

Open Simulation Training

Taking it beyond professional systems



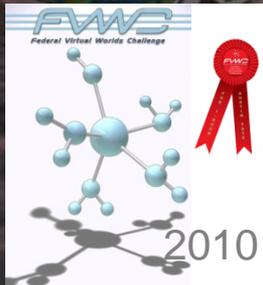
Austin Tate
AIAI, University of Edinburgh



Ai Austin
Virtual University of Edinburgh

Vue – Virtual University of Edinburgh OpenVCE – Virtual Collaboration Environment I-Room – a Virtual Space for Intelligent Interaction

Social Web + Agents + Plans + Virtual Worlds



<http://vue.ed.ac.uk>
<http://openvce.net>
<http://openvce.net/iroom>

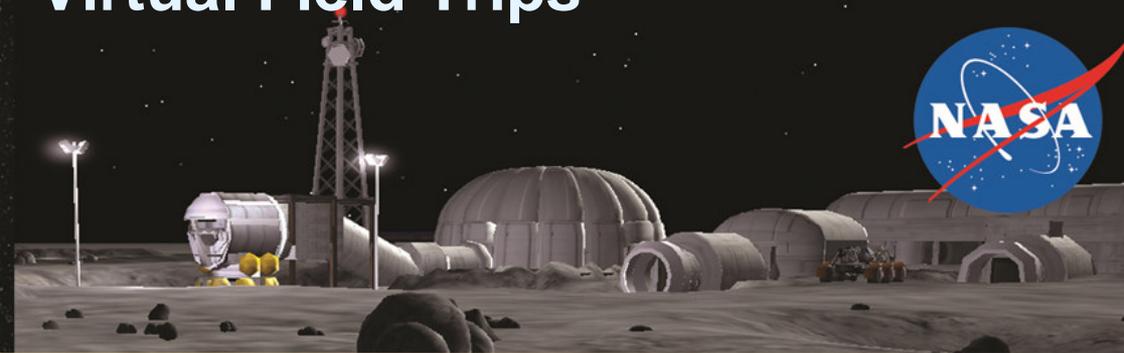


Kelly: ok, so we email Concierge and tell them to move us where Kat says :)

Stand Up

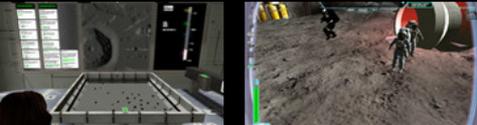
Collaboration

Virtual Field Trips



Virtual World for Inquiry and Planetary Geology Field Work

MoonWorld



<http://moonworld.cet.edu>



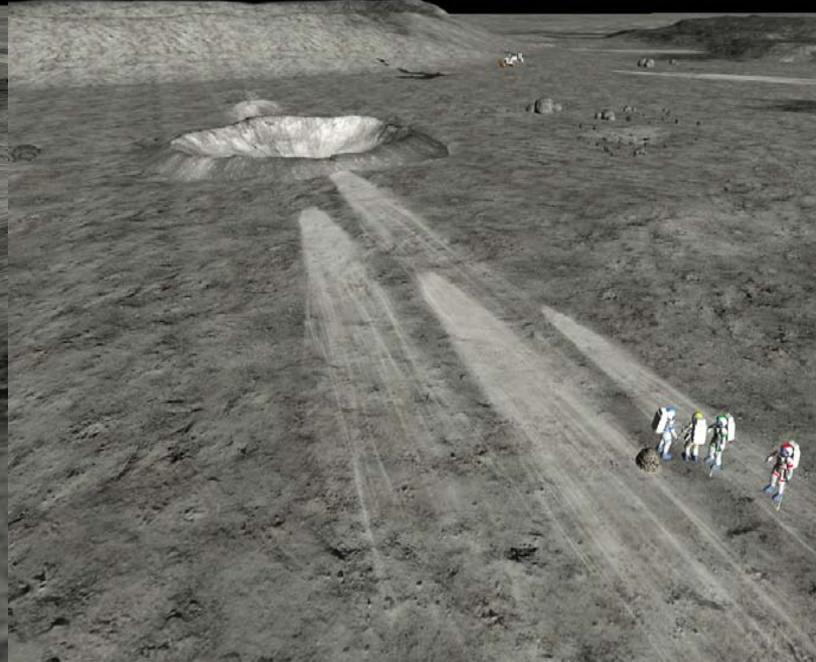
MoonWorld

VIRTUAL FIELDWORK IN SECOND LIFE

VIRTUAL WORLDS
 Second Life (SL) is a persistent virtual world where avatars explore a 3-D landscape. Learners guide their avatars along with 8 other avatars. MoonWorld is a 3D simulation that models the surface of the Moon as a tool for learning lunar science through virtual field work. MoonWorld features lunar impact craters and volcanic features with geologic characteristics and interpretations that can be discerned through careful observation and measurement.

AVATARS
 Avatars will teleport into a lunar base where they will be issued a passport before going through the airport to the lunar surface. The passport gives the property of the lunar globe. In future versions the passport will include different single or treatment packages such as magnetometers, gravimeters, and a mass-up display to visualize these measurements in real time.

BLISS Bioregenerative Life Support System
 Three simulators will provide graphical interfaces to mathematical models of plant growth, human requirements, and resource recycling systems. A fourth simulator integrates all three components to depict how long a selected plant-based model can support a human crew on the Moon.





Vue

Virtual University of Edinburgh

Vue – Virtual University of Edinburgh

A multi-disciplinary virtual organisation
exploring the potential of virtual worlds for
e-learning, research, collaboration & outreach
related to the University of Edinburgh

