

# The Ergonomics of Designing Interactive Games User Interface as an Advertising Medium

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## **Abstract:**

In a world where attracting consumer's attention is becoming more and more difficult, and with advertisers increasingly becoming dissatisfied with the value provided by traditional media, marketers, and advertisers are forced to seek for, search and experiment with alternative and new creative channels, ways and formats of brand communication to attract and persuade their audiences. Attempting of finding new promotion methods, digital games have found a place as a promising new advertising medium.

The use of digital games for other issues in addition to entertainment is undoubtedly a creative idea. With millions of users playing digital games every minute of the day, and with the high level of detailed graphics and technologies we are witnessing nowadays, digital games are a must-have advertising channel if the brand or the promoted product is looking to increase awareness and connect with consumers in a new, interactive, exciting and innovative way.

Digital games can deliver brands with some of the most innovative digital ads today, such as units that can offer players creative and rich media, rewards, value exchange video advertising, custom branded opportunities, branded content, and more. All of these applications are very attractive, unlike traditional media ads that users often ignore. In addition, digital games offer many types of advertising using them, such as in-game ads, advergaming, and around game advertising. Given all of the above, a significant shift occurred in designers' and marketers' attitudes towards digital games, as they started to consider them as a viable advertising medium in their own right.

That makes it essential for advertisers and marketers to understand the medium, as well as, studying the specific rules for each game, to find the best way for integrating ads within the game without spoiling the gameplay experience. So, there are some ergonomics aspects of designing an effective digital game advertising, a user interface is needed to be taken into consideration when designing them.

**Key words:**

Digital game advertising, In-game advertising, Advergaming, Around game advertising, User interface.

**ملخص البحث:**

في عالم أصبح فيه جذب انتباه المستهلك أكثر صعوبة، ومع تزايد عدم رضى المعلنين عن القيمة التي تقدمها الوسائط التقليدية، أصبح من الضروري على المسوقين والمعلنين أن يبحثوا عن قنوات، وطرق، وأشكال، و وسائط إعلانية بديلة وحديثة لجذب وإقناع جماهيرهم. و في محاولة لإيجاد طرق ترويج جديدة، وجدت الألعاب الرقمية مكانًا كوسيط إعلاني جديد و واعد.

إن استخدام الألعاب الرقمية لأغراض أخرى بالإضافة إلى الترفيه هو بدون أدنى شك فكرة إبداعية. نظرًا لأن الملايين من المستخدمين يلعبون الألعاب الرقمية لوقت طويل يوميًا، ومع المستوى العالي من الرسومات والتقنيات التفصيلية، و المتطورة التي نشهدها في الوقت الحاضر، تعد الألعاب الرقمية وسائط إعلانية لا غنى عنها إذا كانت العلامة التجارية أو المنتج المروج له يتطلع إلى زيادة الوعي، والتواصل مع المستهلكين بطريقة جديدة، تفاعلية، مثيرة، ومبتكرة.

يمكن للألعاب الرقمية أن تقدم للعلامات التجارية بعض الإعلانات الرقمية الأكثر ابتكارًا اليوم، مثل الوحدات التي يمكن أن تقدم للاعبين وسائط إبداعية وغنية، والمكافآت، وإعلانات الفيديو لتبادل القيمة، وفرص مصممة خصيصًا للعلامات التجارية، والمحتوى الخاص بالعلامة التجارية، وغير ذلك. كل هذه التطبيقات تعتبر جذابة للغاية على عكس إعلانات الوسائط التقليدية التي يتم تجاهلها في أغلب الأوقات. بالإضافة إلى ذلك، تقدم الألعاب الرقمية أنواعًا عديدة للإعلان من خلالها، مثل الإعلانات داخل اللعبة، والألعاب الإعلانية، و الإعلانات حول محتوى الألعاب. بالنظر إلى كل ما سبق، حدث تحول كبير في موقف المصممين والمسوقين تجاه الألعاب الرقمية، حيث بدأوا في اعتبارها وسيلة إعلانية قابلة للتطبيق في حد ذاتها.

هذا يجعل من الضروري على المعلنين والمسوقين أن يقوموا بفهم هذا الوسيط، بالإضافة إلى دراسة القواعد المحددة لكل لعبة، للعثور على أفضل طريقة لدمج الإعلانات خلال اللعبة دون إفساد تجربة اللعب. وعليه، هناك بعض الجوانب الأرومونية التي يجب أن تؤخذ في الاعتبار لتصميم واجهة مستخدم فعالة للألعاب التفاعلية كوسيلة إعلانية.

**الكلمات المفتاحية:**

إعلانات الألعاب الرقمية، الإعلان داخل اللعبة، الألعاب الإعلانية، الإعلانات حول محتوى اللعبة، واجهة المستخدم.

**Introduction:**

Due to the continuous efforts of marketers searching for new promotion methods to design unconventional advertising messages, and due to the technological developments we are witnessing nowadays, the environment of the digital games has shown up as one of the advanced alternatives. That is because digital games have high qualities and levels of interactivity and motivational ability that make it easy for designers to merge the content of the advertising messages in the interactive virtual environment of digital games, which are considered to be one of the stimulations that cannot be avoided by users, and therefore the time spent by the game users is indirect optional exposure to the advertising environment.

In recent years, commercial organizations have shown an increasing interest in digital game advertising as it possesses several unique characteristics. Advertisers can now buy product placement spaces within an existing game (e.g. buying a billboard in a car-racing game)

similar to product placement in TV shows or movies, or they can design advergames which are custom-online games designed specifically for a brand.

As any other advertising medium, if not applied in a proper way, it might affect the effectiveness of the advertised brand. So, advertisers and marketers need to be aware of the ergonomics factors of designing an effective digital game advertising user interface that affect the productivity in using digital games as an advertising medium.

