



3D Virtual World Platform



Nicole Yankelovich

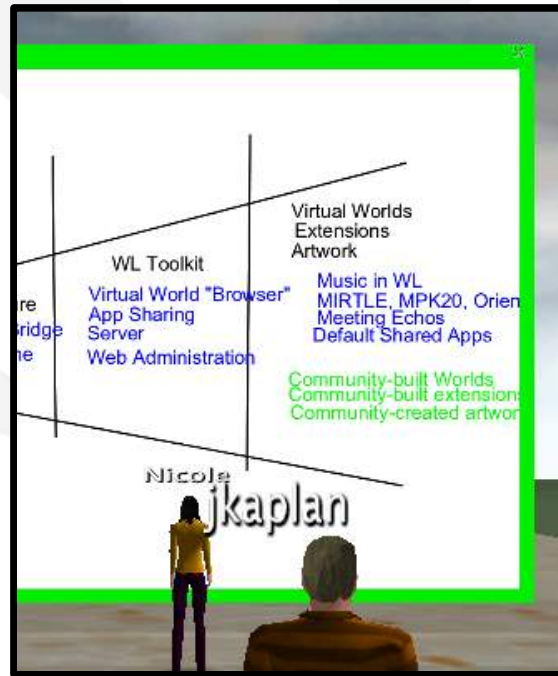
Executive Director

Open Wonderland Foundation

nicole@openwonderland.org

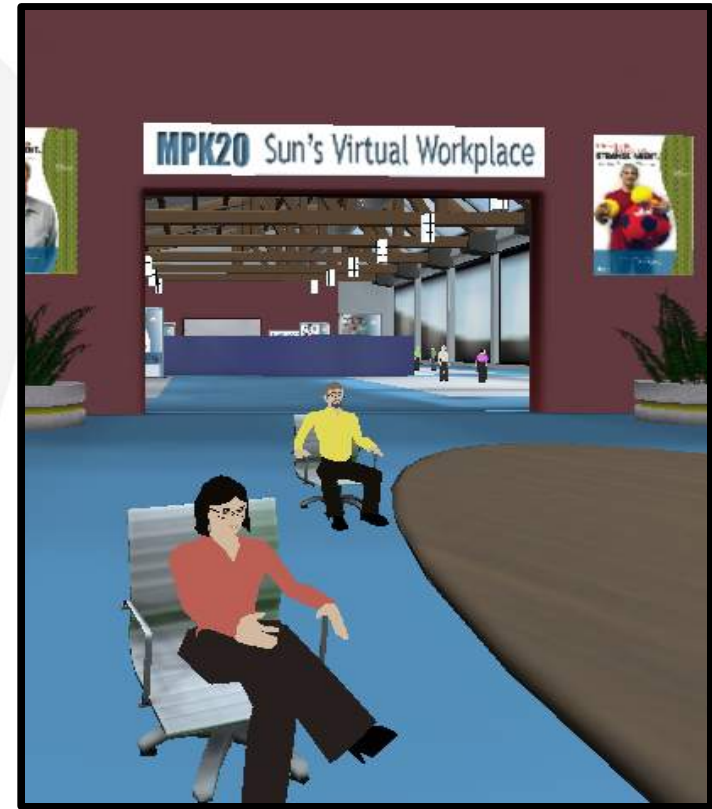
What is Open Wonderland?

