# NEW TRENDS OF MARKETING COMMUNICATION BASED ON DIGITAL GAMES

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## Abstract

Despite the fact that advergaming, avatar-based marketing or alternate reality games are verified by marketing practice, the current development of new technologies implemented into digital games development such as location-based service, augmented and virtual reality pushes forward forms and strategies of the product/brand promotion utilizing digital games as well. The study focuses on the analysis of new trends within marketing communication based on digital games with emphasis on advergaming, determining their opportunities, limitations and possible future direction. New advergaming trends are subsequently demonstrated with a discursive analysis of location-based augmented reality mobile game Pokémon GO.

Keywords: advergaming, video ads, location-based, virtual reality, augmented reality

### 1. Evolution of game-based marketing communication

Marketing communication based on digital games includes marketing practices using digital games in certain ways to promote products and brands. According to Zichermann and Linder, game-based marketing is a primer for utilizing the unprecedented opportunity created by the game-centric revolution in marketing and advertising [1]. Its basic techniques are advergaming, avatar-based marketing, virtual and advertising worlds, around games advertising, games for employees and alternate reality games (ARG) [2]. Some authors are used to include also gamification, but the result of game-based marketing communication is a game (more or less), whereas gamification is defined as using game design elements in non-game contexts [3]. It means that if an output is a game, it is not gamification.

Apparently, since 70's advergaming has gone through the longest evolution of marketing communication techniques based on digital games, therefore it is an adequate for determining individual processes of the game-based marketing communication evolution itself (Figure 1). Advergaming includes all practices using digital games for promotion, while the advertising message is an integral part of a game. It consists of *advergames* and *in-game advertising* [2, p. 8].

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Figure 1. Evolution of advergaming after smart technology establishment.

Advergames have always been adapting to current conditions. From arcades, bigger projects released as package games even for gaming consoles, smaller but easy to adapt online games up to advergames available for any mobile/smart device, therefore an implementation of new technologies was just another logical step. For example, *Home Sweet Zombie* (Koko Digital, 2012), an online application with game elements created in 2012 by an insurance company Confused.com to promote their home insurance service, was connected with Google Maps and Street View to personalize the experience. A user could simply submit a surname and a specific address in order to watch an animation of the zombie attack taking place in the realistic environment created by Google Street View of submitted address. Even though it was essentially an ad, it quickly became viral because users had started to 'send zombies' also on their friends and acquaintances. In general, location-based systems attracted attention to the potential of implementing real world locations into gaming and advergaming contexts.

Nowadays, *in-game advertising* – placement of products, brands and advertisements into digital games based on the similar principle as product placement – can be divided (based on the way of implementation) into an advertising directly inserted into a gameplay (*in-gameplay advertising*) and advertising implemented into a game/graphic user interface (*in-GUI advertising*). Both separately and together, these types of in-game advertising inspired the creation of other advertising tools as well as potentially ground-breaking technology.

Virtual reality represents more immersive experience unlike common gameplay of digital games, thus also new experience with in-gameplay advertising. However, game/graphic user interface (GUI) enables implementation of advertising without extreme regard to possible disturbance gamers' immersion or gameplay itself. By combining online-based ads like pop-ups and banners with motion-sensing Xbox Kinect technology Microsoft created an interactive