### **Research Problem:**

The problem is determined to answer the following questions:

1. How to make use of the interactive games as an advertising medium?
2. What are the ergonomics standards that control designing the interactive games user interface?
3. To what extent does the study of the ergonomics standards of designing interactive games user interface affect its success as an advertising medium?

### **Research Hypotheses:**

The research assumes that:

1. Interactive games can be used as a successful advertising medium.
2. Setting ergonomic standards for designing the interactive games user interface may contribute to its success as an advertising medium.

### **Research aims:**

- Study how to make use of interactive games as an advertising medium.
- Study the ergonomics factors of designing interactive games user interface.

### **Research Importance:**

1. Making use of modern technology to raise the efficiency of advertising.
2. Optimization of interactive games as an advertising medium.

### **Digital Game Advertising (DGA):**

We framed the practice of advertising using digital games as Digital Game Advertising (DGA), which can be described as the association of marketing communication messages with digital games that can be found on all platforms and devices nowadays to target specific audiences through a wide variety of ad opportunities and forms, to achieve the purpose of the advertising process (IAB Games Committee, 2014, p. 9).

### **Digital game advertising characteristics and advantages:**

Digital games possess a number of unique characteristics that throw the advertising process into an uncharted territory offering an exciting mix of profitable opportunities and deadly traps if the adverts were not applied in an efficient way (Vedrashko et al., 2006, p. 33).

**Some of these characteristics that distinguish digital games from other advertising mediums are:**

1. Digital games are considered to be a major sector of entertainment nowadays, as people are changing the way they spend their leisure time by gradually turning to play games rather than spending their time watching TV.
2. Digital games are a worldwide media favored by all genders and their audience is growing very rapidly.
3. Players take a lot of time to achieve the game target and sometimes the player replays it more than one time to complete it. That makes the time spent in playing games exceeds the time spent on any other advertising medium, which helps for building a stronger brand image in minds due to the high rate of hourly exposure.
4. The great development we are witnessing in technology nowadays makes games accessible on every device around us and gives players the opportunity to live an extraordinary experience through the potentials they add to games' environments.
5. Digital game advertising can provide players a custom experience, because of nowadays technology which enables advertising agencies to record data about game users that includes their names, address, buying preferences or their acquisition history, using tracking and collecting technology. This helps advertisers to design custom advertisements for users and make each user has his own custom experience which is very appealing to the target audience (Alina et al., 2012, p. 116).
6. The power of the game's interactivity makes it an ideal medium for marketers and advertisers to promote their products. The interactivity of in-game advertising allows players through their game characters to easily interact with brands and have the ability to use the advertised products in the game. For example, players can customize and wear branded sports clothes in a soccer game, drive a branded car in a racing game, or can even eat and drink products that have a certain effect on the player's avatar, for example: making the avatar regain health or energy after drinking a special branded drink (Verberckmoes et al., 2016, p. 874).



**Figure (1)**

**Choosing among several brands including Adidas for the game character to wear inside Need for Speed™ Heat, (2019). Screenshot from the game.**



**Figure (2)**

**Mountain Dew Product placement inside PUBG Mobile, (2020) (LIGAGAME 2020).**

7. Advertising inside games offers a great opportunity for game developers to cover the huge amount of money they need to produce a AAA<sup>1</sup> video game.

8. The social component of digital games makes them the most enjoyable means of entertainment.
9. The high level of multimediation distinguishes games from any other advertising medium making it a unique one for the advertising process.
10. Games characters are considered to be celebrities like those of Hollywood, and their fame could be used in promoting ads. An example of that is Mario, the main hero of the bestselling Mario Bros.<sup>2</sup> Franchise, which was an icon more recognizable than Mickey Mouse himself at the peak of his popularity.



FIGURE (3)

MARIO, THE MAIN HERO OF MARIO BROS. FRANCHISE (NINTENDO N.D.).

11. The relationship between the gaming and music industries, also makes digital games the hottest new channel for music promotion. An example of that is Marshmello<sup>3</sup> in-game live concert in Fortnite which was held on the 2<sup>nd</sup> of February, 2019. This event was attended by over 10 million people giving an extraordinary example of creative in-game ads. In addition to the in-game event, a Marshmello player skin<sup>4</sup> was also added to the game. This is a whole new level of advertising, as when players wield the skin, they will essentially become walking advertisements for the musician (Barnes 2019).



Figure (4)

Marshmello holding a live concert in Fortnite game,  
(2019) (Petrosyan 2019).



FIGURE (5)

MARSHMELLO PLAYER SKIN INSIDE  
FORTNITE, (2019)  
(PROGAMEGUIDES N.D.).

12. IGA product placements lead to a high degree of persuasion which may result in purchasing products, due to the realism enhanced by in-game ads especially in sports and car racing games (Chaney et al., 2018, p. 2).

13. Digital game advertising offers the opportunity of on-time measuring in the time of display, which helps to evaluate the efficiency of the branded ads (Alina et al., 2012, p. 116).
14. Advertisements can now be dynamically embedded into games giving us the ability to change or update them after the game is released. Internet access allows advertisers to dynamically place and alter ad units in games after their release, as well as gathering statistics about the gameplay. Because of this, advertisements do not have to be static and unchanged images incorporated in games anymore but can be dynamically inserted and updated in the game based on multiple criteria, such as ad frequency, date, time of day, players' demographics, and gamer profile, providing brand campaigns a great amount of flexibility (Herrewijn & Poels, 2017, p. 6-7).
15. Some digital game environments allow for real-life goods to be purchased in their virtual marketplaces. For example, American Apparel has opened a storefront in Second Life game in June 2006, where virtual representations of real outfits were offered. The plan was to link shopping in one world by offering discounts in the other one (Vedrashko et al., 2006, p. 31).
16. Despite being one medium, digital games differ from one another in the way they are treated, not only in content but also in user interface design which includes icons' functionality, virtual geography, as transition from a specific point to another differs from one game to another, hardware requirements, the mechanics of their peripherals, settings and several other aspects (Ibid., p.33). This brings diversity to the advertising process, as well as making digital games an exciting and interesting medium for both advertisers and players.

