Developments in audio technology



Over the past 15 years, the development of technology has been incredibly shifted, and this progress is more and more intense every day. As flat screens television and portable telephones are now part of our lives and audio development is also does not fall behind. It is a long-time age when radio was the only viable option for people who were more interested in listening without actually watching anything. A significant technological step forward brought the number of audio products, and nowadays, we are more than familiar with products like podcast, audio tour, an audio-only game even audiobooks found their place for people who prefer to listen more than read. This report is based upon those four different types of audio products, analyse the way in which the creators use the power of their audio-only environments and discuss how the creators fulfilled or not fulfilled demands of their listeners. The potential future developments will be briefly discussed at the end of the essay.

Podcasting is a play on the words "iPod" and "broadcasting." Podcasts are essentially audio files that, for the most part, can be freely downloaded from the Internet and can be listened to on a computer or any portable playback device that supports MP3 files (Jordan, 2007). When stored in a portable MP3 player, the content can be "listened to as often as desired, whenever, and wherever that desire presents itself" (Gura, 2006). There are so many podcasts in the world, and people now listen to podcasts on their daily basis whenever they are. In the article published by Fast Company states that there are Over 525, 000 active shows and over 18. 5 million episodes. (FastCompany, 2018). Moreover, the enormous increase of active shows is not the only one what proves the undeniable success of podcasting. 60% of

American over the age of 12 are familiar with the term which is the increase of all 38% since 2006. (Edison, 2017).

The original idea of podcasts was to give the listeners the endless option of listening during their everyday lifestyle. Stats show that 49% of podcast listening is done at home and 22% of listening is done in the car. (Nielsen, 2018). The power of this sound-only environment also offers some kind of privacy. You can download whatever you want and listen to it on your way to work or school, and no one around you can even guess what you are listing. Even though the pre-downloading option is still very sophisticated feature, a more significant number of listeners still prefer to listen to podcast immediately. 77% of podcast consumers prefer to click on a podcast and listen immediately. 41% of them prefer to download podcast episodes manually and listen later. 27% of them prefer to subscribe to a podcast to download automatically to listen later. (Nielsen, 2018). The marker offers a wide variety of podcasts, and you can choose what to listen according to categories and specific needs. These categories also allow the podcast creators to produce podcasts for a particular audience. The assumption is that if you have decided to listen to a podcast named 'The Truth About ...' you are somehow connected or interested in the news and politics area, and therefore have at least a basic knowledge of the topic. That is how creators are able to target audience with their shows. When it comes to political podcasts, it is also not always easy for everybody to be focused on it while they are doing something else. For example, politics can be a hard topic to listen to, and for some people, it might be hard to listen while doing

something else which can but not necessarily limit the number of target audience.

The availability of podcast is mostly online, but you can sometimes hear on the radio or see them on television. In 2015 Apple added to all iPhones a native podcast app and there has been enormous growth of new listening apps for both iPhone and Android, Stitcher, Soundcloud, Overcast, Pocket Casts, and DoggCatcher. Among the most used podcatchers are Apple Podcasts and Google Podcasts. Both are free to use, but let's look closer to these two apps specifically. As mentioned before every iPhone owner now have Apple Podcasts directly in his smartphone and as all the apple products with users' iTunes account automatically synchronise. For some users, it might be a useful feature, but for instance, the app itself can sometimes be tough to navigate. While Apple baked the app directly to the smartphones of their users, Google Podcasts is accessible as only the application which can be download in Google Play. On the other hand, Google involved the "Google Assistant" which works similarly as smart speakers known as Alexa or Echo Dot. It might look like a useless feature, but it can come useful while driving or any other situations when you cannot use your hands.

The second discussed audio-only product are audio tours. They are most likely to be found in the museums, walks, etc. Audio tours are defined as a tour where the information is given to the visitor through a collection of pre-recorded speeches on a device that they carry around with them.

(YourDictionary, 2018). However their origin of the audio tours comes from the middle of the 19th century through Willum Sandburg, they have become well-known over the past few years. (Tallon, L, 2009). Audio tours or walks

are now available in almost every museum or larger city, and tourist can self guide themselves through the city in multiple languages. The National Galery of London offers nine different audio tours so far for only £5. Tourists can choose at random from over 1, 200 paintings on display, with access to over 50 hours of in-depth audio commentary. (TheNationalgalery. uk, 2018). From the beginning of last year, the British Parliament in Westminster or Harvard University also offers similar tours.

The most significant advantage of audio tours is their simplicity. They are very easy to use for a broad spectrum of people even older adults manage to put the headphones on and enjoy the private tour. In comparison with standard tours, audio tours allow visitors unique experience of the place of their interest. From possibility to choose the language to the time, they want to spend on every stop. No one is rushing tourist around in a large group with the high intensity of voice how an ordinary tour guide usually holds it. Having the headphones on and be the only one who can listen to the tour gives the visitor a feeling of being special. It is like having a private personal tour just for yourself. However, this positive aspect of the audio tour can also be negative. Visitors come to the museum mostly in the group. If each of them is experiencing expedition at their own pace, it can very easily happen that the group is split up and so ultimately someone will have to wait at the end.

The market for audio guided tours is very tight. First of all, visitors have to be interested in going on tour or to visiting some place and secondly they want to have the ability to choose the tour of their interest. For example, Some people like to see less but learn more, and on the other hand, some people

like to see more with a basic amount of information. As mention before, audio tours have become very popular, and there is a possibility of them in almost every monument worldwide. Most of the sights have their own devices with the whole tour prerecorded, which the visitor receives at the reception after arrival but there are several other different ways. There is an amount of application on AppleStore for apple users and on GooglePlay for Android users, but the most known application with effortless access are GuidiGo, PocketGuide, MyToursApp, Detour, Just Ahead, etc.

