Avatar as a New e-Business Model in Korea

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Abstract

The Internet is gaining momentum in commerce, communication and the net is also used as a tool for portraying personal identity. One of the most popular ways of representing personal identity on the web is managing an avatar, another self in cyberspace. This paper investigates the possibility of avatar business as a new e-business profit model. We suggest lifecycle and a framework for avatar business and cover the characteristics of avatar business by comparing it with other e-business models proposed in past studies. This is illustrated through a case study of one leading company in avatar business.

1. Introduction

In recent years, the Internet has penetrated our daily lives. The Internet provides many useful benefits such as information sharing, chatting, business opportunities through world-wide web accessibility and a low entrance barrier. The Internet also becomes a tool for portraying personal identity. On the Web, an individual is embodied by anything, from a nickname, to an avatar. One of the reasons the Web has become a popular way to represent one's identity is that these symbols can be adjusted to suit one's ever-changing moods, or changed to reflect a specific personality trait [7]. Another reason is the anonymity of the web facilitating redefinition of web users in cyberspace.

Cyber identity denotes personal identity in cyberspace presented through various media such as a personal homepage, an avatar, blog or virtual community. As usage of the Internet spreads in daily life, cyber identity is regarded as important as real world identity. Since people want to portray themselves in cyberspace as we do - clothing, makeup, and hairstyle - in the real world, managing cyber identity can provide new business opportunities on the web.

The number of Internet users in Korea reached at 29.22 million (65% of Korean population) and 24% of Korean homes are connected to the Internet through high-speed networks as of the end of 2003 according to the Ministry of Information and Communication (Korea Internet White Paper 2004, National Computerization Agency). The Internet no longer just has the role as a community in cyberspace but also has become a necessary tool in Korean daily life. Since nearly all commercial websites use avatars to depict web users on the web, avatar has become familiar to Internet users in Korea. Korean internet users buy cyber items to decorate themselves and to form their cyber identity on the web.

However little research on cyber identity as a new business opportunity has been performed. It can be a new profit model for dot-com firms as the Internet spreads over the world. This paper aims at introducing cyber identity of internet users and suggesting the identity as a new profit model of dot-com firms. This paper is organized as follows: Section 2 reviews some related works on avatar and e-business models on the web. We will classify the past research on avatar and e-business models. The avatar business model will be discussed in section 3. In section 3, we also suggest lifecycle and a framework for avatar business and cover characteristics of avatar business compared with other e-business models proposed in past studies. Section 4 illustrates a case study of one leading company in avatar business. Finally, section 5 concludes this paper with some remarks on implications and future research directions.

2. Related works

2.1 Avatar

The word "avatar" comes from the Sanskrit language and can be translated as incarnation or God's appearance on earth. In Hindu mythology a God called Vishnu is believed to have visited earth nine times to curb evil. For each visit he took a different incarnation, called an avatar [4]. Nowadays, however, avatar refers to your appearance in cyberspace. In chat rooms, for example, your avatar appears next to what you say.

Research on avatar can be classified into the following categories: (1) computer graphics; (2) communication facilitation; (3) intelligent agent; and (4) cyber identity.

The first category focuses on the kinematics aspect, making avatar resemble human motion and facial expressions mainly in the computer graphics area, and especially in 3-D animation [5]. Luciano & Banerjee [12] introduced the application of more efficient mathematical representation of the kinematics of avatars in telecollaborative VR environments. Sung & Park [17] suggested making an avatar perform genuine actions and offers multi-style information with 3D graphics. Yang & Chen [21] also presented an imposter-based approach to achieve real-time human-like avatar behavior in virtual

environments.

In the second category, avatar can play a role as a communication facilitator. Aoki et al. [1] proposed a chatting system that uses avatar language to communicate across linguistic barriers. Many avatar models are designed for the use of face-to-face communication in cyberspace. According to Ito et al. [6], an avatar is regarded as a communication interface, which is an agent through which each user expresses his/her appearance and personality. And a user can establish communication with other users who share the space through their avatars. Ohya et al. [14] proposed a new communication method, called "Virtual Me", that enables a user to simultaneously participate in multiple events such as meetings or lectures as a virtual-metamorphosed avatar controlled by the user and/or as a computer-controlled autonomous agents.