### **Types of digital game advertising:**

To be able to choose the suitable way for advertising a specific brand, product, service or idea, advertisers need to know the various types of digital game advertising to promote their ads in the best way and for the best audience.

There are three main types in which brands and agencies can get involved with digital games from less immersive turnkey around-game display ads, to more immersive and elaborate custom integrations, however, the common in all of them is they all reach a fully engaged audience.

The three types of digital game advertising are:

1. Advergames.
2. In-Game Advertising (IGA).
3. Around Game Advertising (AGA) (IAB Games Committee, 2014, p. 9).

#### **a. Advergames (aka custom branded games):**

The term "advergames" was coined by Anthony Giallourakis<sup>5</sup> in January 2000 (Dayal, 2018, p. 21). It is simply a combination of the two main concepts related to this phenomenon: advertising and games (de la Hera, 2014, p. 1). The term Advergames refers to digital custom-made games that are specifically designed and created by companies for the primary purpose of advertising and promotion of a brand, product, service or idea (Verberckmoes et al., 2016, p. 871), played via the Internet, mobile phones, PCs, video consoles, through digital downloads or even distributed via game cartridges or disks (Williamson Smith et al., 2014, p. 98). In parallel to the console and computer advergimes, other types of advergimes continue

to emerge in sync with the ongoing development of technology, such as: casual advergimes, mobile advergimes, social advergimes, and pervasive advergimes.



Figure (6)

OREO: Twist, Lick, Dunk casual advergence, (2012) (Google Play n.d.).

### b. In-game advertising (IGA):

In-game advertising is the practice of presenting, inserting, or placing advertising messages of a brand or product into the virtual environment of digital games through simulated real-life marketing communications mechanisms (Williamson Smith et al., 2014, p. 99). In this strategy, advertisers and marketers can transmit messages through static or dynamic in-game ads, product placements, radio spots, branded music, and branded characters or sponsor signage integrated into the game's environment (Martin Mastrocola, 2010, p. 2).

IGA can be classified according to some characteristics:

- According to interactivity: Interactive IGA and Non-interactive IGA.
- According to how advertising messages will be placed, delivered or displayed within the gaming environment:
  1. Marketing displays: There are three types of in-game marketing displays: static in-game advertising, static in-game ads with auditory, and dynamic in-game advertising.
  2. Product Placement: Chen and Ringel (2001) divided product placement according to product-game integration into three levels, from low to high: associative, illustrative, and demonstrative (Lindmark, 2011, p. 15).
- Recent executions of IGA, which, for example, include: online in-game advertising, value exchange ads, in-game content programs, mobile IGA, and in-game e-commerce.



Figure (7)

Sony Xperia Z5 product placement inside



Figure (8)

Marvel's branded characters as skins inside

### c. Around Game Advertising (AGA):

Around games advertising (AGA) is traditionally described as a type of game advertising that includes banner displays or digital video units shown in specific places. For example, it can be shown around the game window (Verberckmoes et al., 2016, p.871), during game loading, in the form of complimentary ads before/after a game is played, or during natural breaks in gameplay such as between rounds of gameplay or between game levels known as (“inter-level”). This type of game advertising promotes marketing messages in a way that should not intrude into the gaming environment. This type of digital gaming advertising has four main elements of delivery: Banners, Cross-promotion (including Cross-Media Promotion), Interstitials, Sponsorship.



FIGURE (9)

DUNKIN'S DONUTS AGA IN EA'S SCRABBLE (IAB GAMES COMMITTEE, 2014, P. 11).



