisor can be an interesting solution for tourism, municipal services because the application can work with geolocalisation system.

¹¹ See: classical approach to communication by Ch. Fill, under which he defines it as 'the management of company's dialogue with its environment' [1999, p. 13].

standard and repetitive activities, increase flexibility and speed, increase customer satisfaction through continuous access to information and greater opportunities to direct personalized messages (for more information see [Mruk (ed.), 2004]). Moreover, new technologies in company marketing communications are a response to the transformation of modern societies into the information societies¹². An example of the introduction of innovative technological solutions in marketing communications systems of companies may be VA. It fits well into the functions assigned to the system of marketing communication, i.e. the main function to ensure constant market presence of the company and the basic functions such as: information, persuasive and competitive functions (functions of marketing communication system based on [Wiktor, 2013]). VA, as a computer program that uses artificial intelligence algorithms and in a very realistic way replaces human work, can be used, inter alia, to deliver information characterising the company to the environment, including, e.g. information about promotional campaigns and the company product offer presentations specifying the characteristics essential to and expected by the customer, and even in-depth demonstration of specific products. In this sense, VA as a tool for online communication primarily becomes part of personal promotion (personal sales), but also penetrates other forms of traditional marketing communication: sales promotion, PR or advertising. In case of sales promotion VA may well offer specific benefits of economic and psychological nature, e.g. it could be used in the processes associated with the generation of e-coupons, or creates the opportunity of winning prizes through contests, sweepstakes, games, etc. Manifestation of PR activities performed by VA is, e.g. possibility of providing information to users about various company events, willingness to provide this information and so on. It is worth noting that VA could 'talk' not only to the existing or potential customers, but also, e.g. to representatives of media, employees, agents or representatives of competing companies being an effective form of PR and a source of latest information, and a form of 'sought communication' (it is worth noting here that the implementation of this function requires great care on behalf of the company in updating the data and the speed of response in rectifying the knowledge base). In addition, the implementation of VA on the website as an innovative solution is an important part of building the image of a modern company

¹² The transformation of industrial society into the information society was described by A. Toffler in the early 1980s [1986]. In the literature, there is no single, universally accepted definition of IS. The multifaceted aspect of defining the concept is emphasized there. In the economic aspect, it means a society in which information is a key element of socio-economic activity and changes, as well as a resource identifying new competitive advantages in relation to the environment. Information society as a feature of modern economies also introduces the transparency of processes and the requirement to keep open communication with the environment. For a broad characterisation of IS; [see: Castells, 2011].

and an example of creating company's positive images, it raises the attractiveness of the website and increases the number of visitors¹³. Users have the impression of contact with another person through an interactive, synchronous way of communication and a sense of controlling the time and the place of using the information. However, in case of advertising, although VA does not meet most of the criteria of advertising definition (mass scale, profitability, impersonal forms of presenting the company's offer, one-way advertising message, message periodicity), it seems that it can carry out certain purposes of advertising, e.g. VA informing about product performance characteristics may expose those of its qualities, which show an advantage over competing products, and also gives great opportunities to inform customers quickly about e.g. the introduction of a new product on the market or making some modifications to the previously existing products. It is also worth noting that VA allows for reaching out many at the same time, although the conversation is individualized and two-way – so we can talk, as it seems, about the phenomenon of 'individualised mass culture'.

3. Possibilities of using a virtual advisor in the personal selling process as an element of marketing communications

As mentioned above, VA as a communication tool fits best the personal selling (personal promotion). In the marketing literature there is no complete agreement as to the definition of the personal selling concept. Many authors believe, however, that it is a fundamental and original form of marketing communications, and its essence is the company offer presentation and sales activation through a direct contact of employees with potential buyers leading to the conclusion of selling transaction [Wiktor, 2013]. The analysis of many definitions of personal selling found in the literature allows for distinguishing key elements of this form of marketing communication, such as: the presentation of the offer during a sales talk (a presentation of an offer is an element of sales talk

¹³ E.g. one of the objectives of introducing VA in the Inpost company was to create not only an information system, which was convenient for the customer, but mainly to build in the minds of customers an innovative and unique image of the company as a supplier of modern postal services. With the launch of VA the Inpost company has launched a promotional campaign, which was one of the elements of viral marketing. It consisted of encouraging users to talk to VA by entering a mysterious code. After entering the password, and giving a correct answer to questions asked by VA, one of the chosen counsellors gradually 'revealed its secrets'. It is worth noting that the project of placing two VA on the website at the same time is the first of its kind in Poland, and was an important feature of the company's website while distinguishing it from competing sites. You can talk to company's VA: Anna and Adam at www.paczkomaty.pl.