100% Java, free, open-source toolkit for creating 3D immersive virtual worlds



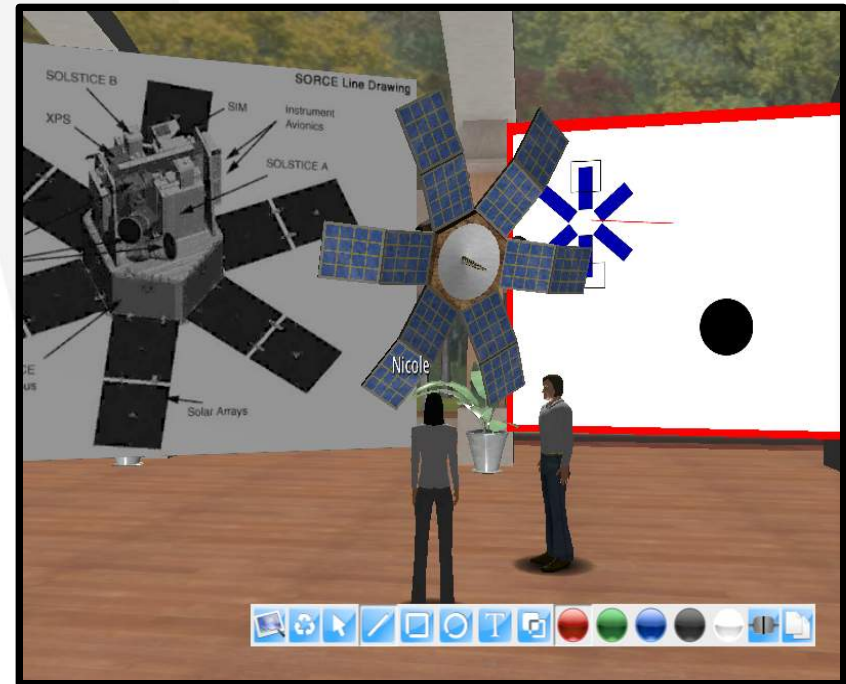
Brief History

- Started in 2007 in Sun Labs
- Challenge from VP of Eco Responsibility
 - > “Let's build our next building in the virtual world”
 - > MPK20 – Sun's Virtual Workplace
- Darkstar needed a demo
- Lots of interest in behind-the-firewall, app sharing
- Major reimplementation, Dec 2008 (v04 → v05)
- January 2010 – Oracle acquisition of Sun



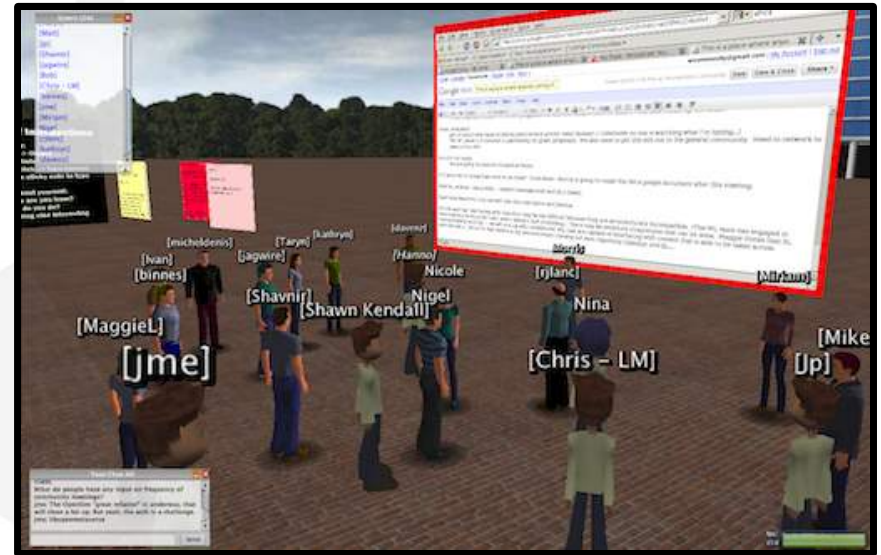
Open Wonderland Foundation

- Mission
 - > Govern open source project
 - > Set direction
 - > Community management
 - > Documentation
 - > Education & Training
 - > Technical support
 - > Bug fixing
 - > Software updates that benefit community
- Not a service organization
 - > No work for hire

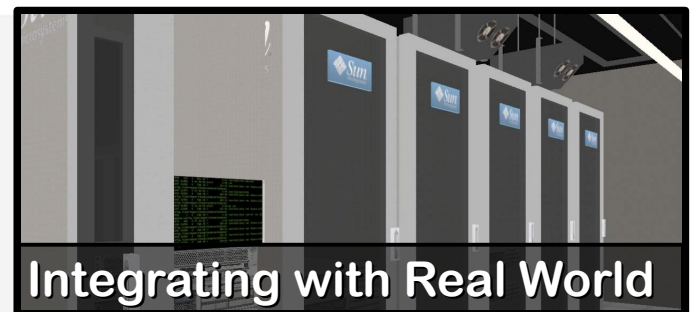
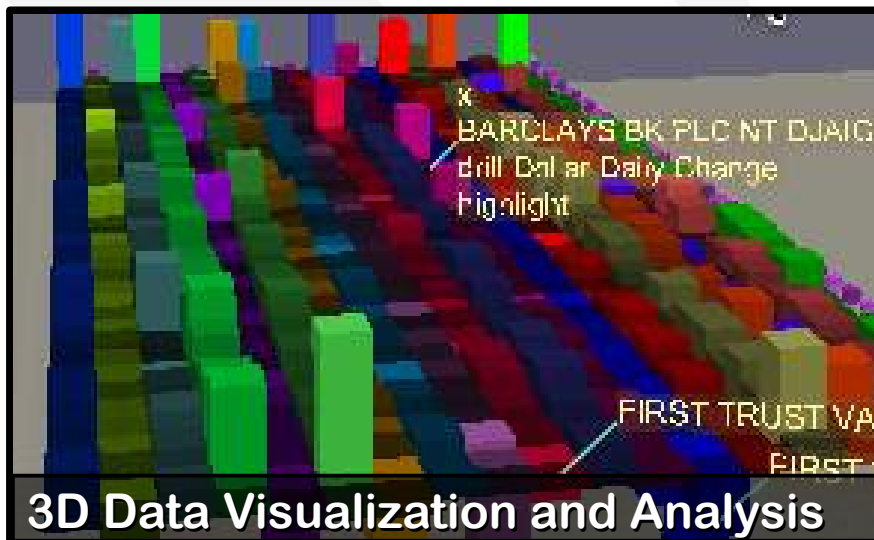
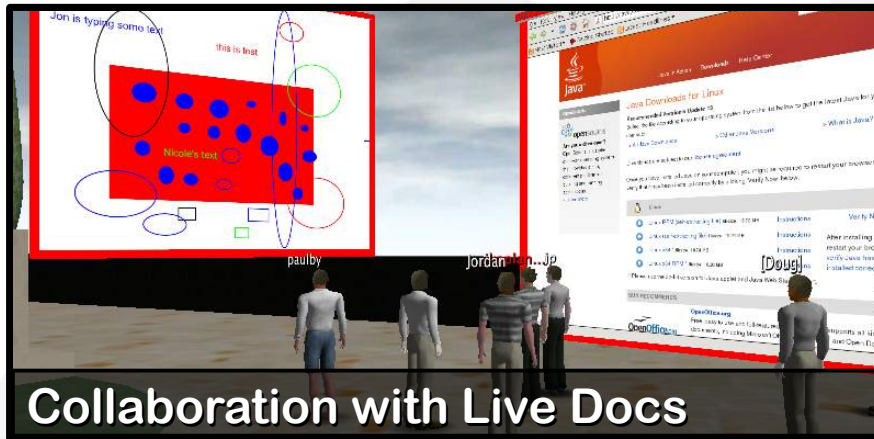