and ergonomic way of advertising. NUads, ads based on voting, were first introduced at Cannes Lions International Festival of Creativity in 2011 and a year later also to Xbox users [T. Vega, With Xbox's New In-Game Advertising, Engagement Is the Goal, http://www.nytimes.com/2011/06/21/business/media/ 21xbox.html]. NUads allow gamers to use voice and motion commands to access additional information about the advertised product/service, share on social networks, and even view maps of nearby retail locations [ESA, Games: In-Game Advertising, http://www.theesa.com/wp-content/uploads/2014/11/Games Advertising-11.4.pdf]. Due to Xbox console multimedia character NUads are not limited to gaming, but they can be used within other audio-visual formats, for example as an interactive TV advertising [M. Shields, Microsoft Officially Unveils NUads, www.adweek.com/digital/microsoft-officially-unveils-nuads-141110/]. They can even replace Nielsen TV ratings [T. Cheredar, Microsoft Kinect's NUads is what the TV industry needs to survive the future, https:// venturebeat.com/2012/05/16/nuads-kinect-microsoft/]. Similar technology of ads extended screens has been developing within augmented reality and its marketing utilization. In the end, in-gameplay advertising principles (particularly non-intrusive and value placement) implemented into GUI upgraded conventional in-app advertisements into a more efficient promotional tool already adapted for current mobile and online gaming environment, e.g. rewarded video ads.

Current trends of advergaming based on its adaptation to the newest technology and requirements of specific digital-gaming environment are *rewarded* video ads, location-based ads, augmented and virtual reality advertising.

## 1.1. Rewarded video ads

Rewarded video ads are one of monetization tools used particularly within free-to-play business model mostly in mobile, online (including MMO) and social network games. Unlike banner picture ads, full-screen picture ads and interstitial video ads, rewarded video ads are implementing the "bonus for interacting with ads" system like value placement, described by Klein [4] and representing the most effective form of in-game advertising together with dynamic and interactive placement, and integrating advertising message into a game story [2, p. 50-51]. They can have a form of *native ads* (imbed into a GUI as a fluid part of the game's experience) as well as moment ads (inserted at specific moments of games like 'game over') [Industry Contributions, A comprehensive analysis of the tools that support mobile game development, http://www.gamesauce.biz/2014/09/10/a-comprehensive-analysis-of-the-toolsthat-support-mobile-game-development-part-2/]. Rewards obtained for watching promotional videos can vary. The game currency, especially the hard one (gold, diamonds - difficult to gain for free, often only via microtransactions), is the most common type of reward followed by rare items, temporary/permanent boosts, etc., while often a type of reward depends on the placement of video ad during a game (e.g. 'extra live' reward on 'game over' screen). Considerably popular reward in many current online strategic games is the reduction or skip of countdown in time-based quests and activities.

According to Unity Technologies survey, 71% of players surveyed cite watching in-game video ads, while 54% chose rewarded video ads specifically as their preferred way to 'pay' for a mobile game; 46% of players today prefer viewing rewarded video content over any other ad offering (banner ads are preferred only by 20%); 78% of players confirmed they are open to engaging with video ads for in-game rewards; and 66% of developers would put rewarded video ads into their next game [Unity Technologies, In-game advertising the right way: Monetize, engage, retain, http://response.unity3d.com/in-game-advertisingthe-right-way-monetize-engage-retain-whitepaper]. DeltaDNA survey from 2015 showed that rewarded video ads in mobile games were displayed by 56% of players, right after interstitial ads with 69% [DeltaDNA, An in-depth study of Free-to-Play (F2P) in-game advertising in Mobile Games, https://deltadna.com/ resources/f2p-ad-survey-results-2015/]. However, in repeated survey from 2016 their displaying slightly decreased to 44%, this time right after banner ads with 50%. Interstitial ads fell down to 21%. At the same time, participants who described their approach taken to in-game advertising as confident or effective marked rewarded video ads (57%) and video ads (57%) as the most displaying type of ads in their games, followed by banner ads (43%) [DeltaDNA, Ad survey results 2016. An in depth study of in-game advertising, https://deltadna.com/ resources/f2p-ad-survey-results-2016/?utm\_source=facebook&utm\_medium=cli cks2website&utm content=Ad Serving Survey&utm campaign=Gated].

In combination with virtual reality, another current trend of game-based marketing communication, rewarded video ads can be presented even in 360° already on the offer of several virtual reality advertising companies like FLO VR [www.flovr.ca/developers/]. It represents the potential of rewarded video ads not only for monetization of free-to-play games.