during which there is also a stage of need recognition, argumentation – informing and persuading, a response stage to possible objections and a closing stage of sales), a personal communication of a seller with potential buyers, a direct contact, a two-way flow of information between the seller and the buyer (two-way flow of information between the seller and the buyer as a feature of personal selling is pointed by Przybyłowski, Hartley, Kerin, Rudelius [1998, p. 468]; see also [Rydler (ed.), 2001, p. 213]). Furthermore, as Ch. Fill points out, personal selling is, on the one hand, the most expensive element in the structure of the marketing communication instruments, but on the other the most effective in terms of the stage of sales completion [1999, p. 439]¹⁴. Additionally, many authors emphasise the flexibility of this form of marketing communication expressed in the possibility of modifying the message and adaptation of arguments to the needs, expectations and communication skills of the interlocutor and thus the impact on decisions as a result of feedback resulting from the process of communication. In personal selling, moreover, the dual communication role of the seller reveals, on the one hand, they are representatives of their own company, on the other hand knowing the preferences and expectations of customers they become almost automatically representative of customers' interests towards their company.

Table 1. Personal selling functions and scope of their fulfillment by VA

Personal Selling Functions	Seller	VA (seller)
Information function – providing information about products, their utility values, purchase conditions, pricing, promotions, solving some of the problems associated with the use of products, etc.	yes	yes
Market researcher function – building databases through the acquisition of information from the market about the needs, expectations and preferences of buyers*	yes	yes
Persuasive function – convincing customers and supporting sales through advice, instruction, presentations, assisting the customer through the possible choice of options and models, etc.	yes	yes
Function of company image creation – providing information about the history of the company, its mission, the possibility of information transmission not only for customers, but also for the media, distributors, employees, etc.	yes	yes

* E.g. the InteliWISE company within the VA software offers so-called: panel report, which provides relevant data for use in sales and customer service at any time, for example: aggregate information on what specifically customers ask, how they ask questions, what words they use in the context of the company's offer or what they miss in the offer at the website, or why they give up the purchase, etc. This way the effects of conversation can be monitored continuously and it is possible to check whether business objectives are implemented; [www 4].

¹⁴ It should also be noted that the effectiveness of sales is also easy to measure as opposed to measuring the effectiveness of advertising or PR.

Table 1 shows that VA can perform all the functions attributed to personal selling. Its significance is important in case of large customer information needs (about the product and company)¹⁵, but it can not only provide information, but also receive it and 'get to know' in this way, the customer, their opinions and possible objections, and then adjust the offer to expectations. The essential difference between a 'real' and virtual advisor is revealed in the nature of marketing activities. The real seller may carry out activities of an active nature (initiating trade talks and submission of bids) and a passive one (response to customer inquiries – triggered by the customer, existing or potential), and VA can only operate in a passive way. Its proactiveness reveals in the fact that it can take the initiative in action and is goal-oriented, e.g. the use of intelligent software in the form of tabs with recommendations helps to increase the value of customer shopping cart. The importance of VA can be smaller if in the company's pricing policy is based on a big range of prices for a negotiation, while in case when the prices are fixed then VA is fully prepared to act as a seller. VA may also function well in situations when there is a need for after-sales service or when customer complaint is submitted. An important feature of VA in the process of personal selling is the fact that there is a full control over when and what offer is provided to the customer. A great advantage of VA in personal selling may turn out to be elimination of most problems associated with the so-called human factor, including: sick leave, holidays, fatigue, 'professional burnout', decreasing levels of patience in case of multiple repetition of questions, incompatibility of corporate culture with attitude towards customer service and lack of involvement or incompetence of the seller in terms of knowledge about a product offer and marketing strategy represented the company on the one hand, or on the other the occurrence among some sellers excessive 'tendency to persuasiveness' understood as too much emphasis on sales and intrusive persuading customers to make decisions, especially in relationships with individual customers. Whereas a well-implemented VA solutions are equipped with such knowledge resources that they increasingly allow them to be experts not only in terms of knowledge concerning their own business, but also general knowledge, which enables them to conduct casual conversations on various topics. The application of these knowledge resources to conduct a conversation with users, both formal and informal, gives users a sense of connectedness and can be considered an important part of building relationships with customers, all the more so that it is the customer who decides about choosing the time and place of contact with VA and

¹⁵ Research conducted by Stanuch Technologies showed that in case of VA at the online store *Drukuj24.pl* up 92% of the questions concerned knowledge about the company and its offer, based on Stanusch Technologies SA information.

the content selection. Table 2 contains the synthetic comparison of selected characteristics of personal selling realized through VA and a 'real' sales representative.