Vibrant Open Source Community

- Improvements since “independence”
 - > Code repository moved to Google Code
 - > Forum moved to Google Groups
 - > Blog moved to WordPress
 - > New Facebook, Twitter, and Wikipedia presence
 - > New community wiki
 - > New IRC chat channel
 - > Weekly in-world developer sessions and bi-weekly community meetings
- V0.5 Preview 4 TODAY!

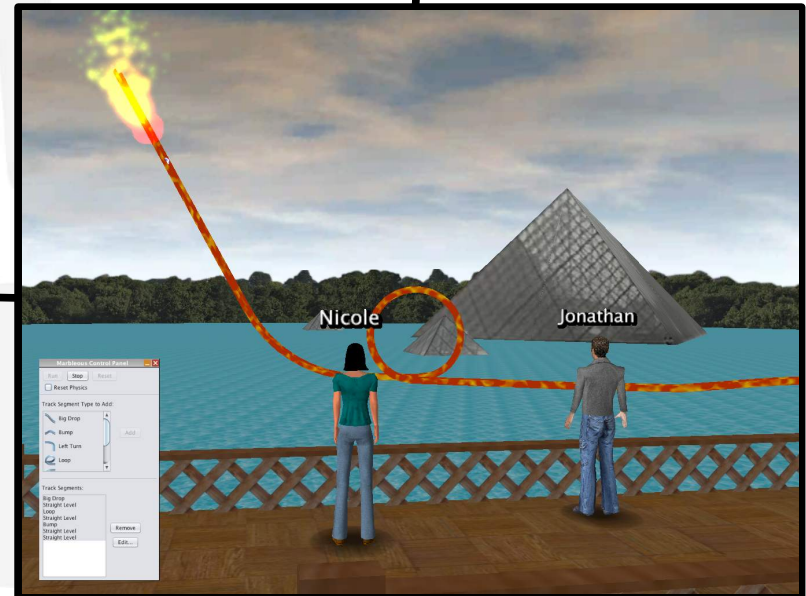
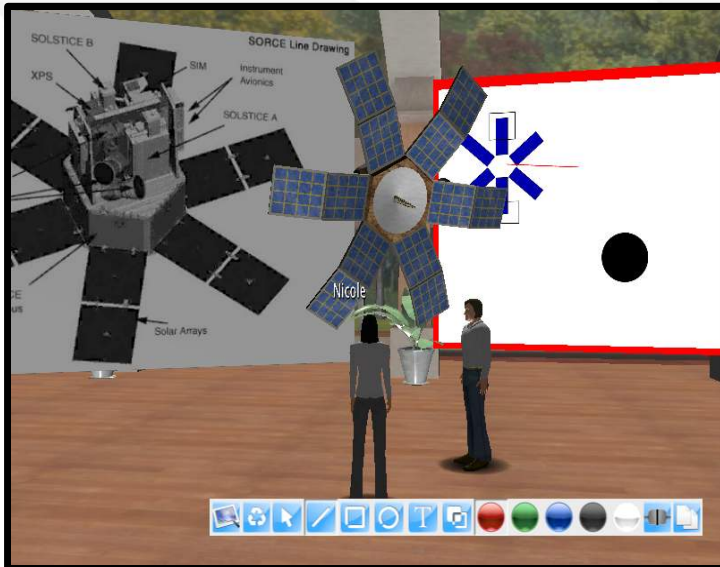
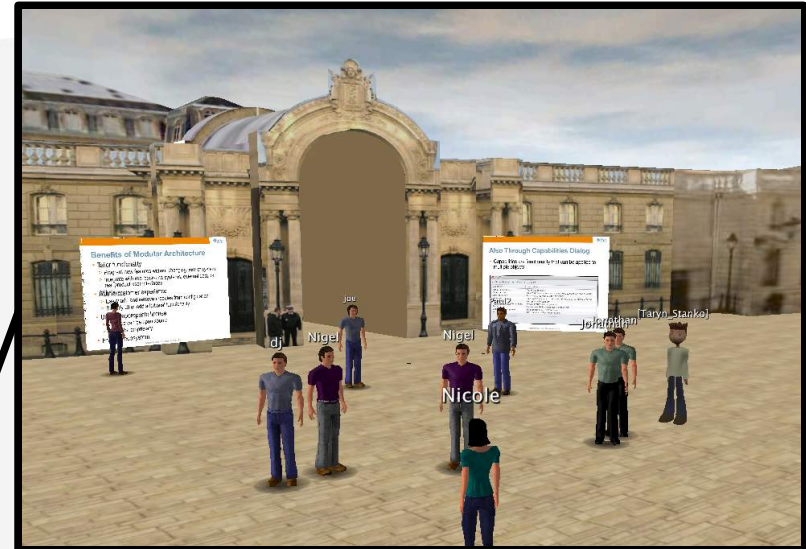