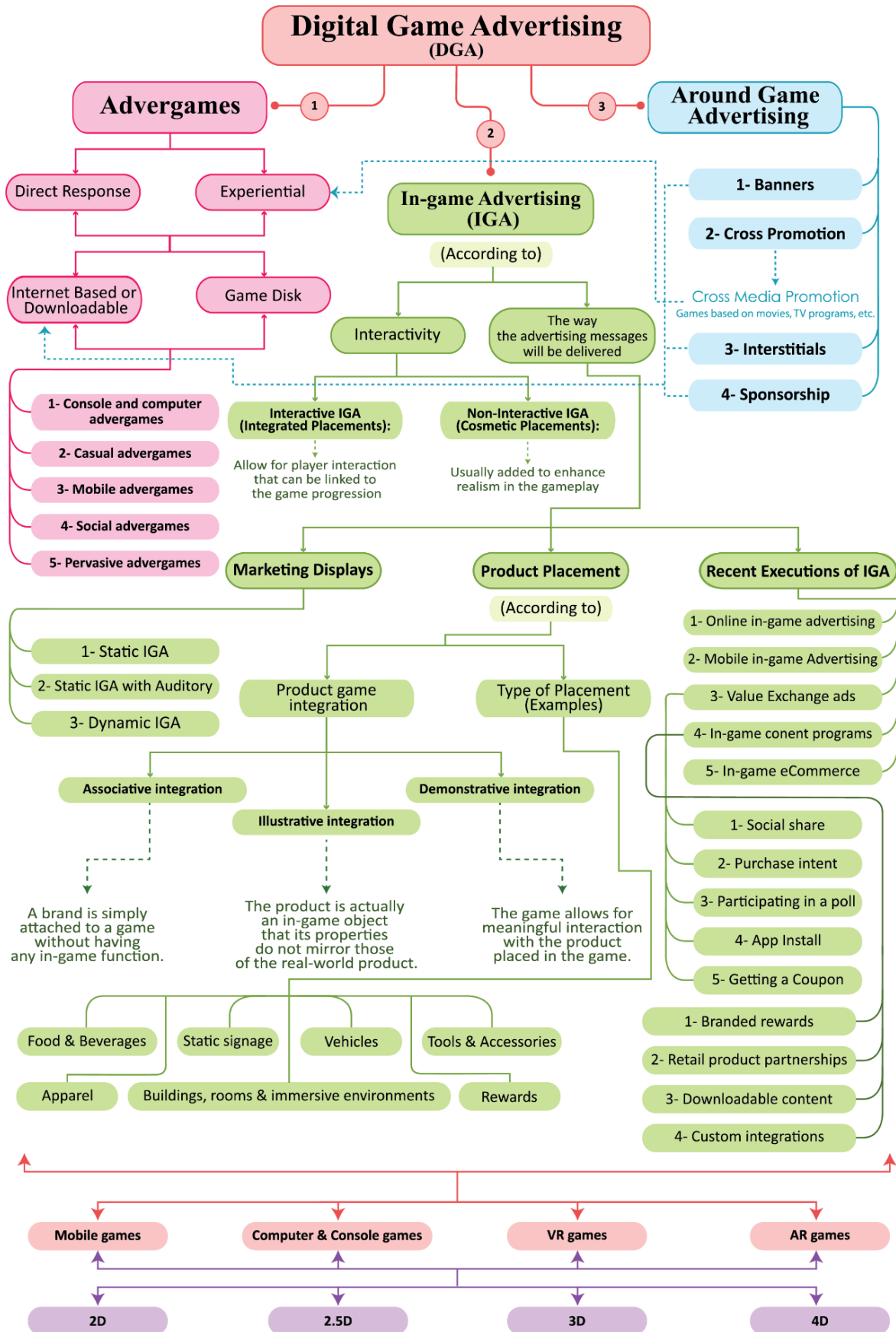


Diagram (1)

Digital Game Advertising types from the researcher's point of view, designed by the researcher.

This diversity in the ways advertising can be applied through digital games, makes it essential for advertisers and marketers to understand the medium and the specific rules of each game to find the best way for integrating ads within the game without spoiling the gameplay experience. So, there are some ergonomics aspects of designing an effective digital game advertising user interface needed to be taken into consideration when designing them.

### **Ergonomics:**

It is the scientific discipline concerned with understanding the interactions among humans and other elements of a system, and the profession that applies theory, principles, data, and methods to design in order to improve human well-being and overall system performance (Middlesworth 2020).

### **User Interface (UI) in digital games:**

It is the system in which players can interact with the game and receive feedback on their interactions. It generally applies to the interactivity and concepts of a game. This includes several aspects of gameplay such as the storyline, controls, graphics, visual perspectives (point-of-view), behaviors of AIs, and level designs (Raffaele, 2017, p. 23). A digital game UI is an interface or system with visual components that help players to interact with the game story, break into the game space, navigate, find information, and accomplish goals (Bowers 2018).

### **The characteristics that have been shown to be of importance when designing an effective IGA UI, are:**

1. Characteristics of the advertisements.
2. Characteristics of the player.
3. Characteristics of the advertising context (Herrewijn & Poels, 2017, p. 11).

#### **a. Ergonomics related to the advertisement characteristics:**

1. Advertisers should think about the best type of ad that suits their campaign strategy. Prior research suggests that:

- Passive billboards lead to better brand recall than passive product placements.
- Billboards integrated into the car racing game genre are more effective than other forms of advertising.
- Brands whose advertising executions contained both a visual and a verbal cue leads to higher levels of both brand recall and recognition than visual brand placements only. Thus, Corporate marketers who are seeking to maximize their brand awareness levels among (SVG)<sup>6</sup> players should seek out placements that include both visual and verbal cues, as these will provide for the best opportunity to have an impact on brand awareness.
- Interactive IGA leads to higher brand recall and purchase intention than passive billboards and visual placements, the least efficient is including text-only ads. Thus, advertisers best avoid the passive banner ad approach and work together with game developers to develop interactive approaches that allow the player to feel, control, and/or interact with the brand in creative ways (Ibid., p. 19).

- The associative placement has a lower level of explicit memory (recall and recognition) than illustrative and demonstrative placements, while the implicit memory of associative placement is higher than illustrative and demonstrative placements.
2. It is important to understand the existing relationship between the brand and the consumer:
    - As, familiar brands require less display time to be remembered than the unfamiliar ones (Belcheva, 2014, p. 3), thus unfamiliar brands using product placements in video games will need higher repetition levels to achieve the same degree of brand recall and recognition compared to familiar brands (Martí-Parreño et al., 2017, p. 61).
    - Also, knowledge about a brand increases recall and recognition when the ad is placed in a location with limited visibility. Therefore, advertising a brand which is unknown to the game's audience will require more prominent placement in order to be effective and vice versa (Bardzell et al., 2008, p. 9).
  3. Advertisers should choose the appropriate places and moments in the game scenario for the integration of ads. According to results, prominent placements lead to higher levels of brand recall and brand recognition compared to subtler placements. Though, companies should seek out prominent placements where the gamer's expectation for manipulating the game controller has been limited in order to have the maximum impact on brand awareness (Walsh et al., 2014, p. 400).
  4. Concerning ad location, ads which are placed very close to the player's focal attention area (central) are more effective than peripherally placed ads.



