

# Government in 3D: How Public Leaders Can Draw on Virtual Worlds

By David C. Wyld

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Virtual worlds, such as Second Life, are fast transforming the very definition of "being together." In these immersive environments of the "3D Internet," people from all over the country—indeed the world—can interact with one another in real time. As such, virtual worlds have been labeled as a transformative development that will perhaps change the way we use the Internet over the next decade.

We will see that government agencies have begun to make use of Second Life and other virtual worlds for a wide variety of purposes, including informational outreach, education and training, emergency preparedness and continuity, tourism, recruitment, and policy outreach. While these sites may have a primary focus, we will see that one of the significant benefits of being in virtual worlds is that a great amount of "spillover benefits" and "synergies" are involved in these efforts. As we will see, agencies may have multiple purposes for being "in-world," and they are finding that they attract visitors to their virtual-world sites for a variety of reasons.

Here are some examples of how virtual-world environments are being used:

- To reach citizens in new ways
- To collaborate internally
- To conduct training and simulations
- To recruit employees
- To promote tourism and economic development

## To Reach Citizens in New Ways: The Centers for Disease Control and Prevention

The Centers for Disease Control and Prevention, or CDC, has been an active player in multiple online virtual-world environments. In Second Life, the agency has established a

very interactive, educational site (<http://slurl.com/secondlife/CDC%20Island/>). John Anderton is associate director of communications science for the CDC. His Second Life avatar is a female one, named Hygeia Philo, after the ancient Greek goddess of health. Asked why the agency is involved in Second Life, Anderton said: "Avatars have the good fortune of being sort of eternally youthful and healthy, but each of those avatars is connected to a person and those people do have real health needs. It's people's health CDC is interested in, and people are using different tools to access health information" (quoted in Bain, 2007, n.p.). Anderton (2007) detailed that in Second Life the CDC has hosted health fairs and traveling health exhibits, as well as provided podcasts, videocasts, educational materials, and links to CDC publications, including the Morbidity and Mortality Weekly Report and the Public Health Image Library. Anderton (2007) observed, "Avatars are giving CDC another avenue to communicate CDC prevention messages about infectious and chronic diseases."

The CDC is also involved in the youth-oriented online world of Whyville. In this virtual world, the CDC ran a six-week-long promotion in late 2007 aimed at raising awareness among kids about the importance of flu vaccinations. They vaccinated over 20,000 Whyville residents against the virtual flu, who paid 5 Whyville "clams" (the site's virtual currency) for a shot. For those that did not get vaccinated, they "caught" a virtual flu virus at a children's birthday party. The "infected" kid avatars—known as "Whyvillians"—quickly broke out in red spots and their avatars had difficulty speaking (Kauffman, 2007).

## To Collaborate Internally: The CIA

Perhaps the "best" best practice example to date of internal collaboration is the Central Intelligence Agency (CIA). The CIA has established a presence in Second Life, with a few private islands exclusively for internal use at present. According to government officials, the sites are presently being used both for holding unclassified meetings and for training purposes (O'Harrow, 2008). It is possible that the agency could use public sites to better inform the public



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about its work and enhance the agency’s image. It has also been suggested that intelligence agents and analysts could use virtual worlds as training and learning grounds for their real-world assignments, using their experience as avatars to learn how to interact—linguistically, culturally, and covertly—in a different culture (Brewin, 2007).

In the intelligence community, the new Intelligence Advanced Research Projects Activity (IARPA) office has been established to sponsor DARPA-like research to improve intelligence gathering across the various intelligence agencies and change the information-sharing mindset from operating on a “need to know” basis to a “need to share” culture (Weinberger, 2008). In March 2008, Forterra Systems of San Mateo, California, and IBM announced their collaboration on a project, funded in part by In-Q-Tel, a technology investment firm funded by the U.S. intelligence agencies. The focus of the project is to develop a virtual-world environment in which members of the intelligence community could securely meet, interact, and exchange information.

The project, code-named “Babel Bridge”—in reference to the so-called “Tower of Babel” problem in the intelligence world of not being able to “talk” to each other because of different communications systems—has been described as a “digital war room.” Here analysts, experts, and agents from various intel organizations will have their avatars, which will be clearly identifiable to their real-world counterparts, meet in this secure virtual environment (Forterra Systems, 2008). The system would enable analysts, experts, and agents in the field to securely view information from a wide variety of sources—from PowerPoint and audio files to images from spy satellites and drone aircraft—as part of their discussions, collaboration, and decision making (Greenberg, 2008).

