

Engineering for the Universe Inside the Metaverse

## ***GOVERNMENT IN VIRTUAL WORLDS***

Spring 2010

Volume IV  
Issue 1



**Training — Visualizations — Simulations**







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### *Letter to Readers:*

There have been many changes in the virtual world since the last issue of Grid Works was published in Spring of last year. And there have been a lot of changes for us here at the magazine. I changed jobs accepting a position with a new city, and we relocated to a new community. Through it all we continued to explore and research virtual worlds, but the demands on our time prevented us from publishing until now. Since we have finally settled in, we expect to ramp back up on our publishing schedule, particularly as more and more agencies and companies are adopting virtual worlds as a serious tool for busi-



ness and training.

One of the more interesting developments we have been monitoring is the use of virtual worlds by government. As a city engineer and co-founder of MuniGov, an in-world local government group, I am particularly interested in this trend. Unfortunately finding these virtual government sites is not always easy. But we have traversed the Internet and digital terrains to bring you the latest in how governments are using virtual tools. There may be more examples out there we missed, and if you know of any, feel free to drop us a note or landmark so we can continue to include them in future issues.

—*Civile Writer*

## Why Government Needs to Leverage Virtual Worlds

Government rose from the dark mist of our past as one of the first examples of community collaboration. With responsible leaders dedicated to providing a collaborative framework for our communities, government continued for centuries to serve a primary function in our society. Unfortunately, in America, and perhaps in other countries, I sense we have forgotten this prime directive leaving us with an increasing distrust and fear of governmental institutions and the question of why we need government.

It's not surprising this misunderstanding of government and negative sentiment has grown. We fail to mandate a civic education in schools, and the only information we hear about govern-

ment is from political candidates intent on spending millions of dollars to convince us that current administrations are worthless and poorly run.

Tim O'Reilly, founder and CEO of O'Reilly Media, Inc, has been one of the first people in modern times to remind us that government is indeed a platform. Government needs to heed his advice, re-connect with its citizens, and again provide the collaborative platform on which it was founded. And virtual worlds, along with social media, provide a multitude of opportunities through which to launch this effort. Fortunately the effort has begun. The examples presented in this issue demonstrate how a few innovative agencies are taking the lead to leverage virtual worlds.





## HOW TO FIND THE SITES SHOWCASED IN THIS ISSUE:

Alameda County, Calif.

Orange County, Fla., Poll Worker  
Training

Technology Strategy Board, UK  
Tameside, UK

Prince Edward, Ontario, Canada

The Planning Portal, UK

Ontario Public Service Careers

Birmingham, UK

Baden-Wuerttemberg

LA County Metropolitan  
Transportation Authority

MuniGov

Chinatown, Boston, Mass.

US Department of Energy

Internal Revenue Service

National Defense University

Smithsonian

US NASA

US NOAA

US CDC

US Military

Swedish Institute

Estonian Embassy

Virtual Training Modules

NIC Opens eGov Island in Second Life



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# Alameda County California



## Virtual Voting

The [Alameda County](#) island in [Second Life](#) was created for the purpose of demonstrating voting procedures. The county's virtual polling site, developed by [Avatrian](#), opened in May 2009. Visitors arriving at the island are greeted with a digital representation of the Renee C. Davidson Courthouse located in Oakland, Calif. Signs are used throughout the build to direct users to the polling place. Much of the time, avatars can be found "working" in the polling site ready to guide people through the voting process. The build was also used to create a video explaining how the site works. ⚙️

### Related Links

Alameda County Web site  
<http://www.acgov.org/rov/>

Alameda County in Second Life  
<http://slurl.com/secondlife/Alameda%20County/175/153/32>

Alameda County: Virtual Polling Place  
<http://www.youtube.com/watch?v=d3G80PIWjcc>





**Alameda County often staffs their polling site with avatar poll workers**

# Virtual Voting



**Avatars in Second Life can travel to the Alameda County island to learn how to vote. The build has areas for poll workers and voters with digital representations of objects typically found at a polling site.**

# Poll Worker Training In Second Life



In March 2010, the [University of Central Florida](#) conducted poll worker training in the virtual world of [Second Life](#). The school supported the project with funding from the Election Assistance Commission in partnership with the [Orange County Florida Supervisor of Elections Office](#). Students from an undergraduate course at the university were recruited to train as poll workers and work in the upcoming fall election. In order to create a site for training, the school hired a private developer to build a 3D virtual representation of the county's polling place.

Members of the in-world MuniGov group volunteered to

serve as voters. This allowed the students an opportunity to interact with a variety of people, many of whom work for local governments. Pre-arranged scripts were used by the volunteers to present several scenarios such as name changes, lost IDs, change in address, and accessibility needs.

The training sessions were successful and both volunteers and students enjoyed interacting in the virtual environment. Michelle Gardner (Enelya Pevensey), a PhD student at the university, presided over the training. ⚙️

**Students from the University of Central Florida train in a virtual setting to become poll workers. MuniGov members took turns posing as voters.**



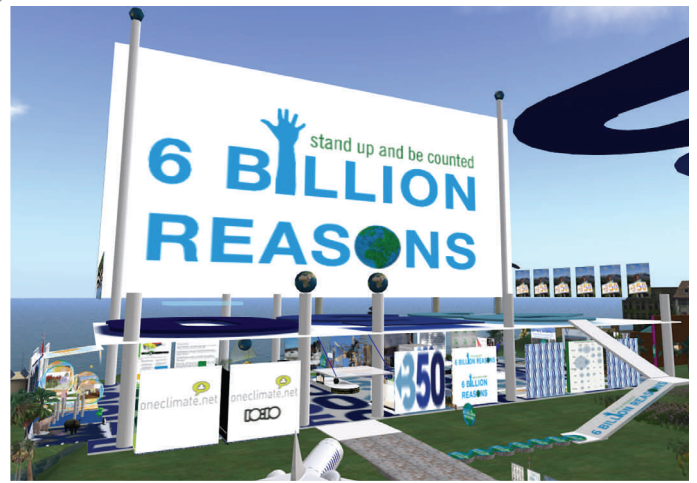


### Serious Business

The photos in this issue highlight the types of regular events that residents of Second Life can attend at no cost. Covering topics ranging from astronomy to education to climate change, presentations in Second Life can deliver some pretty heavy stuff.



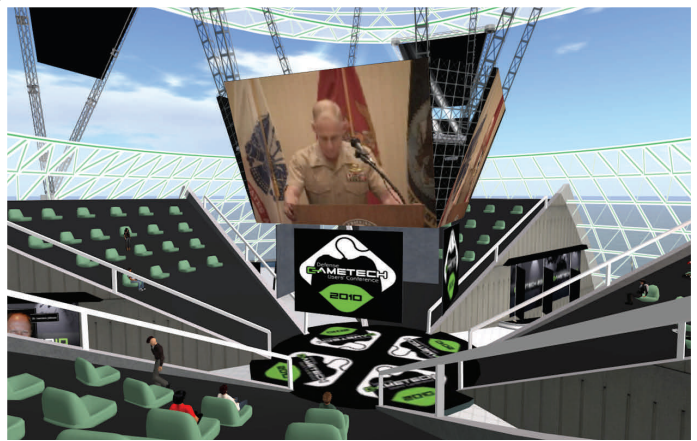
On March 12–13, 2010, the [Virtual Worlds Best Practices in Education \(VWBPE\)](#) Conference was held in Second Life. Over the two day event, 170 presentations were given. Many were recorded and can still be accessed on [treet.tv](#) and [Metaworld 6](#).



[350.org](#) is an international campaign focused on finding solutions to climate-related issues. [OneClimate](#), an initiative of [OneWorld UK](#), built a 350.org-themed pavilion in Second Life. A Green Expo was held in the pavilion in October of 2009.



OneWorld UK streamed live coverage of the Copenhagen conference. During the conference several displays were set up on OneClimate island, an initiative of OneWorld UK. The OneClimate mission is to “leverage media innovatively for a fair and sustainable world.” More information can be found at <http://www.oneclimate.net>



In late March 2010, [Team Orlando](#), an alliance of military simulation commands, hosted the GAMETECH 2010 conference in Orlando, Fla. GAMETECH2010 is described on the group’s site as a user-focused conference dealing with gaming technologies that enhance warfighter training. A portion of the conference was streamed to the VADER sim in MiLands in Second Life.



# TECHNOLOGY STRATEGY BOARD

According to the [Technology Strategy Board](#) (TSB) website, the organization "is an executive non-departmental public body (NDPB), established by the [UK] Government in 2007 and sponsored by the Department for Business, Innovation and Skills (BIS)." The group is governed by thirteen people and is focused on driving innovation in the UK. Near the end of 2008, TSB acquired an island in the virtual world of [Second Life](#). Their site, built by Pall Ariantho and Kucinta Moody, is laid out with the following areas:

**TSB Information Centre**—A two-story building houses posters and video showcasing TSB's missions and goals.

**Spittle Auditorium**—seating area for events and presentations

**Networking Area**

**Duck Pond**—the area around the pond is particularly relaxing and offers seating and

fishing activities. (The entire sim was landscaped by April Manamiko)

**Events Area**—an open-air deck is available for larger, less formal events

**Maze**—visitors strolling through the hedge maze will find several gift boxes tucked away down several of the paths

**Project Centre**—This area showcases a virtual straw-bale home and virtual replicas of the Aquamarine Power Oyster, a technology designed to capture energy contained in waves close to the shore.

**Sandbox**—allows visitors to try out their virtual world building skills

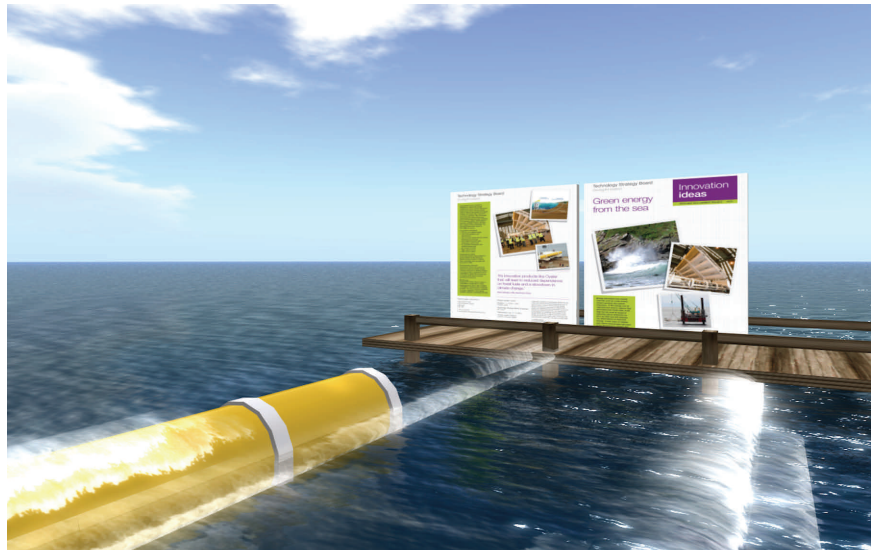
**Drayson House - Private**—a small home sits on a rise located in the southeastern portion of the sim. This area is restricted to visitors. ⚙️





**The Technology Strategy Board sim balances areas for work and for relaxation and fun.**

**Visitors will find a virtual representation of the Aquamarine Power Oyster—a technology designed to capture wave energy .**



## **If They Could Save Themselves They Would.**

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## EXPLORING TAMESIDE IN SECOND LIFE

The Tameside is a borough lying seven miles east of Manchester in the northwest region of England. The region is home to just under 215,000 people living within its 40 square miles.

In mid-2008 Tameside hired Second Places to build a virtual site for the borough in Second Life. The resulting sim showcases several features of the agency. Visitors to the island arrive just outside a central pavilion. Inside this circular, open-air structure, the borough offers links to the following information:

- The region's Community Strategy document
- A video providing information about the area
- Posters highlighting government and community programs, services, and projects.

From this central hub, visitors can tour virtual council offices, a garden area, a demonstration of street services, a water-related museum and a stadium for events.

An aquifer museum offers information about a community's water supply and system. Here a visitor can view a water wheel exhibit and a lecture chamber. In the northern end of the sim, a representation of Tameside offices are located within a white two-story government building.

Those strolling the street in the services area will find signs, drains, garbage cans, and other items typically located along a typical residential street. Each item is linked to the Tameside Street-scene System website. Here residents can report issues that need to be addressed in their neighborhoods. ⚙️



**Note: This sim was removed from the grid in April 2010 and is no longer available.**

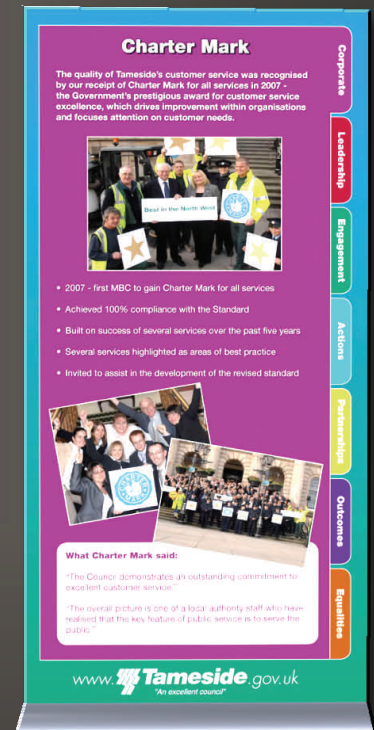




**Top Photo:** The Aquafer Museum on the Tameside sim houses a lecture chamber, water wheel exhibit, and other water-related displays and information.

**Bottom Photo, Left:** Visitors can explore a digital representation of Tameside government offices.

**Bottom Photo, Right:** A central display on the island offers numerous billboards with links to community-related information.







## Prince Edward County

The Prince Edward County sim is located on the grid just south of the Loyalist College island. The site was designed to highlight recreational activities and attractions from the county such as a crystal palace, art trail, sandbanks, taste trail, wine trail, and graveyard.

The sim was built by The Virtual World Design Centre at Loyalist College (VWDC). According to the group's website at <http://www.infinitespaces.ca>, they are "a full-service metaverse design and development agency that creates immersive world environments and experiences for business, education, and government."

The stones in the virtual cemetery activate an audio clip when an avatar

moves close to a monument. Each narration appears to share historical lore from the Prince Edward County region.