Figure (10)

**Ford® Mustang prominent placement in Need for Speed™ Heat, (2019). Players would be exposed to the brand throughout the whole gameplay.**

5. In terms of ad size, large ads tend to be more effective than small ones in securing attention and enhancing memory. According to the guidelines developed by the IAB In-Game Ad Measurement Working Group, the ad must be a minimum of 1.5% of screen coverage.
6. Regarding ad frequency, advertisers should consider the number of times their ad appears, as 80% of an advertising effect stems from visitors seeing the ad seven times; after seven repetitions, awareness and product attributes continue to improve, but the rate of growth tails off (Chang et al., 2010, p. 65).

7. In terms of ad order, more recent ads are more readily remembered, though placing ads in terminal gameplay locations, such as menus, finish lines, save points, etc., is one strategy for maximizing the strong regency effect (Bardzell et al., 2008, p. 9).
8. Also, advertisers should take care of the lighting provided in the dark for the ads to be seen clearly and to be considered as a valid ad impression.
9. The integration of brand placements that can be meaningfully interacted with, and that make up a significant part of the gameplay is a far more effective IGA strategy than incorporating passive ads, both in terms of brand awareness (i.e. brand recall and recognition) and brand evaluations (i.e. brand attitudes) (Herrewijn & Poels, 2017, p. 19).
10. Popular and well-known brands will need less exposure to reach their goals, however, unknown brands might get away with and benefit from a higher frequency. Moreover, strategically placing ads at the center of the player's viewpoint is a more effective approach than randomly cluttering the game environment with large ads (Herrewijn, 2015, p. 191, 193).

#### **b. Ergonomics related to the player's characteristics:**

1. It is important for advertisers and companies to understand their target audience in order to reach their goal. Knowing the target audience's geographic, behavioral, and demographic characteristics establishes the basis of the advertising as such information can help for instance in figuring out what types of games the target audience is playing (Writer 2019).
2. Advertisers and marketers also need to consider the age and gender preferences while designing the IGA in order to know the best platform and game genre for inserting ads to better reach their target audience.

#### **c. Ergonomics related to the advertising context's characteristics:**

1. Advertisers should thoroughly consider and determine how people will actually play the game. Is it a single-player game, or does it include multiplayer options as well? Does it encourage public play or turn-taking behavior? According to prior researches, playing a game with a friendly partner (i.e. multiplayer mode) enhances individuals' brand recall rather than playing the game alone (i.e. single-player mode) (Belcheva, 2014, p. 2).
2. Advertisers also should carefully choose the best game genre that suits the advertised product or brand, as the game genre has a differential impact on the effectiveness of product placement strategy (Chaney et al., 2018, p. 3).
3. Advertisers also need to consider how the game would be controlled. As findings assume that 3D content increases user's sense of presence which leads to better-enhanced consumers' attitudes towards the brand than 2D content. They also indicate that presence is higher in the HMD VR than in the stereoscopic 3D than in the 2D video game. However, VR technology needs more cognitive capacity for the primary task than the 3D technology (Roettl & Terlutter, 2018, p. 14).
4. When employing IGA, advertisers should strive to produce ads that are moderately congruent and integrating with the game environment (Lewis & Porter, 2010, p. 55). Context-appropriate ads increase the realism of the game world and positively impact the gaming experience, thereby facilitating positive brand associations with game players (Bardzell et al., 2008, p. 11). If the marketing message interrupts the players' immersion or makes the

experience seem less realistic, the audience will respond negatively (Chang et al., 2010, p. 65).



Figure (11)

**Adidas apparel congruent placement in FIFA 18, (2018). The advertised brand is congruent with the game genre which enhanced the realism of the game world. Screenshot from the game.**

5. Designers also should know that some specific features of the game they are integrating ads in will affect their ads, for example:

- They should avoid adding IGA where there is a violent scene (Vedrashko et al., 2006, p. 63). That is because violent games are linked to negative attributes such as blood, gore and, death, leading to negative effects on IGA evaluation (Herrewijn, 2015, p. 48).
- They should keep in mind that game speed has an effect on IGA as high-speed games result in lower recall levels (Chaney et al., 2018, p. 4).
- Adding to this, easier game versions resulted in better brand recognition and brand likeability.

6. Also, advertisers should consider processing ads in a narrative context as that can reinforce the connection between a person and a brand, affecting the person's beliefs, attitudes, and purchase intention of the brand (Herrewijn, 2015, p. 157).

7. More importantly, advertisers need to be aware of what do the game's specific features mean for people's subjective experiences during gameplay (e.g. player involvement), and how will these player experiences develop over time (e.g. advertisers should take into account the internalization process of the different dimensions of involvement)?

For example, if it takes people a while to get familiarized with the game's controls, it might be better not to include ads at the beginning of the game but to wait then place them where they are certain that players have mastered the game's controls, allowing them to pay more attention to the game's surroundings. In general, they should consider the degree to which certain elements or tasks of the game monopolize the player's attention and involvement. If a particular area of the game includes an engaging, fast-paced boss fight that will occupy most of the player's concentration, so in this case, advertisers should consider placing advertising in a different location, for example, placing ads in a location that the player visits shortly after the action takes place (rather than during), when the player has time to collect himself and his rewards.

