

Virtual goods in online worlds: basics, characteristics and monetization

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Abstract: In recent years the Internet has brought to the forefront an entirely new form of products: virtual goods. In a narrow sense these are digital items such as clothing for avatars. Unlike traditional digital goods (like musicfiles etc.) these objects live exclusively online in synthetic worlds such as Second Life or World of Warcraft and therefore may be consumed only on the internet. This article provides a practical overview on the virtual-goods-market and considers special characteristics of this young type of products. It is meant to be a short glance throughout diverse aspects of the phenomenon and associated research fields (e.g. legal aspects, new revenue models for online games, game-design-concepts and virtual consumption).

1 Introduction

The internet has changed retail business massively. Main aspects of this development are fast growing opportunities to search products online and thereby increasing market transparency [TKLT10]. But the Internet has not only become an important platform for buying traditional products such as clothing or books, it also enabled a completely new form of products: virtual goods. In a narrow sense virtual goods are items that exclusively exist online in virtual worlds but must be purchased with real money. Originally these goods were a niche-phenomenon. The trade was limited to individuals that occasionally offered items from online games on ebay [Sc07]. In recent years however a commercial market has developed. Many companies sell virtual goods directly to users and generate considerable revenues [Kz2013].

The trade of virtual goods has been enabled by complex online worlds like World of Warcraft and Second Life. Both worlds provide persistent 3D-environments as well as internal economies. Integrated currencies and transaction-systems offer opportunities to trade virtual items from user to user. *Second Life's* internal economy is connected with the real money economy. Participants may exchange their earned virtual money in real money and thus generate a real income.

A keydriver of the market for virtual goods is the increasing use of online communities. Analysts estimate that at least 60 million people worldwide have an existence in virtual worlds [Ch08]. There is especially a long lasting interest in massively multiplayer online games (MMOG). Many users spend a considerable amount of time in these game worlds [Ye06]. Some of them strongly identify with their in-game-identity indicate a high involvement [KK07].

Within the colonization of virtual worlds the internet moves towards a digital space (not only a platform), which enables new forms of social and economic exchange and at the same time opens a very exciting field of research. In a fundamental sense it is desirable to better understand the sometimes complex economic activities within and outside virtual worlds [Ca05]. Moreover it is desirable to explore potentials of integrating virtual goods in new and existing business models. Many companies are faced with the question whether they can generate profit from the current developments [AVW09]. Apart of that there are several neglected research questions with regard to legal aspects (e. g. Who owns virtual goods?) or concerning to consumption (e. g. Why do people buy virtual goods with real money?).

This article examines the phenomenon of virtual goods in a fundamental way. Section 2 provides foundations and backgrounds, such as the historical development of virtual worlds. Then section 3 deals with properties of virtual goods in comparison to traditional information goods such as e-books or music files. Section 4 presents approaches to sell virtual goods. The paper concludes with an outlook on the development of virtual goods.

2 Basic aspects

2.1 What are virtual goods?

The term virtual goods refers in a narrow sense to digital objects, currencies and other premium-content that only exist within online worlds and some social networking sites. The concrete interactive use of these goods depends on the character of the particular environment. Online games mainly include functional objects like weapons and tools which are helpful to get tasks done and save time. Free virtual worlds predominately provide decorative items such as clothes and accessories which are used to customize avatars. Another kind of goods are gift symbols such as flowers or hearts that are found in some networking sites. In addition to portable objects there are also goods like virtual land, animation-scripts or in-world-services. In some browser games participants have the chance buy tactical advantages [AVW09]. All kinds of goods have in common that they expand the opportunities for interaction and self-expression in the digital space [Ca05].

WOW :: Tree Bark Jacket



Details

Unser Preis: €2.49
(\$ 3.19)
inkl. Mwst.

Functional Items



Decorative Items



Gift Symbols

Figure 1 Variants of virtual goods

2.2 Mediation and Reception

Virtual goods come in the form of digital objects. Unlike physical objects digital objects have no independent existence. Instead they are technically mediated and received. At the core a digital object consists of computercode that is translated into an image - or better an image sequence - which can then be viewed on a screen [Ma08]. The actual object is created only in the mind of the viewer as a result of the mental processing of the image information (see Figure 2). The interaction between recipient and computersystem is characterized by looped feedback processes that Klimmt describes as "input-output loops" [KI06]. Here it comes to a permanent run of inputs of the recipients and subsequent answers of the computer program which then again require new inputs of the recipients. The permanent feedback leads to strong mental activity during the receptive-phase. Typically the awareness of mediation decreases what Lombard and Ditton define as "Illusion of Nonmediation" [LD07]. Although the recipients basically know about the mediation of the events they fade this aspect due the high mental effort caused by the simulation.