Visitors can wander along the virtual wine trail to learn to more about the county's wineries. Avatars can also pick up free wine skins and try out barrel rolling. ⚙️

**Lying between Toronto and Montreal, Prince Edward County is home to a population of 23,763 people. According to the agency's website, the area is known for its sailing, fishing and sand dunes, live theatre, artist studios and galleries, and wine.**





**A unique feature of the Prince Edward County island is the virtual cemetery perched on a hill above the coast. Here visitors can listen to local lore.**

**The builds on Prince Edward County island showcase specific attractions found in the county. There is a pavilion and an area dedicated to the county's wineries.**



# The Planning Portal



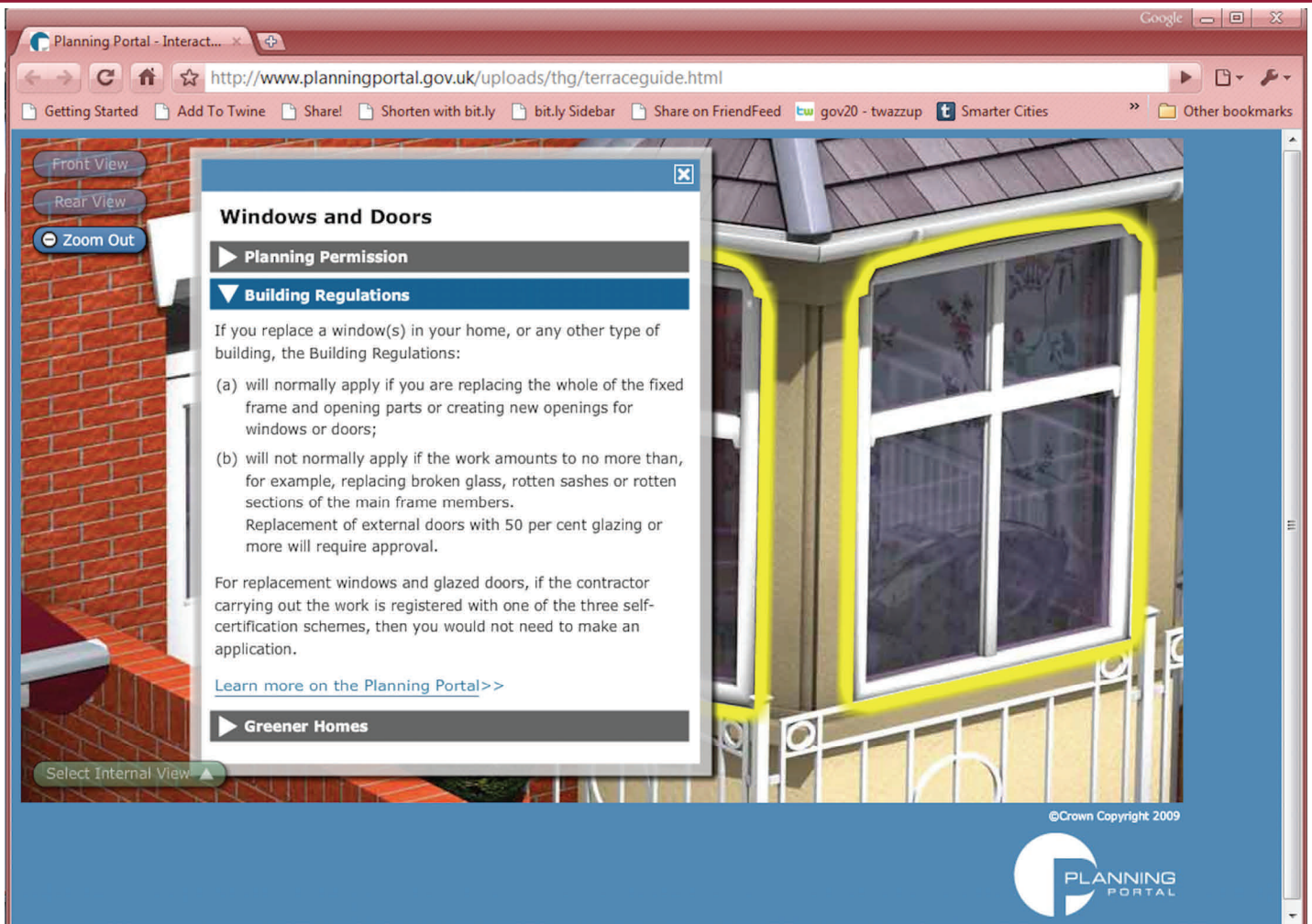
## Online & Virtual Planning Guide

The [Planning Portal](#) is an online planning and building resource established by the UK government. The organization's simplistic home page barely hints at the underlying goldmine of information related to building in the UK. Residents, builders, and government personnel can access the site to find out everything they need to know about planning a build, filing a building application, and learning building regulations.

The site is further enhanced with a set of "useful tools" such as a site location plan creator, visual guides, volume calculators, and fee calculators. The visual guides offer interactive sites where visitors, using a Flash plug-in, can find out specific planning information and regulations just by clicking on a specific building component such as windows.

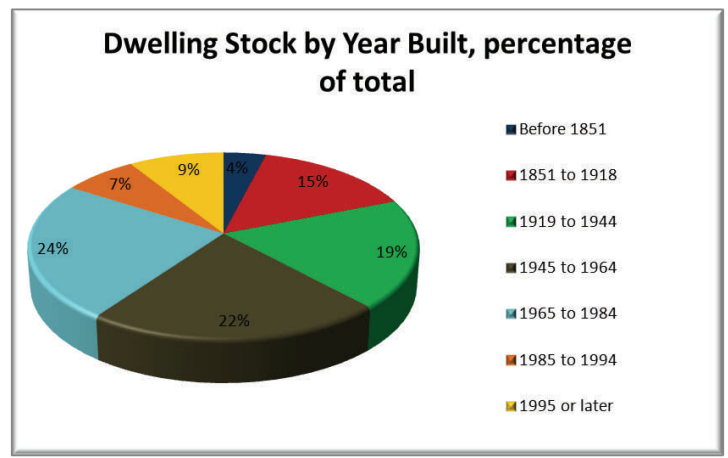
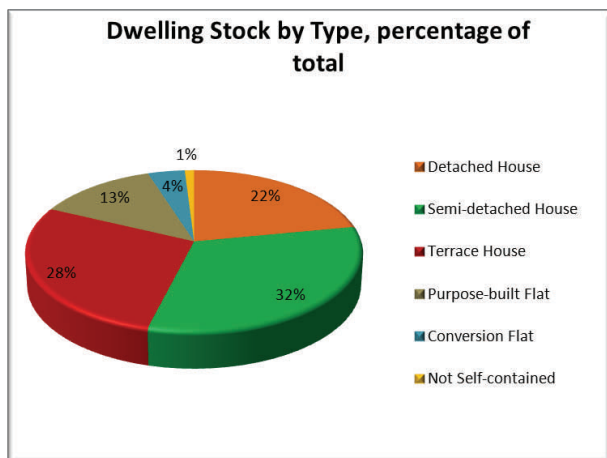
The Planning Portal has also created a site in the virtual world of [Second Life](#). The Second Life build consists of a typical UK residence with info disks located throughout the home. Visitors can click each disk to get more information about a specific building component. ⚙️

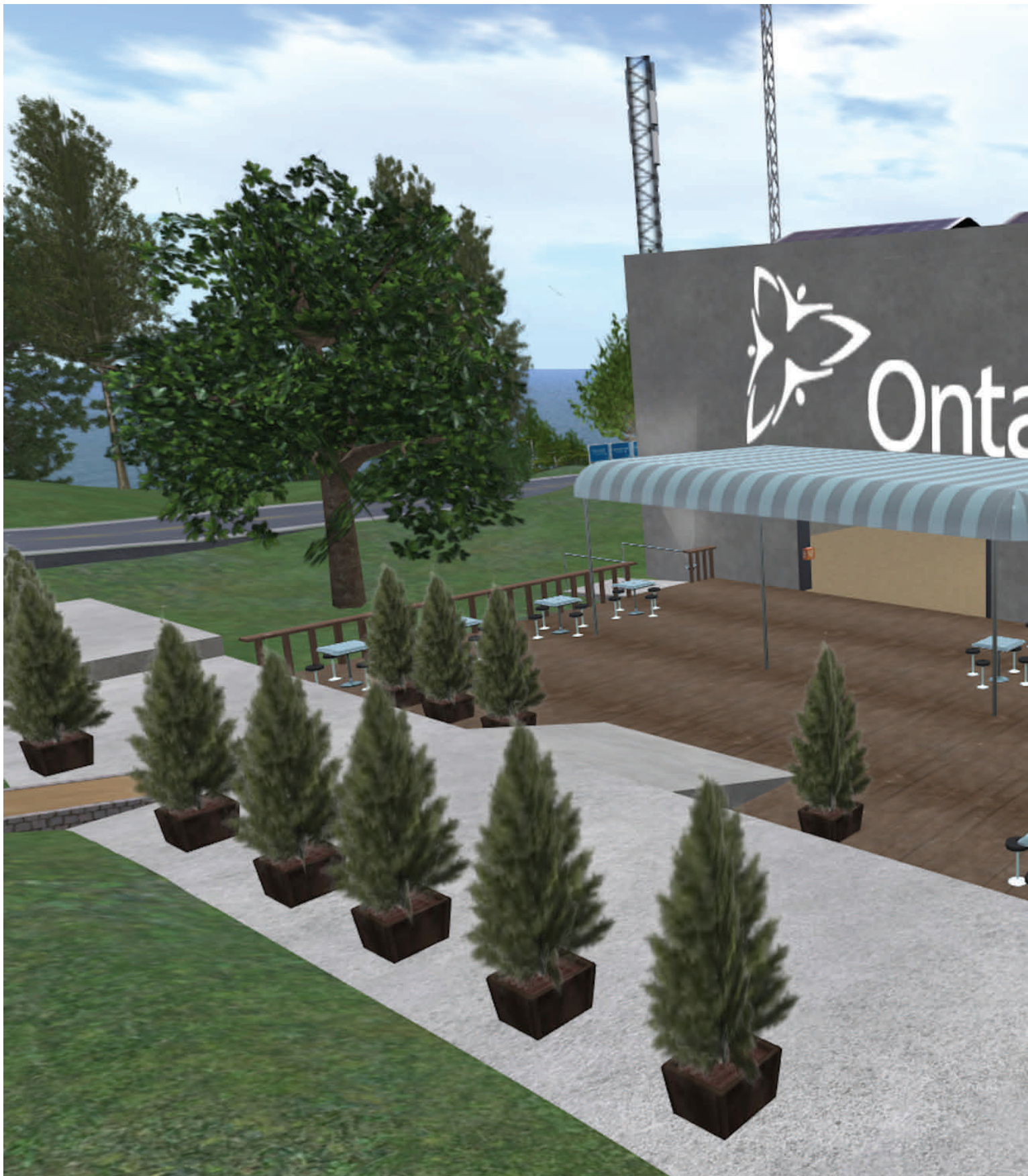




## Housing Statistics from England

Based on UK-housing data from Feb. 2010, there are a total of 22,564,243 dwellings in England.









## Ontario Public Service Careers

In 2008, [Ontario Public Service](#) launched OPS Careers, an island in [Second Life](#) (SL), to introduce their workplace and available job openings to potential job candidates. Those teleporting to the island arrive in the OPS Welcome Center—an area with displays about various positions available throughout the organization.

Visitors wanting more in-depth knowledge can travel around the island to regions set up with job-specific displays. Health sector jobs are represented with a building housing rooms for interviewing and a room illustrating the CPR method.

A fire-fighting display is set up outside between the health building and the welcome center, and a traffic media building is located in the southwest corner of the sim. Visitors to the traffic building can watch a simulation of video screens monitoring traffic conditions throughout Ontario.

The center of the island hosts an IT building with interactive exhibits and a public policy structure. The water testing lab, located in the northeast corner of the island, has an activity that can be completed to give those interested a better idea of the type of work involved in this sector. Avatars wear a “Water Sample HUD” that attaches a water bottle to their hand. Then the visitor must leave the lab, collect a sample in a nearby body of water, and then bring the sample back to the lab and test the sample by clicking on the water testing machine. Results of the sample are then reported.

Finally, back in the welcome center, visitors can access kiosks for specific job information in 18 categories, pick up some free gifts, and watch job-related videos.

In late 2008, OPS launched Digital Ontario Island (DOI) to demonstrate the Ministry’s research related to broadband services. The build offers six areas to demonstrate how communities, businesses, and governments are using broadband.

Moderne Interactive (<http://modernecommunications.com/interactive/>) was the developer of both islands. ⚙️

## FEATURE STORY—LOCAL AND STATE



Visitors to the OPS Careers sim can participate in fighting a virtual forest fire. A note-card offered at the site describes the simulation: “This simulator is based upon realistic information about

heat, evaporation, the dispersion of heat, zone effect, and wind effect to maximize your firefighting experience. The fire propagates using realistic algorithm.”



The Health Center on the OPS Careers sim offers a CPR demonstration. Avatars can practice giving CPR on a digital mannequin.



The Traffic Media Centre on the OPS Careers sim represents a typical traffic operations environment. Visitors can click on video screens to access live feeds of traffic in the Ontario area.



At the IT Centre, avatars can learn about IT-related occupations and win an Ontario SL Desktop Computer by answering questions about a computer motherboard.





# Birmingham

According to the sign at the entry point to this [Second Life](#) build, "Birmingham Island has been developed to explore the possibilities for the city of Birmingham, UK, within virtual worlds." Upon arrival, visitors have the choice to visit the following areas:

**b-scape:** this display allows visitors to access a variety of maps from the Birmingham area. Some are enhanced using Second Life 3D objects and Flickr photo feeds.

**Digital Birmingham**—this area offers several visions and ideas about furthering digital technologies in the Birmingham area.

## Library of Birmingham

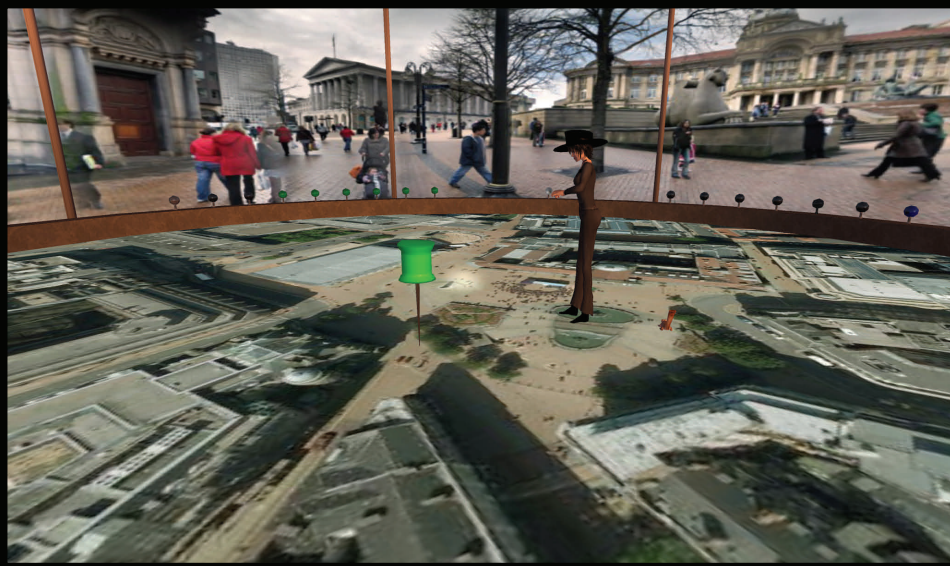
**Exhibitions Room**—this area offers photos from the Library and Archives collection of the Birmingham Central Library.

**Birmingham Council Chambers**—there is a re-creation of the Birmingham council chambers that can be accessed through a teleport located within the Digital Birmingham area.