<http://vue.ed.ac.uk>

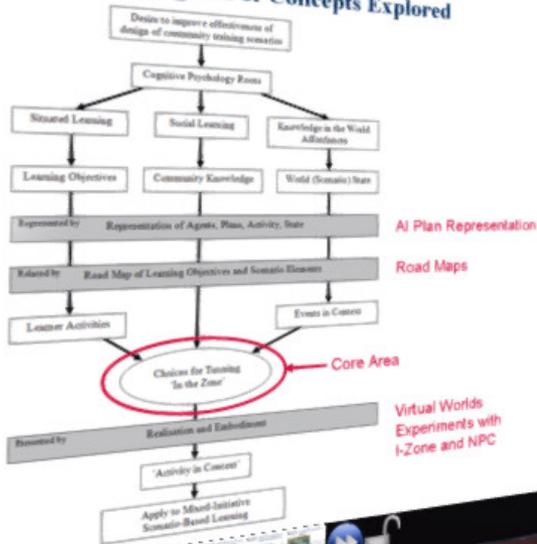


MSc in E-learning Dissertation Festival 2012



THE UNIVERSITY OF BIRMINGHAM
informatics

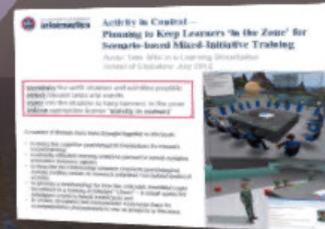
Flow Diagram of Concepts Explored



Austin Tate



AI Austin



Virtual Worlds Experiments with I-Zone and NPC

Dissertation Defence

Vue Virtual Graduation

Winner Of The

Best



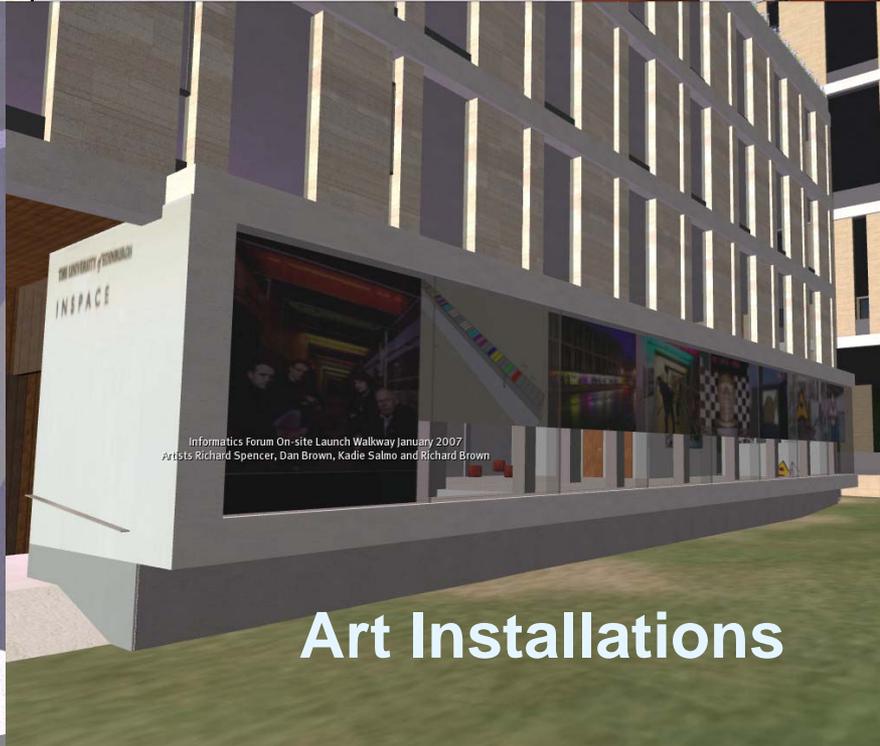
educational use of a
virtual world

Edublog Awards 2009





Informatics



Art Installations



OpenVCE
open virtual collaboration environment



I-Room: A Virtual Space for Intelligent Interaction
An intelligent environment which acts as a knowledge-driven super-collaborative teleconferencing and meetings.



Trinity Rooney
Owner
Theo Outlander

WorkingRelationships
Deb Quintessa

OpenVCE
Ai Austin

Tonito Alderson
Sato Michinaga

RL <-> SL Scripter
AI Supercharge
Owner
Viking Zinner

Vue Associate
SP Pizzicato

Frery Broome
Diana Grizot

Honda SL Design Team
JohnFrej Herzfeld

Light Sequent

Innovator
Serious Starsider

Open University UK
Gardy Flux

Academy of HRD
Rachelle Munro

OpenVCE Event Reception

Member
Pamela Varthader

Member
Joelle Yalin

isi help_desk
shamblesguru V

DougCaldwell Unplugged

Membe
ED Czavicevic

PeterG Ember

Anders Wildcat

Clear Clickers

Chat Relay

I-Room Helper (off)

Anders Cronstet

AD OFF



Sandbox

Venue
Amphitheatre

I-Zone B

Expo Pavilion

Project
and
Team
Suites

Project
Space

Orientation Area

Central Plaza

Hill Top
Meeting Spaces

I-Zone A



Vue NW

Vue North

Edinburgh North

Edinburgh Uplands

Vue

Edinburgh University

Edinburgh East

Vue South

Informatics

VCE



Vue NW



Vue North



Vue



Edinburgh University



Edinburgh East



Vue South



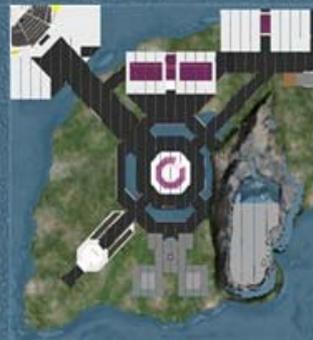
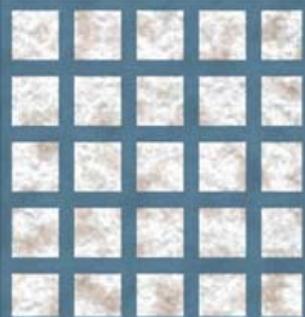
VCE