Use the Toolkit to Build Worlds for...



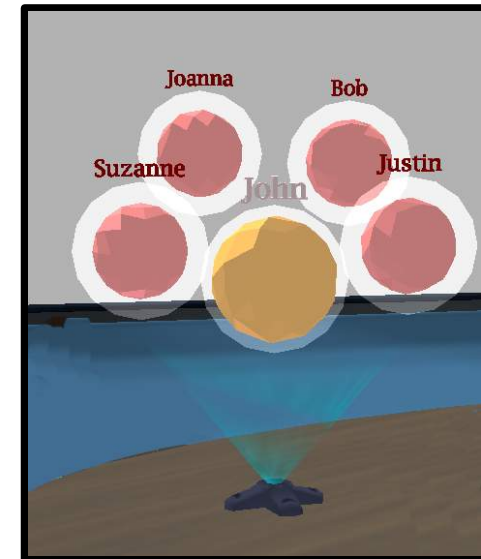
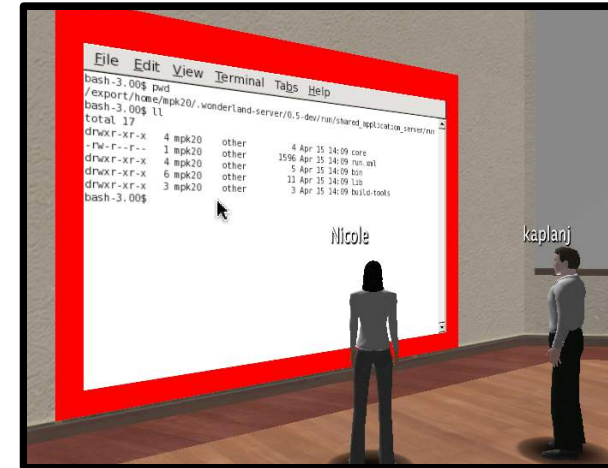
Vision

- 3D Web
 - > Federated, specialized virtual worlds
 - > Common way to express behavior across platforms (Java mobile code)