There is also a live weather feed where avatars can experience the same weather occurring in Birmingham. A colored object on the path illustrates the temperature: blue is used to designate cooler weather while red indicates a warmer climate. The data is fed into Second Life once every hour from a Yahoo website. ⚙

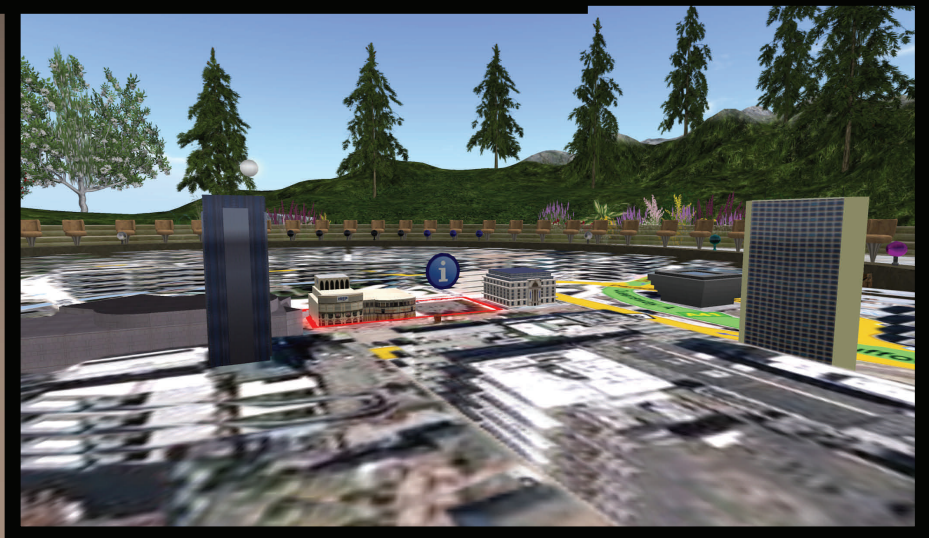


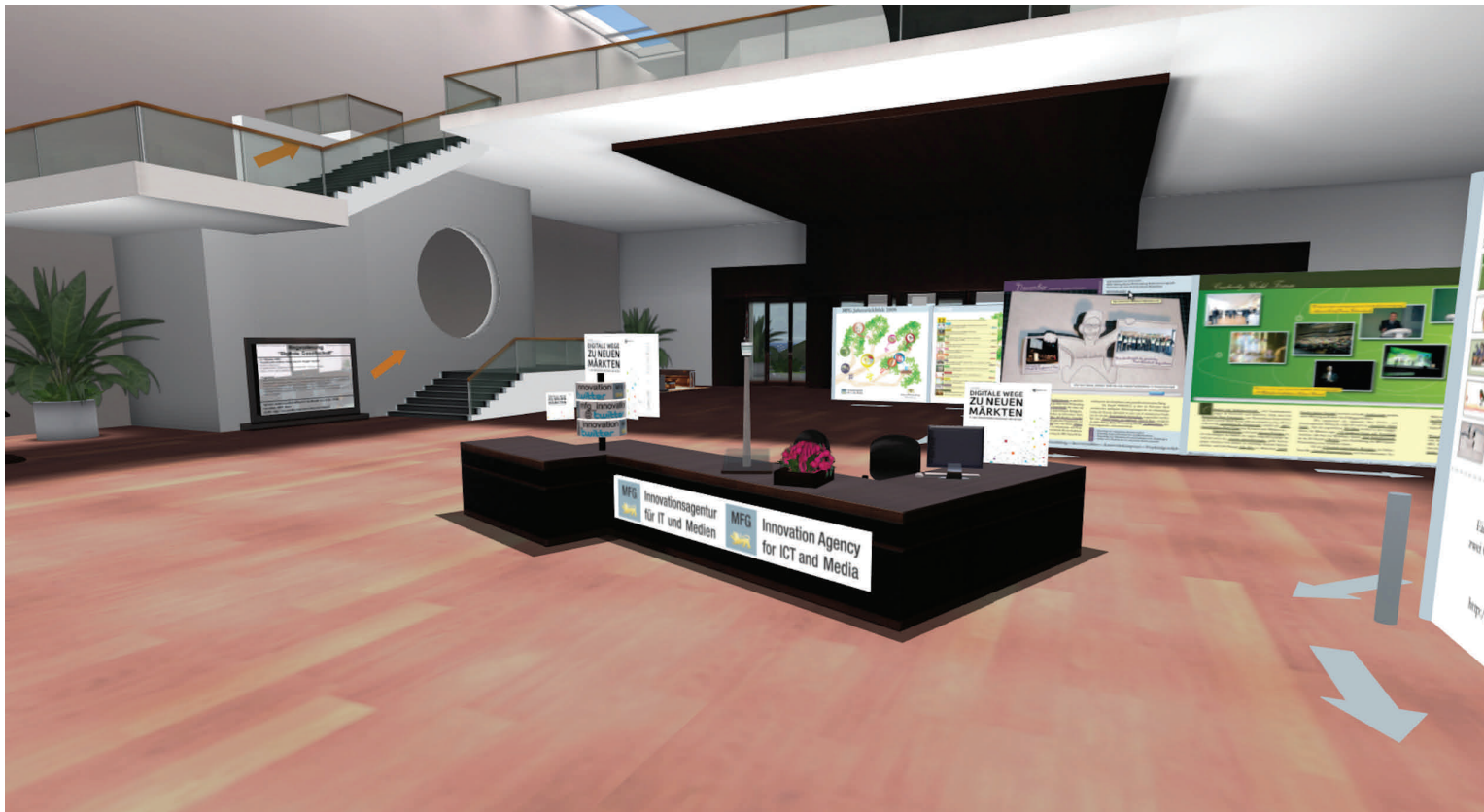
Digital  
Birmingham



b-scape

b-scape





# Baden-Wuerttemberg

According to the website for the [MFG Baden Wuerttemberg](#), the agency launched a virtual build in March 2007 in [Second Life](#). The agency, known as the Public Innovation Agency for Information Technology and Media in Baden Wuerttemberg, eventually expanded their efforts to include another sim. "Our aim is to give young, creative brains from Baden-Wuerttemberg a chance to test new forms of communication and cooperation on the 3D Internet at an early stage in partnership with us", explains Klaus Haasis, managing director of MFG Baden-Wuerttemberg.

The Baden-Wuerttemberg sim hosts a main building offering meeting space and information about MFG Baden-Wuerttemberg. Outside the building is a scale model of Heidelberg Castle.

The Innovation Park area of the island hosts the following projects:

- **University of Stuttgart visualization and interactive systems group (VIS):** "presents implementations of current work in the field of scientific visualization, human-machine communication and e-learning."
- **Hochschule Esslingen University of Applied Sciences:** highlights programs offered by the university
- **Freiburg University:** "In our SL-representation, we offer information for students to elective Information Systems / Telematics and run a virtual experimental laboratory." Several interactive exhibits are scattered throughout their build.





- **The Guardian team from Pforzheim University:** Here the team offers a G bracelet to promote awareness of global warming. "The revenues generated will be donated 100% of a research project of the company SolarWorld. This comes in the form of solar cells to a village in Africa."
- **University of Konstanz:** "Our goals are to create a virtual information environment for the department of Information Engineering, the critical approach to Second Life with students in teaching and the education of students on and dealing with the medium of Second Life (eg, interaction designer)."

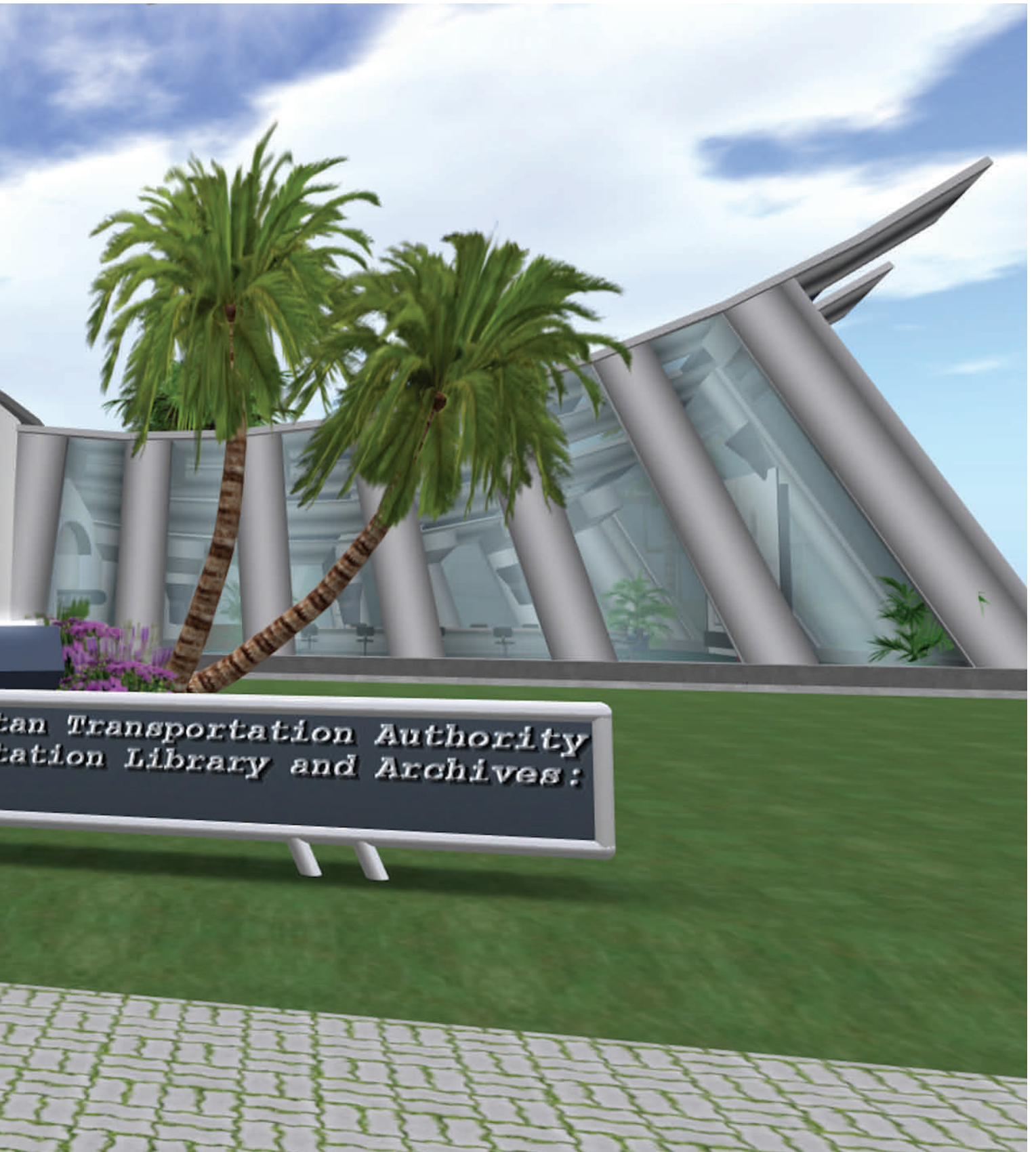
Other projects can be found on the Baden-Wuerttemberg 2 island. One such project is the Stuttgart Tea house housing information about the NETFORMIC GmbH—an Internet-Agentur in Stuttgart.

Many other projects set up by universities and companies can be found throughout the island. ⚙️









—Bill Greeves and Pam Broviak



# MuniGov

In September 2008, we were both civil servants on a mission, scanning the horizon from our work stations in city and county governments 750 miles apart, looking for better resources for government foot soldiers to take some Web 2.0 action. We met through a mutual online colleague and discussed some great ideas via [Skype](#) and [Second Life](#), but when we returned to our respective work in Geneva, IL and Roanoke, VA, we found it hard to find some solid resources to help us build on our ideas. We whined about it for a little while but soon we decided that if we couldn't find it, we'd build it! So we put our money where our mouths were, and we founded [MuniGov 2.0](#). MuniGov 2.0 is a coalition of federal/state / municipal and international governments focused on exploring the use and principles of Web 2.0 in an effort to improve citizen services and communication via technology.

We based the group solely on the idea that there

was value to be had in collaboration, and that Web2.0 could be just the platform we needed to promote and leverage that collaboration in government.

We started the organization with a collaboration Web site using Google Sites. Then we built a Google Groups discussion board and established a foothold in the virtual world by setting up a MuniGov HQ in Second Life. These initial efforts attracted a community of like-minded peers with a common interest in applying Web 2.0 concepts to local government. Our growing group embraced the use of these online tools and started documenting Web 2.0 resources and best practices. We welcomed ideas from around the world and opened the group up to collaboration from anyone working in or for government. Word of mouth and some very timely media coverage did the rest. We grew rapidly, nearly exponentially, as the demand skyrocketed for guidance and camera-



## MuniGov meets every other Wednesday at 4 pm PDT in Second Life.

derie and the journey of 2.0 use in government became commonplace.

We modeled MuniGov on the following principles to allow the group to evolve as more governments begin exploring and applying the concepts and technologies of the Web2.0 movement:

- The more people participate in the development of the product, the more valuable it will become
- All ideas and collaboration are welcome
- Individual feedback and submissions will make the group a truly effective resource and create an environment in which everyone learns from each other.

These principles were enhanced with the following basic goals:

- Become a recognized, powerful and dynamic resource for governments implementing and innovating via Web 2.0
- Establish a strong set of virtual-world resources for government agencies
- Coalesce into a large, active, and innovative user community
- Seek innovation and opportunity in difficult economic times
- Have a little fun along the way

The group continued to attract interest because Web 2.0 in government could no longer be ignored. The Web site expanded as more and more participants shared their best practices, policies, ideas and suggestions. The list serve started rolling with dynamic questions and an-

**Panel discussion during MuniGovCon09—the first virtual world conference for local government held in April 2009.**



swers from all areas of government. Both of us, along with several other members of the group, began to participate in discussions, presentations and projects in work rooms, college lecture halls, and larger conferences around the globe. Using Web 2.0 tools, we were able to participate not only in-person but often virtually. Our foothold in Second Life expanded as we added free virtual offices for all member governments to use.

One Wednesday last winter, someone came up with a great idea: why not hold a conference in Second Life? This would allow us to move past the general “wouldn’t-it-be-cool-if” discussions into providing



tangible, valuable (and free!) resources to our members. There was a unanimous group decision to go for it and MuniGovCon09 was born! For several months we devoted our Wednesdays, and many more days, to pulling together a conference in Second Life. The theme of the conference was introducing Web2.0 to the government community. Munigov members met in Second Life to plan the conference and held one-on-one planning discussions via Skype. A collaboration site was used to share information and allow for conference registrations. Twitter, blogs, and social networks were used to help get the word out.

By the time the conference time rolled around, we had nearly 170 registrations. And although we don't have an exact number, we estimate that the number of attendees was actually at least double this. Many organizations filled a real-life conference room and watched the conference on the big screen via the virtual eyes of a designated avatar. As you'll note from the session videos, we certainly had a fair share of technical hiccups throughout. We knew this was inevitable, given the heavily concentrated noob herd that the conference attracted. However, the MuniGov2.0 hosts and conference speakers showed tenacity, resourcefulness, and perseverance in working through the problems and putting on a good show.

The speakers at the event included people from local, state, and federal government offices, as well as higher education, all of whom spoke on intriguing ideas and engaging topics relevant to Government 2.0. We even had an interactive Q&A session that engaged the audience with a panel of government 2.0 enthusiasts focused on several social-media related topics. The speakers and their topics were well received, based on the very positive evaluations we collected. Perhaps most importantly in these economic times, we were able to save attendees thousands of dollars in registra-

tion and travel fees to attend the enlightening sessions. All they had to do was log-in from a computer. And there was no lost baggage, missed flights, or expensive hotel rooms associated with this conference!