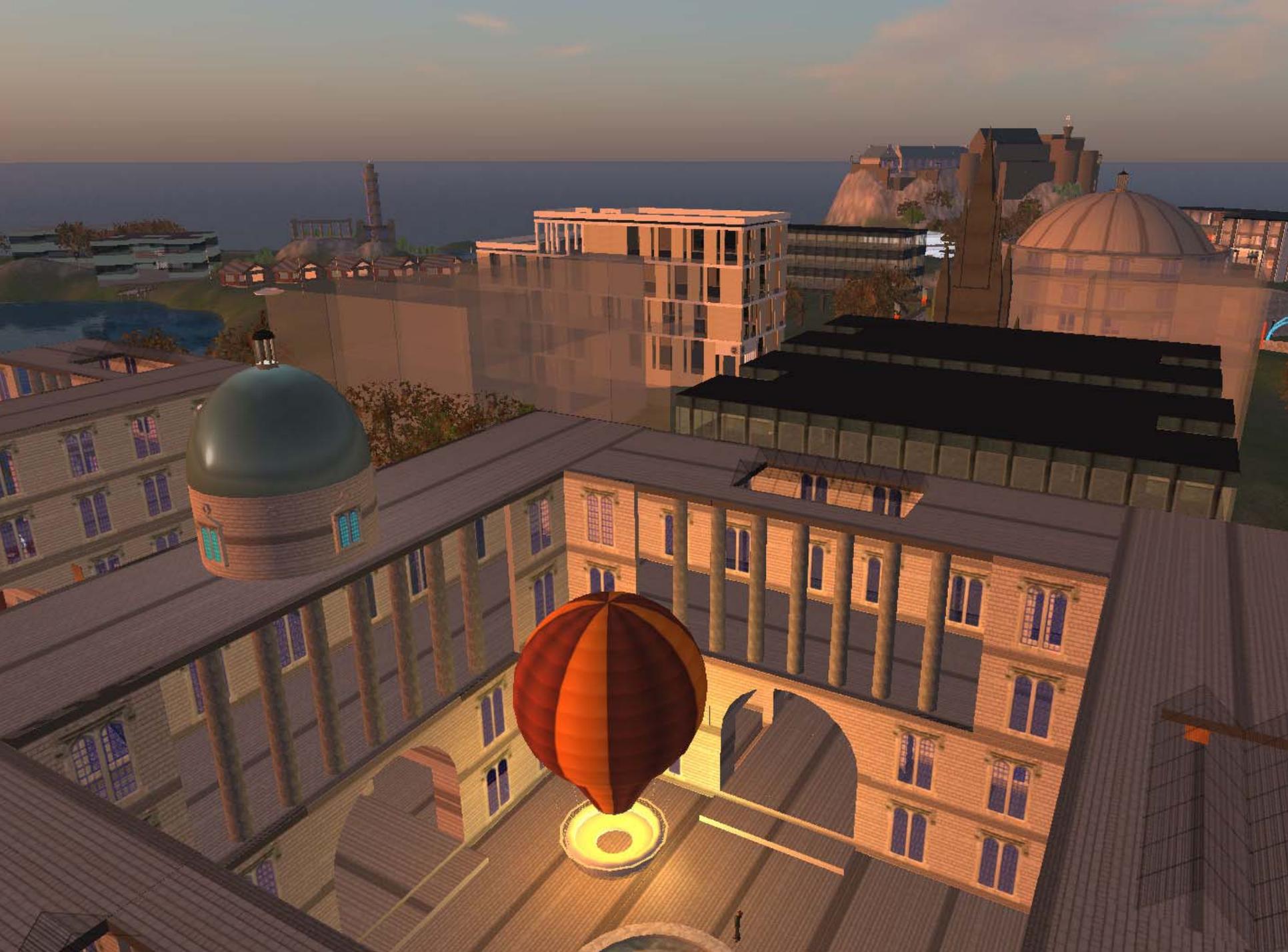


OpenVue – Open Source Virtual University of Edinburgh

Exploring the potential of open source virtual worlds
for e-learning, research, collaboration & outreach
related to the University of Edinburgh

<http://vue.ed.ac.uk/openvue>







Simulation for Training & Exercises

Using computer-based simulation for training and exercises in civil and military scenarios



Lockheed Martin Simulation, Training and Support defense contract for the Defense Advanced Research Projects Agency given on 1/25/2011

Authored By **Staff Writer** | Last Updated: 1/25/2011

Principle Contractor: Lockheed Martin Simulation, Training and Support

Date Reported: 1/25/2011

Department: Defense Advanced Research Projects Agency

Contract Details: Lockheed Martin Simulation, Training & Support, Orlando, Fla., is being awarded a \$7,360,467 modification to a cost plus fixed-fee contract (HR0011-10-C-0042). This award is for the National Cyber Range (NCR) program. The contractor will build on the preliminary design created in Phase I and tasks that have been accomplished in Phase II to date. At the completion of the revised Phase II program, the contractor will demonstrate the capabilities of the flexible automated Cyber Test Range NCR. The Phase I and Revised Phase II deliverables including the Concept of Operations and the Detailed Engineering Plan (DEP) are the basis of the revised Phase II effort. Work will be performed in Orlando, Fla. (69.810 percent); Cherry Hill, N.J. (16.262 percent); Princeton, N.J. (4.073 percent); Columbia, Md. (0.120 percent); Albuquerque, N.M. (1.033 percent); San Antonio, Texas (0.002 percent); Washington, D.C., (8.700 percent). The work is expected to be completed July 7, 2011. The Defense Advanced Research Projects Agency is the contracting activity.