Table 2. Comparison of selected features of personal selling realized through VA and a 'real' sales representative

Feature	Virtual Advisor	'Real' sales representative of company
Recipient	Individual, but there is an opportunity to talk to many at the same time	Individual, talking with only one customer at a time
Information	Individualised (communication using everyday language)	Individualised
Cost per one recipient	Low	High
Elasticity	Significant (e.g. it could adjust the response to the characteristics of the person it is speaking with, and even to the time of the day)	Significant
Availability	Time (24/7/365) and space unlimited**	Limited (meetings carefully and pre-agreed)
Feedback	Accurate and fast (e.g. during the conversation it can access the appropriate web page and any electronic files e.g.. movies, Flash animations, pdf documents, etc.)***	Accurate and fast
Initiative	Comes from customer only (possibility of taking it over during conversation by VA, goal-oriented)	May come from customer or sales representative
Scope of control	High	Rather high

* E.g. the Stanusch Technologies company estimates that VA is five times less expensive than a traditional customer service via hotline (www.Stanusch.com), while the InteliWISE company estimates that the cost of VA conversation with a customer is about 0,10 PLN, while the cost of one phone conversation is about PLN 5-25 [[www 4](#)].

** E.g. Ewa VA in an online store EMPIK within 4 months from its implementation responded to 850 thousand questions from customers, talked to 105 thousand interlocutors. It conducted 575 conversations per day and up to 50 conversations simultaneously [[www 10](#)].

*** In addition, for example, the live chat feature allows for transferring information contained in customer communication through various channels e.g. a customer moving from VA service to a contact with a consultant does not have to repeat information or inquiries that they have already submitted.

Introducing the aspect of 'a philosophical nature' to considerations about the use of VA in the process of personal selling arises, however, the question whether in view of many significant customer values generated by VA in this process (competence, communication and content of information provided, availability and convenience, etc.), it could be clearly concluded that such communication can effectively replace the personal contact with the seller? May the use of VA in marketing communication processes by adding to it the 'human dimension' and its generating higher utility time (24/7/365), and the convenience

of place selection be an equivalent alternative to personal contacts? Is the use of VA actually perceived by the existing and potential customers as a tool for increasing the quality of communication effectively and strengthening relationships with customers, or vice versa, is it perceived by customers as a sign of mechanisation of contacts, a kind of 'industrialisation' and even marginalisation of personalised message prevalence? Table 3 contains the basic features of marketing communications of companies using VA to summarise the above discussion.

Table 3. Key features of marketing communication using VA

Feature	Characteristics
Real-time access to VA	in reality unlimited
Cost of marketing message with VA use	low
VA flow of information	two-way
VA knowledge	limited to knowledge base
VA range	global
Elasticity of information provided by VA	high, great possibility of personalising provided information
Opportunities of conducting research	quite high
Level of trust	higher than to Internet as medium
Target group of users (customers)	Y generation*
Additional functions	additional channel of receiving orders**

* In fact, there is a lack of research on the characteristics of VA users, including those selected due to their age, but it seems that a potentially 'predisposed' group of users (customers) is the so-called Y Generation, namely young people who 'live from their birth' with new media and products of modern technology. The available results of studies show that this generation considers as basic selection factors the following: convenience and accessibility, to a lesser extent, price (and therefore the value offered by VA), and additionally, they consider innovation as a key factor in business development, recognizing the positive impact of these innovations in business on social development; see: the results of a global survey of Millennial Innovation Survey carried out by the Millward Brown company [www 2].

** E.g. within three months of implementation Victoria VA at an online store Drukuj24.pl there was recorded an overall increase in orders of 25%, a threefold increase in the number of orders on Saturday and Sunday, and a threefold increase in turnover after 17.00. In the third month after the implementation of the turnover after 17.00 on weekdays accounted for an average of 38% of a daily turnover; based on the Stanusch Technologies SA company information.