Eighteen months later, MuniGov has grown to nearly 600 members from around the world, and we are happy to report significant progress towards all of our goals. We have a diverse and dedicated membership that literally spans the globe and incorporates nearly all of the functions in each level of government. From police officers to public information officers, technology directors to elected officials, the MuniGov group and its resources have become a powerful asset to use as a

resource for 2.0 research and implementations. The group has established a prolific Web presence ([www.munigov.org](http://www.munigov.org)) and meets via avatar every other Wednesday night in the virtual world of Second Life to talk shop about the policies, tools, trials, and tribulations of Government 2.0 or just government in general. We've accomplished all this solely thanks to the efforts of a talented and dedicated volunteer group – no budget required!

Thanks to the generosity of the National Oceanic and Atmospheric Administration,

we've got a bigger, better home in Second Life as we also begin to explore other virtual world opportunities. And we've got big plans with regards to government education and collaboration. There is no end in sight for the future potential of government 2.0 and we hope to continue to be a valuable part of it!

Want to know more? Give us a shout or sign-up today on the Website, and join in the conversation and the collaboration! ⚙

*Reprint of an article that appeared in the Spring 2010 Government by Collaboration newsletter, a product of the GSA Office of Citizen Services and Communications. (with permission)*







## Virtual Planning - Chinatown, Boston

Emerson College and the city of Boston broke new ground in 2007 when Eric Gordon, professor of new media at Emerson, launched Hub2 with the help of Nigel Jacob, technology advisor to the mayor. This initiative focused on using immersive technologies like *Second Life* to engage citizens in city planning. By 2008, residents, in co-operation with Harvard and the city, were working with the Hub2 project to collaborate and determine what type of park and related amenities should be developed in the Allston area. Gene Koo, a fellow at Harvard Law School's Berkman Center for Internet & Society, worked with Gordon and Jacob to establish the pilot program.

Since that time, Gordon has been working on *Participatory Chinatown*, an immersive planning tool focusing on the Chinatown area of Boston. He describes his approach in an interview posted on <http://www.hastac.org>, "We want to re-design the community meeting to include a wide range of experiences born of game play, social interaction, and deliberation." The project allows people to register on the Participatory Chinatown website, download the software, and become part of the planning process. Once the game is

launched, the user picks one of 15 virtual residents and reads the resident's biography and related quests assigned to that resident. For example, one of the residents is a married woman with children who has just moved from New York. She is searching for a place to live. Her quest is to learn what places are available for rent and then to choose the place that best fits her needs. The user then plays the game to achieve the desired outcome and complete the quests.

The project blog at <http://blog.participatorychinatown.org/> describes the process used to create the 3D immersive space. To create the models and textures, the project relied on photos, Google Earth, LiDAR (Light Detection and Ranging) technology, CAD, GIS, and Sketchup. All the models created are available for download on the blog site and some have been uploaded to Google's 3D warehouse.

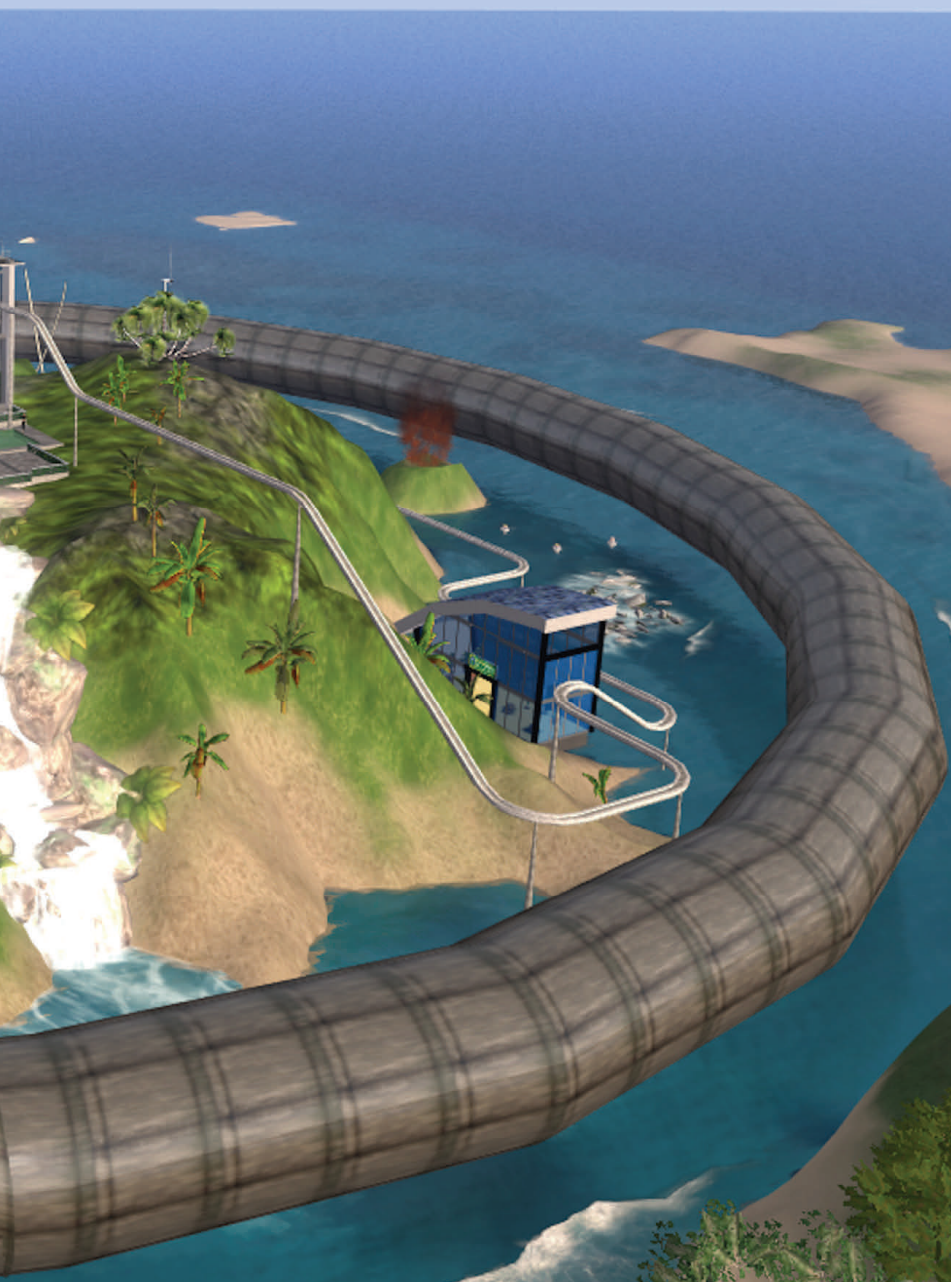
With the official launch of Participatory Chinatown on 6 May 2010, the project team has announced several community meetings to discuss development of the area. The website explains that participants "will learn about issues that affect land-use planning in Chinatown and be asked to give feedback about potential development scenarios for the neighborhood."

# ENERGY ISLAND IN S





# SECOND LIFE



Earlier this spring, the U.S. Department of Energy (DOE) opened up Energy—a virtual site in *Second Life* located just east of the *Meteora* sim—another government-owned island managed by NOAA. Visitors to the Energy sim start at the DOE Career Center, a large building perched on a hill in the center of the island. Energy Ant, a digital bot located at the front desk of the center, is available to greet anyone interested in chatting. Books and displays throughout the center offer information about working for the DOE. A treasure hunt is available on the center's patio on the ground floor.

On the second floor of the center, there is meeting space and a boarding area for the island's monorail. The monorail ride provides narration about the island and points out energy-related displays positioned along the track. These exhibits showcase tidal generators, a geothermal power plant, heliostat array, and wind turbines.

People interested in touring the particle accelerator, a large structure that encircles the island, can enter from the second floor of the career center. Here, avatars can rez a cart on which to ride through the accelerator and learn more about its purpose and operation. ⚙️

## FEATURE STORY—FEDERAL

The DOE Career Center offers books and videos with information about working for the DOE.

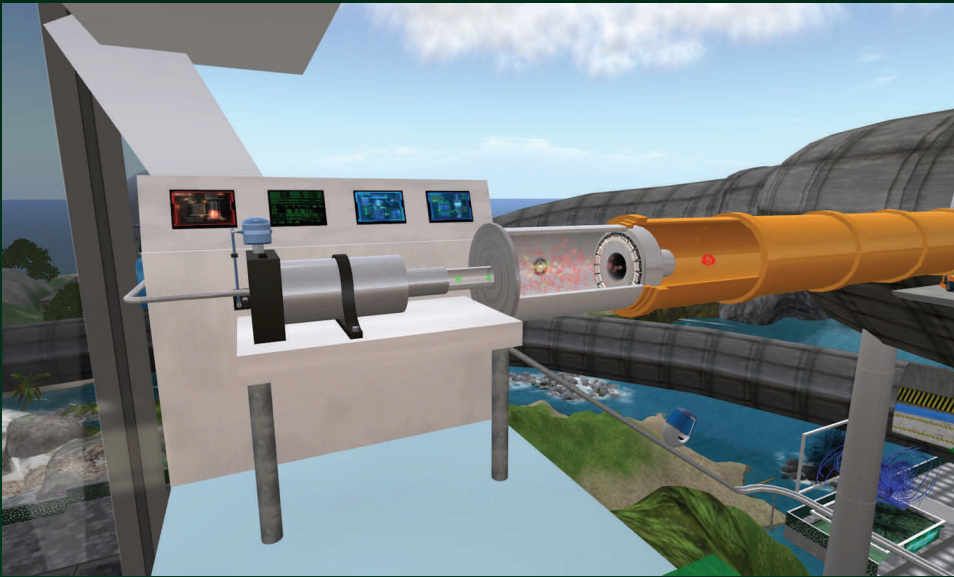


Energy Ant greets visitors interested in chatting.

The particle accelerator display explains the process involved in stripping hydrogen atoms of electrons and the resulting acceleration of the remaining protons.



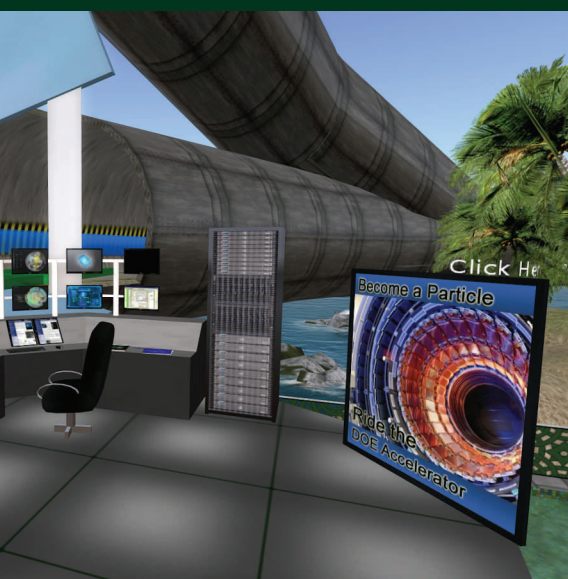




The linear accelerator is the first stage of a typical DOE accelerator. Protons begin their acceleration here at a third of their final speed.



DOE employs 16,000 federal and 93,000 contract employees worldwide.



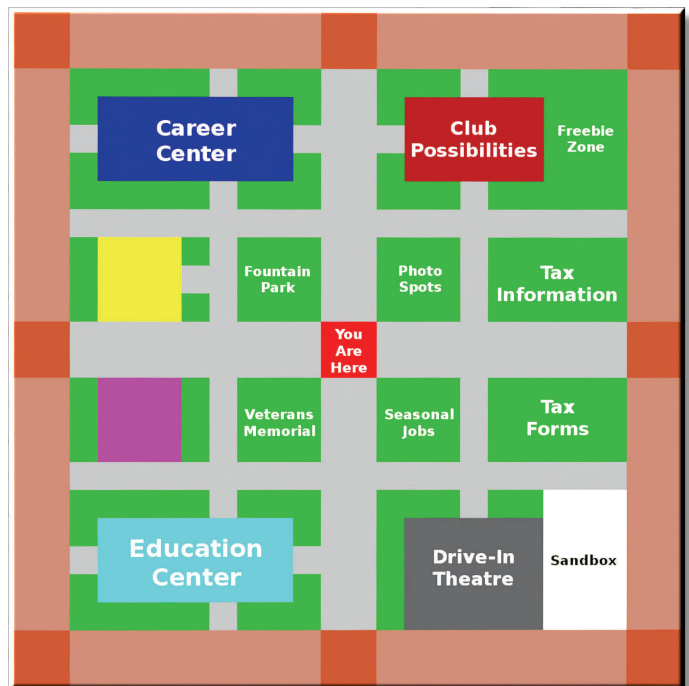


# INTERNAL REVENUE SERVICE

The IRS Careers Island in [Second Life](#) offers the following attractions located on a platform in the sky:

- Career Center in the northwest corner of the sim offering information about how to register and apply for a job
- Seasonal Job Center
- Conference Center
- Tax Forms Center with links to many forms and publications
- Tax Information Center with links about where and how to file, FAQs, and other tax-related facts
- Club Possibilities—this area hosts a space for dancing; trivia competitions are held on Tuesday nights
- Veteran's Memorial
- Drive-In Theater with cars
- Photo Spot
- A race track lies below the main platform. Visitors can pick up a car and drive it around
- Sandbox for practicing building
- Freebie zone
- Playground

There is also an IRS Careers Group and gifts are located throughout the sim for group members. ⚙️







# NATIONAL DEFENSE UNIVERSITY

The National Defense University Information Resources Management College (NDU iCollege) (Formerly IRMC) is a component of the National Defense University. This institution provides “a global learning community for government’s most promising information leaders.” IRMC has had a presence in *Second Life* for some time. The current site consists of four sims boasting a welcome center, crisis center, conference building, orientation area and changing areas for males and females. Member of the NDU iCollege put together the Federal Consortium for Virtual Worlds in an effort to provide a group for those working in government and interested in the use of virtual worlds. In support of the group’s virtual world endeavors, the group hosts an online site at the fol-

lowing URL: [www.ndu.edu/irmc/fedconsortium.html](http://www.ndu.edu/irmc/fedconsortium.html). The group also created a site using *3dexplorer* technology and continues to investigate other virtual world tools. ⚙





# Smithsonian

The Smithsonian Latino Main sim, located in [Second Life](#), hosts the Smithsonian Latino Virtual Museum, a site sponsored in part through the support of the Walt Disney Company. Visitors to the island will find domes with ecological areas, an observatory, and canal display with working locks.

## Smithsonian Latino Expeditions

The Smithsonian Latino Expeditions lies to the north of the main sim. Here a Mesoamerican display showcases the eight expeditions to Mexico that the National Geographic Society and Smithsonian co-sponsored between 1939 and 1946 to explore archaeological sites. Displays show the camp and re-create some of the archaeological finds in situ.

## Smithsonian Latino Music

Visitors to the Smithsonian Latino Music island, lying south of the main sim, can watch a video and pick up free maracas and a Cuatro Guitar for \$0L in the Afro Cuban Music Display. There is also a Portales Gallery showcasing musicians, an outdoor patio area, and the Corridos Café. People can also explore the Son Clave Lounge for Music and participate in dancing in the southeast corner of the sim.

