

Chapter 8.4

The Current State and Future Potential of Virtual Worlds

John M. Artz

The George Washington University, USA

ABSTRACT

Virtual worlds, while not a new phenomenon, have come to the foreground of information technology in the past few years largely due to the growth of Second Life, a three dimensional, global virtual world that has captured the imagination of millions. This article provides some background on this virtual world phenomenon providing both a history and a classification of virtual world technology. It then focuses on Second Life discussing the application, technology, and social implications. Included in the discussion are some current initiatives such as the open source client and server projects and the implications of those initiatives. Finally, we provide some speculation on the future potential of virtual world technology as an extrapolation of the current trajectory.

INTRODUCTION

Virtual worlds have become increasingly more popular in the past few years as the technology has improved and the virtual world experience has become increasingly more impressive. At the same time many see enormous future potential for virtual worlds that is yet untapped. Some see the state of the art in virtual worlds as comparable to the state of web technologies in the early 1990's. Following that analogy many see virtual worlds as the 3D web and expect the impact of this technology to be similar to or perhaps even greater than the impact of web technologies. This is a bold claim and needs to be examined more closely. This article will plot a trajectory of virtual world development beginning with the first virtual worlds available in the late 1970's to the state of the art today. The current state of the art will be discussed in some detail to provide a foundation

for speculations on the future potential. Then the trajectory will be extended to possible futures and future potential. Attempting to predict the future is always a dicey proposition. And yet in the world of rapidly evolving and emerging technologies the current state does not hang around long enough to be studied in full. So this article will make some bold speculations about the future potential of virtual worlds but every speculation will be grounded in the current state of the art, the current trajectory, and things that we know analogously from similar technologies.

What is a Virtual World?

In his seminal tome on *Virtual Worlds*, Bartle offers a good starting point for explaining exactly what a virtual world is.

Virtual worlds are implemented by a computer (or network of computers) that simulates an environment. Some – but not all – the entities in this environment act under the direct control of individual people. Because several such people can affect the same environment simultaneously, the world is said to be *shared* or *multi-user*. The environment continues to exist and develop internally (at least to some degree) even when there are no people interacting with it; this means it is *persistent*. Although virtual worlds now have many applications beyond that of being mere entertainment products, they began as computer games. (Bartle, pp. 1-2)

Bartle also provides a detailed history of the evolution of early virtual worlds beginning with the earliest games called MUDs that were developed in the late 1970's. He goes through five ages of development; the most recent being 1997 to the present. In Bartle's fifth age, graphics are introduced laying the foundation for modern multiuser video games and ultimately the marriage of video games and social interaction technology. Castronova (2005) picks up where Bartle leaves off and focuses mainly on graphical video game environments. He introduces the term 'synthetic

world' which is as workable a term as virtual world although the later seems to be a little more common.

For the reader who has never experienced a virtual world this concept can be difficult to grasp. So, as a starting point, imagine a video game being played on a networked computer where one of the creatures in the game represents the player and the other creatures in the game represent other players on the network who may actually reside anywhere on the globe. The player has a quest and the pursuit of that quest may involve the other players in the environment. Players collect things in the environment which persist from one session to the next. And some players create objects in the environment which they may sell to other players giving rise to a rudimentary economy. In early virtual worlds, the user interaction was largely text based whereas modern virtual worlds have graphical user interfaces. Virtual worlds in the late 1990's were mainly shared video games whereas in recent years virtual worlds have begun moving more toward social interaction environments. Consequently, virtual worlds can be thought of as three, not necessarily mutually exclusive, kinds. There is: 1) the game world, 2) the socializing world and 3) the platform world. The game world has rules and the player is usually on a quest of some kind. The player improves by pursuing the quest. Examples of the game world include early virtual worlds such as MUDs and current graphically intensive video games such as World of Warcraft (<http://www.worldofwarcraft.com/index.xml>) or Entropia (<http://www.entropiauniverse.com/index.var>). Socializing worlds range from simple text based chat rooms to the more modern example of chat rooms with a strong visual component. An example of a social networking virtual world is IMVU (<http://www.imvu.com>) which is described as "a graphical instant messaging client with more than 1 million users" (*IMVU*).

In game worlds, players pursue quests in order to achieve rewards defined by the game. In

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