Total Contract Value: \$7,360,467

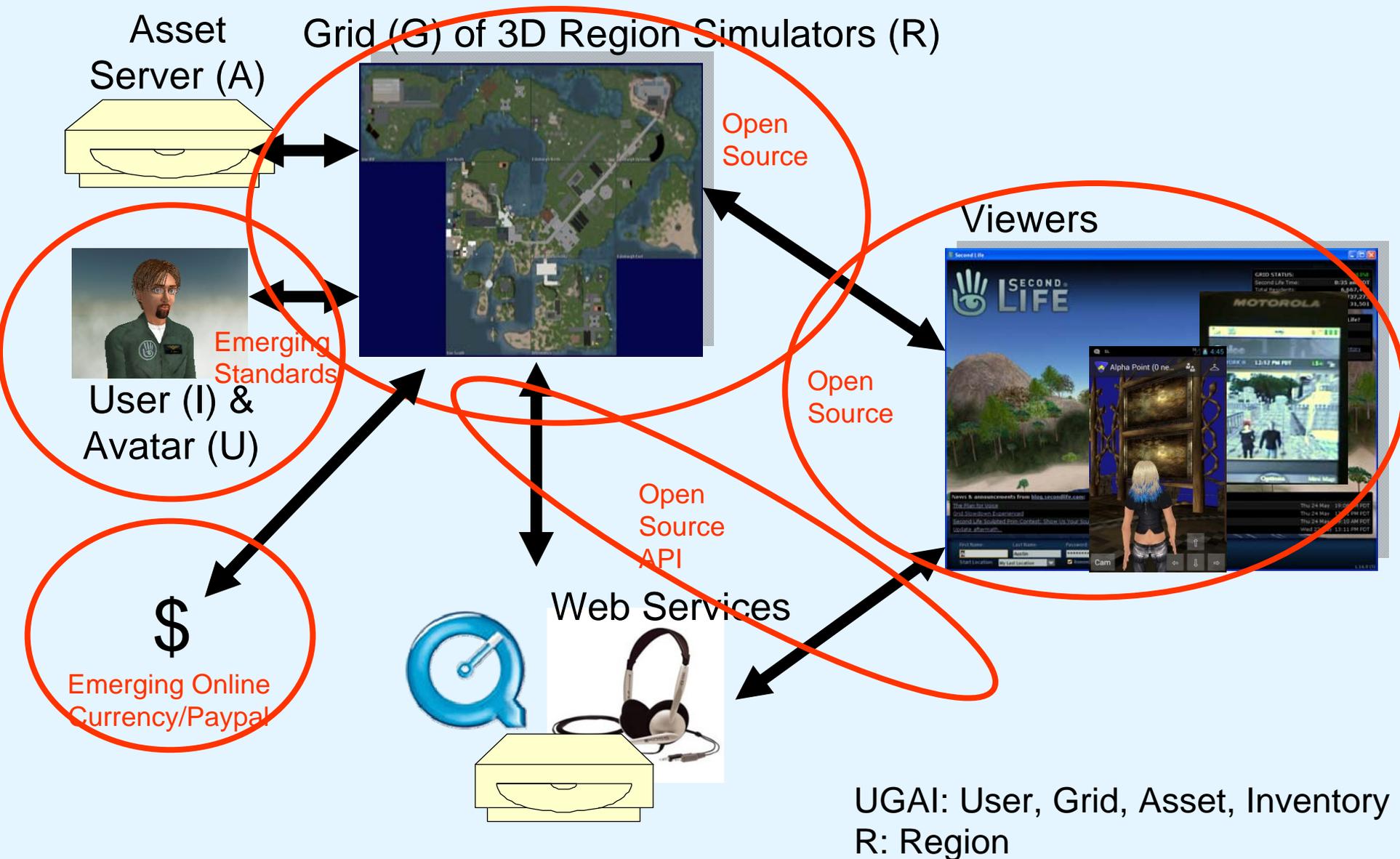


Other Virtual Worlds SAIC Forterra OLIVE





Virtual Worlds - Systems Architecture



Virtual Worlds – Multiple Levels

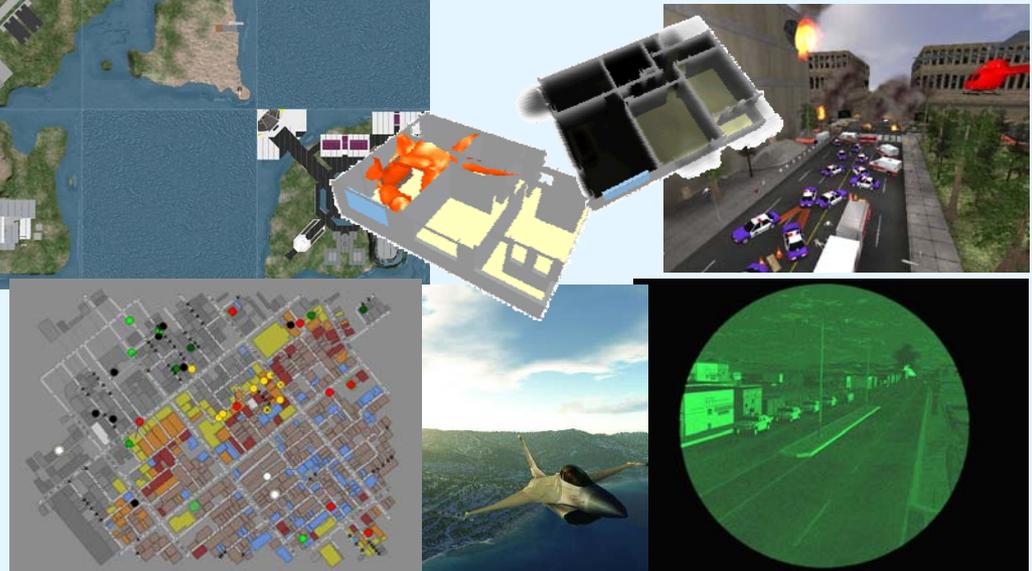


Publicly Accessible Grids
(e.g. Second Life)

Privately Managed Grids
(e.g. Opensim)



Specialised Simulations
(e.g. CRISP, Vega Prime)



Components

Virtual World Viewers (e.g. Firestorm)

Virtual Worlds Service (OpenSim)

Voice Service (I shall say no more)

3D Terrain (DTED)

3D Models (via Collada)

NPCs

Scale (Intel DSG)

Easy Deploy (USB Stick to Cloud)

Role Play Scenario



SECOND LIFE GRID STATUS: ONLINE

Current Time:	10:14 am PDT
Logged In Last 60 Days:	1,413,546
Online Now:	76,942



First Name:
 Last Name:
 Password:

Start Location:
 Remember password



OSgrid

The open source metaverse

Users in world : 45
Hypergrid Visitors : 22
Total Regions : 8597
Active users (last 30 days) : 3452
Total Users : 87899
Grid is ONLINE

- [Wright Plaza](#)

- [Bade Plaza](#)

- [Lbsa Plaza](#)

- [SeaPrior Plaza](#)

- [Teravus Plaza](#)

- [Sandbox Plaza](#)

- [Sandbox Plaza II](#)

- [Recreation Plaza](#)

- [Zaius Plaza](#)




OSgrid.org
osgrid

osgrid New Weekly Briefing is out, We have Partnering :) Check it out.
forums.osgrid.org/viewtopic.php?...
9 hours ago · reply · retweet · favorite

osgrid OSgrid PrimWords Today, March 24, 2:00 PM Pacific Time, OSgrid Recreation Plaza, come play or cheer your friends on. Key Gruin Coordinating
yesterday · reply · retweet · favorite

osgrid Sci Fi RP, Sunday 3:00 pm Pacific Time, Lani Region, OSgrid, RolePlayers, Observers, Beginners Welcome.
pic.twitter.com/QIX2HGC1gp
yesterday · reply · retweet · favorite

StormingAmy @osgrid Sci Fi RP Sunday, 3:00 pm Grid Time (Pacific Time), RolePlayers, Beginners, Observers Welcome. Location: Lani
 [Join the conversation](#)

Bade Plaza

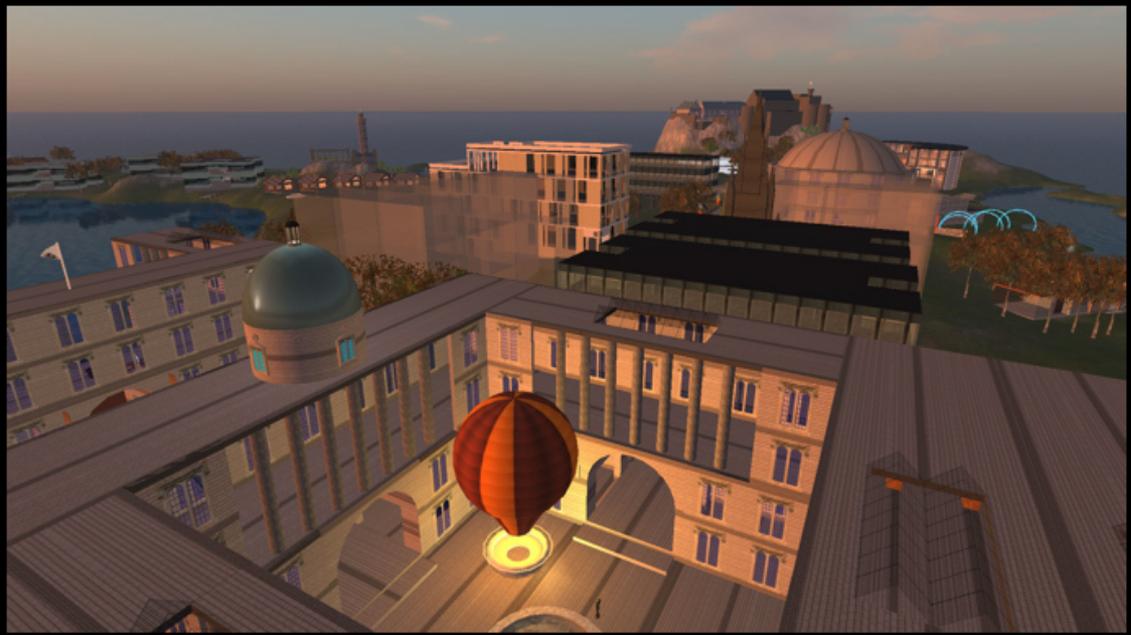
Username: Password:

 Default Settings: Start at:
 Remember password

Log onto Grid:
Sign up

Forgot password?
 Need help logging in?

