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RISE OF AUGMENTED REALITY IN GAMING TECHNOLOGY

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ABSTRACT

Augmented Reality (AR) has been a thing in the world today. This doesn't leave the gaming industry untouched from AR technology from involving their self in this huge industry. The topic of this research is mainly to talk about how AR has rise recently in the gaming industry. The purpose of this research is to find out how AR has been involving in the gaming industry to this day. For this research, our method to do this research is by reading and analysis the thesis and paperwork of previous research and also by involving in the conference manage by the company and industry that manage to implement AR in their game. The result that we got is quite interesting when the company that manage to pioneer in the AR for gaming, managed to monopoly the market of AR gaming considering that gaming industry is a big piece of pie and they manage to monopoly one of the genre. The implication of this research is that we can realize how there is a huge consumers were waiting for the AR gaming available to them. AR is quite interesting compare to Virtual Reality (VR) because we can concluding that VR is just like having a dream because it only bring us to their own room, compare to AR that implement and improving the reality into a more interesting world without us being lost to the real world.

Keywords : augmented reality; virtual reality; game technology;

INTRODUCTION

The history of video game that has been commercialized date back to 1972 when a video game system "Odyssey" is released by Magnavox [1]. Over the year, the video game industry has gone to rise and down led to the bankruptcy of several home computer and video game consoles company. In the recent years, the use of Augmented Reality, also known as AR has been in the rise. The first reference of AR comes from Frank Baum illustrated novel called "The Master Key" where he imagined a kind of augmented reality [2]. AR make it debut in 1968, developed by computer scientist Ivan Sutherland called "The Sword Of Damocles". With the rise of AR, the number of game

developer pursuit to create a game using AR technology. From 2018 Game Developers Conference, the percentage of game developers that develop games for AR headset has reached 5% [3].

Even so, the drawback of AR for gaming is quite high considering the current usefulness of AR. The major drawback is the technological demands for AR are much higher than for Virtual Reality (VR) [4]. This cause the consumers of AR for gaming remains in a small scale. If one day, someone manage to make AR available almost for everyone, it will be a historical moment for the world to witness just like when computer is popularized in the late 90's.

LITERATURE REVIEW

The paper "A survey of Augmented Reality Technologies, Application and Limitations", a review of the technologies, applications and limitation of AR was performed by D.W.F van Kravelen and R. Poelman. The paperwork was supposed to give general overview of the different aspect surrounding AR to whose interested in this field.

As mentioned on the above, the application area for the AR is very broad. Particularly, AR can be used for creating different genre of games. The classification of the game genre can be shown as below.

AR or augmented reality had gone from pipe dream to reality in just over century. The development of AR games are increasing rapidly over the years. Some are still under development but there were some that already developed and ready to distributed. There is an unlimited potential for AR and yet to be unlocked.

RESEARCH METHOD

For this research, because of the lack of time, we only manage to do research only by researching the journal, thesis and company conference from the past years.
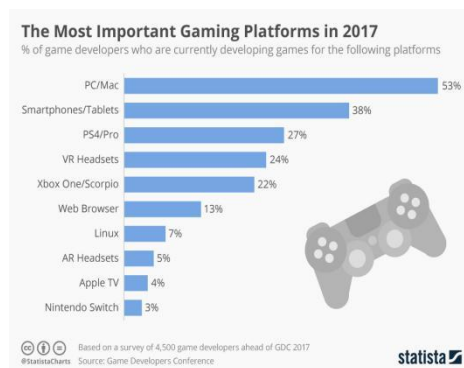
The creation of AR is pioneered by using a head-mounted display (HMD) device. This impose the problems of social and commercial. By using this device, it is troublesome and expensive causing the lack of popularity to mass market. This last until when the handheld device can be used for AR even if their usage of AR will be limited [5].

2016 proof to be the game breaking for AR in game technology when Nintendo manage to create the Pokemon Go. This event was a huge phenomena that swept the world causing Nintendo's stock to rise by 33% after release. This proof that a game that manage to mix the reality with gaming without us forgetting can breach the market of the game industry [6].

It comprises the procedures or steps of the research, e.g., from the methods of sampling to the data analysis, and presented in brief and concisely by numbering. It comprises the procedures or steps of the research, e.g., from the methods of sampling to the data analysis, and presented in brief and concisely by numbering. It comprises the procedures or steps of the research, e.g., from the methods of sampling to the data analysis, and presented in brief and concisely by numbering.

FINDINGS AND DISCUSSION

This study shown that AR which was generally an unknown to majority of the world population being used widely all over the world. Especially for games, AR nowadays is a common platform to play but still low in development for the games. The development of AR increasing rapidly over the years. AR was originally founded for many decades ago but only surface

The Most Important Gaming Platforms in 2017
% of game developers who are currently developing games for the following platforms

Platform	%
PC/Mac	53%
Smartphones/Tablets	38%
PS4/Pro	27%
VR Headsets	24%
Xbox One/Scorpio	22%
Web Browser	13%
Linux	7%
AR Headsets	5%
Apple TV	4%
Nintendo Switch	3%

Based on a survey of 4,500 game developers ahead of GDC 2017
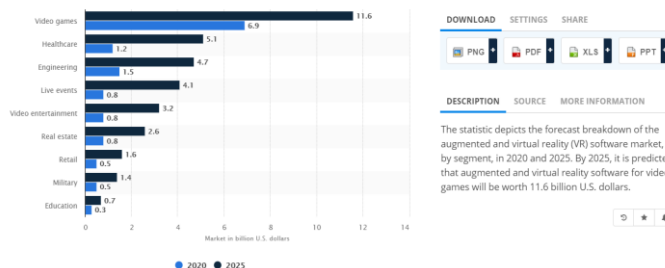@StatistaCharts   Source: Game Developers Conference

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to people consciences recently. All thanks for the developers whose work very hard to build AR games.
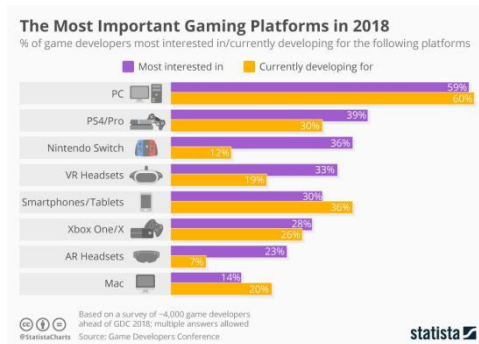
Both of the pictures show the trend of the important gaming platform. On the right side, We can see AR Headset only got 5% for the development of games in 2017. However, the percentage increase in 2018 into 7% which the incremental affected by the interest of users. We assume that gamer nowadays want the games to be more realistic by referring to the chart because AR games provide the most realistic experience in gaming.

The chart above show the forecast of the augmented reality and virtual reality market worldwide in 2020 and 2025. AR is predicted to be used for gaming the most in 2020. The percentage in 2025 for the application of AR in video game goes up almost half of the percentage in 2020. This mean that AR will further developed and it's potential in game will be higher.

CONCLUSION

All the information in this study can be concluded as the AR will be developed for video game for a higher quality and there are more potential can be unlocked through the years that users can enjoy while playing. AR devices although being unpopular few years ago but nowadays they are so popular as there are still not many of the developer interested in developing games for

this platform back then. In our opinion, the use of AR for gaming should be necessary for gamer in the future as its provide realistic view and realistic experience.

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