The Smithsonian has a few other islands located adjacent to these; however, they are not open to the public at this time. ⚙️

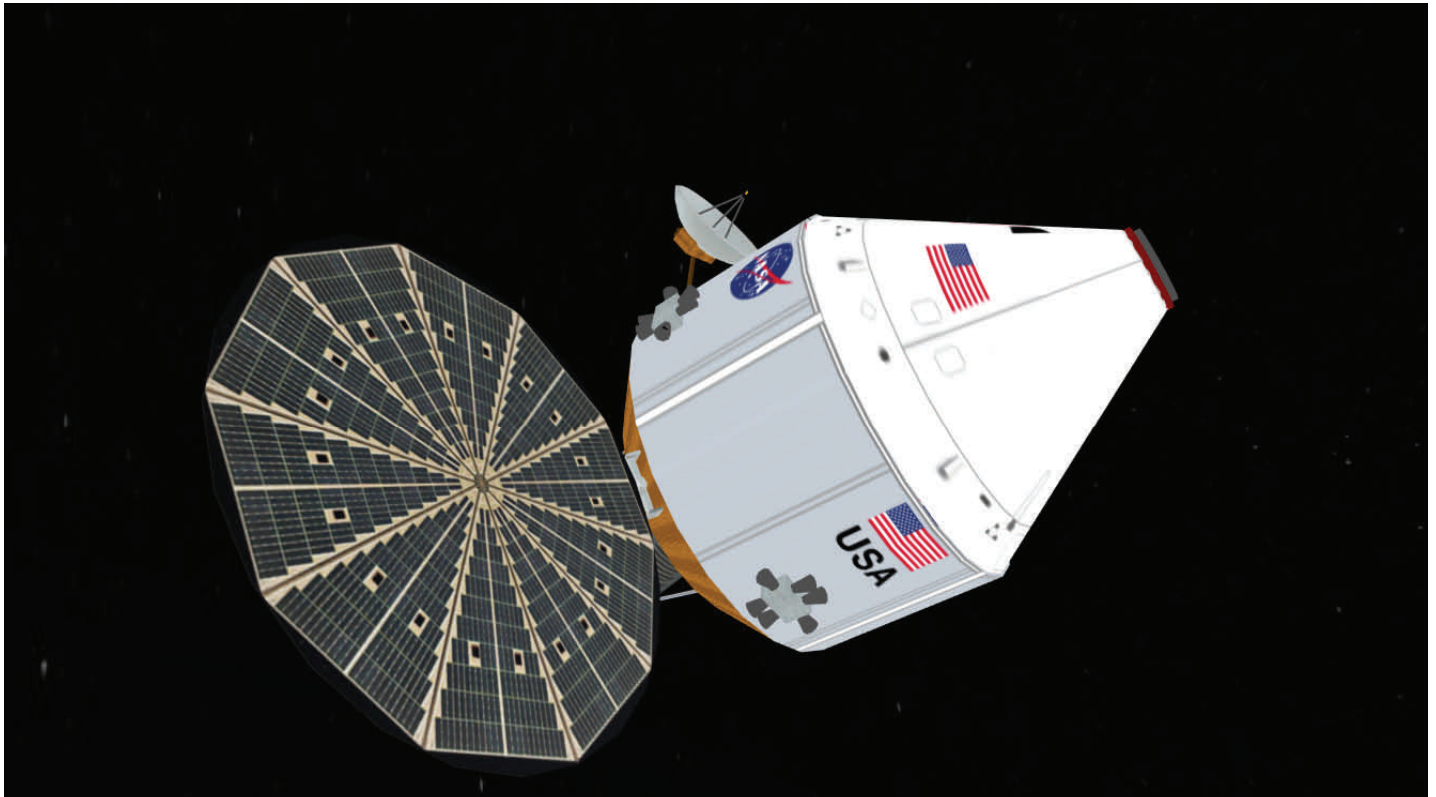




**Photo Above: The Smithsonian Latino Expedition sim showcases a re-creation of the field camp from archaeological expeditions to Mexico in the 1940s. The featured site is Tres Zapotes.**

**Photo Right: Discover the roots of Latin music by visiting the Afro-Cuban music display. Free guitars and maracas are located in the building.**





# NASA

According to the [America.gov](http://America.gov) site, NASA has had a virtual presence in the virtual world of [Second Life](http://SecondLife.com) (SL) since 2006 when the NASA Ames Research Center in California set up the NASA CoLab island. Today this sim hosts facilities for a resident talent show, the annual Yuri's Night party, and the Neil A. Armstrong Library and Archives Building.

The library is unique as a notecard at the site points out it is the "first virtual world library or archive recognized by the Library of Congress of the United States of America. Its assigned ID is 38392, and its MARC Code is CaPsLAN." Major collections number over 200 archival items and include "the history of women, African-Americans, and the working class in aeronautical and astronautical history, as well as the histories of Apollo 11 and Space Medicine." A resource center is also located on the library's third floor. Just outside the library, visitors can pick up a free space suit, NASA mug, virtual books, and invita-

tions to write to Buzz Aldrin and Neil Armstrong. Avatars can also follow a link to submit their name for inclusion on a microchip that will journey to Mars.

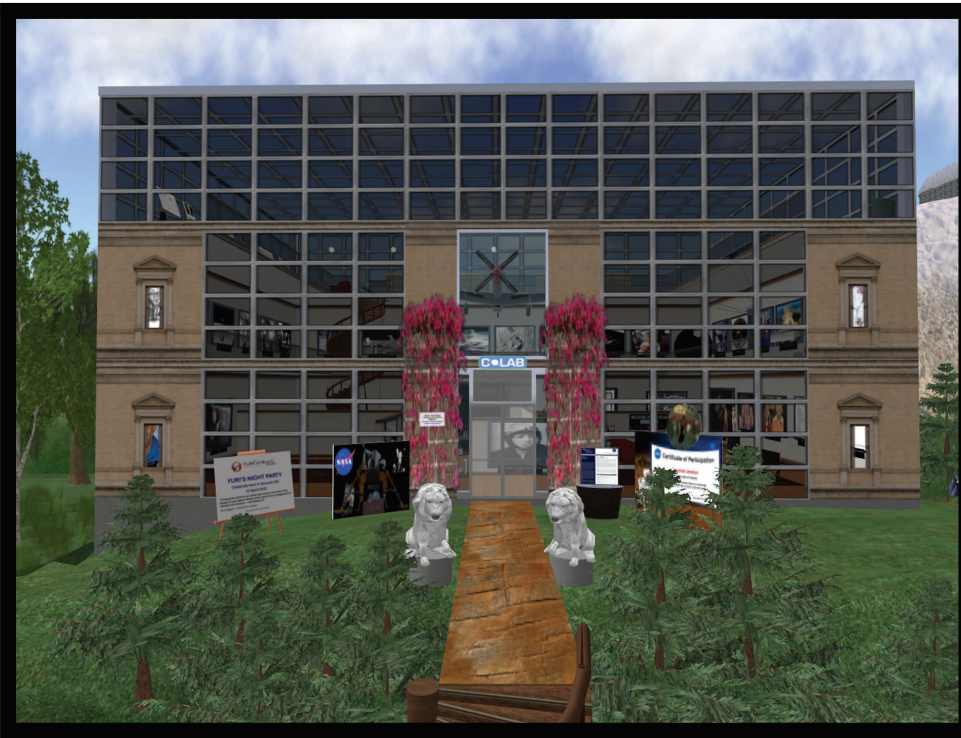
Other NASA-related sites in Second Life are listed below:

## NASA eEducation

Visitors to NASA can receive information about the [Learning Technologies Program \(LTP\)](http://LearningTechnologiesProgram.nasa.gov)—NASA's educational technology incubator. Areas around the island include the following attractions:

- Marine Research Station
- Underwater Habitat with a virtual NEEMO—NASA Extreme Environment Mission Operations, the world's only underwater laboratory.
- Airstrip offering displays about the Lunar Reconnaissance Orbiter (LRO) and the Lunar Crater Observation and Sensing Satellite





terns working for NASA Glenn—the Glenn Research Center in Cleveland Ohio. Attractions on the sim include the following:

- Aero-Acoustic Propulsion Laboratory Flight Research Lab
- Engine Simulator
- Rocket Modeler
- Zero Gravity Facility
- Electric Propulsion Facility
- Exercise Countermeasures Lab
- Alternative Energy Park

## Lunar Exploration Island

The Lunar Exploration Island (LEI) is the Second Life site of [NASA's Lunar Precursor Robotics Program](#). Here visitors can find out more information about the Lunar Reconnaissance Orbiter (LRO) and the

Lunar Crater Observation and Sensing Satellite (LCROSS). The site also

hosts the following resources: a Mission Control Building and LEI Hall of Flight along with a plaza area, theater, welcome center, and orbit diorama. There is also a Lunar Planetary Institute display found in a small building located just outside the LEI Hall of Flight. Here visitors can find out more about the [Connect to the Moon](#) and [MyMoon](#) project.



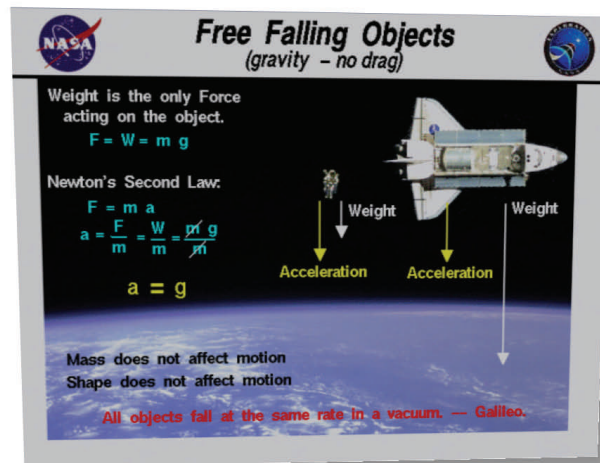
- (LCROSS)
- Amphitheater
- Outdoor events
- Main Building
- Earth Science
- Rovers
- Sandbox
- Antarctic Outpost

Several other exhibits are accessed through a teleport:

- NASA's Orion crew exploration vehicle which will make flight to the international space station next decade.
- Advanced Composition Explorer (ACE)
- Hubble Space Telescope

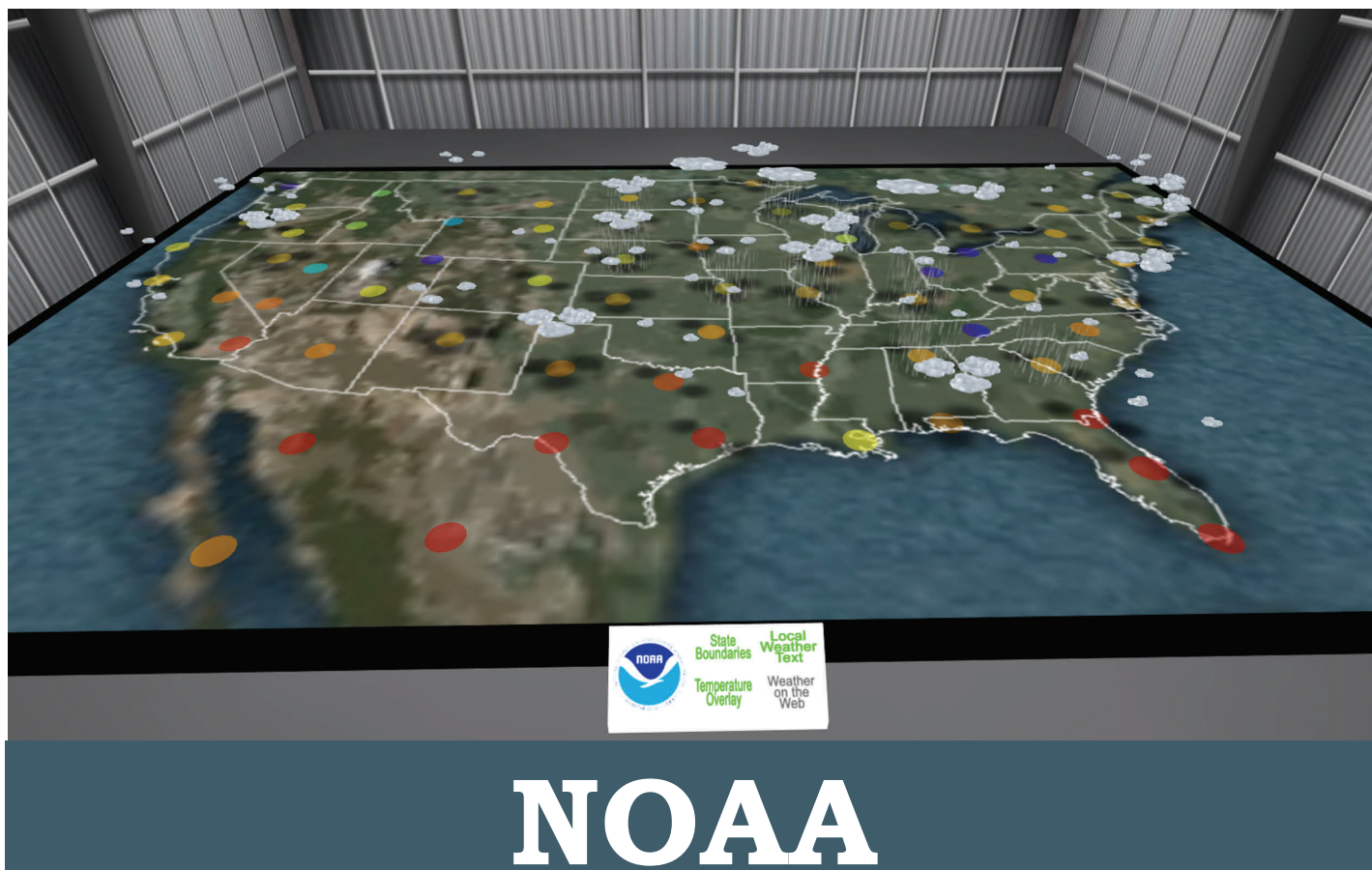
## NASA Glennopolis

The NASA Glennopolis island was created with the help of summer in-



*"The Lunar and Planetary Institute is a research institute that provides support services to NASA and the planetary science community, and conducts planetary science research under the leadership of staff scientists, visiting researchers, and postdoctoral fellows."*

Pasted from <http://www.lpi.usra.edu/lpi/about.shtml>



**N**OAA was an early innovator in government use of virtual worlds. In 2006, Eric Hackathorn, NOAA's virtual worlds programs manager, established the agency's first sim, *Meteora* in [Second Life](#). The goal for this effort aligned with the agency's goal: "to create an informed society that understands the role of the ocean, coasts, and atmosphere in the global ecosystem to make the best social and economic decisions."

Now renowned for its displays, the site has been proven to increase public awareness of NOAA. One of the island's more popular attractions has been the Tsunami exhibit. By clicking a sign on a beach, visitors activate the start of a Tsunami. They can watch as the virtual water pulls back away from the shore line. Then just as they begin to think about running out onto the sandy floor of the ocean, the tidal wave begins. A tall wall of water rushes to the shore crashing into the land and destroying the buildings in its path.