Virtual University of Edinburgh based on OpenSimulator Openvue (OpenSim 0.7.6 Dev)



Users in World: 3 Regions: 17 Local Avatars: 45 Active Users & Visitors (Last 30 Days): 24

[Openvue](#) | [Vue-5000](#) | [Vue-9000](#) | [OpenVCE](#) | [Sandbox](#) | [Vivox Acceptable Use](#)

Username: Password: Default Settings: Start at: Log onto Grid:

Remember password

Sign up
 Forgot password?
 Need help logging in?
 Grid Manager help



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Users in World: 25 Active Regions: 182 Total Users: 445 Active Users (Last 30 Days): 65

Username: Password: Default Settings: Start at: Log onto Grid: [Sign up](#)
 Remember password



What is MOSES?

The Military Open Simulator Enterprise Strategy is an exploratory effort designed to evaluate the ability of the Open Simulator to provide independent and secured access to a virtual world.

Year One Goals:

1. Provide a completely independent virtual world capability. Runs in an enclaved network, capable of multiple levels of secured processing.
2. Provide a stable in-kind Second Life®-like environment.
3. Provide guidance to other organizations wishing to replicate the MOSES results.
4. Link with other organization in a hyper-grid manner to demonstrate external growth and scalability.

Next Steps:

1. Secured/Encrypted Communications
2. User Authentication with certificates and CAC
3. Larger Scale User Support
4. Integration/Conformance with the DoD Virtual World Framework

Why was MOSES created?

- Replacement to the Second Life® Enterprise Project
- Effort to preserve significant investment in the SLE platform.
- Continue research started in the SLE platform.

What value does MOSES bring to military training applications?

MOSES breaks the traditional paradigm of modeling and simulation.

- Art Pipeline: Subject matter experts may create the training material
- Computationally Steerable: The scripting language can enact changes to objects without restarting simulation.
- Out of the Box External Communications Mechanisms: Everything in the environment is an interactive object, capable of being driven by external behavior models.
- Every Object can connect to an external data source.
- Flexible Terrain: Real world terrain sources can be used. Terrain is deformable while simulation is running; May be restored via scripting
- Persistent Virtual Environment: Capable of High Availability and Uptimes
- Multiple Communications Options: Point to point chat, point to many chat Point to point VOIP, point to many VOIP - can replicate military radio behavior

Appearance

Body Parts

- Shape
- Skin
- Hair
- Eyes
- Clothes
- Shirt
- Pants
- Shoes
- Socks
- Jacket
- Gloves
- Undershirt
- Underpants
- Skirt

Body

Located in /My Inventory/Clothing/Male/Ai Male Base

Body Thin Body Thick

Body Thickness 20

Female Male

Focus Move Edit Create Land
Click and drag to change view

Zoom Orbit (Ctrl) Pan (Ctrl-Shift)

Edinburgh University
Ai Austin

Save As Revert

World Map

Objects Terrain

NW N NE

You Home Go Home

Classifieds Popular

Person Land For Sale

Infohub Events

Telehub Events (M)

Land For Sale Auction

My Friends

My Landmarks

Vue Search

Search Results:

Vue

Location:

Vue (128, 128, 0)

W E

SW

Inventory

File Create Sort Filters

Type here to search

All Items Recent Items

- Build - Vue
 - AI/2
 - Education
 - Inf2
 - Shared Areas
 - The Venue
 - Light Ring
 - Paved Area 10x10
 - Seat 5m - Sculpted with Pads
 - Seat 5m 60deg
 - Seat 10m 60deg
 - Seat Pad
 - UoE Black
 - uoE-2colour-256x256-square
 - uoE-2colour-512x512-square
 - uoE-2colour-1024x1024-4x3
 - Vue Banner - Horizontal
 - Vue Banner - Vertical
 - Vue Freebies Box
 - Vue Texture Box
 - Vue UoE Coffee Mug
 - vue-base-128x512
 - vue-base-1024x256
 - vue-uoE-vue-1024x256
- Calling Cards
- Clothing
- Gestures
- Landmarks

General Object Features Texture Content

Edit object parameters:

Locked Physical Temporary Phantom

Building Block Type: Box

Path Cut Begin and End
B: 0.000 E: 1.000

Hollow: 0.0

Hollow Shape: Default

Twist Begin and End
B: 0 E: 0

Taper
X: 0.00 Y: 0.00

Top Shear
X: 0.00 Y: 0.00

Position (meters)
X: 146.242
Y: 222.592
Z: 23.815

Size (meters)
X: 0.500
Y: 0.500
Z: 0.500

Rotation (degrees)
X: 0.00
Y: 0.00
Z: 0.00

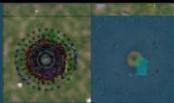
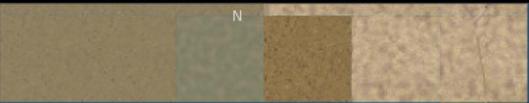
Material: Wood

Chat Speak Snapshot Build About land

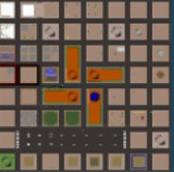


NW

NE



N



W



SW

SE



S



Fork me on GitHub



3D Repository



[Create an Account](#) | [Sign In](#)

[Advanced Search](#)
[Federated Search](#)

Sort By: Results Per Page: 

Showing results 1-12 of 803



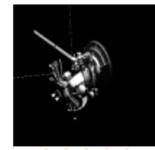
[BAE Caiman](#)

VastPark is proud to offer this model for free via...
1045 Views



[Office Chair 02](#)

No description available
158 Views



[Cassini Assembly](#)

Includes orbiter from CAD models. Accurate (to a f...
136 Views



[SU-27](#)

Soviet SU-27 Flanker
1343 Views



[Oshkosh M-ATV](#)

Oshkosh M-ATV is an Mine Resistant Ambush Protec...
2824 Views



[HMMWV](#)

HMMWV armored in desert paint scheme.
1731 Views

A 3-D Model Supercar by [Mick Imrie](#) and [Austin Tate](#).



Model Availability

The models and images are provided for your enjoyment, but should not be used for any commercial purpose. The models are provided as is and with no warranty of any kind (of course). Please let the individual creators know of any problems with using them though.

