

V-Commerce: The Potential of Virtual Worlds in Services

Urszula Świerczyńska-Kaczor
University Jana Kochanowskiego
in Kielce
ul. Żeromskiego 5, 25-369 Kielce,
Poland
Email: swierczynska@pu.kielce.pl

Abstract—The author assesses the suitability of virtual worlds for building effective selling environment. In analysis key features of virtual worlds are discussed and compared with the way of functioning the other type of virtual communities—social networks web-site.

I. INTRODUCTION

WHEN the idea of embedding virtual communities in business appeared in the mid 90's [1] the numerous virtual communities have grown in Internet space. Nowadays many companies apply virtual communities¹ into their functioning, mostly in promotion and R&D, often resorting to social networks or sponsored web site. Among many different types of virtual communities, virtual worlds based on the new technology previously created for entertainment start playing important role in many business areas including distribution. Due to better description of virtual words even new marketing terms were invented like 'v-commerce' or 'v-CRM' [17]. Because 'pure' services² can be sold without material component, virtual worlds offering direct real-time communication with 3D graphics, become perfect venues in the Internet space for meeting customers and companies. Virtual world such as Second Life is still emerging new technology and their potential business users, such as companies operating in a real market, have limited knowledge about implementing virtual worlds' into their business environment. Many entrepreneurs perceive virtual worlds only as 'games', not discerning their potential in business areas. This article is focused on analysis of the role of virtual worlds in services. The analysis, based on qualitative research - netnographic studies, highlights the differences between implementation 'traditional' social networks and virtual worlds as a distribution channel.

II. THE MAIN FEATURES OF VIRTUAL WORLDS—EXAMPLE OF SECOND LIFE (SL)

Second Life (SL) is a well-known virtual world with about 1.2 million of users, mostly from United States (about 36%) and from Germany, France, Brazil, Japan and United King-

¹ The terms 'virtual community', 'virtual society' or 'social networks' are still unclear and authors use different criteria in analyzing this phenomenon

² Such as educational services or lawyer's advice

dom³. Second Life is an example of Massively Multiplayer Online Games (MMOGs)⁴, but significantly different from the goal-focused on-line games such as racing or fighting. This virtual world is also called 'metaverse' [7] in order to distinguish Second Life from non-social games. Second Life reflects 'real' life, therefore the avatars spend their money on entertainment such as shopping, going to clubs, disco, museums, parks.

Virtual world is an interface for people who want to meet, talk on-line with other users and play by creating their own world. SL also works as an Internet tool for companies looking for their potential customers, although the customers in Second Life (and virtual worlds as general) exist as avatars.

Depending on the connection with real world, the companies operating in Second Life can be classified into two groups:

1) Companies existing in the real market which aimed to strengthen their brands using virtual worlds:

- manufactures eg. Fiat, Peugeot, IBM, Adidas⁵, Sony, Reebok, Sun Microsystems
- retailers e.g. Circuit City, Sears,
- service companies e.g. AOL, hospital: Palomar Pomerado Health [5]
- media ex. Reuters, National Public Radio NPR, Polish Radio Bis, Warner Bros

2) Companies which operate only in the virtual market e.g. language schools providing lessons via chat or voice, companies creating digital houses, garments etc. for avatars.

The varieties of business existing in Second Life is incredibly diverse: from companies connected with creation in SL such as custom avatar designer, jewelry maker, architect, freelance scripter, theme park developer [8] to companies using interface as a platform for delivering professional services such as education or architecture.

The business in Second Life flourishes due to the possibility of trading currency which is used inside the game (Linden

³ Poland is 14-th in the ranking of active accounts with 4.426 avatars – less than 1% of all residents – April 2008 [9]

⁴ There.com or Entropia Universe are other examples

⁵ Adidas promoted their running shoes – the a3 Microride – creating the experimental store in Second Life, the project was successful: three out of every five visitors bought the product, virtual sales alone earned back 14.5% of total investment, also 3.750 on-line articles and TV interviews plus extensive magazine coverage were generated [15]

Dollars). It means that an entrepreneur who gains profit selling products or providing services inside a game, can exchange the earnings (Linden Dollars) into real money – American Dollars.

In the table 1 (see below) there are some main descriptions of Second Life and examples of social networks: Facebook, MySpace (global scale) and fotka.pl, Moja Generacja.pl, nasza-klasa.pl (regional market).