Other exhibits on *Meteora* include a ride into a hurricane or on a weather balloon, a climate change demonstration in a glacial setting, the Science on a Sphere display, and submarine ride to explore sea life. A building located near the entry point shelters a digital map displaying real-time weather across the United States.

### Okeanos

NOAA added a second island, Okeanos, in late 2007. People visiting Okeanos arrive on a hill near the northwest

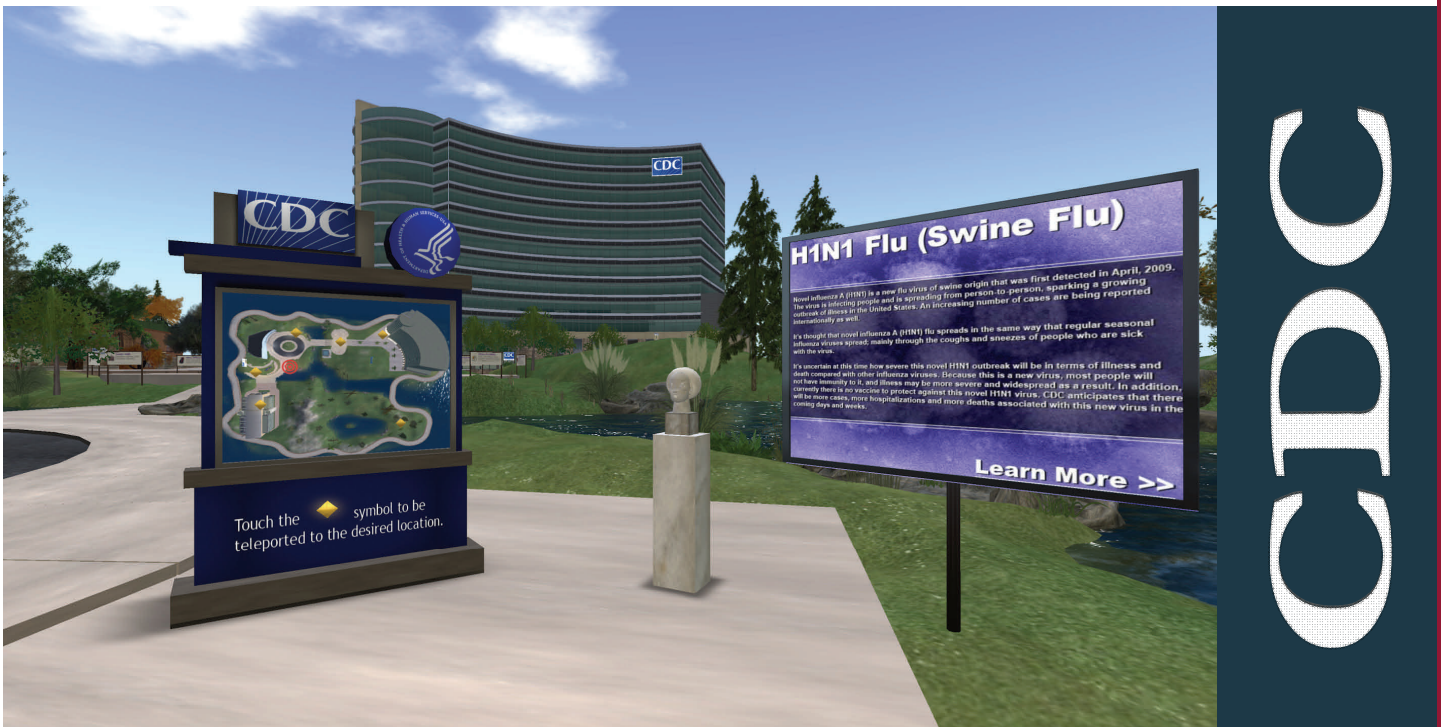
corner of the sim. This welcome area offers visitors a heads-up-display (HUD) that allows avatars to activate pre-recorded narrations by clicking signs located around the island. Through sound and graphics, the HUD conveys information about the display and subject matter. The HUD can also serve as a teleporter to different attractions on the sim.

Themed areas established on the island offer information about:

- Geodetic survey
- Coastal services
- Marine Sanctuary Submarine Tour and Oil Spill Demo
- Hawaii Humpback Whale Marine Sanctuary
- Olympic Coast Marine Sanctuary
- Channel Islands Marine Sanctuary
- Monterey Bay Marine Sanctuary
- Hydrographic survey
- Coastal Observations and Predictions
- NOAA info hub
- Ferry Charting Demo
- Harmful Algal Bloom

Finally an interactive ground map is located at the top of the hill near the coastal services building. This map can be activated to show weather alerts, hurricanes, and satellite and radar displays. ⚙️





**The CDC offers health-related information on various displays located throughout their virtual site in Second Life. Visitors exploring the island will find a conference center and a kiosk offering free CDC awareness bracelets. ⚙**













# U.S. Air Force

The MiLands were opened in [Second Life](#) on 23 April 2009, and formally established on 29 May 2009, when a group of U.S. Military stakeholders formally adopted a charter establishing a guidance board. According to Douglas Maxwell, staff researcher at the [Naval Undersea Warfare Center \(NUWC\)](#)—Newport, R.I., “this board, otherwise known as the MiLands Senate, was established to foster collaboration efforts and provide for the guidance of other military organizations and institutions who wish to enter Second Life.” Maxwell, also known as Maccus McCullough in Second Life, is the estate manager and technology lead for MiLands.

### Coalition Island

Coalition Island, located near the center of MiLands, is the central hub. A pentagon-shaped structure in the center of the island houses information about every branch in the U.S. Military. From here visitors can explore virtual builds created by the Navy, Air Force, Army, and a military group known as Team Orlando.

### MyBase

On 2 Dec. 2008, the [U.S. Air Force \(USAF\)](#) opened MyBase—a virtual site located in Second Life as part of the Huffman Prairie Estates (HPE) Virtual Learning Communities (VLC). According to the USAF website, the purpose of MyBase is to target “avatars or people interested in learning more about the Air Force.” The island is designated as Pier 3 Station of the HPE group and is located directly south of Coalition Island.

The displays on MyBase focus on providing history and general information about the USAF. At the entry point, visitors are greeted with welcome signs and information. The visitor center is located straight ahead in the center of the sim. A teleport map of the sim is displayed in the building along with information about USAF opportunities. By taking the elevator to the lower level, avatars can jump on the MyBase Metro—a public transit system offering rides to the sim’s attractions. On the third floor of the center there is a gift box offering photos, a target dummy, rifle, jetpack, hoverboard and other freebies.



A museum is located just outside the visitor center. Current exhibits offer information about the Apollo 15, the USAF Thunderbirds, USAF uniforms, aircraft, band, and the Tuskegee Airmen. Visitors can pick up a free t-shirt and play USAF-themed music on a music box at the museum's front desk.

Airfields flank the island on the north and south, and there is a parade field in the northwest corner of the sim offering space for virtual events. Next to the field is a digital representation of a dormitory and dining hall.

Visitors can immerse themselves in military training simulations by moving through the confidence course and firing range. A crate in this area offers a variety of free weapons to try out on the range.

Other attractions on the island are a chapel highlighting chaplain service in the USAF and a club and theater for just hanging out.

## MyBase Zeta

To the east of MyBase is the MyBase Zeta sim or Pier 4 Station of the HPE group. This area hosts an airfield and the Captain Lance P. Sijan Leadership Range. According to information at the site, the range "supports the prototyping of multiplayer games,

**An airfield on MyBase Zeta provides a combat challenge. A scoreboard near the airfield keeps track of wins and losses.**

**"MyBase provides a virtual, exploratory and interactive environment in support of continuous lifelong learning, from educating the general public, to entry into the service, and throughout our Airmen's careers and post-career years."**

**—Maj. Gen. Erwin F. Lessel III**

which is an example of a future-oriented learning environment. It is equipped with systems for supporting team membership identification, scoring, voice and text communication among team members, team briefing rooms, videotaping of game activity, target damage and scoring, simulated weather, various day and night conditions, assignment of equipment and tools to each team member, and game goal-oriented action, timing and feedback controls for use by game referees."

Visitors can immerse themselves in flight combat by picking up a free red

or blue plane and signing up at the scoreboard. There are also other models of planes available for flying around the island. In addition to the planes, avatars can pick up a parachute and jump on the skydiving pod. This pod carries visitors into the sky then releases them allowing them to free fall. As they near the ground, the parachute can be deployed allowing them to safely land



## FEATURE STORY—FEDERAL

on the ground. Finally, for those looking for a more leisurely ride can hop into the hot air balloon and drift across the sim.

### Huffman Prairie Chi

Continuing further to the east is the Huffman Prairie Chi island or Pier Station 5. The auditorium dominating the center of the sim is used for events held by the Global Learning Forum Events Group in Second Life. People are encouraged to join this group to be notified of events held in this space. Tunnels run beneath the building and lead to a library, tutorial areas, media center, and photo galleries.

Huffman Prairie Theta and Huffman Prairie Delta lie directly east of Huffman Prairie Chi. Both sims are closed to the public.

**The Ayn Rand Space Station floats above the Huffman Prairie Omega sim. Visitors to the station can explore learning pods, conference rooms, and hologram displays.**

### Huffman Prairie

Moving directly south of Huffman Prairie Chi is Pier Station 9—Huffman Prairie. Content on this sim is for the design and development of machinima. Equipment used for machinima is housed in two hangars on the island. A library and auditorium also support activities on the sim.

### Huffman Prairie Omega

The next island to the east is Huffman Prairie Omega or Pier Station 6. This area offers the following attractions:

- Ayn Rand Space Station: this build floats above the sim. Visitors can ride a 3-stage rocket to reach this station.
- Conference rooms, classrooms, faculty offices, and hologram displays.
- Space travel vehicles
- A monorail and skylift to get to sites in the region
- A visitor center
- The General Bernard Adolph Schriever Rocket Launch Learning Center





### Huffman Prairie Sigma

Huffman Prairie Sigma, or Pier Station 7, is east of Huffman Prairie Omega. This sim is home to “The Mars Expedition Strategy Challenge”—the winner of the [Federal Virtual World Challenge Contest](#). The entry, created by Dr. Andrew Stricker, Mr. Mike McCrocklin, Jeanne Holm, and Dr. Cynthia Calongne (POC), is “an immersive reality challenge to explore strategies for human spaceflight beyond low-earth orbit.”

Visitors can immerse themselves in the challenge by first visiting the Sigma Launch Facility and Learning Center, located in the center of the sim. A welcome notecard provides the necessary instructions:

1. Proceed to Mission Prep Station and review the slides that depict the mission you are about to take.
2. Afterward, continue to the Pre-Launch Prep Station and review the research material on expedition challenge-based learning.
3. Next, report to the Launch Control Station and view the video and notecard. Your next set of instructions are awaiting when you arrive.

A free NASA shuttle suit is available near the Launch Station. After listening to the video, the launch sequence begins, and the visitor proceeds to the launch pad then onto the rocket to begin the experience.

### Huffman Prairie Gamma

Huffman Prairie Gamma (HPG)— Pier Station 8—is the last of the HPE group open to the public. The region info button explains that “HPG supports the exploration and prototyping of educational informatics. Educational informatics melds the study of informatics science with analysis of learning information and knowledge, to address the interface between technology, learning, and assessment sciences in the design of interactions between natural and artificial systems.”

The Ada Lovelace Informatics Tower, a tall structure of glass and white brick, is located in the center of HPG. Inside this building is an auditorium, foyer, faculty club, and faculty offices. A pavilion is nearby and can be used by people for experimentation with informatics. A mind-map exhibit representing American attitudes about the use of biometrics is currently on display here along with

a few other exhibits.

Other buildings on the sim include the following:

- Jay Wright Forrester Informatics Decision and Performance Support Systems Hall
- The Marsden Scott Blois, Jr. Informatics Innovation Hall
- The John Graunt Educational Informatics Library
- The Octave Chanute Educational Informatics Laboratory

The last two sims in this area, V Holm Center and AFRL, are not open to the public. ⚙️

## Air University GLF

“The Air University GLF consists of interested faculty and staff from military, industry and academia. Its purpose is to interpret and illustrate cyberscholarship. GLF members critique researching, learning, instruction, and assessment approaches that underline effective cyberscholarship, advanced distributed learning (ADL) course design, teaching practices, and innovations made possible by digital libraries and online datasets. A desired outcome of GLF is for members to help scan, focus, and act on promising cyberscholarship innovations, including the methods and assumptions used when applying learning science theory to instructional design in support of distributed and global learning.”



# U.S. Army

People arriving in the welcome area of the [Army Information Center](#) in [Second Life](#) can pick up an Army Gesture Heads-Up-Display (HUD). The Gesture HUD allows an avatar to choose between an "Attention" or "At Ease" posture. There is also a salute gesture. Another kiosk in the welcome area dispenses n Army Points HUD. By wearing the Points HUD, visitors can gain points for taking part in the following challenges on the Army Interaction Center island which lies just to the east:

- Apache Helicopter Landing Pad Game
- Skydiving Challenge

## • Army Trivia Quiz

Points can be cashed in at the Army Gift Shop for duffle bags, baseball caps, vests, shirts, first-aid kits, boots, flashlights, and other miscellaneous items.