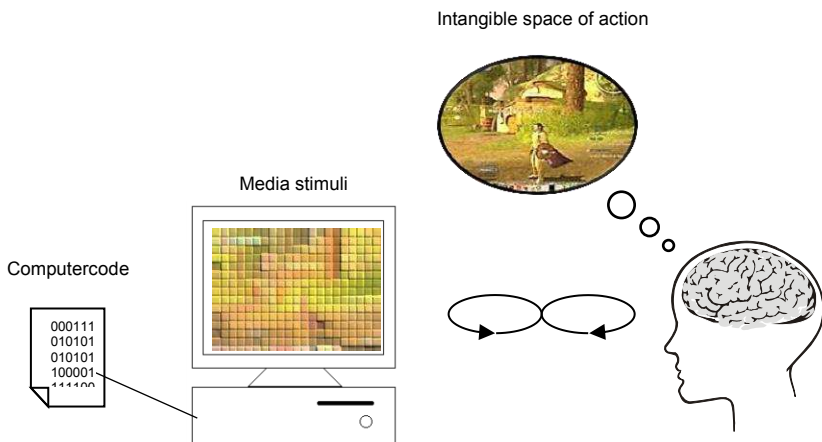


Figure 2 Reception of online worlds and virtual goods

2.3 Historical development

The historical development of virtual goods is closely linked to the development of online worlds (see Figure 3). The concept of virtual worlds goes back to so-called "Multi-User Dungeons" (MUDs). MUDs are pure text-based online games, which are comparable with today's chat rooms [Ba03]. The visual representation of virtual goods established in the first commercially successful Massive-Multiplayer-Roleplaying-Games Ultima Online (1997) and EverQuest (1999). Both games simulate complex graphical environments and integrate a wide range of equipment. Collecting and trading these items is still part of modern game concepts [PZ09].

With the emergence of free online worlds the commercial trade of virtual goods widened. The best known examples within this genre are Habbo Hotel (2001) and Second Life (2003). A special feature of Second Life is the free economic exchange. Participants may not only buy goods such as virtual real estate they are moreover able to create and trade basically any kind of objects [AM08]. The productivity of Second Life is driven by the transfer of copy- and licensing-rights to creators of virtual goods [BM07].

Since about 2004 the market for virtual goods increasingly expands into the two-dimensional World Wide Web. Item-Selling-Models are also implemented in mass appeal communities such as Cyworld (1999) and Facebook (2004). Inside Facebook virtual goods are found at social games like Farmville (2009). Social games are casual games which are available as an add-on-application on social networks. These games attract broader audiences than traditional MMOGs. In most cases browser games are designed as free-to-play games that integrate paid-content such as Premium-Items [Po10]. Transactions are processed through in-app-payment-options.

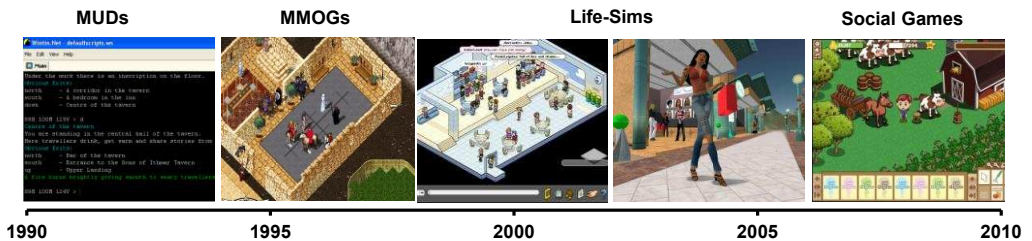


Figure 3 Historical development of online worlds

2.4 Virtual economies and Real Money Trading

Most online worlds include schematized economic systems that allow participants to buy and exchange virtual objects. Transactions are processed through internal auction platforms and own game currencies (gold, coins, credits, etc.). Similar to the real-world all traded goods, resources and money are scarce so that conventional market mechanisms come into play.

In-game-economies are closed systems that are regulated by game operators who take the role of a central bank. All transactions are processed within the virtual world. According to terms of use in-world-resources may not be transferred into real money [Nä08]. However there is a growing grey market outside of popular games where traders offer items and currency for real money. Dependent on rarity prices range from a few cents up to three-digit amounts in Euros (see Figure 4). The purchase is based on an obligation business. This means the purchase takes place in external e-market places (especially ebay) whereas the transfer of goods is processed with a delay in the actual game [Nä08].