The third category emphasizes an intelligent agent role of an avatar on the web. Lee & Chung [11] proposed in their recent research a web DSS approach to building an intelligent internet shopping mall by integrating virtual reality and avatar. Avatars act as representatives for actual people, and agents capable of interaction, based on an autobiographical log of the person. This autobiographical log records events experienced by the person and the person's history, which could be considered the critical element in a social conversation agent [3].

The last research direction of avatar is as an identity in cyberspace. According to Paniaras [16], a virtual identity is a projection of one's self into a virtual domain and it involves a formation process that requires the interaction of the user with the virtual community. Talamo & Ligorio [18] analyzed how identities are built and maintained in cyberspace through social interaction and dialogical processes. Kivimäki et al. [9] suggested that identity production and verification should be supported for virtual business communities to be attractive. Kim & Lee [8] classified cyber identity into five categories: (1) unrealistic alternate ego; (2) idealistic ego; (3) realistic ego; (4) realistic alternate ego; and (5) bizarre ego.

2.2 E-business model

E-business models denote methods, concepts, frameworks, or architectures by which companies can use the Internet to carry out their strategies of gaining market competitiveness, establishing viable market niches, and adding value for their stakeholders [10]. Timmers [19] defined the term "e-business model" as an architecture for the product, service and information flows, including the various business actors and their roles; a description of the potential benefits for the various business actors; and a description of the sources of revenues.

Lam & Harrison-Walker [10] classified popular e-business models into six cells: (1) Internet merchants and portals; (2) Virtual product differentiation; (3) Brokerage, purchase assistance, and retail networks; (4) Interactive networks; (5) Internet promoters; and (6) Image building.

Depending on the classification scheme, as many as 29 Internet business models currently in use have been described by various authors [2]. However, according to [13] and [20], there are four key distinctions: (1) the supply chain model; (2) the revenue model; (3) whether the model serves the business or consumer market; and (4) whether the firm is pure-play or clicks-and-mortar.

Osterwalder et al. [15] suggested four aspects of an e-business model: Product innovation, Customer relationship, Infrastructure management, and Financials.

There are few research papers on avatar as an e-business model while a lot of research on avatar and e-business models have performed separately. Therefore, we explore the possibility of avatar business as a new e-business model in this research.

3. Avatar business

3.1 Overview

We refer "avatar business" to all electronic commerce activities to plan, construct, and sell various cyber items such as wallpaper, backgrounds, pets, and bits and pieces in cyberspace. Avatar business can be performed similar to the way business is performed in the real world. Most activities, such as changing hairstyles, buying cars, giving presents to others, and even donating belongings, are possible in cyberspace.

At the beginning stage of avatar business in Korea, only a few items like facial type, hairstyle, and clothing were being merchandised. Also, emotions such as delight, grief, anger, and surprise can be purchased. At that time, avatars were mainly used in chat rooms or when posting articles on bulletin boards. Recently, however, the avatar world has begun to gradually mimic the real world. For example, we can buy anything in cyberspace such as clothing, jewelry, gift certificates, cyber pets, flooring, wallpaper, cars and even houses.

3.2 Avatar Lifecycle

Avatar has the following life cycle as shown in Fig. 1: (1) design; (2) build; (3) distribute; (4) purchase; (5) use; and (6) dispose.

The first three phases are performed by suppliers, that is avatar service providers, and the remaining three phases are performed by customers, that is Internet users who purchase cyber items.
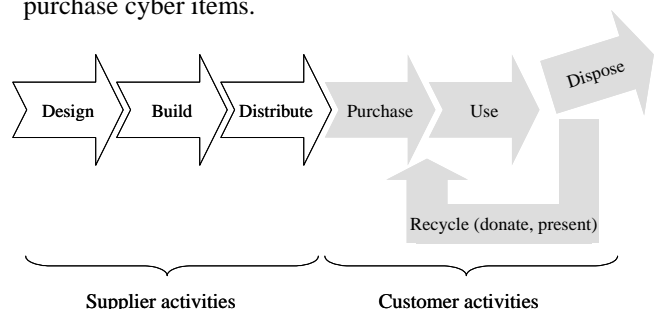

Fig. 1. Lifecycle of avatar

Stage 1: Design. Avatar service providers first analyze up-to-date fashion trends in the real world, and then select convertible cyber items, and design those items with regard to market research and customer needs.