Supercar	Format	File	Description
 Mick Imrie & Austin Tate	Cinema4D v5	sc_c4d.zip 3,110KB 7-Oct-98	Supercar. Origination model, and full supporting textures, bumpmaps, etc. Includes pilot figure, Beaker's desk, blast shield, chair, floor, a simple lighting scheme and a sample render. The default configuration is wings in and open canopy. The Lab items are showing but the pilot figure is hidden. Includes graphic image . Blueprints are also available in colour and black & white . Additional model information is here .
	trueSpace 1.04	sc_ts.zip 3,869KB 10-Jan-99	Supercar with extended and retracted wings, open and closed canopy and all textures. Includes read me file and explanatory graphic image .
	AutoCAD DXF	sc_dxf.zip 3,079KB 7-Oct-00; sc_dxf-autocadv14.zip 4,662KB 21-Oct-00	Supercar with extended wings and closed canopy. No textures. Includes read me file and graphic image . Alternative as saved from AutoCAD version 14 is available.
	3D Studio MAX	sc_max.zip 4,451 22-Apr-99	Port of model to 3D Studio MAX by Mateen Greenway . Includes all textures, read me file and graphic image .
	LightWave 3D	sc_lws.zip 1,936KB 9-Feb-99	Port of model to LightWave 3D by Don Showalter . Includes all textures, read me file and graphic image .
	Studio 3D Release 4	sc_3ds.zip 4,298KB 16-Sep-99	Port of model to Studio 3D Release 4 by James Murphy . Includes all textures, read me file and sample images (image 1 , image 2).
	Poser 4	sc_p4.zip 2,953KB 9-Oct-99	Port of model to Poser 4 by Darrin Horn . Includes all textures, read me file and sample images (image 1 , image 2).
	SketchUp	sc_sketchup.zip 15MB 22-May-2011	Port of model to Sketchup by Austin Tate via 3DS model. Includes all textures, read me file and sample image .
	Blender	sc_brl_blender.zip 27MB 19-May-2011	Initial port of model to Blender 2.5x by Austin Tate via 3DS model.
	Unity3D	Supercar_unitypackage 29MB 24-May-2011	Supercar, Blastshield and Figure to Scale. Unity3D Package via Sketchup Model and 3DS export by Austin Tate .

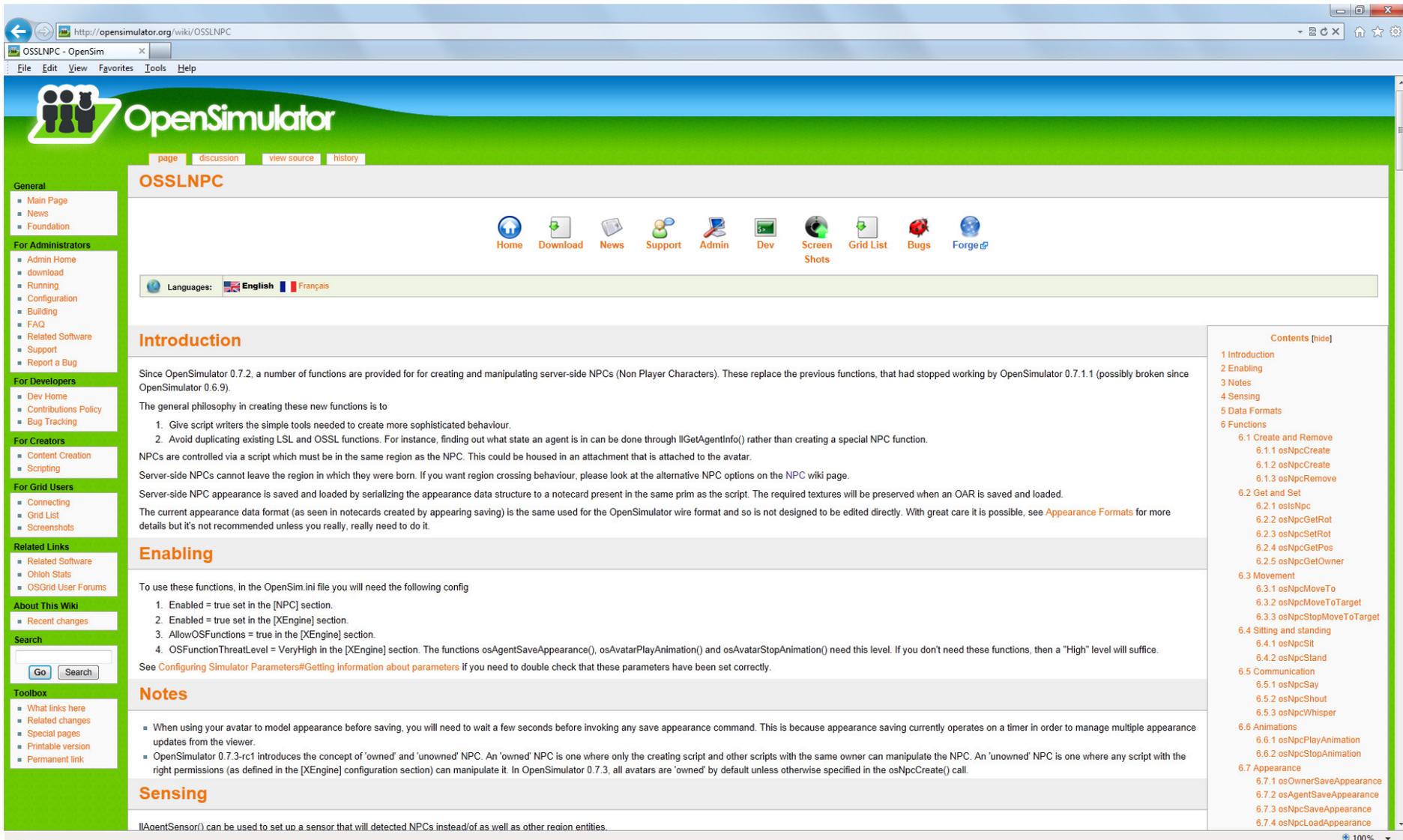


Non-Player Characters (NPCs)



- AI's Cybertwin: Yes really.
- AI's Cybertwin: No kidding? I'm actually surprised!
- AI's Cybertwin: So you should be!
- AI's Cybertwin: Bossy!
- AI's Cybertwin: Do you like having a boss or being a boss?