In recent years the trade of in-game resources has become a professionalized industry. Some dealers established a worldwide network of suppliers and engage "gold farmers" to produce in-game resources [Sc07]. Gold farmers are freelancers who pick valuable items and currencies in online games [He10].¹ In countries with elaborated gaming cultures such as China and Korea the production of virtual goods is now a small economic sector [Sc07]. Due to the low local wage level Chinese dealers achieve profit margins up to 86 percent [He08].

A special case is the radical platform-approach of Second Life. The operator Linden Lab only provides an empty environment and puts the design of the environment completely in the hands of the participants [PZ09]. The free economic exchange creates a wide product range and opens up structures that are quite comparable to developed real world economies: Virtually any kind of product can be produced, several services are offered and used [AM08].

Ansicht: Alle Artikel | Sofort-Kaufen

196 Ergebnisse in allen Kategorien gefunden

Ansicht als: Liste ▾ Sortieren nach: Neu eingestellt ▾

Bild [ausblenden]	Artikelbezeichnung		Versand nach 24937	Eingestellt (Uhrzeit) ▾
		Preis	Kostenlos	
	WoW Item TCG Loot: Tabard of the Arcane	EUR 18,99	Kostenlos	10. Sep. 07:59
	WoW Item TCG Loot: Tabard of the Void	EUR 18,99	Kostenlos	10. Sep. 07:59
	WoW Item TCG Loot: Tabard of Fury	EUR 18,99	Kostenlos	10. Sep. 07:59
	WoW Item TCG Loot: Tabard of Nature	EUR 18,99	Kostenlos	10. Sep. 07:59

Figure 4 Real money trade of virtual goods on ebay-Germany

¹ Inside the time-logic of the simulation resources do not arise out of nowhere but must be produced by time-consuming interactive actions. So ultimately the goldfarming-business is based on a familiar factor of production: time.

3 Characteristics

3.1 Marketing related characteristics

A well known problem of digital goods is the unauthorized duplication of goods by "pirates" [TKLT10]. Especially downloadable commodities such as e-books or musicfiles can be reproduced easily so that these goods are ultimately available for people who are not willing to pay [TKLT10]. In the case of virtual goods there are differences: Although the product comes also in a fully digital shape community operators are able to (and need to) prevent undesired duplication. The reason for this is that virtual goods are stored centrally on webservers and consumption takes place in a digital online environment (see Figure 5). In contrast to traditional e-commerce the internet is not only used as a distribution platform, instead virtual goods exclusively live within this medium.

Due to the storage on webservers virtual goods offer some advantageous product characteristics. Besides the chance to exclude unauthorized people from consumption it is also possible to ensure rivalry in consumption. Rivalry in consumption means in this context that two community participants may not own the same copy of a virtual object. Thus scarcity and exchange value of copies in circulation remain. Virtual goods combine it in an extraordinary way benefits of physical goods (e. g. scarcity, rivalry in consumption) with advantages of digital goods (such as digital distribution, marginal costs of reproduction) and are for this reason particularly interesting for business.

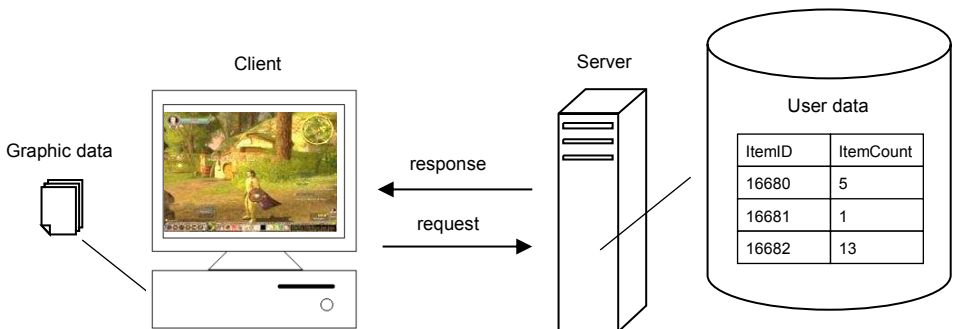


Figure 5 Storage of virtual goods (simplified)

3.2 Consumption related characteristics

While community-operators benefit from the central storage of virtual goods consumers are faced with limitations. Consumers need to keep a constant internet-connection to the server of the operator to use virtual goods. There is no appropriation of the good that would be comparable with the purchase of physical goods [Ps09]. Instead consumers only receive the right to use the virtual object within the community [Fa05]. Because of the dependence of customers on the constant access-permission by the supplier virtual goods aren't classified as property [Ps09].

Another limitation for consumers is the missing portability of virtual goods. Since online communities are “walled gardens” (self-contained systems) items cannot be transferred to other communities [Na07]. Even if portability would be technically passable one cannot expect that operators would provide this function because hard earned goods generate lock-in effects and enhance customer loyalty [Bu07]. Due to the technical and economic barriers a future portability of virtual is unlikely.