The products or services sold inside virtual communities can be classified into two categories [see the fig. 1]:

1. Products exclusively for entertainment. In Second Life these are new garments, houses, boats, cars and other products for avatars. In Facebook or in nasza-klasa there are some digital presents for friends (like small pictures). In fotka.pl the user can buy 'being a star'. These products are useless for members of the community outside the game.

2. Products that can be used out with the gaming environment. In this case the virtual world is only an interface (environment) in providing services or selling products - these products/services could be sold in similar way using alternative Internet channels such as the web site. Providing language lessons or educational courses are the examples of services, but also digital products such as e-book, music, photos can be sold in this way.

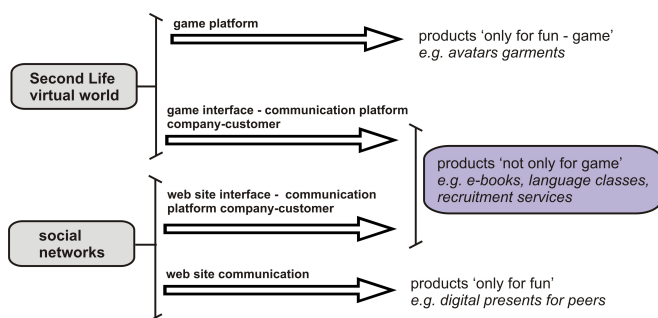


Fig 1. The link between Second Life and social networks as distribution channels

Although Second Life is still in the early development phase, there are some examples of traditional companies using SL in their distribution. They successfully implemented SL in educational courses, consulting services, engineering and architecture projects or recruiting staff (see examples below)

1. Many schools use Second Life in teaching:
 - (a) 43 universities in the United Kingdom work with Second Life organizing different kind of activities [6]
 - (b) Insead provides MBA lecturers [20],
 - (c) Ball State University in Indiana [19], Montana State University-Bozeman and Harvard Law School [10] use the SL as a e-learning platform,
 - (d) Stanford University and University of Houston examine different aspect of functioning virtual world [10]
 - (e) A group of schools in Barnsley resort to a virtual word to teach children writing and comprehension skills [21]
2. Non-profit institutions such as museums, art galleries, public radio organize educational events e.g.:
 - (a) NPR Radio organizes Science Friday
 - (b) The Royal Liverpool Philharmonic gives performances [4]
3. SL is useful in HR projects:
 - (a) Novartis and Johnson&Johnson [4], Cisco Systems, BMW and Vodafone [23] use SL in the program of training their staff and company
 - (b) Wipro Technologies receives submitted resume at Wipro's virtual campus [2]
 - (c) Dutch bank ABN Amro is using the virtual world for one-to-one meetings with prospective employees [18],
4. Some engineers resort to Second Life as a platform for projects: 3D graphic is more convenient in presentation for clients than traditional architectural programs (e.g. Second Life allows customers experience walking through the house) [22]

Among many variables determining the potential of virtual communities in distribution, two groups of factors are especially important (see fig. 2):

1. factors connected with the technological environment
2. factors connected with characteristics of users

Apart from the characteristics of the community such as the age of members, the number of users or the intensity of communication, also the technical infrastructure affects the process of delivering services. Using only chat or instant

TABLE I.
COMPARISON OF VIRTUAL WORLDS AND CHOSEN SOCIAL NETWORKS

Feature	Second Life	Facebook.com	Fotka.pl	Moja Generacja.pl	Nasza klasa.pl
Type of community	Virtual world	Social network - global	Social network - regional	Social network - regional	Social network - regional
Time founded	2003	2004	2001	2006	2006
Number of members [9], [11]-[13]	13,7 mln users; 1,2 mln users logged during the last 60 days	70 mln us	3 mln users	6 mln users	6 mln users
Availability of Polish language	No	Yes, since December 2007	Only Polish	Only Polish	Only Polish

messaging is a more limited way of communication between entrepreneur and potential customer than voice communication.