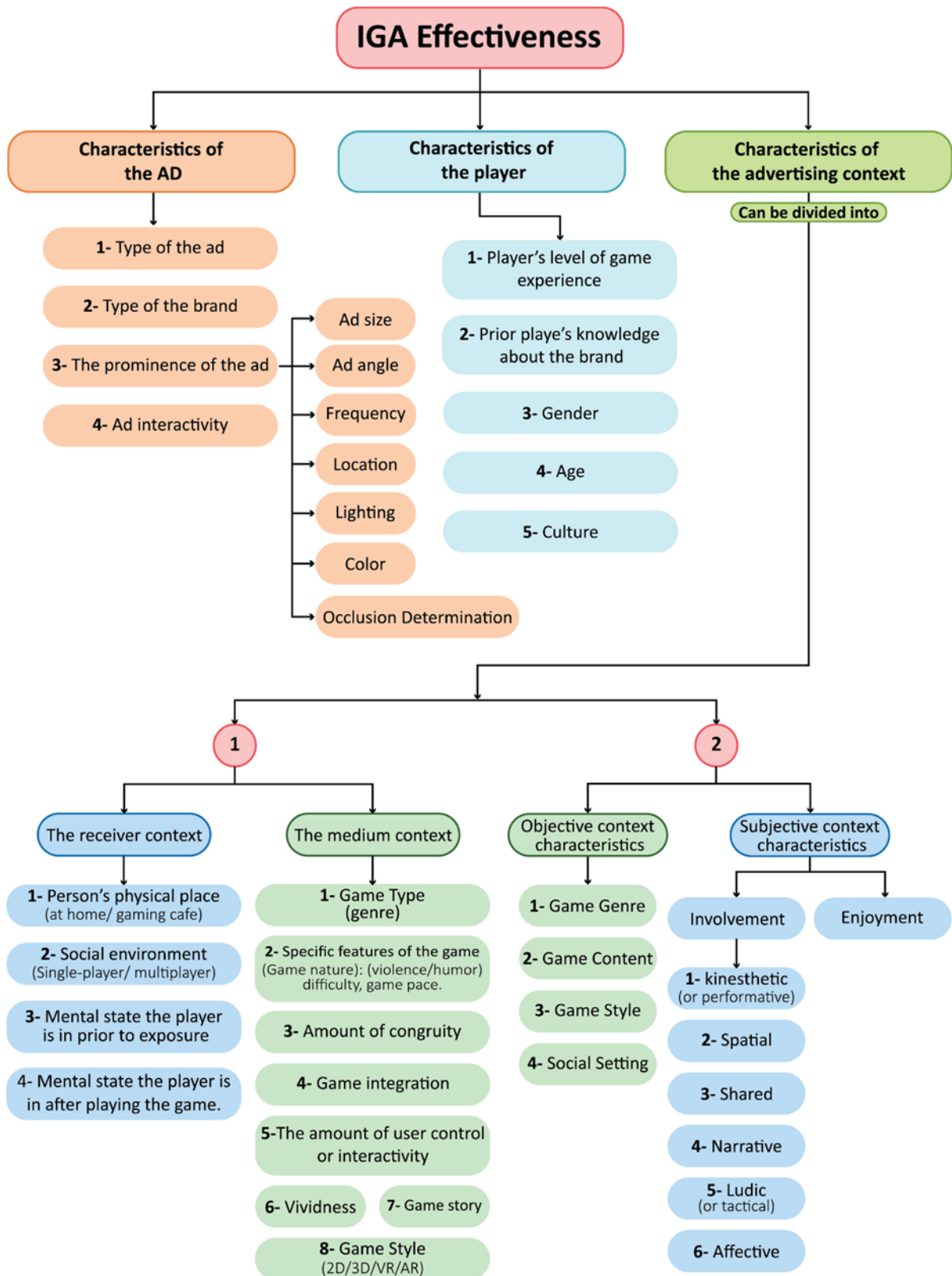


Diagram (2)

Ergonomics aspects of designing an effective IGA User Interface, designed by the researcher.

### Analytical study:

Following is a model of an interactive, successful, and effective IGA implementation that has achieved its advertising goal. This IGA is Travis Scott's live musical concert "Astronomical" in "Fortnite", which was held between April 23 to 25, 2020.