### 1.2. Location-based ads

Location-based services (LBS) are services enhanced with and depend on information about device position, and take up the role to supply users of these services with customised information according to their location. At present, *Global Positioning System* (GPS) provides highly accurate data about position of most devices with connection to the network. These data have versatile usage from security, social networking and entertainment, and it is also an integral part of mobile marketing. According to BWCS Consulting and Communications Services Inc. location aware advertising messages are expected to create 5 to 10 times higher click-through rates compared to internet advertising messages [C. Ververidis, G. C. Polyzos, *Mobile marketing using a location based service*, http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.143.2914&rep=rep1&ty pe=pdf]. Many types of games have started to implement this technology into gameplay as well. In 2002 the game *Botfighters* (It's Alive! Mobile Games, 2002) marked the beginning of real-time location-based mobile games playable in

urban space [5]. Montola calls this kind of games *spatial pervasive games* [6] and they often use augmented reality to fully realize their potential.

Utilization of Google Maps within advergames is fairly common, even as pseudo location-based system, thus without the need to be at a certain place (already mentioned *Home Sweet Zombie*). *Uber Drive* (Uber Technologies, 2015) is an advergame created in order to support a recruitment of Uber drivers. It is working on the principle of finding the most optimal route between destinations by tapping on the map, while driving along. Asset for in-game advertising is at least questionable, because in real world places, possibly taken by a phone camera, it would suffice just to choose where desired ad is situated and then navigate gamers there. Of course, specific locations can be extended by advertising within augmented reality.

## 1.3. Virtual reality ads

Virtual reality (VR) is electronic simulations of environments experienced via head-mounted eye goggles and wired clothing enabling (e.g. fibre-optic data gloves) the end user to interact in realistic three-dimensional situations within computer-generated imaginative environment [7]. Virtual reality, with its recent consumer-level device development, enables the interactivity and immersion of 3D graphics to be lifted to a new level. In the context of advergaming, ads are integrated into the virtual reality world – looking at the billboards (Figure 2) [http://www.hypergridbusiness.com/wp-content/uploads/2016/06/In-game-video s.png] or collecting branded power-ups as a response of head tracking and hand control [8]. VadR Network is offering VR advertising services in forms of 360° Advertising, Rewarded Videos and Interactive Ads.



Figure 2. Implementation of Pepsi billboard in VR action game.

The advantage of this kind of promotion lies in the fact that the branded VR experience (or VR experience in general) is never disrupted nor does advertising become a dreaded experience [J. Puthuparampil, *VadR helps VR game developers add ads*, http://www.hypergridbusiness.com/2016/06/vadr-helps-vr-game-developers-add-ads/]. On the other hand, users need to use necessary additional VR devices, which are fortunately becoming more available, also in terms of the financial costs (e.g. Samsung VR Gear). But probably the most significant negative aspect of the VR experience is the *motion sickness* that some users may experience. A pallor, sweating, salivation, apathy, headache, stomach awareness, disorientation, and postural instability are only some of its symptoms [9]. Consumers can subsequently associate such negative feelings with the promoted brand or product.

## 1.4. Augmented reality ads

The term augmented reality (AR) refers to any case in which an otherwise real environment is 'augmented' by the means of virtual (computer graphics) objects. On the virtual continuum augmented reality lies between real and virtual environments, which together form the *mixed reality* [10]. Unlike virtual reality, users are not cut off from the real world, but they can perceive their natural environment augmented by additional content, including promotional one.