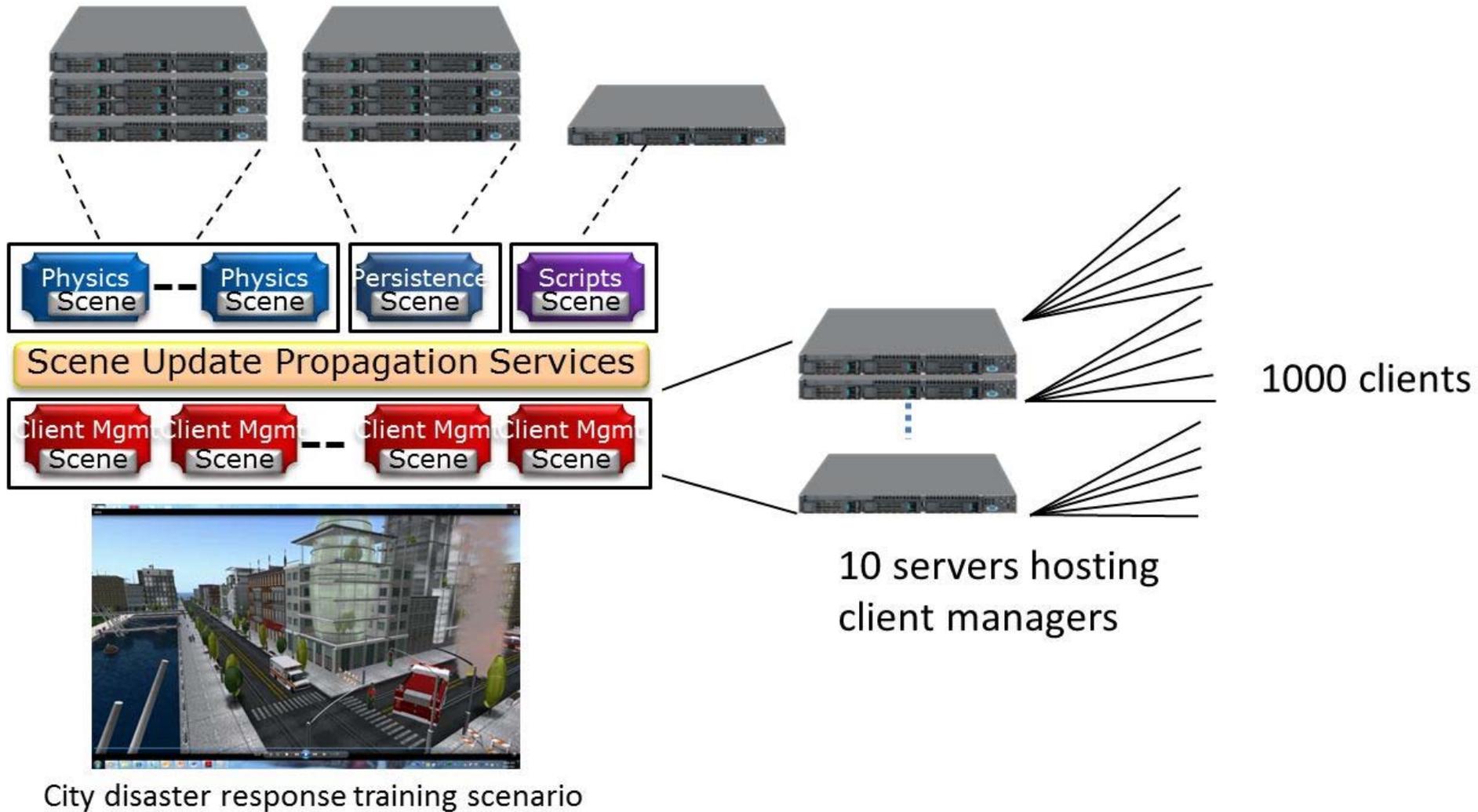
Non-Player Characters (NPCs) in OpenSim



The screenshot shows a web browser window displaying the OpenSimulator wiki page for OSSLNPC. The browser's address bar shows the URL <http://opensimulator.org/wiki/OSSLNPC>. The page features a green header with the OpenSimulator logo and navigation tabs for 'page', 'discussion', 'view source', and 'history'. A sidebar on the left contains various navigation links categorized under 'General', 'For Administrators', 'For Developers', 'For Creators', 'For Grid Users', 'Related Links', 'About This Wiki', 'Search', and 'Toolbox'. The main content area is titled 'OSSLNPC' and includes a navigation bar with icons for Home, Download, News, Support, Admin, Dev, Screen Shots, Grid List, Bugs, and Forge. Below this is a language selection bar for English and Français. The 'Introduction' section explains that since OpenSimulator 0.7.2, new functions for creating and manipulating server-side NPCs are provided, replacing older functions that stopped working in version 0.7.1.1. It outlines the general philosophy of creating these functions and lists two key principles: providing simple tools for complex behavior and avoiding duplication of existing LSL and OSSL functions. The text also notes that NPCs are controlled via scripts in the same region and that server-side NPCs cannot leave their birth region. It mentions that NPC appearance is saved and loaded by serializing appearance data to a notecard. The 'Enabling' section provides instructions on how to configure the OpenSim.ini file to use these functions, listing four specific settings: 'Enabled = true' in the [NPC] section, 'Enabled = true' in the [XEngine] section, 'AllowOSFunctions = true' in the [XEngine] section, and 'OSFunctionThreatLevel = VeryHigh' in the [XEngine] section. A note indicates that if these functions are not needed, a 'High' level will suffice. The 'Notes' section contains two important reminders: to wait a few seconds before invoking save appearance commands, and that OpenSimulator 0.7.3-rc1 introduces 'owned' and 'unowned' NPC types. The 'Sensing' section begins with the `lIAgentSensor()` function. A table of contents on the right side of the page lists the following sections: 1 Introduction, 2 Enabling, 3 Notes, 4 Sensing, 5 Data Formats, 6 Functions, 6.1 Create and Remove (with sub-items 6.1.1 osNpcCreate, 6.1.2 osNpcCreate, 6.1.3 osNpcRemove), 6.2 Get and Set (with sub-items 6.2.1 osIsNpc, 6.2.2 osNpcGetRot, 6.2.3 osNpcSetRot, 6.2.4 osNpcGetPos, 6.2.5 osNpcGetOwner), 6.3 Movement (with sub-items 6.3.1 osNpcMoveTo, 6.3.2 osNpcMoveToTarget, 6.3.3 osNpcStopMoveToTarget), 6.4 Sitting and standing (with sub-items 6.4.1 osNpcSit, 6.4.2 osNpcStand), 6.5 Communication (with sub-items 6.5.1 osNpcSay, 6.5.2 osNpcShout, 6.5.3 osNpcWhisper), 6.6 Animations (with sub-items 6.6.1 osNpcPlayAnimation, 6.6.2 osNpcStopAnimation), and 6.7 Appearance (with sub-items 6.7.1 osOwnerSaveAppearance, 6.7.2 osAgentSaveAppearance, 6.7.3 osNpcSaveAppearance, 6.7.4 osNpcLoadAppearance).

NPC Creation, NPC Clones, NPC Attachments, NPC Behaviours, NPC Functions, Pathfinding, etc.

Scaling – Intel Distributed Scene Graph





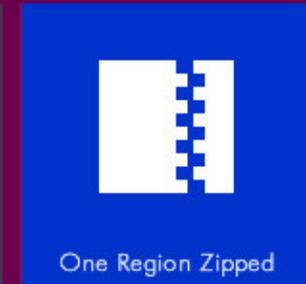
single-user preconfigured
OpenSimulator 0.7.5
running with its own isolated instances of
MySQL, Apache, and PHP for Windows



One Region



Four Region



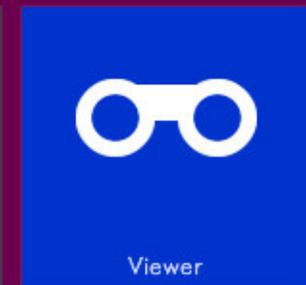
One Region Zipped



Nine Region



Sixteen Region



Viewer



faq



blog



tweet

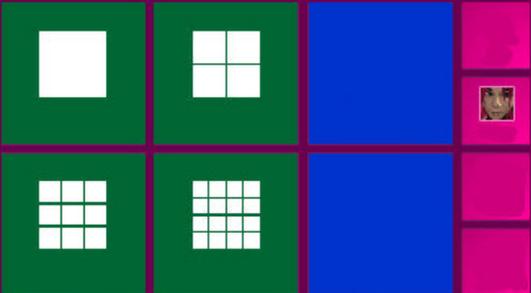


prior

virtual world
simonastick



single-user preconfigured
OpenSimulator 0.7.5
running with its own embedded instances of
MySQL, Apache, and PHP for Windows



Simonastick.com is provided
by FLive in Science Land, LLC
and owned by Izee Has

Users in World: 0 Regions: 1 Total Users: 7 Active Users (Last 30 Days): 1



Username:
Ai Austin

Delete this entry

Password:
.....