Lying to the north is the College American Soldier island. Here 12 colleges have military program displays set up in Army tents. Army One-Source also has a display in this area. Other islands located in this area are closed to the public: Technology Exploration, Army, Pilot, Development, AOS NE, and Survivors. ⚙️





# Joint Forces - Team Orlando

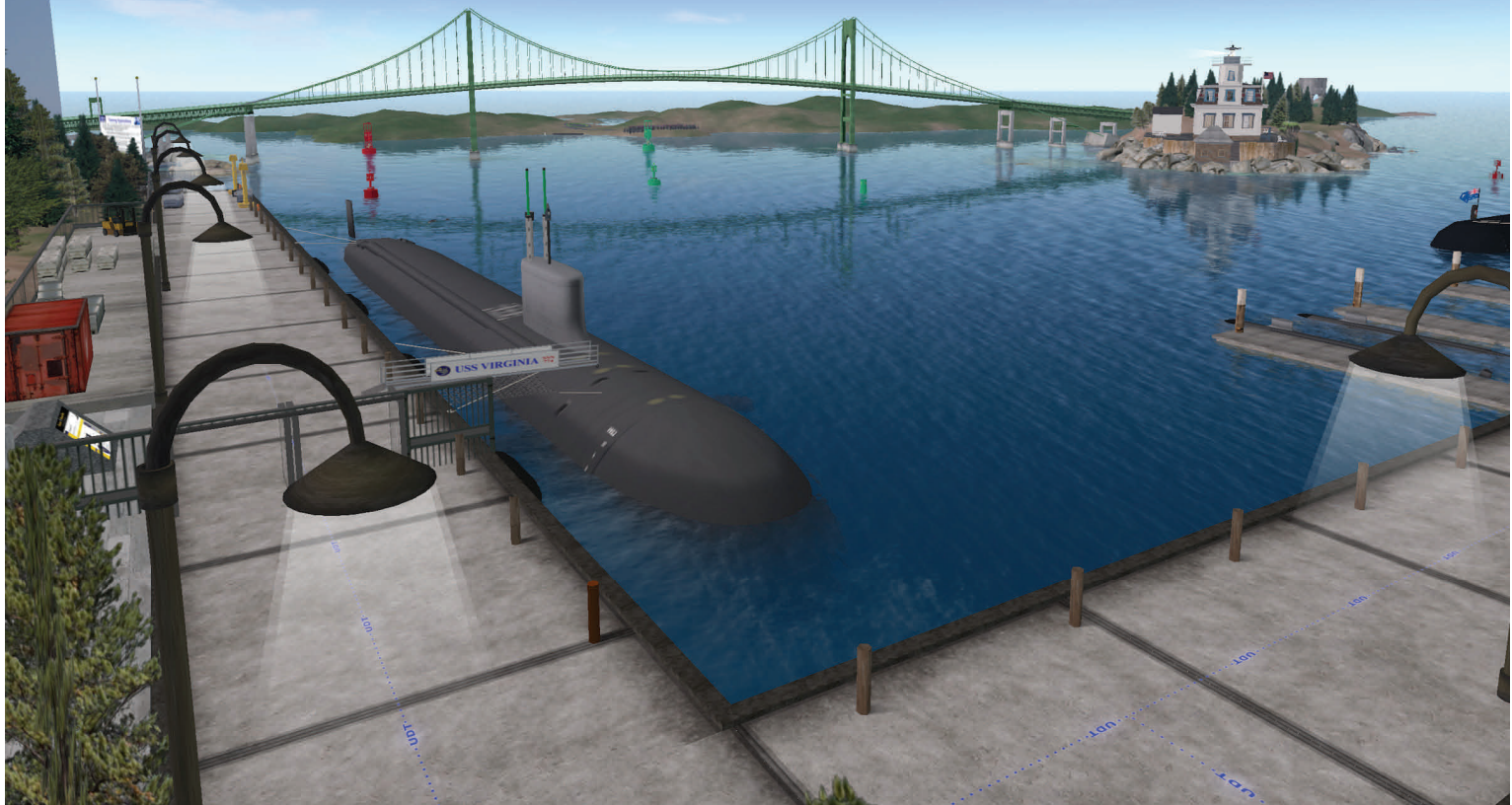
The [Team Orlando](#) sim in [Second Life](#) is laid out with a main building in the center and structures dedicated to the Army, Air Force, Navy, and Marines located on the perimeter of the island. The nearby VADER sim has a fire simulation display, a driving track, auditorium, and several smaller displays. Recently the virtual portion of the [GameTech 2010](#) event was held in this location.

Other sims in this area are the NAWCT3D and the NAWCT3D Warfighter Park, but both are closed to the public. ⚙️



**In April 2010, Team Orlando hosted GAMETECH 2010—a unique user-focused conference dealing with gaming technologies that enhance warfighter training. A portion of the conference was streamed to the VADER sim.**

# U.S. NAVY - VIRTUAL NUWC



A trip to the [U.S. Navy](#) virtual region in [Second Life](#) begins at the visitor center on the USS Nautilus sim. The center has displays with note-cards highlighting virtual attractions related to the U.S. Navy. There is also a movie theater on the center's ground floor. The second floor houses the following displays:

- Undersea Warfare Analysis Department
- Ranges, Engineering, and Analysis Department
- Torpedo Systems Department
- Autonomous and Defensive Systems
- Combat Systems

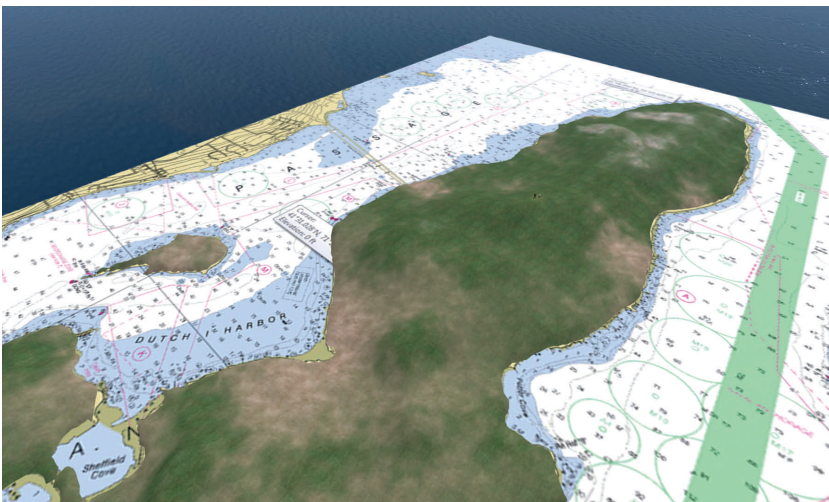
Outside the visitor center to the north is an orien-

tation trail. To the south are the USS San Juan and USS Seawolf sims. These areas are designed to represent actual terrain and landmarks in Newport, Rhode Island, the location of the Naval Undersea Warfare Center in "real life." Some of the attractions represented here are the Newport Cliff Walk, the Rose Island Light House, the Newport Bridge, and the Touro Tower. The USS Virginia submarine is also docked in this area.

To the west of the visitor center is the USS Sturgeon sim. Here visitors can explore a training center, café, and innovation center, and underground garden lying below. The USS Los Angeles island

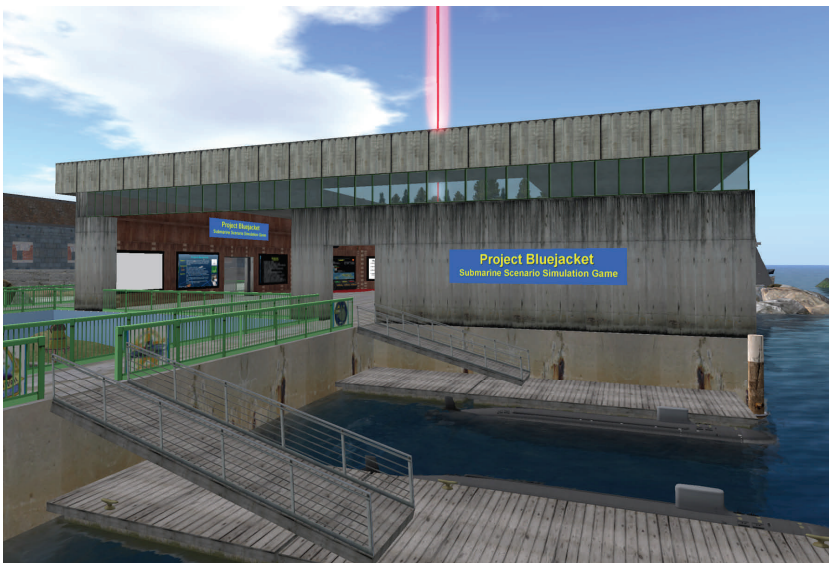


further to the west offers virtual representations of command and control centers. And finally on the USS Providence sim, avatars can explore several interactive displays. The sonar acoustics tank in this area demonstrates how sound moves through water. Another nearby attraction is the Project Bluejacket Immersive



Learning Game. According to information at the visitor center, "This game prototype is exploring how a submariner's basic navigation and contact management skills can be improved by iteratively exposing him/her to greater levels of mission complexity while simultaneously removing game aids."

The Navy also has the following sims currently not open to the public: USS Virginia, USS Halibut, USS Narwhal, USS Skate, USS Skipjack, and the USS Permit. ⚙️



**Top Photo: Virtual Control Center**

**Middle Photo: Topographical map illustrating the ocean terrain near the coast. This virtual site has been rendered to accurately reflect the actual elevations of the bay.**

**Bottom Photo: Project Bluejacket area on the USS Providence sim. Visitors can maneuver a submarine out to sea.**

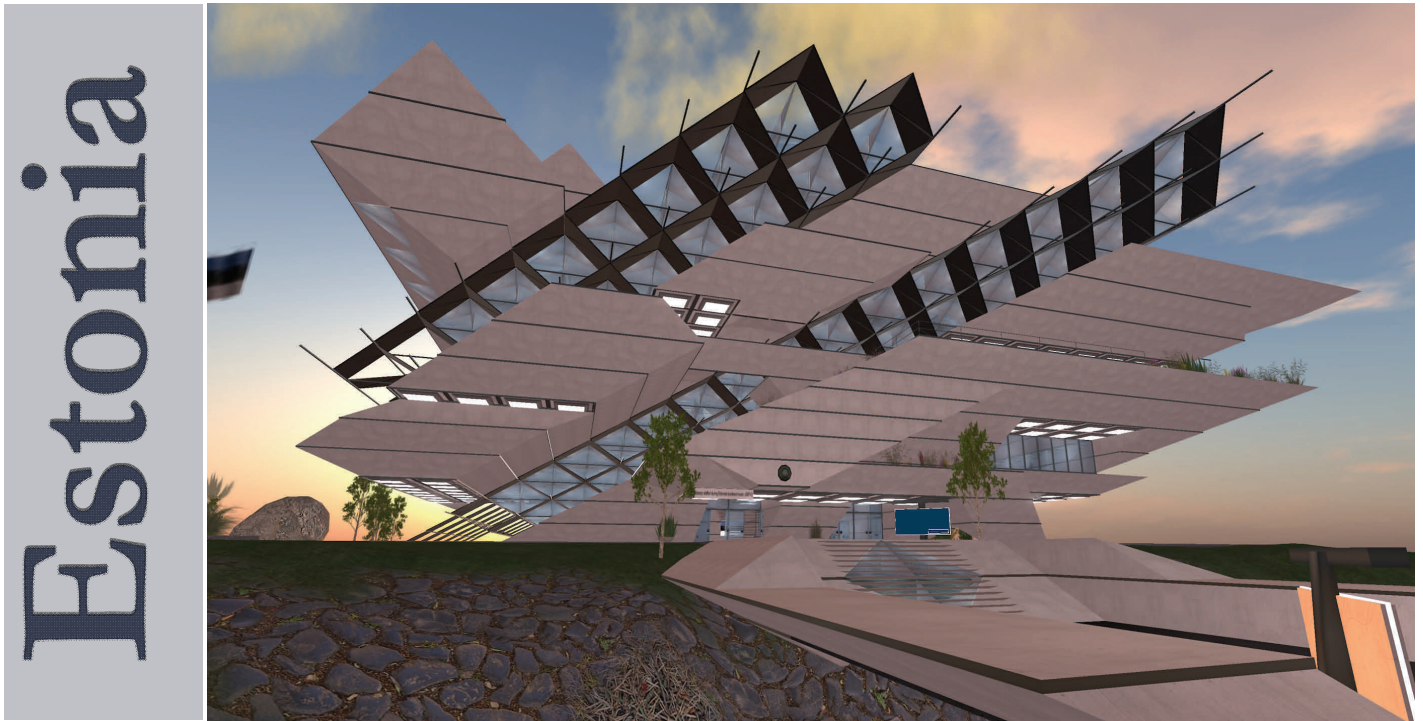


The [Swedish Institute](#) established a site in [Second Life](#) in March 2007. Visitors to the island will find a main building just down the path from the entry point. Inside there is a teleport to a globe that shows the location of every Swedish embassy, consulate, mission, or delegation around the world. Clicking each location takes visitors to the website for that region. Inside the main building are links to other Swedish-related sites, free virtual furniture designed by IKEA and Sweden's Wood and Furniture Association. The building also houses Raoul Wallenberg's office. Wallenberg was a Swedish diplomat in Budapest at the end of World War II. Visitors to the

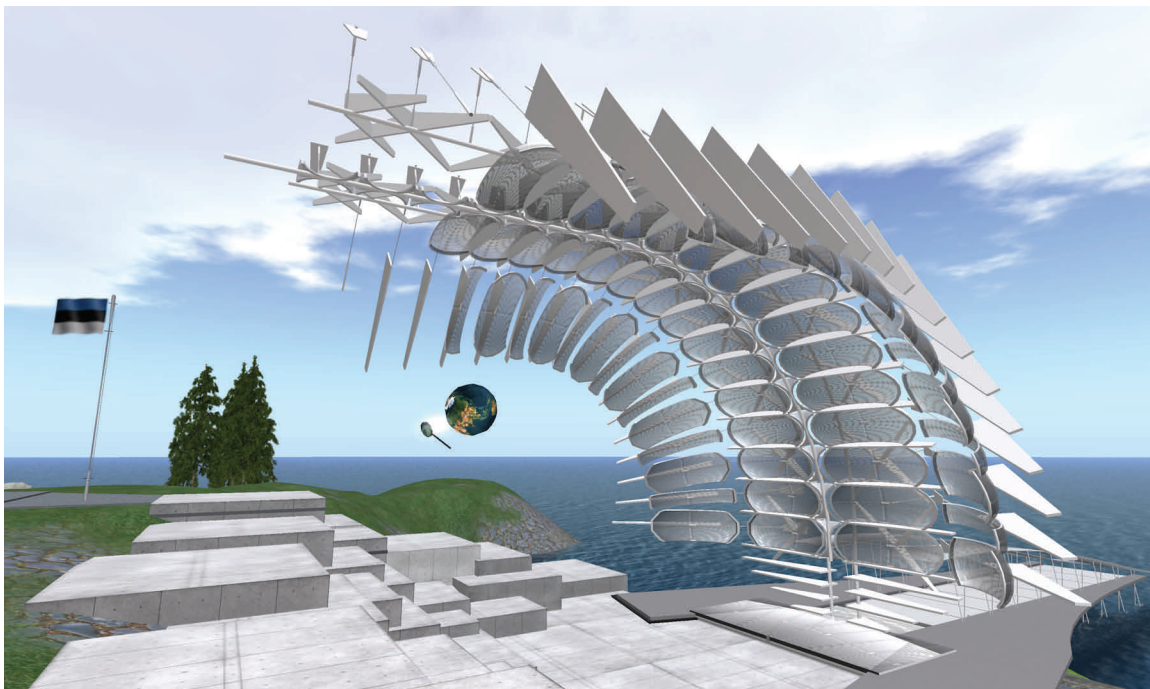
room can listen to "a re-enactment of Wallenberg dictating a report on 16 January 1945, his last day of freedom." Upstairs is the Linnaeus Room where visitors can find out more about Car Linnaeus, a Swedish scientist. ⚙

