Chapter 5.20
Virtual Worlds and the 3–D Internet

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ABSTRACT

A virtual world is a computer-based simulated environment, usually modeled after the real world, accessed through an online interface, and inhabited by users in the form of avatars. The purpose of this chapter is to explore how these interactive, immersive environments are being used by a variety of organizations. Although various kinds of virtual worlds are introduced, this chapter focuses on the interactive 3-D virtual world of Second Life, describing its demographics and its features. Ways in which Second Life has been used by businesses, educational organizations, and political entities are then discussed. Legal issues associated with virtual worlds in general and Second Life in particular are raised. The chapter concludes with some ways this technology is expected to evolve in the future.

INTRODUCTION

The Internet is continuing to evolve, and the second phase promises to be as revolutionary as the first. In the early 1990s, the World Wide Web project led to widespread public interest in the Internet as a source of what would become massive amounts of interlinked, hypertext documents and applications. For about the first 10 years, interaction mainly consisted of a person accessing content on the Web. Since the beginning of the 21st century, the Internet has provided a much more dynamic platform, becoming more visual and allowing us-

ers to interact with each other in communities and share information in real time. The new Internet is a social medium, and online communities are taking on a new dimension, quite literally, in the form of immersive 3-D virtual worlds.

A virtual world is a computer-based simulated environment, usually modeled after the real world and accessed through an online interface. It is inhabited by users in the form of avatars: two- or three-dimensional graphic characters that may resemble humans, animals, or imaginative creatures that take on fanciful names. These digital doppelgangers can then walk or fly around this virtual world, meeting other avatars, playing games, attending concerts and other events, and carrying on conversations through text chat.

Virtual worlds, sometimes also called digital worlds, have a number of characteristics in common (*What is a Virtual World?*, n.d.). Multiple users share a common space that is depicted visually, ranging in style from 2-D cartoon-like imagery to a more immersive 3-D environment. Any number of users may participate at the same time and interact in real time. These users are able to create, modify, and submit customized content. The virtual world permits and encourages the formation of in-world social groups, which may take the form of clubs, guilds, communities, sports teams, and so forth. The virtual world continues to exist whether or not an individual user is logged on.

THE DEVELOPMENT OF VIRTUAL WORLDS

A Variety of Worlds

A major influence in the development of virtual worlds was Neal Stephenson's science fiction classic *Snow Crash*, published in 1992. The novel is set in two worlds: Los Angeles in the 21st century and the Metaverse, Stephenson's concept of how an online virtual space might evolve in the future.

Written before the concept was technologically feasible, the novel has inspired many online virtual worlds today. *Cybertown*, with its futuristic science fiction theme, perhaps comes closest to recreating the Metaverse that Stephenson envisioned.

One of the early visual virtual worlds was Lucasfilm's *Habitat*, a technologically influential multiparticipant online virtual environment launched in 1985 and designed for Commodore 64 machines. Although it was neither 3-D nor immersive, its graphical user interface (GUI) and a large user base have led to its being regarded as the precursor to today's online communities ("Habitat", n.d.; *VZones*, n.d.).

Virtual worlds come in a variety of forms. Perhaps the largest category is massively multiplayer online role-playing games (MMORPGs), in which the participants assume the role of a specific predefined character, are restricted by rules, and progress through a series of competitive events to a predefined goal. MMORPGs, such as *World of Warcraft* and *EverQuest*, are usually based on a fantasy theme, and players progress through a series of events (e.g., slaying dragons) that require interactions, and perhaps even teaming up, with other players. These games are defined by the large number of players at any given time, and the continued existence of the world in which they interact, even if a given player is logged off.

At the other end of the spectrum are virtual worlds that are more community focused and emphasize socializing rather than gaming. These worlds offer a more unrestricted experience and are more comparable to the cultures associated with text-based chat rooms. Although participants may engage in small-scale, casual games, the focus of these worlds is on socializing in an environment similar to the real world. The participants, represented by avatars, may create this environment and the objects in it. Participants may design and alter their avatars at will, customizing such features as height, weight, skin color, eye color, hairstyle, and dress. Users generally create idealized versions of

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