### To Conduct Training and Simulations: Emergency Management

Simulations of emergency situations may be a “killer app” not just of Second Life but of all virtual worlds, in that they are cost- and time-effective. Robert Furberg, a research analyst for the Center for Simulator Technology at RTI International in Research Triangle Park, North Carolina, observed: “A fullscale [emergency response training] exercise takes a lot

**Figure 1: Screen Captures from First Responder Virtual Simulation**



**Source:** Center for Advanced Transportation Technology (CATT) Laboratory, Civil and Environmental Engineering Department, A. James Clark School of Engineering, University of Maryland. <http://www.cattlab.umd.edu/index.php?page=research&a=00028>. Used by permission.

of advanced preparation and requires daylong drills—it is expensive and time-consuming. With simulation, we can run through a mass casualty event and change the parameters. Each case is a little different, and it is available 24/7” (quoted in Raths, 2008, n.p.). Such simulations also allow for participants to join in virtual training exercises from wherever they are, saving a great deal on travel costs. Virtual simulations allow for scenarios to be practiced and rerun repeatedly with differing scenarios and variables at play. And, as with military simulations, machinima video captures of virtual simulations allow for after-action review capabilities to allow for critiques and debriefings after concluding the exercises.

### An Executive Guide for Keeping Up with the Virtual World

As virtual worlds increase in both utility and usage, it will become important for you to learn about what is going on in this “second place.” So, here’s a five-step plan to learn more about Second Life (see the next section for a discussion of Second Life) and the rest of the 3D Internet:

1. Join Second Life and create an avatar (be careful; pick a name that your constituents and your mom would be happy with). Teleport around to islands of various types (the governmental, corporate, university, and museum sites highlighted in this report will make for a good start.)
2. Pick at least two other virtual worlds to join and explore, depending on whether you are more of a World of Warcraft or Virtual Magic Kingdom type.
3. Ask your kids (whether they are in first grade or college) what they are doing in virtual worlds. Don’t do this in an accusatory way—they might be able to teach you a great deal.
4. Ask your staff what they are doing in virtual worlds (again, not acting as the IT police). Find out who are “the experts” in your office and which staffers might be helpful in working on your agency’s virtual-world project.
5. Bookmark or RSS several virtual-world news sites and/or blogs (CNN’s I-Reports on Second Life and Reuters News Bureau in Second Life are great places to start). Set up a “Google Alert” for virtual worlds and government topics (you may want to focus it more narrowly on your agency type and on Second Life as well if that is your targeted venue).

Randy Sickmier is the exercise plans manager for the Emergency Management Training, Analysis and Simulation Center (EMTASC) in Suffolk, Virginia—a nonprofit consortium between Old Dominion University and 17 private sector firms formed in 2005. He related the value in using virtual-world simulations for emergency management training by stating: “You’ve got a guy driving in to the EOC [emergency operation center] who hasn’t sat in that chair in more than six months. During the day, he’s the public works officer for Staunton, Virginia, and all of a sudden he’s in charge of some aspect of this emergency response. It’s not something he does every day. This is where the simulation can be valuable” (quoted in Raths, 2008, n.p.).

The U.S. Department of Homeland Security (DHS), working with the Emergency Readiness and Response Research Center (ER3C) at Dartmouth College’s Institute for Security Technology Studies, created a private island, named “Response,” in 2005. The Synthetic Environments for Emergency Response Simulation (SEERS) project was established by DHS to prototype new virtual tools to conduct cost-effective disaster response rehearsals for emergency preparedness (Aitoro, 2007).

In 2006, the California Department of Health Services, aided by researchers from the University of California–Davis Health System, set up a virtual environment to train staffers in procedures for setting up emergency clinics in the event of a biological attack. Working in a virtualized representation of the California Exposition and State Fair built in Second Life, a dozen staffers participated remotely in the exercise geared to simulate the administration of antibiotics from the Strategic National Stockpile in response to a mock anthrax attack. The Second Life–based simulation was a replication of a real-life disaster simulation held at the same location two years earlier, one that involved 250 state employees and a thousand patient volunteers. The principal investigator on the \$80,000 project, Dr. Peter Yellowlees, professor of psychiatry at UC-Davis, explained: “The aim of the exercise was to see if the state could constantly train people in setting up emergency clinics. One big advantage is that they could do this training 24/7 from wherever they are, and you don’t have to recruit patient volunteers” (quoted in Raths, 2008, n.p.).