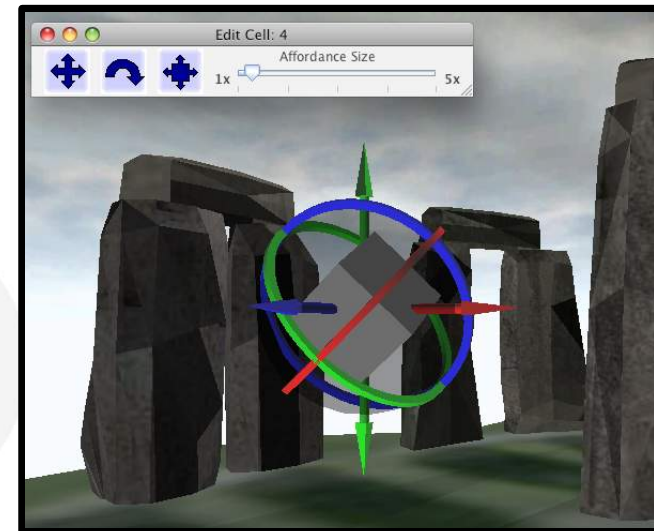
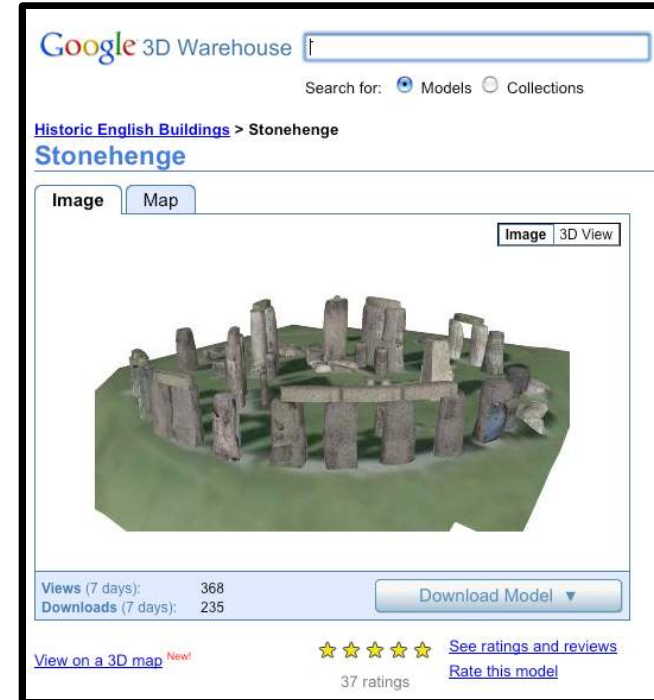
Wonderland Core Features

- Application Sharing
 - > Unmodified X11 application and collaboration-aware Java applications
- Immersive Audio
 - > Includes mix of recorded and live audio, range of audio fidelities, individual volume control, audio recording, and audio applications such as the virtual microphone and cone-of-silence
- Telephone Integration
 - > Includes dial-in, dial out, and connecting avatars with telephone audio



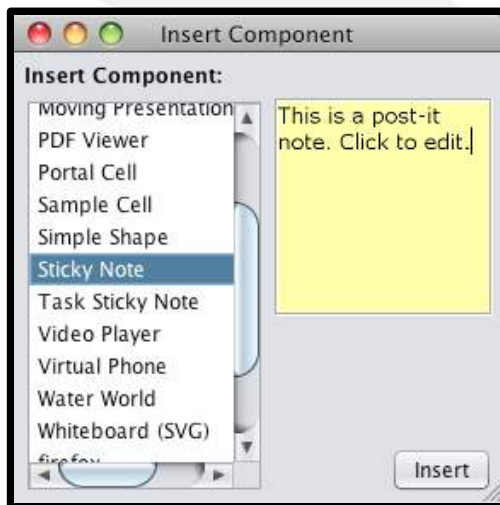
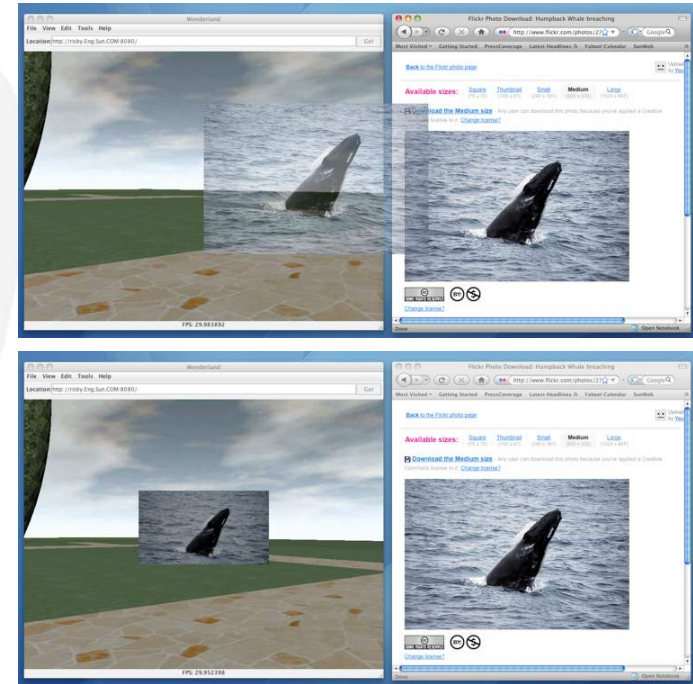
3D World Assembly

- Open art path for 3D
 - > Import Collada 3D models
 - > Uses industry-standard tools
 - Photoshop, GIMP
 - SketchUp, Maya, Blender
 - > Direct import of .kmz models created with Google SketchUp
- Move and resize objects using in-world tools