Augmented reality has started to be a real object of interest for marketing communication since 'smart' devices (e.g. smartphones) were created. It is interconnected with the Internet and location-based service especially to bring supplementary information within shopping, tourism [11], etc. Currently, many traditional advertising tool are implementing augmented reality as did for example Unbelievable Bus Shelter from Pepsi Max in 2014 when bus shelter digital screen recorded the street behind in an attempt to look like a clear glass and subsequently it augmented reality with various elements (a channel monster, a falling meteorite, an alien invasion, etc.) to surprise unsuspecting people waiting for a bus [https://www.youtube.com/watch?v=Go9rf9GmYpM]. In the context of digital games, augmented reality mediates overlaying of virtual and physical world, a fantasy and a reality, extending the game by a commercial layer (including microtransactions, rewarded video ads and other monetizing tools) and advertising by gaming experience, in both cases to boost marketing intentions. A company Total Immersion has created several augmented reality advergames for brands like Citroën, Kia, Haribo, Volkswagen and Pringles, while they have been using for example a gameplay with real-life background, scanning packaging logos in order to activate a game or using a paper steering wheel from the promotional flyer to control a virtual car.

One possible negative feature of augmented reality, particularly regarding outdoor usage, lies in the size of user's screen. Special headset gears based on VR accessories could solve this problem in the future. In fact, all mentioned advergaming evolution trends have some pros and cons (Table 1).

New trends of marketing communication based on digital games

Tools	Positives	Negatives
rewarded video ads	<ul> <li>more natural integration with game</li> <li>in-game reward as motivation</li> </ul>	• similarity with annoying online advertising formats (e.g. pop-ups)
location- based ads	• real-time and location offerings	<ul> <li>concerns about privacy and tracking</li> </ul>
virtual reality ads	<ul> <li>undisrupted immersive experience</li> <li>360° advertising forms</li> </ul>	<ul> <li>demanding many necessary accessories (e.g. VR headset)</li> <li>possible motion sickness</li> </ul>
augmented reality ads	<ul> <li>worldwide available smart devices</li> <li>not blocking real world perception</li> <li>overlaying fantasy and real world</li> </ul>	• limited by the screen size

**Table 1.** Main aspects of new trends within advergaming.

Each advergaming extension is working on its own, but they are often combined to add another dimension to both gaming and advertising experience. The most common is the interconnection of augmented reality and locationbased services. The results of this mutual cooperation within marketing intentions are demonstrated in the following case study.

## 2. Case study - in-Pokémon GO advertising

Currently, digital games are effective tools of marketing communication able to increase consumers' engagement that is sometimes almost overlapping with so called experiential marketing. The study focuses on advergaming as a digital level of marketing communication based on digital games that can more naturally and precisely reach desired target groups, and positively affect the acceptance of advertising messages [2, p. 68-71]. With the aim to determine advergaming opportunities, limitations and its possible future direction we conducted a discursive analysis of Pokémon GO, one of the last year's most popular and played mobile game.

*Pokémon GO* (Niantic, 2016) is a location-based augmented reality mobile game where players can collect and train Pokémon, fictive creatures first time introduced in anime series in 1997. The game concept was originally created as an April Fools' Day joke made by Google in 2014, but in 2016 Niantic released the game using GPS technology and Google Maps for spawning Pokémon on specific locations with optional augmented reality mode to evoke the impression that Pokémon appear in the real world.

However, the game was not designed or promoted as a health application that supports physical activities (as walking outside) that stereotypical geeks have been avoiding and now are blinking eyes in sunlight while catching a Pikachu [12]. On the contrary, encouraging walking to various locations raised critical reactions due to growing criminality (e.g. robbing Pokémon hunters at PokéStops) and many even fatal accidents (14 deaths, 5 injuries), mostly transport-related (even though the game does not count players' steps after exceeding certain speed limit) [http://pokemongodeathtracker.com/]. According to Caillois' game theory, interconnections between his game principles *mimicry* (linked to adaptation and immersion to the game simulation, assuming roles and fantasy) and *ilinx* (linked to seeking ecstasy from dizziness or other change in the common perception) may cause merciless unleashing of gamers' passions and complete obsession and can lead to injuries [13].