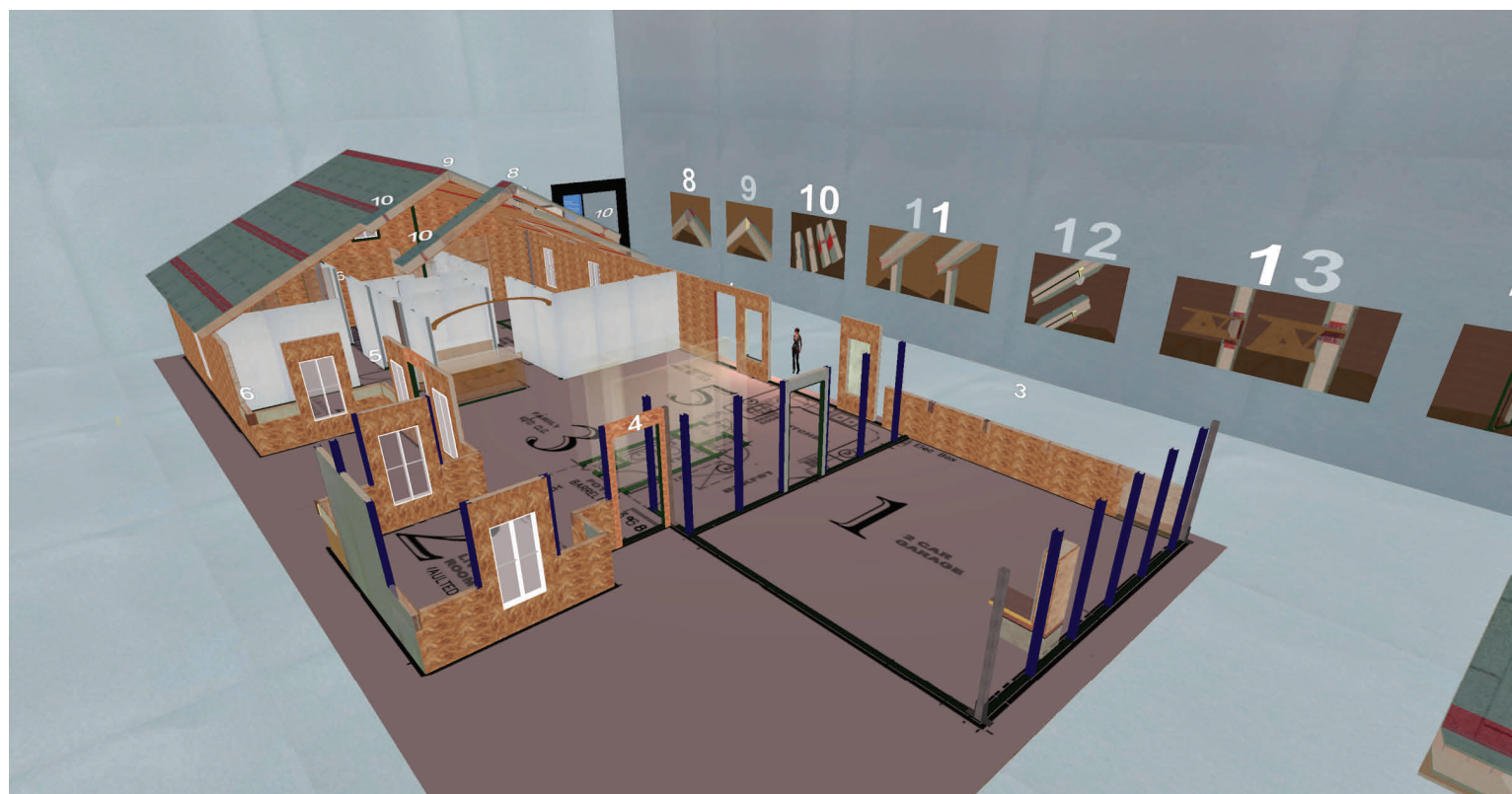






**In 2007, the country of Estonia opened a virtual embassy in Second Life. The site is managed by the Foreign Ministry of Estonia in order “to work with government issues within the virtual environment.” According to information on the island, visitors can visit with staff during normal Estonian business hours.⚙**





# Virtual Training Modules

In 2009, the [Federation of American Scientists \(FAS\)](#) developed a virtual training program to demonstrate the proper use of Structural Insulated Panels (SIPs) in building construction. A paper summarizing the program was prepared by Lindsey Marburger and delivered to the [Lawrence Berkeley National Lab](#) and the [Department of Energy](#) in October of last year.

As the paper points out, there is a lack of wide-scale training in the building industry related to the use of energy-efficient, high performance materials. And while there is more education available related to general building inspection, the student still receives little training actually out in the field prior to taking a job. Although this research effort focused on educating inspectors and builders about one specific building system—structural insu-

lated panels or SIPs—the end result can be used for any building component.

### Goals of the Project

By leveraging the virtual world of [Second Life](#) and [Medulla](#), a web-based tool developed by FAS, the team created the “Building Inspector SIP Training Module Pilot.” Project goals were to:

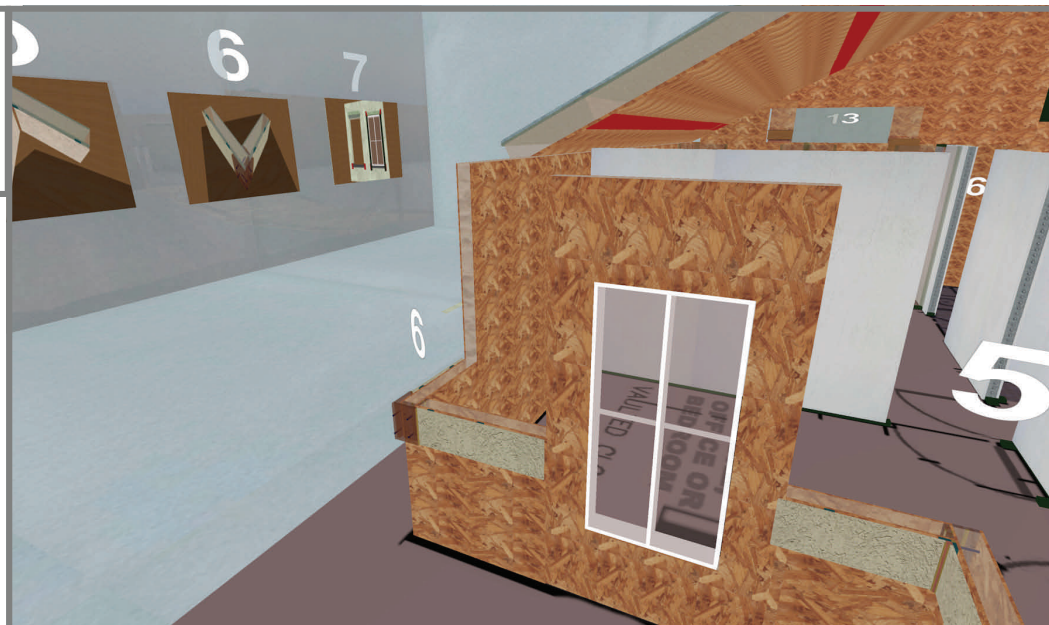
*“SIPs can be used for walls, flooring, and roofing and serve as an insulator, structural support, and weatherproof barrier; they are structurally strong, have high thermal resistance when properly installed, produce little waste as they are manufactured and cut in the manufacturing plant, and are installed quickly and with fewer labor hours than a traditional stick framed structure.”*

- “ease the adoption of advanced building technologies”
- “improve training related to energy efficient construction and advanced technology in the construction industry”
- “improve understanding of code compliance and constructability issues among building inspectors and code officials”
- “teach residential building inspectors how to properly inspect a



Specific building details are illustrated throughout the virtual house. Students can click on each detail to access additional information.

home built with SIPs by educating and then assessing the trainee on code compliance issues with SIPs, common installation errors, and energy efficiency concepts”



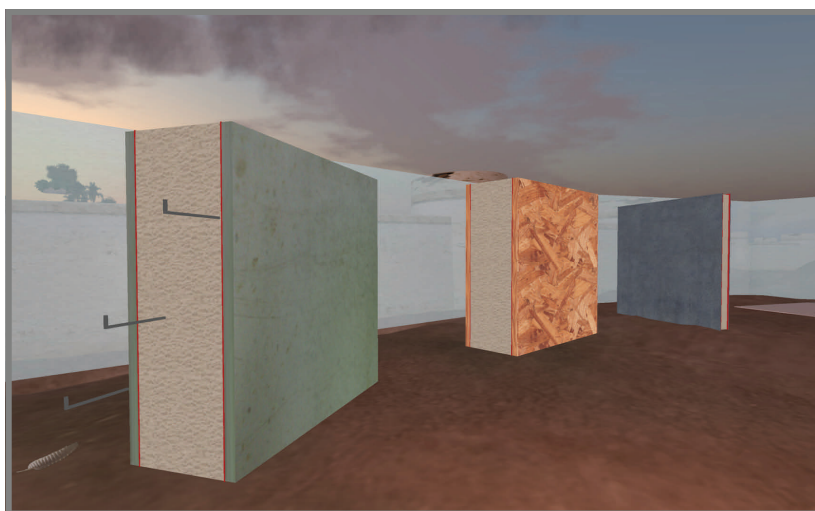
### Project Layout

The Medulla site supporting the program allows a prospective student to register and choose the training module. On the module site, the purpose and goals of the program are displayed along with an explanation of how the Medulla site integrates with the virtual site in Second Life. There is also information about the subject matter with numerous educational resources such as drawings, photos, and videos.

The virtual site in Second Life consists of three areas: an introduction and orientation area, a training house area, and an assessment house area. Students arriving in the introduction and orientation area can read more about the subject matter—in this case, SIPs—and can view virtual models.

In the training house area, students can view a full size house under construction. This home is a representation of an actual house constructed in Houston. Nineteen building components are highlighted throughout the house to show specific areas requiring inspections related to SIP construction. In each case, the inspector would need to determine if construction details meet the requirements for proper SIP installation. Students can click on the numbers above the details to access related information on the Medulla site.

Students are tested in the next area where the assessment house is located. This house is an exact replica of the training house except the nineteen details in this house have been modified to illustrate improper construction techniques. According to the paper, “each mistake was deliberately made to mimic a mistake commonly made by SIP installers in the field.” Students click on the details but instead of receiving information, they are presented with a multiple choice question related to that specific detail. Again from the paper, here is an example of the question format:



**As shown by these virtual models, SIP composition is a sandwich of rigid foam insulation covered by a facing such as OSB, fiber-cement board, or metal. The first SIP house was constructed in Madison, Wis., in 1935.**

## FEATURE STORY—VIRTUAL TRAINING MODULE

The screenshot shows a web browser displaying the Medulla website. The URL is [https://www.medullaweb.org/registry/public/building\\_inspector\\_sip\\_training\\_pilot](https://www.medullaweb.org/registry/public/building_inspector_sip_training_pilot). The page title is "Building Inspector SIP Training Pilot" with a 5-star rating and 8 ratings. It is a Medulla project by Lindsey Marburger. The page includes a search bar, a "Go" button, and a "Login" link. The main content area features a "Project Description" section with a thumbnail image of a training module. Below this is a "Subject Tags" section with tags: building inspection, SIPs, energy audit, construction, building energy performance. The "Public URI" is [https://www.medullaweb.org/registry/public/building\\_inspector\\_sip\\_training\\_pilot](https://www.medullaweb.org/registry/public/building_inspector_sip_training_pilot). The "Manager" is Lindsey Marburger. The "Virtual Worlds" section includes a link to "Introduction and Orientation Area". Below this is a section titled "Optional Reference Materials on SIPs" with a list of links and descriptions:

- [About SIPs and CSIPs](#) (Medulla-Dspace): This chapter, an excerpt from the FAS report titled "Adaptations of Cementitious Structural Insulated Panels for Multistory Construction", consists of a general discussion of the history of sandwich panels (SIPs), their engineering mechanics and the application of sandwich panels in construction. Added by: "Lindsey Marburger" 08/14/2009 10:42 AM
- [Questions and Answers about SIPs](#) (Medulla-Dspace): A guide to structural insulated panels (SIPs) for homeowners, builders, and contractors in a question and answer format. Includes information on SIP materials, properties, and installation and fabrication techniques. Added by: "Lindsey Marburger" 08/13/2009 15:56 PM
- [Science Engineering and SIPs brochure](#) (Medulla-Dspace): Added by: "Lindsey Marburger" 08/13/2009 15:57 PM
- [Green Building with SIPs](#) (Medulla-Dspace): An introduction to green building and the role that SIPs can play in sustainable construction. This presentation includes information about SIPs and energy efficiency, resource use, air quality, and life-cycle analysis. The article also discusses the LEED, NAHB Green Building Program, and Builders Challenge and how SIPs score under each program. Added by: "Lindsey Marburger" 08/13/2009 15:59 PM
- [Whole Wall Rating/Label for Structural Insulated Panels: Steady-State Thermal Analysis](#) (Medulla-Dspace): Report from Oak Ridge National Laboratory Buildings Technology Center on the r-value of SIPs. Analysis concludes that SIP wall systems are designed and engineered to be thermally efficient.

"Correctly identify the mistake in this detail. A) There are no mistakes. B) There is no flashing. C) The panels are not correctly screwed together. D) The cladding is not ventilated."

### Program Findings

Based on their work, the FAS team had a few key findings:

- Building in Second Life was "not always ideally precise and textures cannot be tested on an object before they are imported"
- Orientation process for users must be simplified. Some suggestions were to create a training video for showing users how to use the virtual

world software or create training avatars with an auto-login feature to be used by students.

- Create open source models that can be modified by others for their own training purposes
- Include additional capabilities for manipulation of virtual objects
- Add "multiple learning scenarios and simulations for each scene and each audience"
- Link "with a curriculum and toolset that is housed outside of the virtual world in an independent web platform"

FAS advised working with industry partners to develop more comprehensive modules with more

**Further Information:** "FAS Paper: [Building Inspector Virtual Training Pilot paper](#)

Photos of house constructed in Houston: <http://www.flickr.com/photos/fascientists/>

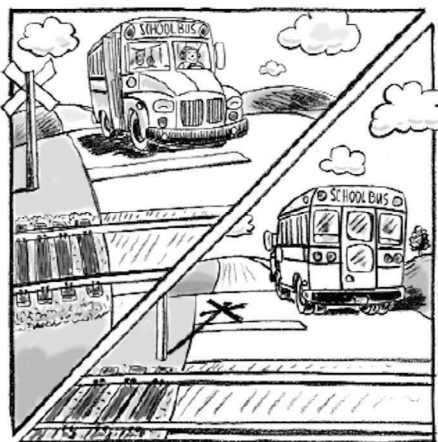
integration of virtual



worlds and web-based tools. The team also recommended launching a training program for about 100 students to better assess the "feasibility of large-scale virtual world training for inspectors"

Finally, the report concluded that "virtual tools are a promising solution to these training inadequacies due to many factors, including their interactive nature and capacity for remote collaboration and learning." ⚙️

## Look + Listen = Live



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## NIC Opens eGov Island in Second Life

The eGov island in [Second Life](#) has been developed as a virtual [NIC](#) environment. Visitors arrive in the center of the island and are encouraged to pick up a Tour HUD (heads-up-display). The Hall of States is a massive building showcasing innovations in government. Within is a display with views of U.S. State websites. Another display shows which states offer transparency in government services. There is also a cafe and video room within this building.

NIC has also re-created a digital representation of their headquarters in Kansas. Within visitors are greeted with a welcome desk and offers of free shirts and a hat. The headquarters also houses an auditorium and office space. The Innovate Building is located on

the south side of the sim. Within are displays exploring communication in the virtual world. There is an area offering information about importing 3D models into virtual worlds and an object morphing solution that demonstrates the ability to dynamically change objects within the virtual environment.

An adjacent island offers an orientation for those just registering and learning to use virtual worlds. ⚙

**Photo right top: Display offering screenshots and links to all state governments in the U.S.**

**Photo right bottom: The Innovate Building on the eGov Island in Second Life.**



## FEATURE STORY—GOVERNMENT SERVICES



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## **Know what's below. Call before you dig.**

Anyone can terraform anytime in a virtual world, but  
before you do in real life, remember to call 811 to re-  
quest the location of underground utility lines.

## **Looking for government-related groups online or in the virtual world?**

### **Online:**

GovLoop: <http://www.govloop.com>

MuniGov: <http://www.munigov.org>

### **Second Life:**

Real Life Government in Second Life

OpenGov

MuniGov 2.0