As already highlighted the value of virtual goods depends on the respective context. An important factor here is that virtual objects are visible to other people and sometimes affect other people. The ability to consume the product in a semi-public online space and the related resonance in the form of attention or emotions of other participants create a derivative benefit. A virtual good would certainly donate little benefit for the owner if there wouldn't be other participants that are related to the owner. The actual value of virtual goods thus bases on the relation to other community participants and network effects that occur here [Fa05].

A general characteristic of virtual goods is the duality of their “thing-like” nature and their non-physical form. Things are usually understood as physical objects that have a solid, liquid or gaseous state. However this does not apply to electronic data. The intangible form advises to classify virtual goods as services. On the other hand it should be noted that virtual goods are persistent, transferable and unique objects that hence share properties with material goods. Given this unusual combination virtual goods can be considered as hybrid-commodities.

Overall it should be noted that virtual goods are fully marketable assets. Advantageous product characteristics such as rivalry in consumption and scarcity are technically feasible. The product is solely consumable in the context of online communities. In these key points virtual goods differ from many classical digital goods. The differences between the two product types are summarized in Table 1.

Classical digital goods (media /information goods: e.g. e-books, music files)	Virtual goods (e.g. items in online games)
editorial content	interactive things, virtual currency, in-world-services
originally had a physical carrier (paper, records etc.)	originally digital
partially consumable offline	only consumable online
multiple ownership	individual ownership
no identity	unique
portable	context-bound
not resalable	partially resaleable

Table 1 Differences between classic digital goods and virtual goods (Source: Based on Szugat 2008)

4 Monetization

The sale of virtual goods ("Item Selling") seems to be a profitable business for community operator. Marginal costs of reproduction and online distribution promise high margins. Also the commodity is being sold directly from the operator to players so that no duty to retailers accrues. On the other hand risks and limitations of the business model must not be ignored. For example the development, implementation and support of a community cause considerable costs. There are also high demands on the technical infrastructure especially in terms of system stability and availability of user-generated content [Pa09].

In online games the number of actual buyers is generally low because some participants categorically reject this behavior [Gr09]. In any case purchasable items should not affect the overall balance of the game because otherwise the game loses its entertainment value [Pa09]. It is recommended to make only average items buyable while the most powerful objects must be earned through own efforts [Le09].

A fundamental decision for community operators concerns the conception of the revenue model. Conceivable revenue streams are transaction-based revenues (e.g. sale of virtual goods) and / or non-transaction-based revenues (e.g. monthly usage fees, advertising). In recent years there has been an increased launch of browser games that finance through item-selling [Po10]. This trend also illustrates a paradigm shift: while computer games were originally marketed as generic products they are nowadays increasingly used and designed as a marketing platform for paid content. However it is not necessarily an either/or decision for one revenue model: It rather appears to be a strategic option for game operators to turn a subscription-based-game into a free-to-play-game when the userbase decreases.

5 Conclusion and Outlook

The market for virtual goods is still at an early stage of development. Although some operators achieve considerable revenues the overall sales-situation remains suboptimal [Fr11]. At the moment only some online games and some youth oriented virtual worlds gain significant turnovers [Kz13]. Growth is expected in the console market where there is a trend towards multiplayer games. Overall the market for virtual goods is more diversified and more competitive as commonly perceived.

The increasing commercial trade of virtual goods opens diverse aspects of research and raises some fundamental questions.

- From a legal perspective it must be clarified whether community participants can take ownership and claim disposal rights on virtual goods. Regulation is also needed on the question, of how revenue from the trade in virtual goods is taxed.

- Another field of research is the design of virtual economies. Pannicke and Zarnekow stated that problems associated with the design of virtual economies (e.g. inflation and deflation) have not been solved sufficiently [PZ09].
- Especially operators of free-to-play games are faced with the challenge of designing item-selling-models that are accepted within the broad userbase and do not reduce the collective playing experience.
- There also remains relatively little understanding of why consumers are willing to buy virtual goods. The limited knowledge about drivers that lead towards purchases of virtual goods is a considerable problem for game operators. In order to develop attractive offers and maximize customer value game operators are reliant on knowing the expectations of their target-customers [Le09].
- A sensitive topic is the possible exploitation of living resources by letting goldfarmers work for little money (even compared to low local wage-level) and selling the produce in Europe [He10]. Item-Selling appears to be an interesting characteristic of globalization.

All in all it should be noted that virtual goods represent a new and genuine type of products that differs from conventional products particularly in the contextual integration in online worlds. The real money trading of virtual goods is an original variant of E-commerce: not only the buying-process takes place on the internet but the product itself is also consumed online.

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