To sum up, it can be said that VA is a kind of an answer to the quest of alternative forms of communication with the environment by today's companies. It can build a message in such a way as to more effectively reach the individual customer, often resistant to traditional forms of promotion. At the same time, it is a good example of the creation of unlimited forms of communication with the environment by new technologies (the only limitation seems to be just the human imagination). It should be noted, however, that this solution can not be treated as the sole channel of communication, able to replace other forms of

marketing communication¹⁶, but rather as an important element of measures used by the company to communicate with the environment perceived by customers as an important source of information with high growth potential in the field of communication.

Conclusions

Continually developing technology strongly affects many areas of functioning of modern companies. This changes the rules of marketing significantly. Further, this often forces companies to reformulate existing procedures of identifying customers, communicating with them and delivering value. One of the pillars of contemporary marketing becomes virtuality [Frąckiewicz, 2010]¹⁷. It means moving parts of processes including creating, communicating and delivering value, which are the essence of modern marketing management philosophy in cyberspace. This happens in response to changes in behaviour of customers who increasingly appreciate their time, freedom to choose the place and manner of contact. Adapting to customer needs means for enterprises to invest in new solutions and technologies that enable contact with the customer (potential and existing) at any time when they would expect it. One of these new solutions that can be implemented successfully anywhere in companies where it is necessary to contact the customer is VA. It can be 'hired', for example, as a seller in the online store, a customer advisor, a consultant in the customer service office, a virtual representative of the company, a market researcher (VA is capable of acquiring data about clients and study their preferences and expectations with respect to products and services offered by company), as well as a partner for casual conversations. The ability to perform multiple tasks by VA, additionally in various areas of marketing activities, mainly in the processes of marketing communications, as well as its full availability cause that this solution, is increasingly implemented by domestic companies becoming undoubtedly the key to create a 'double value' – the value for the companies themselves and the value for their customers [Bajdak, Drzazga, 2013, p. 38.].

The diversity of companies that have decided on VA deployments, and the evolution of their implementation development in Poland may indicate a grow-

¹⁶ The confirmation of such a hypothesis could be the research results according to which up to 93% of Polish customers said they participated at least once in communication with the involvement of different media in the past year; e.g. 54% of customers began their communication on the Internet, and then passed to voice communication. It seems that the need for integrated communications continue to grow as customers will increasingly use new information and communication technologies [see: [www 7](#)].

¹⁷ The author stresses that apart from the virtuality, the pillars of modern relationship marketing are also knowledge and interdependence.

ing interest in the use of VA by companies in their marketing activities, in particular in order to improve marketing communications with customers and to provide them with personalised information. Many companies treat the implementation of VA as a prescription for reducing costs, others see in this solution the ability to increase the attractiveness of their website and create the image of a modern market participant employing the latest technology applications¹⁸. On the other hand, it has to be emphasised that the currently proposed solutions because of many problems associated with the complexity of natural language, especially the Polish language, are not free from defects and they have to be improved. However, recognising the progress to date in the evolution of VA, it seems that it is only a matter of time until they reach a level that will make them to become more standard solutions than distinguishing features, offering even greater value to businesses and their customers, particularly in improving communication processes while reducing the cost of customer service.

References

- Adamczyk J. (2009), *Ewolucja internetowych botów*, "Marketing w Praktyce", nr 1.
- Bajdak A., Drzazga M. (2013), *Komunikacja marketingowa w procesie tworzenia wartości w przedsiębiorstwach handlu detalicznego*, "Handel Wewnętrzny", maj-czerwiec.
- Castells M. (2011), *Spoleczeństwa sieci*, WN PWN, Warszawa.
- Fill Ch. (1999), *Marketing Communications: contexts, contents and strategies*, Prentice Hall, London.
- Frąckiewicz E. (2010), *Nowe technologie informacyjno-komunikacyjne w marketingu przedsiębiorstw na rynku sieciowych powiązań*, Wydawnictwo Uniwersytetu Szczecińskiego, Szczecin.
- Granström B., House D. (2007), *Modelling and evaluating verbal and non-verbal communication in talking animated interface agents* [in:] L. Dybkjaer, H. Hemsén, W. Minker (eds.), *Evaluation of text and speech systems*, Springer Science – Business Media, Berlin.
- Herma M. (2013), *Bo to bot był*, „Polityka”, nr 36.
- Kotler Ph., Armstrong G., Saunders J. (2002), *Marketing. Podręcznik europejski*, PWE, Warszawa.
- Kotler Ph., Caslione J.A., (2009), *Chaotics: The business of managing and marketing in the age of turbulence*, MT Biznes, Warsaw.
- Mruk H., red. (2004), *Komunikowanie się w marketingu*, PWE, Warszawa.
- Porter M.E., (2001), *Strategy and the Internet*, "Harvard Business Review", No. 3.