Stage 2: Build. A design team constructs a large number of avatars using multimedia features such as animated graphics, flash, sound, and so on.

Stage 3: Distribute. In this stage, proper price on each cyber item is determined and various kinds of avatars are released and displayed on websites.

Stage 4: Purchase. Customers try on candidate items and select their most preferable ones and pay for them.

Stage 5: Use. Customers can put on/off, resell, present to others, and even donate their avatars for social welfare.

Stage 6: Dispose. In this stage, avatar owners are no longer interested in specific items. Customers will dispose unnecessary items in their closets.

3.3 Avatar as a new e-business model

As mentioned in section 2.2, there is a lot of prior researches on classifying in the e-business model. In this section we use three characteristics of e-business to define the position of the avatar business model by modifying Chen's model [2]. Three characteristics and attributes of each characteristic are shown in Table 1.

Table 1. E-business characteristics and attributes

Characteristic	Attribute
Supply chain model	Direct sales
	Intermediated sales
	Marketplace
Profit model	Free site
	Pay site
Digitalization model	Pure digital
	Click-and-Mortar

Avatars are sold to customers directly by avatar service providers and customers purchase avatars, purely digitalized items. Therefore the avatar business model has the following characteristics: (1) direct sales; (2) pay site; and (3) pure digital. Therefore the avatar business model is located at the dotted position in three-dimensional space as shown in Fig. 2.
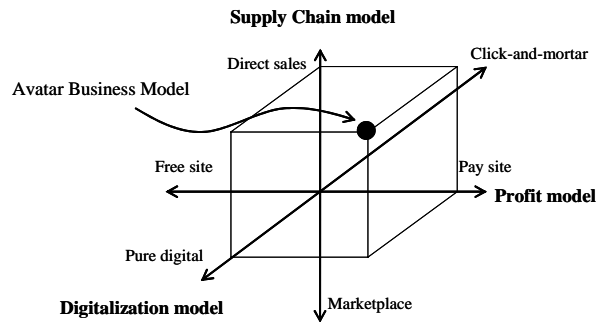

Fig. 2. Position of Avatar business model

3.4 A framework for an avatar business model

We suggest an avatar business model as shown in Fig. 3. Above all, high-speed internet connectivity, the proliferation of Internet cafes and mass of web users as basic infrastructure, are required to start an avatar business. The diffusion of internet-accessible networks can promote daily use of the Internet. The 5Cs (Culture, Cost, Content, Community, Communication), the column shafts in Fig. 3, depict the five driving forces of the avatar business model.
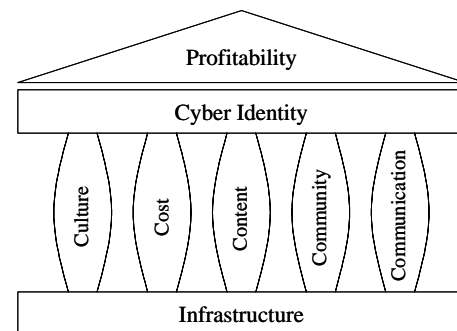

Fig. 3. A framework for the avatar business model

3.4.1 Culture

Cultural environment is a critical factor for activating an avatar business. When people get accustomed to the web, they regard life in cyberspace as important as life in the real world and culture on the web can stimulate the needs of managing cyber identities.

3.4.2 Cost

One of the most noteworthy characteristics of digital items is that they are highly cost-effective. Digital items can be replicated indefinitely without raising production and inventory costs. We will discuss how cost-effective avatar business is in section 4.

3.4.3 Content

It is also important to provide popular digital content to rally web users. Good content in a website can attract

web surfers to stay at the website. High quality content results in the formation of virtual communities.

3.4.4 Community

Many web users may participate in one or more virtual communities and visit to share their common interests. Good communities can anchor the visitors of a website as inhabitants and make them recognize the necessity of building a cyber identity.