At the University of Maryland’s Center for Advanced Transportation Technology, researchers are developing a virtual-world training exercise—encompassing many different traffic scenarios, from minor accidents to major incidents—for use by emergency responders in the I-95 Corridor Coalition (see Figure 1). These simulations can now include hundreds of participants playing out their real-world response functions in the virtual environment. Michael Pack, director of research

for the University of Maryland center, observed: “It wasn’t until we started to do elaborate demos that the first responders started to realize the true potential” (quoted in Lynch, 2008).

Training in the virtual environment can be more cost-effective—and realistic—in ways that staged disasters cannot. For example, in the simulated environment, if first responders fail to put on their safety vest or reflective jacket when approaching the scene of an accident, their avatar may be hit by a car—a negative reinforcement that could not occur in a real-life training exercise (Lynch, 2008). Captain Henry de Vries of the New York State Police noted: “This project provides incident responders from all disciplines the opportunity to train together in real time for the purpose of learning the latest best practices in incident scene safety, coordination, and quick clearance of highway events” (The Center for Advanced Transportation Technology, 2008, n.p.).

### To Recruit Employees: U.S. Army

The U.S. Army has a strong tradition of using simulation games for training. However, the Army is also a recognized leader in using such games as a recruitment tool. In fact, one of the most popular games available on the Internet today is “America’s Army” (available at <http://www.americasarmy.com>). The idea of an Army-based military game being produced for the Army itself originated in 1999 with Colonel E. Casey Wardynski. Since going live in 2002, the MMOG has drawn approximately 9 million registered users who have put in well over 200 million hours of game play. In fact, it is ranked as one of the five most popular MMOGs on the web today (Derryberry, 2008).

The game allows for a “recruit” to progress from basic training to specialized training areas for combat and even medical training—both of which have been shown to produce real-world results in terms of training and preparation in the civilian and military realm. Not only do active and reserve soldiers play the game to sharpen their real-world warfighting skills, but there have been several documented cases where civilian game players have put their first-aid knowledge, gained in medic training in the game, to actual use (The America’s Army Game Leadership Team, 2008). The game has shown demonstrable results in the recruiting area as well, as it was designed to reach out to a younger generation tuned into online gaming. According to Major Mike Marty, operations officer for the Army Game Project: “Recruits have told us that the game was a factor in shaping their interest in the Army or was part of their information gathering process on the Army” (quoted in Castelli, 2008, n.p.).

### To Promote Tourism and Economic Development

Au (2008a) observed that Europeans are at the forefront of using Second Life as virtual gateways to their countries

and regions (see the sidebar “Embassies in Second Life” on page 28). A best practice example can be found in Tuscany. The Intoscana Fondazione Sistema Toscana, which is the official tourism foundation of for the Italian region of Tuscany, opened Toscana Island ([http:// slurl.com/secondlife/toscana/85/215/105](http://slurl.com/secondlife/toscana/85/215/105)) in Second Life in late March 2007 (Zimmer, 2007b). On Toscana Island, visitors can explore Tuscan arts, culture, and landmarks, including:

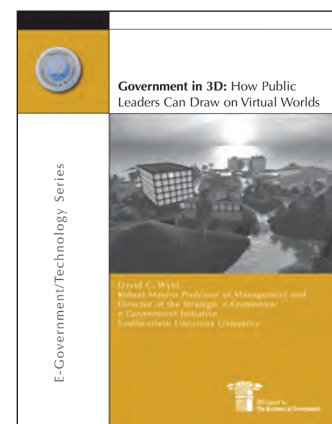
- The Tower of Pisa
- The Piazza del Campo
- The Piazza Grande
- The Ponte Vecchio
- The Duomo in Florence

The site has grown to a virtual archipelago of six islands. It includes the Intoscana Store, where virtual-world visitors can purchase real-world items from the region. Also, in response to visitors who wanted to vacation or live in virtual Tuscany, the tourism agency opened up an island where avatars can build or rent their own virtual villas or beach houses (Fondazione Sistema Toscana, 2007).

In October 2007, Toscana Island hosted the Festival della Creatività (Creativity Festival), in which visitors could enjoy a number of special events, including the opportunity to take lessons in Italian from Scuola Leonardo da Vinci, a leading Italian university (Villiger, 2007). ■

#### TO LEARN MORE

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- In .pdf (Acrobat) format at the Center website, [www.businessofgovernment.org](http://www.businessofgovernment.org)
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