¹⁸ Many benefits generated by VA for companies were confirmed by the first empirical study carried out by K. Kuligowska in 2010. According to the research results, VA implementation in companies contributed to the significant reduction in costs allocated to customer service, an increase in transactions conducted online, or an increase in the number of repeat visitors to websites of companies [see: [www 3](http://www.3)].

- Przybyłowski K., Hartley S.W., Kerin R.A., Rudelius W. (1998), *Marketing*, Dom Wydawniczy ABC, Warszawa.
- Rutkowski L., (2009), *Metody i techniki sztucznej inteligencji*, WN PWN, Warszawa.
- Toffler A., (1986), *Trzecia fala*, PIW, Warszawa.
- Weizenbaum J. (1966), *Eliza – a computer program for the study of natural language communications between man and machine*, "Communications of the ACM", No. 1.
- Wiktor J.W. (2013), *Komunikacja marketingowa. Modele, struktury, formy przekazu*, WN PWN, Warszawa.
- [www 1] www.chatbots.org, (retrieved 1.06.2014).
- [www 2] www.deloitte.com (retrieved 15.02.2014).
- [www 3] www.egospodarka.pl/66183,Polski-biznes-a-wirtualny-doradca,1,39,1.html. (retrieved 05.15.2014).
- [www 4] www.inteliwise.com/pl (retrieved 15.02.2014).
- [www 5] Kasperski M., *Krótką historią programów konwersacyjnych*, www.aibotworld.com/articles/mk_historia.html. (retrieved 10.12.2013).
- [www 6] www.komputerswiat.pl/artykuly (retrieved 15.06.2014).
- [www 7] *Komunikacja przez różne media – doświadczenia klientów. Wyzwania, trendy i niespełnione oczekiwania klientów wśród polskich przedsiębiorstw. Research report commissioned by Alcatel-Lucent* http://www3.alcatel-lucent.com/wps/PA_1_A_1OB/images/pl/Images/Large_Callouts/PL_Komunikacja_przez_rozne_media.pdf. (retrieved: 10.09.2013).
- [www 8] www.loebner.net/Prize/loebner-prize.html (retrieved)
- [www 9] www.loebner.net/Prize/TuringArticle.html (retrieved 10.06.2014).
- [www 10] www.stanusch.com. (retrieved 10.01.2014).
- [www 11] *Wirtualny doradca pięć razy tańszy niż tradycyjne biuro obsługi klienta*, www.gazetaprawna.pl, (retrieved 25.10.2012).

MOŻLIWOŚCI APLIKACJI WIRTUALNEGO DORADCY W PROCESIE KOMUNIKACJI MARKETINGOWEJ WSPÓŁCZESNYCH PRZEDSIĘBIORSTW Z RYNKIEM

Streszczenie: Proces komunikowania się z rynkiem stanowi dla wielu współczesnych przedsiębiorstw ważny element ich działań marketingowych. Ekspansja nowych technologii oraz możliwość zastosowania różnych sposobów komunikowania się z rynkiem jako źródła przewagi konkurencyjnej skłania przedsiębiorstwa do poszukiwania coraz to nowych i oryginalnych rozwiązań w celu wykorzystania ich do kontaktów z otoczeniem. W artykule zaprezentowano możliwości aplikacji rozwiązania wirtualnego doradcy (WD) jako nowej formy komunikacji z otoczeniem. Podkreślono przy tym, że dynamiczny rozwój nowych technologii i adaptowanie opartych na nowych technologiach rozwiązań dla potrzeb komunikacji marketingowej stwarza dla współczesnych przedsiębiorstw wiele nowych wyzwań, a sama komunikacja marketingowa nabiera cech coraz większej aktywności i kreatywności.

Słowa kluczowe: wirtualny doradca, komunikacja marketingowa, instrumenty komunikacji marketingowej.