The Future Is Virtually Here

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Increasingly popular for more than a decade, massively multiplayer online role-playing games now generate remarkable revenues. The current king of MMORPGs, *World of Warcraft*, boasts 10 million active subscribers as of early 2008. Developed by Blizzard, *WoW* hosts a virtual population larger than the real-world populations of countries such as Sweden and Hungary.

In addition to population numbers, MMORPGs post some substantial economic figures as well. Back in 2002, economist Edward Castronova attempted to measure the gross national product of *EverQuest*, the leading MMORPG at that time. He started by estimating how much the game’s players were producing each year through quest completion and loot gathered from vanquished monsters.

This domestic product took the form of virtual money (platinum pieces in *EverQuest’s* fantasy world), virtual goods such as powerful magic swords and armor, and powerful virtual characters. *EverQuest’s* popularity had already led to a black market in which these virtual goods could be bought and sold for real-world currency. The market remained black because *EverQuest’s* publisher, Sony Online Entertainment, considered it a violation of the game’s rules to sell virtual goods for real money. Sony has since reversed this policy and now runs its own service that sells virtual goods to its players.

By studying the black market, Castronova measured the value of *EverQuest’s* gross domestic product in real-world currency. Somewhat surprisingly, the game’s gross national product turned out to be $2,266 per capita—larger than the GNP for India and China and just behind Russia (www.walrusmagazine.com/article.pl?sid=04/05/06/1929205&tid=1).

**PLAYING THE GOD GAME?**

Given that thesevirtual worlds have populations and economies that rival real-world countries, we must ask who governs these worlds and how they do so. To date, the companies that develop and maintain these games appear to provide the closest thing to an MMORPG’s virtual-world government.

The designers of these games act as dictators who wield the power to set laws enforced through the game’s rules and all-powerful End User License Agreement (EULA), manage the economy, and provide essential services to the player population. Stretching this analogy further, the game programmers assume the powers and privileges of virtual gods, wielding the ability to create worlds and control all who live within them. Viewed from this perspective, working as a software developer for industry standouts such as Blizzard and Sony Online Entertainment can seem irresistibly appealing.

**EVE OF INSTRUCTION**

Recently one MMORPG stepped back from governing its virtual world as a dictatorship and moved toward a more democratic model. CCP Games, the developer of *EVE Online*—a complex and involving interstellar trading and warfare simulation—has given its players the opportunity to elect nine individuals to represent the players in meetings with developers to discuss the game’s future. In addition to planned teleconferences, once a year CCP pays for these elected officials, called the Council of Stellar Management, to travel to the company’s headquarters in Iceland.

It’s not surprising that *EVE Online* is the first game to move toward online democracy. It has long been a nontraditional title.

Most MMOs include multiple versions of the same world, with each oriented toward different styles of play. Two of the most popular styles are player versus monster (PvM) and player versus player (PvP). In PvP versions of the virtual world, players can only battle each other under specific circumstances, such as minigames or arenas. Most conflict focuses on players fighting monsters in pursuit of preestablished quests scattered throughout the virtual world.

In PvP versions of the world, players can battle each other at any time, which focuses more of the game dynamic on interactions and...
battles between players, although these players still also battle monsters. *EVE Online* includes many of these dynamics but has raised the complexity of player-to-player interactions by an unprecedented degree. Two examples showcase the richness of these interactions.

**Contract killers**

The Guiding Hand Social Club (GHSC) is an *EVE Online* corporation—a player organization similar to a guild in other MMORPGs—that specializes in mercenary attacks on other players and corporations. In 2004, a patron hired GHSC to attack a corporation called Ubiqua Seraph, reportedly for a sum of 1 billion ISK (*EVE Online’s* virtual currency). At the time, this sum was equivalent to about $500.

As in most MMORPGs, the virtual world is a dangerous place where player-controlled characters, often called avatars, frequently die, but the penalty for a character dying is fairly minor. Thus, simply killing the leaders of the Ubiqua Seraph corporation wouldn’t result in any significant inconvenience. A corporation in *EVE Online* can be hurt much more effectively by stealing its carefully saved treasury of ISK and destroying its fleet of powerful, expensive, hard to obtain and even more difficult to replace spaceships.

To do this, the attackers had to get past the safeguards that permit only trusted members of the Ubiqua Seraph corporation access to these vital assets. To do so, the GHSC players spent countless hours carefully infiltrating Ubiqua Seraph and climbing the “corporate ladder.” Ten months later, they were sufficiently trusted to be given access to the corporate coffers and placed in command of the most powerful spaceships.