Remember password

Log In

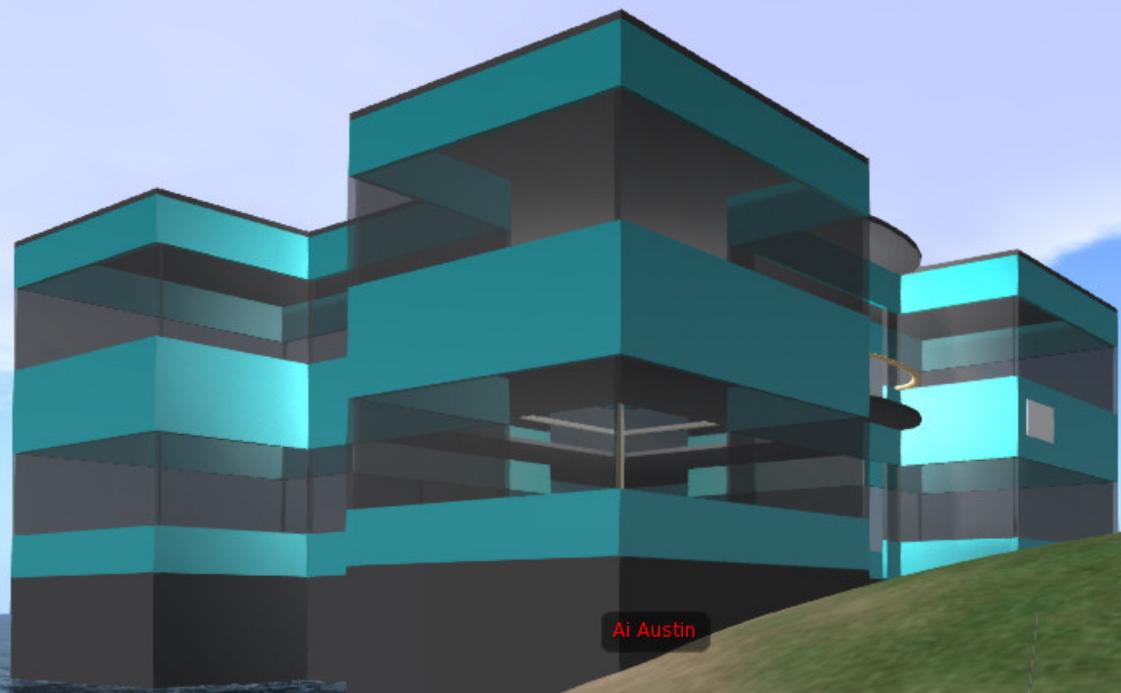
Default Settings:
Firestorm

Start at:
Home

Log onto Grid:
simonastick

Grid Manager help

Sign up
Forgot password?
Need help logging in?



Ai Austin



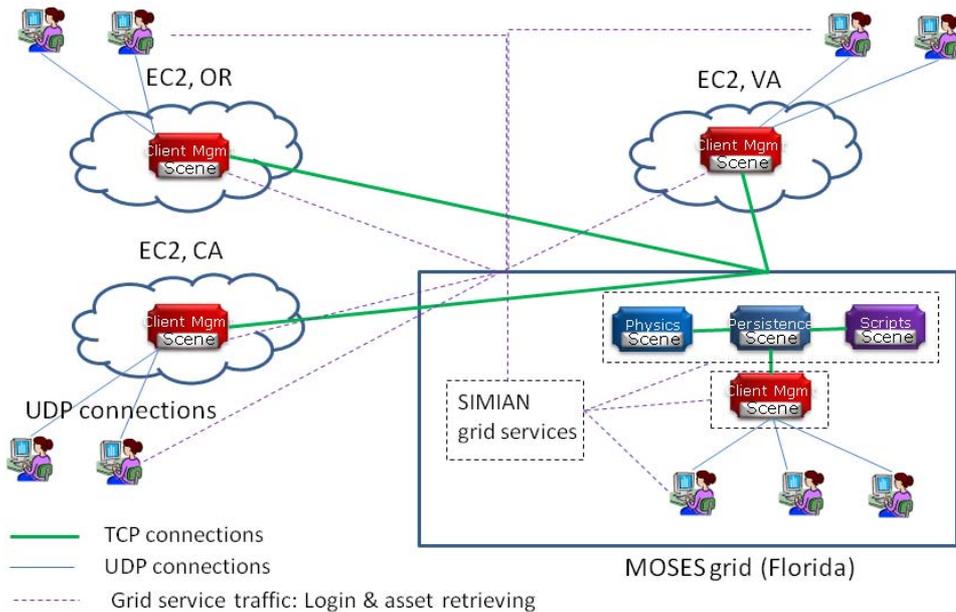
Stand

MOSES

MILITARY OPEN SIMULATOR ENTERPRISE STRATEGY



Targeted Configuration



MOSES OpenSim Grid with Intel DSG Immersive Training

MOSES - IntelSTTC User Scalability Experiment 1 - STTC

https://107.7.21.233/redmine/projects/moses/wiki/IntelSTTC_User_Sc..

IntelSTTC User Scalability Experiment 1 - Fri

REGISTER HERE: <http://107.7.21.233/form.php>
MOSES DSG Client: MosesDSG_4-4-0-33429_Setup.exe

IntelSTTC User Scalability Experiment 1 - Friday March 22, 2013 - 1800EST
Goals and Objectives

- Background and Hypothesis
- Scalability Experimentation Goals
- March 22 2013 Event Experimental Objectives

Experimental Design

- Independent Variables
- Dependent Variables
- Experiment Details

Scenario

- Background
- Roles
- Observer Roles (10 Players)
- Blue Force Roles (40 Players)
- Neutral Roles (50 Players)

References

Goals and Objectives

Background and Hypothesis

Properly representing the operational environment for Army training is believed that virtual world technology may be used to achieve the experiment is the first step to prove and demonstrate more than 100 mission.

Scalability Experimentation Goals

ARL/HRED/STTC has identified a need for scalability and flexibility for 2015¹. Scalability can be examined in three different categories: **size**, **complexity of the environment**. The next generation of training applications operational environments. This experiment will focus on the number of acceptable performance.

The majority of current simulation based virtual environment training. The reason for this is the inability for current systems to handle larger means there is limited system resources left over for opposing forces more operationally accurate and persistent worlds for the soldiers to t



<http://opensimulator.org>

This presentation is available on-line at:
<http://www.aiai.ed.ac.uk/~ai/>

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Open Simulation Training

Taking it beyond professional systems

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