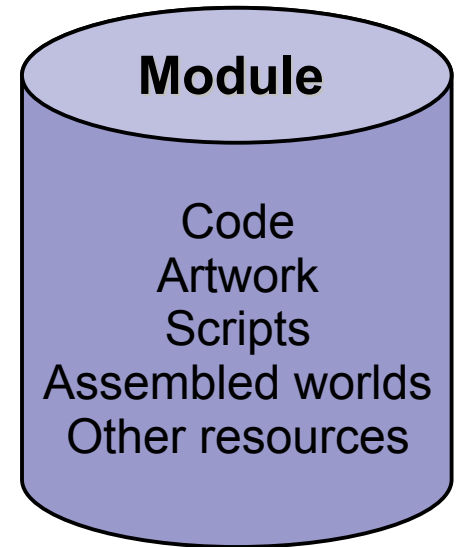
Content Creation

- Drag-and-Drop
 - > Mime-type scheme
 - .gif, .jpg, .png, .pdf, .kmz, .svg, ...
 - > Application launches on drop
- Dynamically add interactive content using insert dialog



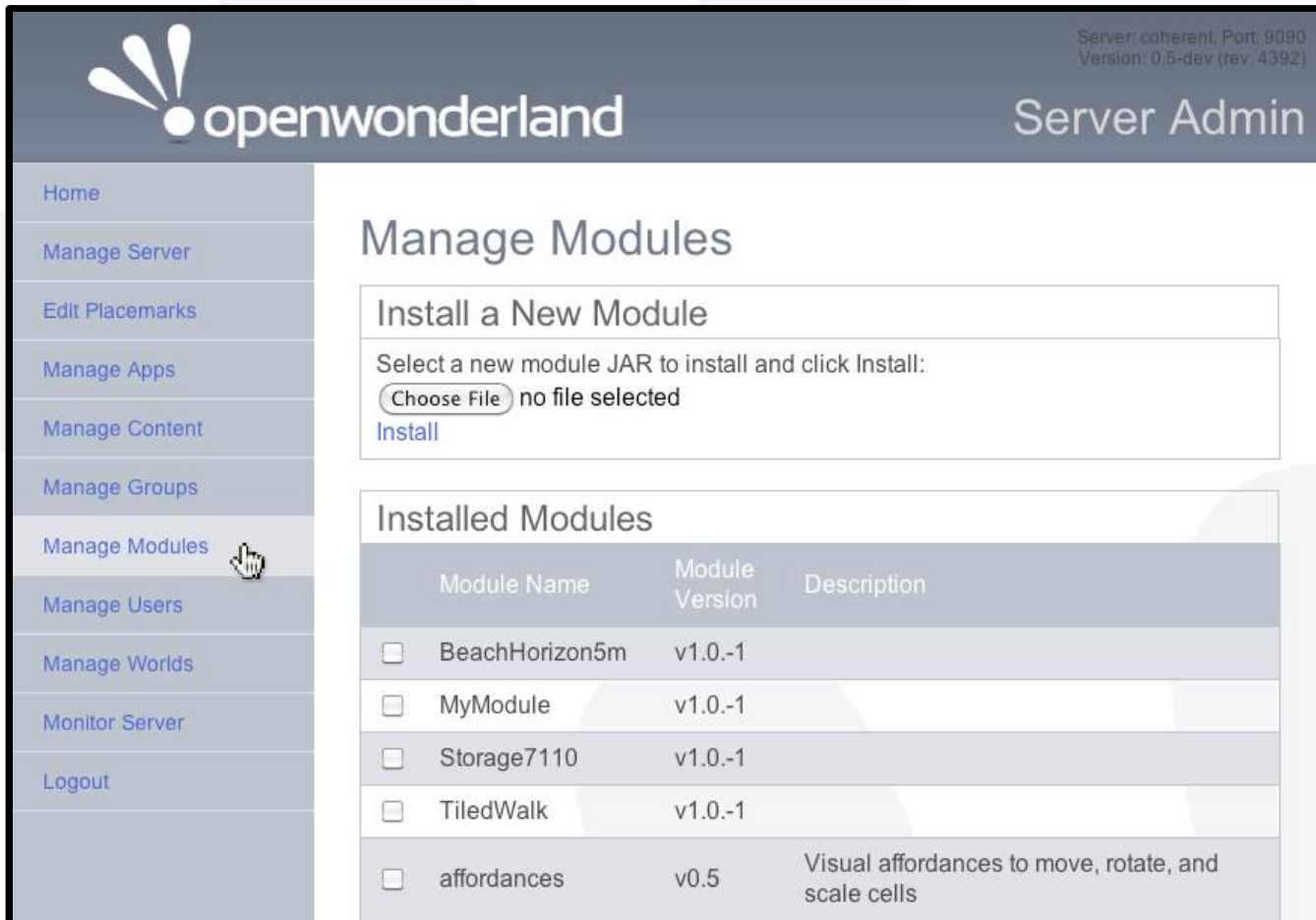
Modules for Extensibility

- Modules akin to “plug-ins”
- Mechanism for packaging & sharing Wonderland extensions
 - > Can contain code, artwork, audio, scripts, web management and web services
 - > Also world configurations for sharing whole worlds
 - > Deliver art assets via embedded HTTP server
 - > Packaged as archive (jar) files
- Modules can depend on other modules