On 18 April 2005, GHSC attacked and, in less than an hour, decimated Ubiqua Seraph. The attackers raided every hanger the corporation shared, took all the corporation’s money and, adding insult to injury, collected the CEO’s dead body—a trophy with little value—at the GHSC’s anonymous client’s request. In all, the attackers stole about 30 billion ISK (about $16,500 US), although GHSC representatives have stated that the monetary rewards were secondary, in line with their philosophy of “the contract above all.”

**Making bank**

A second example involves the Eve Intergalactic Bank (EIB), a player-run, in-game banking enterprise that let players deposit ISK into savings accounts and earn interest on the money. Although there was some debate as to the EIB’s legitimacy, players started depositing money and received their interest as promised. Over time, more and more players trusted the bank with their hard-earned profits and appreciated the interest earned.

EIB became a well-known feature of the virtual world. Then, in a frighteningly familiar scenario that sometimes plays out in the real world, the bank’s proprietor absconded with 700 billion ISK in August 2006, revealing the EIB to be an elaborate Ponzi scheme.

**Long-term investment**

What makes these two examples unique is the amount of time and effort the perpetrators put into gaining their victims’ trust. In many ways, *EVE Online’s* virtual world serves as the backdrop for elaborate social interactions between players over months and years.

In this regard, the game is actually closer to some of the nongame-oriented virtual worlds like *Second Life* and *There*. While these 3D worlds look like traditional first- or third-person computer games, they aren’t because they don’t provide a defined objective the player must strive to achieve. An open field and a ball don’t make a game. However, if we add, for example, the objective of getting the ball into the other team’s end zone, along with rules for how that objective can and can’t be achieved, we have, for example, a game of football.

In this sense, MMORPGs like *WoW* and *EVE Online* provide games in which the designers define the objectives and rules. In contrast, 3D virtual worlds like *Second Life* and *There* provide grass and a ball, then encourage players to make their own games. They bring a community of users together and give them a flexible set of tools for constructing almost anything, but they leave it up to the individual users to decide what they want to do.

**SERIOUS GAMING AND MORE**

While some users develop games within these sandbox virtual worlds by customizing portions of the world to add objectives and rules, many of the most interesting applications address nonentertainment purposes. The 2007 Virtual Worlds Conference and Expo, held in San Jose, California, included tracks on marketing and virtual worlds for the enterprise that targeted large-scale companies. The 2008 conference in New York City added new tracks on virtual worlds for Hollywood and for kids. Speakers included representatives from companies such as IBM, Intel, MTV Music Group, Sun Microsystems, Cisco, and PricewaterhouseCoopers.

These and many other large companies have invested in virtual worlds for several reasons. For example, in May 2007 IBM opened a virtual business center in *Second Life* (www.pcworld.com/article/131886/ibm_opens_sales_center_in_second_life.html). In this IBM-owned virtual island, current and potential customers can talk to...
IBM sales representatives and access technical support libraries.

But IBM’s use of this virtual world goes beyond marketing. The virtual business center also functions as a virtual conference center, an increasingly attractive option as gas prices climb. It provides part of IBM’s onboarding or new employee orientation process as well (www.websterb.com/articles.php?ID=4ce13cffab67304f).

New employees create an avatar and have opportunities to meet and interact with other new hires and IBM managers. This lets the employees get a head start on learning about IBM and their new positions before their relocation, sometimes even before they leave their current positions. Second Life is also a way for IBM to maintain contact with alumni who have left the company.

Meanwhile, Intel has shown a lively interest in virtual worlds both as a way to streamline its business and as a current and future driver of chip sales (http://news.cnet.com/8301-10784_3-9782212-7.html?hhTest=1). Crafting the technology to power online virtual worlds offers an especially attractive solution for Intel, one that leverages two markets. On one hand, Intel can sell the processors that power the client computers running the application that renders the virtual world. On the other, it can sell the back-end servers that maintain the virtual world’s state, simulate its dynamics, and pass the necessary information to every connected client.

The military and intelligence communities’ “three-letter agencies” have already expressed interest in the potential application of virtual worlds for training, mission planning, and intelligence analysis. Indeed, the crossover between games for entertainment and those for military applications has already blossomed—which might be why Orson Scott Card’s classic science fiction novel *Ender’s Game* has become required reading in some government circles.

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Thanks to spectacular advances in graphics technology and network infrastructures, we stand at the threshold of a new era, one in which conventional perceptions of the world will blur as virtual-reality applications provide an increasingly vivid window through which we view our world. Just as Mosaic put a new face on computing in the early 1990s, emerging virtual environments such as Google’s Lively, a social networking browser plug-in (www.joystiq.com/2008/07/09/google-goes-mmoish-with-lively), will envelop us in colorful and highly interactive displays that accompany us through the day, responding to our needs, either for work or play, with equal facility.

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