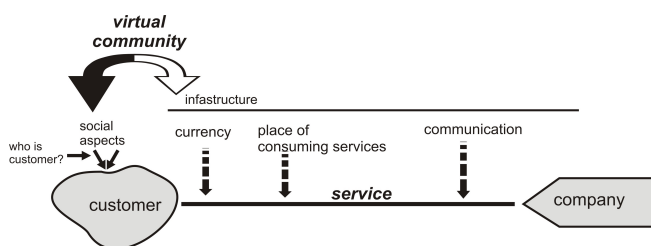


Fig 2. The factors influencing the process of delivering services

The following differences between social networks web site and virtual worlds can be pointed out [see table 2]:

1. Interaction with customers
2. Potential of creation
3. Currency

III. INTERACTION WITH CUSTOMERS

The most significant advantage of Second Life is expressed by words of vice president ABN Amro's Bank: "The 2D Internet is excellent for simple human-machine interaction, but the 3D social Internet enables ready human-to-human interaction, or anonymous avatar-to-avatar communication" [3]. In the virtual world the environment allows the Internet user to see others' gestures, express emotions, hear voice and give indication that they really interact with others. Moreover the nature of interaction between avatars reflects the nature of human being interaction such as social norms of gender (the interaction between male and female avatars), interpersonal distance and eye contact [24]. On traditional 2D web-site of social networks, even if the communication goes smoothly, there is a significant delay in interaction.

The next issue is users' privacy. On most social networks web sites the posts and discussion are visible for all members. In virtual worlds the communication can be 'one-to-one' or provided among a chosen group.



Fig 3. The English language course for avatars in SL – example of delivering service inside virtual world

IV. POTENTIAL OF CREATION – BUILDING EFFECTIVE SELLING ENVIRONMENT

The unlimited potential of virtual worlds in creating digital space leads to the situation when the customers-avatars can be 'immersed' in an environment which is far different from traditional distribution channels. The digital world allows entrepreneurs to create the venue for meeting with their customers which is the most preferable for selling a particular brand and does not reflect a traditional office. The employees can meet customers in a space craft or old castle – depending which architectural surroundings better express the nature of the company. The company can enhance the level of interaction using music, videos, podcasts, interactive presentation and voice communication. There is also no technological barrier in teleportation - avatars can easily move in a particular place. The creation into virtual worlds seems to be limited only by imagination of the entrepreneurs. But the aim of this marketing is to put customer into the space which strongly enhances consumer's involvement in purchasing and their engagement into brand.

Consumption inside SL can be perceived as a substitute to consumption in the real world without causing an environmental effect. Because customers do not travel in order to receive services, companies do not build expensive headquar-

TABLE II.
KEY FEATURES OF ANALYZED VIRTUAL COMMUNITIES IN DISTRIBUTION SERVICES

Feature	Second Life	Facebook.com	Fotka.pl	Moja Generacja.pl	Nasza klasa.pl
Tools of communication	Chat, voice communication, messages send to avatar's e-mail, notes	E-mails and instant messaging, forums	Chat, e-mails, forums	Forums, instant messaging (Gadu-Gadu), recording audio information, Internet phone (Gadu-Gadu – is not fee of charge)	Forums, e-mail
Time of communication	Mostly real-time	Mostly asynchronous, real-time possible	Mostly asynchronous, real-time possible	Mostly asynchronous, real-time possible	Asynchronous
Currency	Not real currency, Linden Dollars	Dollar	Polish zloty	Polish zloty	Polish zloty
Customers appearance	Avatars 3D	Name/nick – image 2D	Name/nick – image 2D	Name/nick – image 2D	Name/nick – image 2D

ters, the ecological footprint of providing services in the virtual world is significantly lower than in the traditional market [14] and for some customers there could be an important reason for purchase.

Also the environment created in virtual worlds is much more friendly for visually impaired people than traditional web sites, including social networks web sites.

V. LIMITATION OF VIRTUAL WORLDS

A. Moving avatars

There is difficulty in 'moving' avatars between different virtual worlds – the market is limited to the members of users of a particular virtual world. In other Internet services such as instant messaging, Internet phone and social networks the process of integration has just started – allows the customers to integrate their content from different site e.g. Facebook allows to implement user's content from del.icio.us. Nasza-klasa integrates contact from Gadu-Gadu etc.

B. Currency

Using internal currency, e.g. Linden Dollars, can be perceived as a limitation of virtual worlds compare to social networks. Facebook sells its virtual gifts for American dollar (even at Polish language site), although there is a plan for introducing on-line currency at Facebook [16].