Web-based Admin Console

- Add / remove modules from web UI



The screenshot displays the openwonderland Server Admin interface. The top header includes the openwonderland logo, the text "Server Admin", and server details: "Server: coherent, Port: 9090" and "Version: 0.5-dev (rev. 4392)". A left sidebar contains navigation links: Home, Manage Server, Edit Placemarks, Manage Apps, Manage Content, Manage Groups, Manage Modules (highlighted with a mouse cursor), Manage Users, Manage Worlds, Monitor Server, and Logout.

Manage Modules

Install a New Module

Select a new module JAR to install and click Install:

no file selected

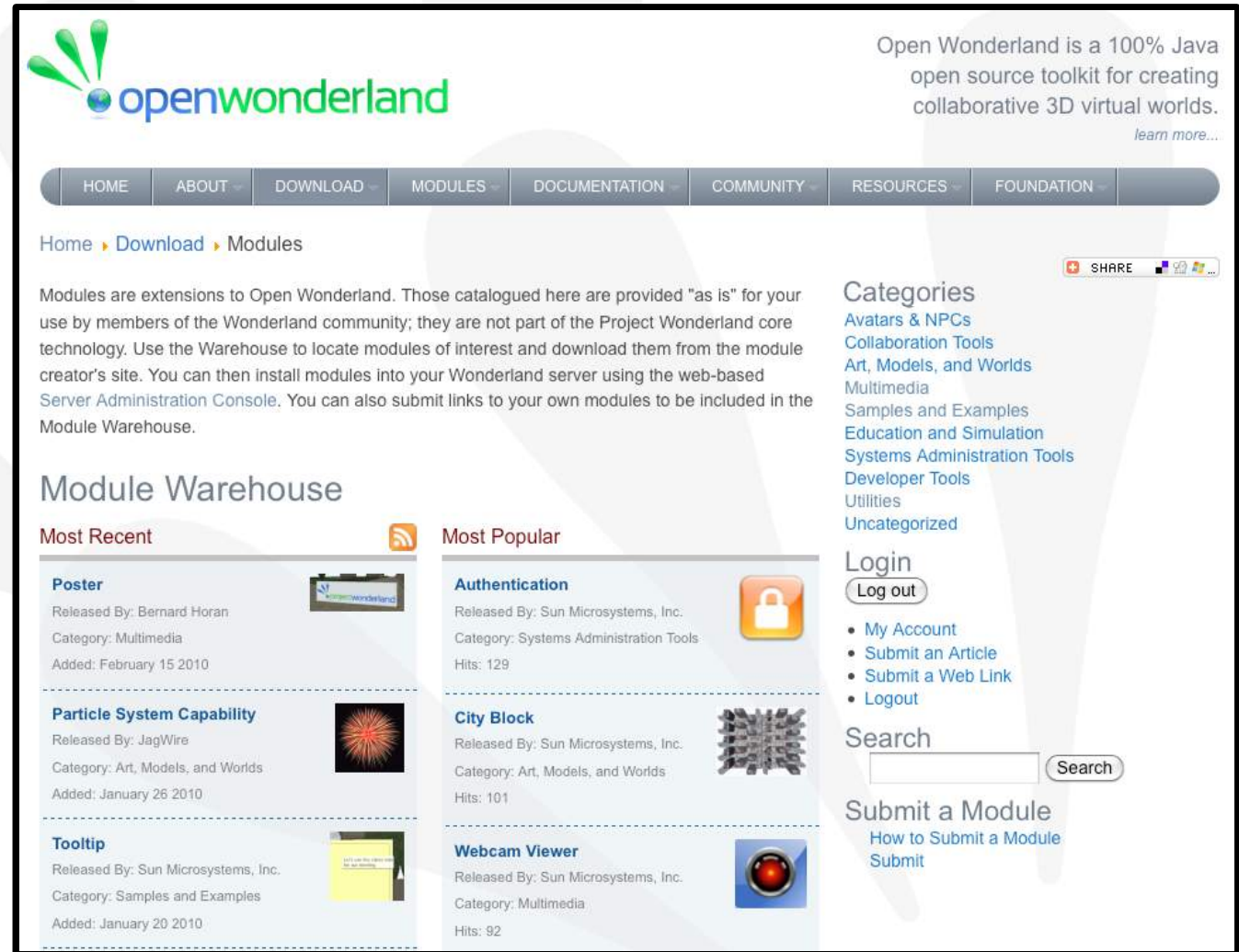
[Install](#)