3.4.5 Communication

Building various communication channels is essential to escalate the membership among community inhabitants. Multi-media chatting, online memos, personal homepages and blogs are popular functionalities of community websites. Frequent communication among web users can raise concerns to how they are seen in cyberspace.

Successful deployment of avatar business through the 5Cs results in enhanced cyber identity. If web users are satisfied with their enhanced cyber identity, they purchase avatar items repeatedly for their identity. Finally the profitability of a company will increase due to the characteristics of avatar item as mentioned in section 3.3.

4. An illustrative case study of avatar business

N company is the most successful company in avatar business in Korea. It introduced avatar commercially to its website for the first time in the world. Every month 8.5 million people visit the community site of the company and more than 500,000 people purchase avatar clothing to dress their cyber identity. From May 2003, users have been able to purchase virtual furniture and decorative items to make their virtual inhabitants look prettier (A presentation for prospective investor and partners, N company, 2003). In 2003, 90% of sales revenue was generated by only nine workers on the avatar team.

Fig. 4 shows the quarterly sales of avatar from 2002 to 2003. Sales revenue of avatar rapidly increased until the second quarter of 2003. In the second half of 2003, despite the economic depression, sales entered a stable stage.
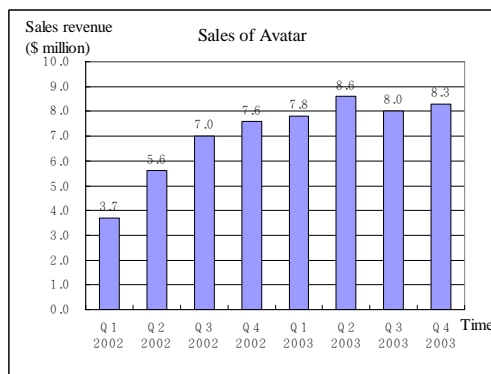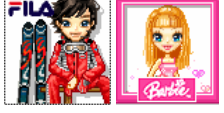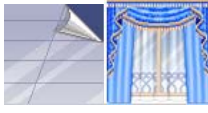

Fig. 4. Quarterly sales of avatar (Year 2002 ~ Year 2003)

N company manages various virtual shops and in each shop they sell thousands of avatars. Table 2 describes the virtual shops of the company and shows examples of representative avatars.

Table 2. Avatar shops of N company

Category	Avatar	Description
Fashion Shop		A basic shop selling fashion items including casual wear, formal dress, accessories, cyber pets, even friends
Brand Shop		Affiliated with famous brands such as Barbie or FILA, it is joint marketing through a strategic alliance between online and offline companies.
Theme Shop		People can celebrate special days or offer season's greetings by purchasing products in this shop.
Interior Decoration Shop		This shop deals with all decoration items including flooring, wallpaper, terraces, window dressings, carpets, stairs, and so on.
Gift Certificate		Customers can buy gift certificates in this shop to present to other people.
Donation		This shop is quite different from the other shops. People can donate purchased items to help poor people.

5. Concluding remarks

The Internet is the latest technological breakthrough which has built up a new digital space. As we spend more time in cyberspace, we make the most of our cyber identities. One possible method of enhancing our cyber identities is managing an avatar - a broad concept of a character in cyberspace. The desire to manage cyber identities using avatar on the web provides dot-com firms new e-business opportunities.

In this paper we reviewed the related work on avatar and e-business models. And then we defined avatar business and presented the lifecycle for an avatar business. A framework for avatar business was suggested as a new business model on the web. A real world case of avatar business was introduced. The avatar business model does not only have some possibilities of a profit model on the

web but it has the following potential benefits:

(1) Social benefits: (a) Donation of cyber items: If cyber items are donated to N company, it converts donated items to cash and helps poor people; (b) Creation of new jobs: An avatar director is a specialized job for planning, pricing and displaying avatars.

(2) Personal benefit: Psychological satisfaction: People can change their egos into whatever they want to be in cyberspace.

(3) Commercial benefit: CI (Corporate Identity) improvement: Firms can advertise their products on the web through an avatar as shown in Table 2.

In the future, we expect that this study will be extended to cyber identity including cyber items in online games. We can also investigate specialized e-marketplaces which deal in cyber items for online games as a new business model.

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