

## Videogames and virtual assets exchange.

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**Abstract.** With the increase of the online videogame industry and the acceptance of the players to invest time and real money in the games, the developers create new business models for selling virtual assets. This work is part of a postgraduate thesis in development and examines the business of video games, virtual assets, why players spend real money and the advantage of a common market between different games would have to increase the profits of the developers and allow the time invested by the players to also give them profits.

**Keywords:** Videogames, virtual assets, currency exchange, common market

### 1 Videogames

The video game industry is one of the most has grown today [1] due to the increased possibilities to connect to the Internet and the growth of social networking through interactivity that exists between users of these networks. This is reflected in participatory online games, where several people connect to play together, either within groups such as clans or joining to meet goals collaborating with each other, these games are called "Massively Multiplayer Online Game" (MMOG) [2].

We have different business architectures in online game, some where the player pays a monthly amount to access all the content and others where it is played for free, generating the need to spend real money to progress in the game, these business model is called "Free to play" (F2P) [3]. This model has become an integral part of online services, but more quickly in games [4], where there is a need to spend real money, to advance faster; either by purchasing resources or eliminating spam through subscription accounts or premium currencies [5], even if a small group of users spend money it seems to be a successful revenue model [5].

The F2P model is used especially for casual games, those that can be easily learned and are played occasionally, as well as video games available on social networks [5]. However, it is being implemented in more complex videogames such as Cross-Fire, which is among the best sellers worldwide [5]. The success of this modality continues to call on developers to create more and more video games that implement it, produc-

ing a great offer, which reduces the user base that a game can attract. Thus reducing retention and increasing the expense required to bring in new players [5], therefore, developers must identify the most profitable users [5] and thus be able to keep them.

As mentioned by Hamari, Hanner & Koivisto [6] of the analysis on the 300 best applications of the Apple store reveals that this business model has become the main option of many virtual services; similar results were obtained from the store of Google. Based on the great demand, developers must face the problem of a balance between creating a main system with the highest possible quality and at the same time producing the need for premium content to obtain benefits [6].

### 1.1 Why players spend real money?

The successful of this model make us question “Why players spend money in intangible items such as armors, esthetic or collectable items”. This question can be answered with these factors list: 1) Eliminate Spam, 2) the customization of players characters, 3) shows different social status, 4) Advance faster in-game and 5) Avoid repetitions. These factors were obtained from the analysis of several studies [4] [5] [7] [8] [9] [10] and it can be seen that there is a generated need to invest money in or out of the game and thus obtain benefits.

## 2 Virtual Assets Exchange.

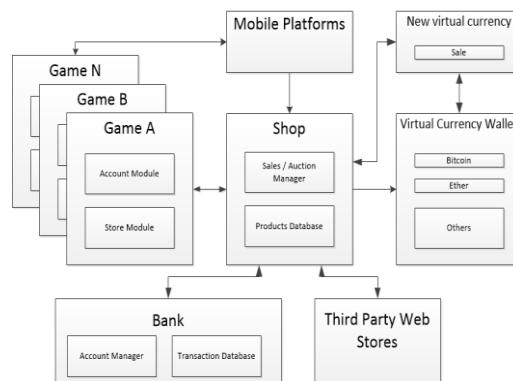
Another point to take into account is the exchange of virtual assets for other virtual assets, real money, goods and services. The exchange of virtual items first emerged in 1999, through exchange between players, in games such as Ultima Online and EverQuest, where users listed their items on eBay and others bid for them [7].

In the study by Bi and Shu [19] is indicated that the implementation of an official platform for the exchange of virtual money depends not only on the demands of consumers, but also on the will of issuers. As an example of an exchange platform we have GameUSD.com [19], this platform allows players to sell and buy virtual currencies, the price often being lower than the game provider; which disrupts the normal pricing system of the virtual currency and damages the earnings of the game provider. It can also be seen [19] the importance of implementing an official currency exchange platform, which leads to a demand increasingly strong of reverse change by consumers, which promotes the emergence of third-party platforms.

In the work of Siira et al. [1] an implementation of a common market between two games is proposed, with which items could be bought with the currency of one game in the other, and there must be a commitment from the game providers for the exchange rate. And in the case of mobile videogames, Apple and Google also come into plays, who receive a commission from the transactions carried out in videogames for real money, for which a platform for purchases between videogames must be implemented in compliance with the rules that they stipulate [1].

### 3 Common Marketplace

Based on the analysis, the video game market is booming and will continue to grow. This creates an overpopulation of video games and developers must get creative when developing them. On the other hand, when players leave a game, the progress and resources obtained remain in the account until it is reused and if real money was invested, it is considered a loss. To avoid this, the option of a common market is proposed where the resources obtained in a game can be traded for a virtual currency and it is used for the purchase in other games. Where developers will be benefited both by the sale of assets within the system and by the possibility that a player has to recover the investment in another video game within this ecosystem, therefore it will be more likely to select a new video game that works with this platform.. Expanding the architecture proposed by Siira et al. [1] the following common market theoretical architecture is proposed, to which new modules are added for the management of virtual currencies. Where the element in this architecture are 1) Bank, will be in charge of managing user accounts and transactions records, 2) Games A to N, are the different games, 3) Mobile platforms, such as Google and Apple, are the interaction mechanism for purchases in mobile video games, 4) New virtual currency, new common currency to use within the system, 5) Virtual currency wallets, it is the payment method within the new market., 6) Third Party Web Stores, allows third parties to sell products and services and 7) Store platform, allows transactions to be carried out.



**Fig. 1.** Theoretical architecture of the common market

As mentioned, it is a theoretical model since various legal implications must be taken in visits within the system, such as: 1) the regional laws where users and developers are located, on the profits obtained, 2) it must have a method of control over developers to prevent them from unbalancing the price of crypto assets. 3) In the case of mobile platforms, the commissions they receive for the sales of crypto-assets generated by stores within video games must be taken into account. This is a model under study that continues to be analyzed and validated through surveys of players, developers and staff of mobile platforms. Likewise, the analyses of the laws of each of different countries to validate that local regulation are not violated.

## 4 Conclusion

As can be seen with the expansion of networks, and especially mobile networks, the video game business has grown, adopting new architectures and models to attract and keep gamers. At the same time the players accept them and are willing to spend real money on virtual goods, accessories.

Finally, the need is seen to be able to exchange virtual goods with each other, inside or outside the game, generating profits for developers and players. Proposing as a solution to this a common market where the elements obtained in one game can be exchanged within another or through a common means of exchange.

Therefore, the study of a market continues that allows the exchange of virtual goods between different games or platforms, using a common currency between them, in which the largest number of developers and players can converge.

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