Getting Real About Virtual Worlds: A Review

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ABSTRACT

Virtual worlds have emerged as important socio-technical artifacts in contemporary society. They have enabled unique business models in the digital economy. This paper presents a rich account on how virtual worlds have transformed modern society and how they have been presented as having outstanding benefits and promise, with examples of successes and failures. The goal is to synthesize the research and demonstrate an accurate understanding of this novel artifact and its multi-facet consequences. In addition, and more importantly, this review proposes a research agenda for the information systems discipline and assists in identifying critical issues on virtual world technologies and strategic management practices. The objective of this study is to establish a foundation for research on virtual worlds.

Keywords: Design, Information Technology, Management, Strategy, Virtual Worlds

INTRODUCTION

Virtual worlds are defined as “online immersive game-like environments where participants engage in socialization, entertainment, education, and commerce” (Mennecke et al., 2007). They are typified as massive multiplayer online (MMO) virtual environments that are part of the “entertainment/fantasy” sub-type of the broader concept of virtual communities (Carver, 1999; Jones & Rafaeli, 2000). There exists a large number of virtual worlds: game-focused massive multiplayer online games (MMOG) that rely on fantasy and role playing (e.g., World of Warcraft) and socialization-focused massive multiplayer online social games (MMOSG).
that function on the basis of shared interest communities (e.g., Second Life). What is unique about these MMOs is that users/players in these virtual worlds represent themselves as virtual characters (known as “avatars”) and interact to complete game tasks, create and exchange virtual assets, and develop social relationships (Fink, 1999; Blackwood, 2006; Lessig, 2000).

Several factors make it difficult to accurately gauge the exact size of the virtual worlds market, or to compare market performances of various providers. These factors include: differences in interpretation of the very definition of a virtual world; differences in the sample space of virtual worlds used; the fact that the detail provided by a source is often insufficient to clearly identify the sample space; the fact that types of data once reported are no longer updated and reported even though the virtual world is still actively used; the fact that information is often held by proprietary (as well as expensive) sources not readily available to academic researchers; and international currency differences in both real and virtual worlds.

Notwithstanding these limitations, it is evident that virtual worlds have attracted high volumes of online users. Virtual world users were projected to exceed 1 billion by 2017 (Cohen & Gilbert, 2008). This projection was exceeded five years early with 1.9 billion actual registered accounts reported in 2012 (KZero Worldswide, 2012a). Studies estimated that there would be almost 8.5 million monthly subscribers of World of Warcraft in 2007, about 8 million registered participants of Second Life as of July 17, 2007 and over 10 million users of Cyworld as of February 2007 (Camp, 2007; Cyworld, 2012), figures that increased significantly after these estimates were reported. According to their corporate web site, registered users of Cyworld doubled over the preceding year to exceed 25 million in February 2009 (Cyworld, 2012). In 2012, the Second Life Grid Survey (http://www.gridsurvey.com/economy.php) reported 31 million Second Life residents.

KZero Worldswide (2012b, 2012c) is a firm that researches and advises on virtual worlds and on the massively multiplayer online and social gaming sectors (http://www.kzero.co.uk/insight-research/). Since 2006, they have tracked revenues, market size, age profiles, and branded virtual goods. Their report for the first quarter of 2012 shows a total 1.4 billion registered accounts across 61 virtual world environments, and projecting a growth to an active virtual world user base of 1.9 billion in 2013. Furthermore, KZero does not provide figures for the widely popular Second Life, CyWorld and Entropia Universe, making the overall market even larger. The breakdown of the 45 (out of 61) virtual worlds, that have more than one million registered users, is as follows:

- Twenty-five Massive Multiplayer Online Role Play Games (MMORPG) with 743.5 million users;
- Eight First Person Shooter (FPS) games with 80 million users;
- Seven Action Real Time Strategy (ARTS) games with 176 million users;
- Five Multiplayer Online Racing (MOR) games with 371 million users.

The report (KZero Worldswide, 2012b) indicates that the largest players are:

1. Crazy Kart Rider, a Korean MOR from Nexon (www.nexon.net), at 230 million players,
2. Runescape, a MMORPG from Jagex Ltd. in the United Kingdom, at 175 million players (www.runescape.com),
3. Maple Story, a Korean MMORPG from Nexon, at 100 million players,
4. QQ Speed, a Chinese MOR, at 100 million players (speed.qq.com),
5. Dragon Nest, an MMORPG also from Nexon, at 100 million players,

With such user-ship figures, virtual worlds naturally represent a major economic presence. MindArk (2011) reports that the computer gam-
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