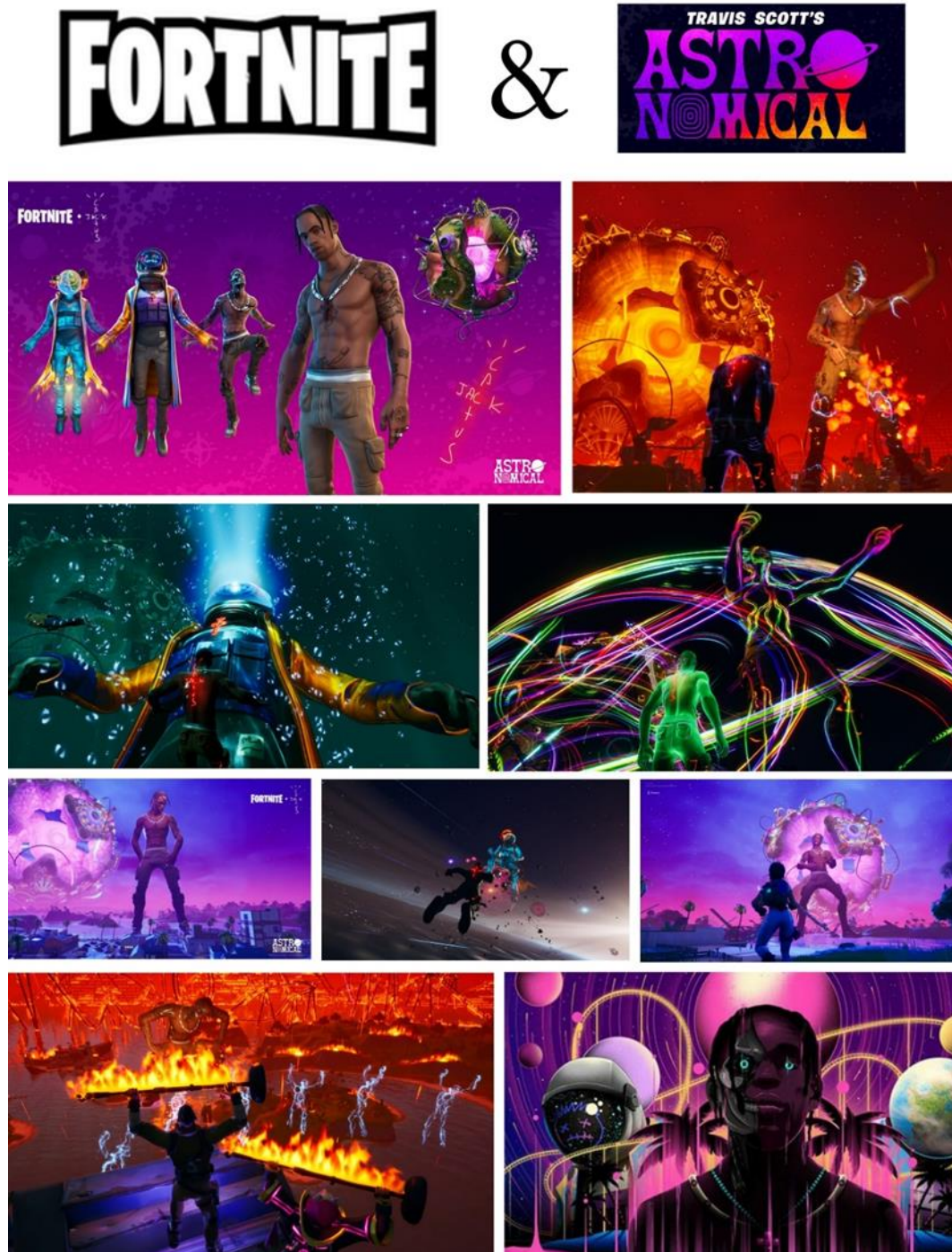


Figure (12)

Screenshots from Travis Scott's live musical concert "Astronomical" in "Fortnite", (2020) (Webster 2020).

Components	Clarification
Game Name	Fortnite.
Released By	<b>Epic Games, Inc.</b> , which is an American video game and software developer and publisher based in Cary, North Carolina, US.
Game Demographics	Fortnite has amassed 350 million players across the globe as of May 2020 (Clement 2021). • According to Verto Watch, Fortnite is most popular among male players between the ages of 18-24 years old (Zuckerman 2020).
Game Genre	Fortnite is an online shooter-type game that can be categorized as a survival, battle royale, and sandbox game.
Game Features	Fighting, shooting, survival, strategy.
Game Style	(3D): that will lead to better consumers' attitudes towards the brand.
Control of the Game	The game can be played through consoles, PCs, and mobile phones. It can be controlled via traditional controllers or newer controllers.
Advertised Brand	The popular American rapper and producer "Travis Scott" <sup>7</sup> held an unprecedented live musical concert called "Astronomical" inside the popular video game "Fortnite." Scott performed five virtual live shows in the video game Fortnite Battle Royale from April 23 to 25, 2020 with visuals based on his Astroworld tour.
Ad Type	According to interactivity: it is an interactive IGA. According to the category of IGA: it is a branded character and branded music IGA. It was a demonstrative ad, as the players were invited to interact with the event. That led to a higher prominence ad with a higher level of explicit memory (recall and recognition). It was also a verbal with visual ad, because there were graphics along with music in the event. This led to the increase in players' awareness, (recall and recognition).
UI Design	Once the show started the game's UI was automatically turned off, and that was ergonomically useful to let the players get a better view of the 3D visuals. During the event, gamers could not do random dances, instead, they could head bang or rage with a fiery microphone stand, which was the special dance, Travis was performing while singing. The smartest thing Epic did was making this event a tour instead of a normal concert like the real one (Webster 2020). Travis' Fortnite concert was a live surreal experience watched by millions of fans. Through it, an asteroid crashed into the ground, with a giant 3D avatar of Scott emerging from the explosion performing the "Sicko Mode" song (Ketchum III 2020). The event was a simulation of a live musical concert where players could be immersed and interact with it as if they are attending a real one.
The	<u>Ad location</u> : The event was central to the gameplay and prominent as the



Prominence of the Ad	<p>gameplay stopped once the event started, and all players took their spots to attend, watch and enjoy Travis singing. The entire Fortnite island was the stage. Since the event appeared to be central to the game, that supposed to attract high levels of users' recall.</p> <p><u>Ad angle:</u> the event allowed players to watch from all angles as the environment of the game is a 3D one.</p> <p><u>Ad size:</u> Travis was a virtual 3D avatar with a giant scale, larger than any object inside the game and even larger than the whole map of Fortnite.</p> <p><u>Visual design (graphics-color-light):</u> The Astronomical Experience was a visually stunning event that consists of graphics related to the singer's music video clips, in addition to having hints of previous Fortnite events. The event started off with a meteor made up of speaker sets, carnivals, and a cluster of stars making their way towards the earth. On stage, Travis Scott's logo appears, which is soon followed by an illustration of that same meteor. By the time that silhouette fades out, the "SICKO MODE" song starts playing and the sky turns dark real fast. As the beat of the intro was coming down, a pink comet shoots out of the sky and then a giant 3D avatar of Travis Scott himself appeared.</p> <p>From start to finish, the entire event just looked like one visual masterpiece. Travis Scott was walking around the entire island, collecting stars and merging them together.</p> <p>From the animations, lighting effects to the vibrant colors, this in-game event excited players and immersed them in an experience that made them felt as if they are attending a real-life concert, even if it was just 10 minutes long.</p> <p><u>Frequency:</u> To make sure everyone has a chance to experience "Astronomical", the game set up multiple tour dates with show-times for players around the globe. This opens up the event to a larger audience around the world (EPIC GAMES, FORTNITE n.d.).</p> <p>As a conclusion to all of the above, the virtual live musical concert was the central and core event at those specific show times that were the main focal attention to the player, making it the only prominent thing at that time which of course led to higher brand recall, recognition and brand awareness.</p>
Type of Brand	<p>The event was an <u>international</u> one as it targets audiences around the globe. It was a <u>real</u> live concert by the <u>popular</u> and famous American rapper Travis Scott.</p>
Interactivity	<p>The event was an interactive and vivid one as it immersed players in it with the fantastic visuals and graphics with heart-pumping songs that almost made players felt as if it was a real concert built from the ground up. The interactive nature of the event was supposed to lead to significantly higher brand awareness and attitude.</p>
Target Audience	<p>Most of Travis Scott's target audiences are male college students with an age range of 18-25. From prior research, it has been found that game</p>