C. Profile of users

Many social networks attract users from a particular regional market and the potential customers are people with the same cultural and sociological background. On the contrary Second Life has users from all nations, although some markets such as US, Western Europe and the Far East have major representation. Second Life is mostly suitable for companies which selling services at global scale.

VI. CONCLUSION

Service companies which resort to virtual worlds receive an immersive environment, which allows using real-time, three dimensional audio and video and software to enable companies to communicate and interact with individuals or groups of customers. Due to the potential of creation in virtual worlds companies can build the selling environment which strongly enhances consumer's involvement, their perception of brand and influences the satisfaction from products. Nowadays the main limitation of using virtual worlds is the lack of connection between different platforms.

Moreover in virtual worlds many business aspects still become unclear e.g. law regulation (taxes) or the consumers' rights. Social networks compare to virtual worlds are more useful as a promotion board and the selling environment is limited to digital gadgets or a few items connected with web site. Although there are a few examples of companies which resort to social networks as a distribution channel ⁶ the 2D Internet web-site has many disadvantages compared with 3D virtual worlds.

REFERENCES

- [1] Armstrong A., Hagel J. III "The Real Value of On-Line Communities" in *Business Harvard Review*, May 1996
- [2] *Business Today*, November 18 2007, "3D Marketing Wipro hopes a virtual presence will attract talent" Rahul Sachitanand
- [3] *Computer Weekly* 11/6/2007—, "Virtual worlds are 2008's 'breakthrough technology'"
- [4] Donahue Marylyn "Setting up shop on Second Life" in *Pharmaceutical Executive*, November 2007 Consultants Confidential Supplement, vol. 27
- [5] Gaudin Sharon "Real-World Hospital Makes Virtual Debut in Second Life" in *Computerworld* 03/03/2008
- [6] *Information World Review* - „Is Virtual a Virtue in Scholarship?"; December 2007, www.iwr.co.uk/Academic, 2007 Incisive Media
- [7] http://en.wikipedia.org/wiki/MMOG#MMO_Social_game, 25.05.2008
- [8] <http://secondlife.com/whatis/businesses.php> 25.05.08
- [9] http://secondlife.com/whatis/economy_stats.php, 25.05.08
- [10] http://secondlifegrid.net/how/education_and_training, 27.05.2008
- [11] <http://www.facebook.com/press/info.php?factsheet>,
- [12] http://www.fotka.pl/info/o_stronie.php,
- [13] http://www.mojageneracja.pl/o_nas - 21 May 2008
- [14] Lin Albert C. *Virtual Consumption: A Second Life for Earth?*— Brigham Young University Law Review; 2008, vol. 2008, issue 1
- [15] *New Media Age*, 11/15/2007, "Consumer Products and Services" Supplement
- [16] *New Media Age*, 3/27/2008, "Facebook Calls for Online Currency"
- [17] *Research Technology Management* - "Firms Entering Virtual Worlds" Jan/Feb 2008, vol. 51, issue 1
- [18] Riley John „Virtual worlds are 2008's 'breakthrough technology' in *Computer Weekly* 11/6/2007
- [19] Robins S., Deb Antoine, „Second Life w nauczaniu", Szkoły Głównej Handlowej w Warszawie, wywiad, http://www.e-mentor.edu.pl/artykul_v2.php?numer=21&id=473
- [20] Sarvary Miklos „Metaświat: telewizja przyszłości?" *Harvard Business Review Poland*, February 2008
- [21] Thomson Rebecca "Barnsley schools use virtual world to teach reading and writing skills" in *Computer Weekly* 2/26/2008
- [22] Traum Matthew J. "Second Life: a Virtual Universe for Real Engineering" *Design News* 10/22/2007, vol. 62, Issue 15
- [23] Weekes Sue "Get a SECOND LIFE" in *Training & Coaching Today*, Nov/Dec 2007
- [24] Yee Nick, Bailenson Jeremy N., Urbanek Mark, Chang Francis, Marget Dan "The Unbearable Likeness of Being Digital: The Persistence of Nonverbal Social Norms in Online Virtual Environments" in *CyberPsychology & Behavior*, February 2007, Vol. 10 Issue 1

⁶e.g. native speakers delivering conversation using instant messaging,