Pokémon GO reached 10 million downloads in record-breaking seven days, faster than titles like *Clash Royale* (Supercell, 2016), *Candy Crush Jelly Saga* (King, 2016) and *Angry Birds 2* (Rovio Entertainment, 2016) and 50 million just nine day later making it the fastest mobile game to earn 600 million USD (in 90 days), generating 2 million USD daily. Up to February 2017 the game has beaten 650 million downloads. 78% of more than 20 million daily users are 18-34 years old, mostly men between the ages of 21-27 who spend playing on average 26-33 minutes a day (longer than on Facebook) and have taken 144 billion steps at the end of 2016 [J. Jordan, *Updated: Pokemon GO: The latest bigger numbers*, www.pocketgamer.biz/news/63549/pokemon-go-numbers/; DMR, *75 Incredible Pokemon Go Statistics and Facts (February 2017)*, http://expandedramblings. com/index.php/pokemon-go-statistics/; Statista, *Number of times Pokémon Go was downloaded worldwide as of February 2017 (in millions)*, www.statista.com/ statistics/641690/pokemon-go-number-of-downloads-worldwide/].

#### 2.1. Pokétourism

By using location-based service, Pokémon GO offers opportunities for tourism and destination marketing. Howbeit, Pokémon are spawning randomly, they appear on specific locations mostly according to their type, it means that a water Pokémon would rather appear near water areas like rivers, lakes or shores. In addition, the rarer they are, the more difficult is to find them. A couple of these creatures are so unique that they are 'ostensibly' findable only within the specific regions -Mr. *Mime* in Europe, *Kangaskhan* in Australia, *Farfetch'd* in Japan and *Tauros* in North America. Some Pokémon GO fans are able to travel thousands of miles to have a chance to add one of the rarest Pokémon to their collection.

Besides Pokémon themselves, *PokéStops* and *Gyms*, very popular and visited spots, use to blend with famous places and monuments. Due to this fact, several travel itineraries and sightseeing tours linked to Pokémon hunting have been created. In this regard, fans are considerably resourceful and original in looking for the ways of how to make Pokémon hunting as easy as possible. They have made many sites with Pokémon location maps and also mobile applications (e.g. *Poké Radar, Gochat*) since the game began. Even official organisations like travel agencies do not underestimate the potential of Pokémon GO for tourism development and some of them have started to offer Pokémon tours (e.g. Junior Travel in Spain).

In July 2017, Niantic Inc. and the UK heritage organization Big Heritage created a partnership to curate historical locations throughout the ancient city of Chester (Chester Castle was opened to the public for the first time in 20 years) with the objective to encourage community engagement and education [The Niantic Team, *Big Heritage and Pokémon GO team up in the ancient city of Chester*, https://www.nianticlabs.com/blog/bigheritage/].

## 2.2. Cross-promotion partnerships using in-game advertising

Similar to 'pokétourism', PokéStops and Gyms can be used for more commercial purposes by applying in-game advertising principles. Above all PokéStops' advantages, they are operatively adaptable as virtual advertising spots within the dynamic form of in-game advertising, so that any ad can be added, moved or removed according to game and advertisers' needs, but unlike in-game advertising they do not explicitly promote branded locations even when augmented reality is turned off. PokéStops are also naturally highly attractive for gamers who can acquire *Poké Balls* (and other useful items) which are necessary for playing by visiting and spinning them (gamer can search the same PokéStop for rewards every 5-10 minutes). In this case, it is comparable to value in-game advertising – a reward for interacting with the ad. Finally, gamers can apply a Lure Module to increase Pokémon spawn rate at a PokéStop for 30 minutes (the effect benefits also other gamers nearby).

In July 2016, 462 retail store GameStop locations were overlapped with PokéStops (and other important in-game spots) and their sales increased by 100 percent over the weekend. This may seem like a coincidence, because until then Niantic refused all private business applications for becoming a PokéStop, it was the beginning of Pokémon GO monetization plan. Shortly after, PokéStops merged with 3000 Japanese McDonald's restaurants, which started to offer Pokémon-branded Happy Meal [J. Roettgers, *Pokemon Go Boosts Sales at GameStop Stores, May Launch McDonald's Partnership in Japan*, http://variety.com/2016/digital/news/pokemon-go-gamestop-mcdonalds-japan-1201817427/].