	genres such as Shooters attract younger males, which is supposed to be the target audience of Travis Scott. That made Fortnite a suitable choice for holding the concert and to announce the premiere of Travis' new song.
Social Environment	Online multiplayer game, which makes it a more enjoyable and involving game which led to individuals' brand recall enhancement.
Congruity of Ad with the Game Content	The compatibility between the game context and the style of the live concert leads to the congruent effect that immersed players immediately with all of their possible senses in the event. That positively led to player's interest in the event in addition to higher purchase intentions for the skins and mascots provided especially for the event.
Integration of Ad with the Game Content	The event was central to the game. As all players were ready to attend it. The event was a part of the game and due to its aesthetically pleasing graphics along with the popular music played, users were integrated with the game as they started to move, sing and dance as if it was a real concert. The concert was related to the game scenario as some graphics used in the event referred to previous Fortnite events. The integration here was one of the reasons that are positively related to players' interest in the event and to players' purchase intentions toward the advertised product.
Game Story Relevance to the Ad	The visuals used while Scott was singing were relevant to the theme of the music. Also, the Astronomical Experience had hints to previous Fortnite season-ending events (Gonzalez 2020).
Effectiveness	<p>Many musicians make the majority of their money from live shows and merchandise. And because of the horrible coronavirus (CoVid-19) pandemic that strikes in March 2020, all live concerts have been canceled. Music streaming numbers have also gone down since many countries had to lockdown for months. This has forced artists to get creative and try something new.</p> <p>It was a brilliant idea from both Fortnite and Travis Scott to hold a virtual live musical performance inside the game where many concerts were canceled at that time and many people wanted to have some fun in such days, as no mass public gatherings were allowed during this pandemic, so people were looking for a connection with others, for some sense of unity.</p> <p>So, that event was impressive that Epic said that 12.3 million people had tuned in for the premiere. After five shows, the developer says that number has reached up to 27.7 million unique viewers, with a total of 45.8 million views in the game for the event, including replays. According to Stream Hatchet, Scott's Fortnite concert was the largest music-video game crossover streaming event ever.</p> <p>That was a win-win situation for both, Scott and Fortnite. The event was responsible for boosting the sales of Fortnite-branded products, as</p>

	<p>numerous cosmetic items for avatars based on Scott and the concert were available to purchase by players of Fortnite Battle Royale. Regarding Travis Scott, his record-breaking virtual concert in Fortnite reportedly earned significantly more than his average in-person show. The ten-minute digital concert, which was held in April, grossed the rapper roughly \$20million including merchandise sales, according to a new Forbes report. In comparison, Scott's four-month-long, 56-stop Astroworld tour from 2018 to 2019 garnered approximately \$53.5million, or roughly just under \$1million per show (Ziwei 2020).</p>
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### Results:

1. The use of interactive digital games as an advertising medium is a successful strategy for enhancing brand awareness, brand recall and recognition, as well as, its purchase intentions.
2. Targeting interactive digital games as an advertising medium has become the goal for many brands to enhance the visual exposition, and affect the explicit and implicit memory, which eventually leads to higher brand awareness and high purchase intentions.
3. The UI ergonomics factors related to designing an effective digital game advertising emphasize the importance of choosing the appropriate digital game advertising strategy for the advertised brand.
4. Sticking to applying the ergonomics standards of designing an effective digital game advertising user interface would successfully affect both the digital game and the advertised brand.

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<sup>1</sup> “AAA” or “Triple-A”: generally, refers to games that boast a large budget for both production and marketing. Due to that, they are expected to be of high quality and be sold in a substantial number of copies, typically going into millions, AAA is analogous to the film industry term “blockbuster”.

<sup>2</sup> **Mario Bros.:** is a platform game developed and published for arcades by Nintendo in 1983. It was designed by Shigeru Miyamoto and his coworker and Nintendo’s chief engineer Gunpei Yokoi. Italian-American plumber Mario and his brother Luigi exterminate creatures emerging from the sewers by flipping them on their backs and kicking them away.

<sup>3</sup> **Marshmello:** Christopher Comstock (was born on May 19<sup>th</sup>, 1992), known professionally as Marshmello, is a popular American electronic music producer and DJ.

<sup>4</sup> **Skin:** it changes the look of an item in a digital game. Skins are either earned within a video game or they can be purchased in the game’s store. Skins are purely cosmetic so they do not change the gameplay or they do not make you a better player. Some skins are rarer than others. So players with rarer skin get a certain recognition.

<sup>5</sup> **Anthony Giallourakis:** is the creator of www.advergames.com service, a business executive and consultant with over 35 years of video game and marketing experience. <sup>6</sup> SVG: Sports video games.

<sup>7</sup> **Travis Scott:** is an American rapper, singer, songwriter, and record producer. Scott's musical style has been described as a fusion of traditional hip hop, lo-fi and ambient.