Third audio product to be investigated is audio – only games. Audio games, as opposed to video games, are computer games whose primary output is sound rather than graphics. (CreativeHeroes, 2002). Unlike the audio products mentioned before, audiobooks are not yet very known, and their limitations are far more significant and more evident. These games are often developed by and for the visually impaired community, but can also be played by sighted users. The advantage, as well as the challenge, is that these games can only be played through sound. (Röber, 2005). Using sound, games can have dimensions of atmosphere, and possibilities for gameplay that do not exist with visuals alone, as well as providing games far more accessible to people with all levels of sight. (CreativeHeroes, 2002).

One of the greatest benefits of audio-only games is their excellent suitability for mobile gaming, and they do not need any visual information and screens are also not necessary. This allows to even play these games with the attention distracted to other activities. Technologically, audio-only games are relatively easy to build and, besides some additional hardware, which would allow a deeper immersion into the virtual environment, the equipment

needed is simple, affordable and small in size. Another advantage of audio games is their increased level of immersion with a much higher stimulation of the participants' phantasy opposed to visual gaming. This results from the lack of information that is presented and causes the player to imagine the missing pieces and to "shape" the virtual environment through their own experiences. (Röber, 2005).

At the beginning of 2012, Aaron Rasmussen and Michael T. Astolfi introduced to the world BlindSide, most innovative winning award game of Games for Change 2013. "What we are really excited about, is that the game offers an identical experience for both sighted players and players who are visually impaired," one of the creators said in a YouTube promotion video (EpiCycleGames, 2012). Unfortunately, the limitations of audio games are massive. However, there are many possible things you can do with sound there always will be a possibility of improvements by adding visual component. Audio games are now available on every well-known platform including iOS, Mac, Windows, Xbox and Playstation however the market is still relatively small in comparison with other audio products.

The last audio product that needs to be investigated in this essay is Audiobooks. The first mention of the audiobook defined here as any spoken word recording of book dates to 1877 when Thomas Edison invented a phonograph. (Rubery, 2011) The e-audiobook category is recently the fastest growing format (APP, 2018). More people are listening to audiobooks than ever before. 5. 5million people bought or listened to an audiobook which is an increase of 3% on two years previously. (Nielons, 2016).

Except for numerous advantages what audiobooks have, it is an excellent way of making books more accessible. Not everyone nowadays has time to stop, sit down and read the book. The big advantage of audiobooks is their way of bringing stories to life and enable people to enjoy reading while doing other things such as running or driving. (ThePublisherAssociation, 2017) Audiobooks became very popular among students as well. Listening is allowing them to focus on what is important rather than getting overwhelmed by the number of pages they have to read not forget to mention that it is a big help for people with print disabilities.

The most popular platform for audiobooks is Audible. The history of Audible originally began in 1995 but when Audible actually came to life in 2008 when Amazon bought it. Amazon Audible has changed the way in which audiobooks are heard in the modern day. Audiobooks naturally found a gap in the market created by book lovers who are lacking time to sit and read. To ensure the needs of this specific area are met, creators must ensure that popular books are read by their authors and done so in an entertaining manner. Audiobooks are using the advantage of the sound-only environment which focusing mainly on groups of people who can not enjoy books by standard way of reading.

As mentioned at the beginning of this essay, audio development is massive in the past couple of years and keep growing. The potential future of audio products is big, and there is a big chance of possible new products still to be invented. Even though the audio is already strongly developed, there are still things that can be improved. Two of the most prolific recent advances in audio technology, at least from a hardware point of view, are noise-

cancellation and wireless connectivity in professional and consumer headphones (Bell, 2015)". Bell also describes the potential future of audio products where the earphones will anymore not be necessary and will be replaced by conductors which will be transmitting sound through the listener's skull. It is maybe hard for the general public to imagine or even believe it, but Bell in 2015 also predicted wireless headphones which were introduced by Apple in 2016, today are known as Airpods. The improvement of the quality of sound in the past couple of years is significant so is there any bigger improvement of sound to come?

Podcasts are now the most recognised sound-only products around, but their further development is likely to happen in the next couple of years. The number of Americans who listen to podcasts weekly increased from 42 million to 48 million people from 2017 to 2018, and 69% of podcasts are consumed on smartphones. (Edison, 2018). Another fact is that a podcast audience is quite young. 84% of listeners are under the age of 54, with 44% under the age of 34 (Moore, O & J, 2017). Podcasting has a big potential to become even more popular in the next five to fifteen years if recent consumers and future young generations continue to keep listening.

The future developments of products such as audio-only games and audiobook are also very promising. Although audio-only games are more limited than other audio products, their market remains unchanged by the number of disabled people or people with imperfect vision.

Even though there very many audio-only games invented and introduced in 2018, none of them made a significant breakthrough, so there is still some possible space for improvement.

Audiobooks are already in a secure hanging behind the podcasts according to reach. Also, the reach keeps spreading due to recent advancements in technology. In 2012, the number of audiobooks was at 42. 02 millions of units, and in 5 years the number was 108. 17 million units. The massive growth over five years supports the assumption that in the next couple of years audiobooks will be the dominant feature of the reading world. However, the question is: Will audiobooks in the future replace paper books for good?

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