December 2016 brought new cross-promotion partnerships. In the USA it was an exclusive U.S. wireless partner Sprint. Besides PokéStops and Gyms benefits, gamers could charge their phones in over 10,500 Sprint, Boost Mobile and Sprint at Radioshack retail locations, and got a chance to earn extra Trainer Reward points. At the same time, Niantic launched a partnership with Starbucks and placed PokéStops and Gyms at 7,800 coffee houses [J. Roettgers, *Pokemon Go Fans Get New Pokestops at Starbucks, Sprint Stores*, http://variety.com/2016/digital/news/pokemon-go-pokestops-starbucks-sprint-radioshack-1201938404/] which also started to offer Pokémon-inspired Frappucino. Last official December partnership was established in India with Reliance Jio Infocomm. PokéStops and Gyms at Jio retail and charging stations locations were complemented by special 'Happy New Year Offer', in which Jio SIM users could download and play Pokémon GO without incurring data charges till 31st March 2017 [*Jio Delights Gamers*, https://www.jio.com/pokemon-go].

In the effort to develop cross-promotion relationships and to implement also CSR marketing strategies, most likely to continue with health-oriented message of the game and stay up with current business trends as well, in February 2017 Niantic added new PokéStops and Gyms across 58 shopping and destination centres Unibail-Rodamco in 10 European countries with the aim to avoid injuries caused by cold weather outside [The Niantic Team, *Stay Warm While Playing Pokémon GO This Winter at Unibail-Rodamco Shopping Centers in Europe*, www.nianticlabs.com/blog/unibail/].

## 3. Discussion

Pokémon GO acts as a prototype of commercially successful game format that uses augmented reality fully integrated into the real geographical space. According to Clark and Clark, this game incorporates virtual, physical and social dimensions as parts of the game, representing the super-complex intervention that will redefine education and health in the future [14]. This is reflected also in its marketing approach that is realized more in terms of the CSR.

Regarding Pokémon GO commercial game-based marketing activities, the decision to use PokéStops and Gyms as location-based in-game advertising medium for dynamic, interactive and particularly value placement has got longterm potential without the overly distracting or irritating character unlike other carried out in-game advertising campaigns. In addition, gamers can gain benefits from both PokéStops (in-game items) and real locations (e.g. charging station). On the other hand, augmented reality, one of game's major assets, also for the future in-game advertising implementations, can be turned off. Many Pokémon GO guide sites even recommend turning it off to save the battery. However, this deficiency could be solved by adapting the game for other types of devices like Apple Watch that are besides game functions providing also functions of a watch, a jogging meter and it is safer to manipulate with them outdoors due to a band around the wrist. Additionally, Google Glasses or Microsoft HoloLens might be more appropriate for full utilization of the augmented reality potential. In-game advertising should work more effectively in virtual reality, the implementation of which was widely discussed on online forums shortly after releasing the game, but, according to Niantic CEO John Hanke, Pokémon GO VR might be too good, in the sense that people would want to spend a huge amount of time in virtual reality possibly causing both health and social impacts [J. Batchelor, John Hanke: VR is 'too good', could be a 'problem for society', http://www.gamesindustry.biz/articles/2017-04-04-john-hanke-vr-is-too-goodcould-be-a-problem-for-society].

It can be said that Niantic found the effective monetizing way of the game Pokémon GO by implementing in-game advertising principles, applicable even within CSR marketing. Perhaps, Niantic should consider incorporation of rewarded video ads for developing another monetization tool – a game currency *PokéCoins*.

## 4. Conclusions

The future of marketing communication based on digital games, particularly advergaming, lies in the evolution of existing monetizing tools – *rewarded video ads* – and in the application of current technological trends – *virtual reality, augmented reality* and *location-based services* – which are able to get closer to physical world of gamers, augment it with a virtual promotional content and provide the undisrupted experience with this content during a game. Each of mentioned trends can be used separately, but it is quite common to combine them to boost both gaming experience and advertising efficiency.

Similar cooperation is described within a discursive analysis case study of game-based marketing communication of Pokémon GO, a location-based augmented reality mobile game. Besides benefits for destination marketing as results of Pokétourism, the game has started to use PokéStops and Gyms, spots of players' interests, as advertising medium applying principles of the dynamic, interactive and value form of in-game advertising. Although Niantic has established more non-commercial partnerships particularly to increase awareness regarding historical heritage, PokéStops and Gyms has been already used by GameStop, Japanese McDonald's, US Sprint (including Boost Mobile and Radioshack) and Indian Reliance Jio Infocomm. The challenge for next development of this kind of promotion in Pokémon GO is to incorporate augmented reality also into in-game advertising activities and the optimization of a game currency PokéCoins for example by rewarded video ads. Nevertheless, the implementation of virtual reality into Pokémon GO was discussed shortly after releasing the game, Niantic see the future of Pokémon GO rather in the next development of augmented reality so far.

The theoretical research and following discursive analysis showed that current advergaming trends can reach gamers in their natural environment and also provide augmented or full undisrupted virtual experience with advertising using gaming engagement at the same time, but can be limited by additional technical requirements accompanying by motion sickness in some cases. Particularly the importance of virtual reality for in-game advertising, as well as for advergaming and game-based marketing communication in general, tends to rapidly increase with bigger game projects coming out, even as big as *Fallout 4 VR* announced at E3 2017.

## References

- G. Zicherman and J. Linder, *Game-based marketing: inspire customer loyalty through rewards, challenges, and contests*, John Wiley & Sons, New Jersey, 2010, 6.
- [2] Z. Mago, World of Advergaming: Digitálne hry ako nástroje reklamy (World of Advergaming: Digital games as advertising tools), Faculty of Mass Media Communication, Trnava, 2016, 9.

- [3] S. Deterding, D. Dixon, R. Khaled and L. Nacke, From game design elements to gamefulness: Defining 'gamification', Proc. of the 15<sup>th</sup> International Academic MindTrek Conference: Envisioning Future Media Environments, MindTrek '11, ACM, Tampere, 2011, 9-15.
- [4] B. Klein, Zur Werbewirkung von In-Game-Advertising: Theoretische Fundierung und empirische Erkenntnisse, FGM-Verlag, Munich, 2009, 12.
- [5] F. von Borries, S.P. Walz and M. Böttger, Space Time Play: Computer Games, Architecture And Urbanism: The Next Level, Birkhäuser Verlag AG, Berlin, 2007, 226.
- [6] M. Montola, Exploring the Edge of the Magic Circle: Defining Pervasive Games, Proc. of the Digital Arts & Culture Conference 2005, IT University of Copenhagen, Copenhagen, 2005, 103-105.
- [7] J. Steuer, J. Commun., **42(4)** (1992) 73-93.
- [8] X. Li and M. Romero, *Playful Advertising: In-Game Advertising for Virtual Reality Games*, Proc. of the annual meeting of the Swedish Computer Graphics Association: SIGRAD 2015, Linköping University Electronic Press, Stockholm, 2015, 46-48.
- [9] B.K. Wiederhold and S. Bouchard, *Advances in Virtual Reality and Anxiety Disorders*, Springer, New York, 2014, 280.
- [10] P. Milgram and F. Kishino, IEICE. T. Inf. Syst., E77-D(12) (1994) 1321-1329.
- [11] A. Zaušková, L. Grib, M. Hliboký and P. Kyselica, Eur. J. Sci. Theol, 12(1) (2016) 223-230.
- [12] M. McCartney, Brit. Med. J., 354(8069) (2016) 233.
- [13] L. Rusňáková, Communication Today, 7(2) (2016) 18-28.
- [14] A.M. Clark & M.T.G. Clark, International Journal of Qualitative Methods, 15(1) (2016) 1-3.