Installed Modules

	Module Name	Module Version	Description
<input type="checkbox"/>	BeachHorizon5m	v1.0.-1	
<input type="checkbox"/>	MyModule	v1.0.-1	
<input type="checkbox"/>	Storage7110	v1.0.-1	
<input type="checkbox"/>	TiledWalk	v1.0.-1	
<input type="checkbox"/>	affordances	v0.5	Visual affordances to move, rotate, and scale cells

Module Warehouse

- Browse
- Share
- Comment
- Rate



The screenshot shows the Open Wonderland Module Warehouse website. At the top, there's a navigation bar with links: HOME, ABOUT, DOWNLOAD, MODULES, DOCUMENTATION, COMMUNITY, RESOURCES, and FOUNDATION. Below the navigation bar, a breadcrumb trail reads "Home > Download > Modules". The main content area is titled "Module Warehouse" and contains a paragraph explaining that modules are extensions to Open Wonderland, provided "as is" for user use. It mentions that users can locate modules of interest, download them, and install them into their Wonderland server using the web-based Server Administration Console. To the right of the main content, there's a "Categories" list with links to various module types: Avatars & NPCs, Collaboration Tools, Art, Models, and Worlds, Multimedia, Samples and Examples, Education and Simulation, Systems Administration Tools, Developer Tools, Utilities, and Uncategorized. Below the categories, there's a "Login" section with a "Log out" button and a list of links: My Account, Submit an Article, Submit a Web Link, and Logout. A "Search" box with a "Search" button is also present. At the bottom right, there's a "Submit a Module" section with links to "How to Submit a Module" and "Submit". The main content area is divided into two columns: "Most Recent" and "Most Popular". The "Most Recent" column lists three modules: "Poster" (Released By: Bernard Horan, Category: Multimedia, Added: February 15 2010), "Particle System Capability" (Released By: JagWire, Category: Art, Models, and Worlds, Added: January 26 2010), and "Tooltip" (Released By: Sun Microsystems, Inc., Category: Samples and Examples, Added: January 20 2010). The "Most Popular" column lists three modules: "Authentication" (Released By: Sun Microsystems, Inc., Category: Systems Administration Tools, Hits: 129), "City Block" (Released By: Sun Microsystems, Inc., Category: Art, Models, and Worlds, Hits: 101), and "Webcam Viewer" (Released By: Sun Microsystems, Inc., Category: Multimedia, Hits: 92). Each module entry includes a small thumbnail image.

Open Wonderland is a 100% Java open source toolkit for creating collaborative 3D virtual worlds. [learn more...](#)

HOME ABOUT DOWNLOAD MODULES DOCUMENTATION COMMUNITY RESOURCES FOUNDATION

Home > Download > Modules

Modules are extensions to Open Wonderland. Those catalogued here are provided "as is" for your use by members of the Wonderland community; they are not part of the Project Wonderland core technology. Use the Warehouse to locate modules of interest and download them from the module creator's site. You can then install modules into your Wonderland server using the web-based [Server Administration Console](#). You can also submit links to your own modules to be included in the Module Warehouse.

Module Warehouse

Most Recent

- Poster**
Released By: Bernard Horan
Category: Multimedia
Added: February 15 2010
- Particle System Capability**
Released By: JagWire
Category: Art, Models, and Worlds
Added: January 26 2010
- Tooltip**
Released By: Sun Microsystems, Inc.
Category: Samples and Examples
Added: January 20 2010

Most Popular

- Authentication**
Released By: Sun Microsystems, Inc.
Category: Systems Administration Tools
Hits: 129
- City Block**
Released By: Sun Microsystems, Inc.
Category: Art, Models, and Worlds
Hits: 101
- Webcam Viewer**
Released By: Sun Microsystems, Inc.
Category: Multimedia
Hits: 92

Categories

- [Avatars & NPCs](#)
- [Collaboration Tools](#)
- [Art, Models, and Worlds](#)
- [Multimedia](#)
- [Samples and Examples](#)
- [Education and Simulation](#)
- [Systems Administration Tools](#)
- [Developer Tools](#)
- [Utilities](#)
- [Uncategorized](#)

Login

[Log out](#)

- [My Account](#)
- [Submit an Article](#)
- [Submit a Web Link](#)
- [Logout](#)

Search

[Search](#)

Submit a Module

[How to Submit a Module](#)

[Submit](#)

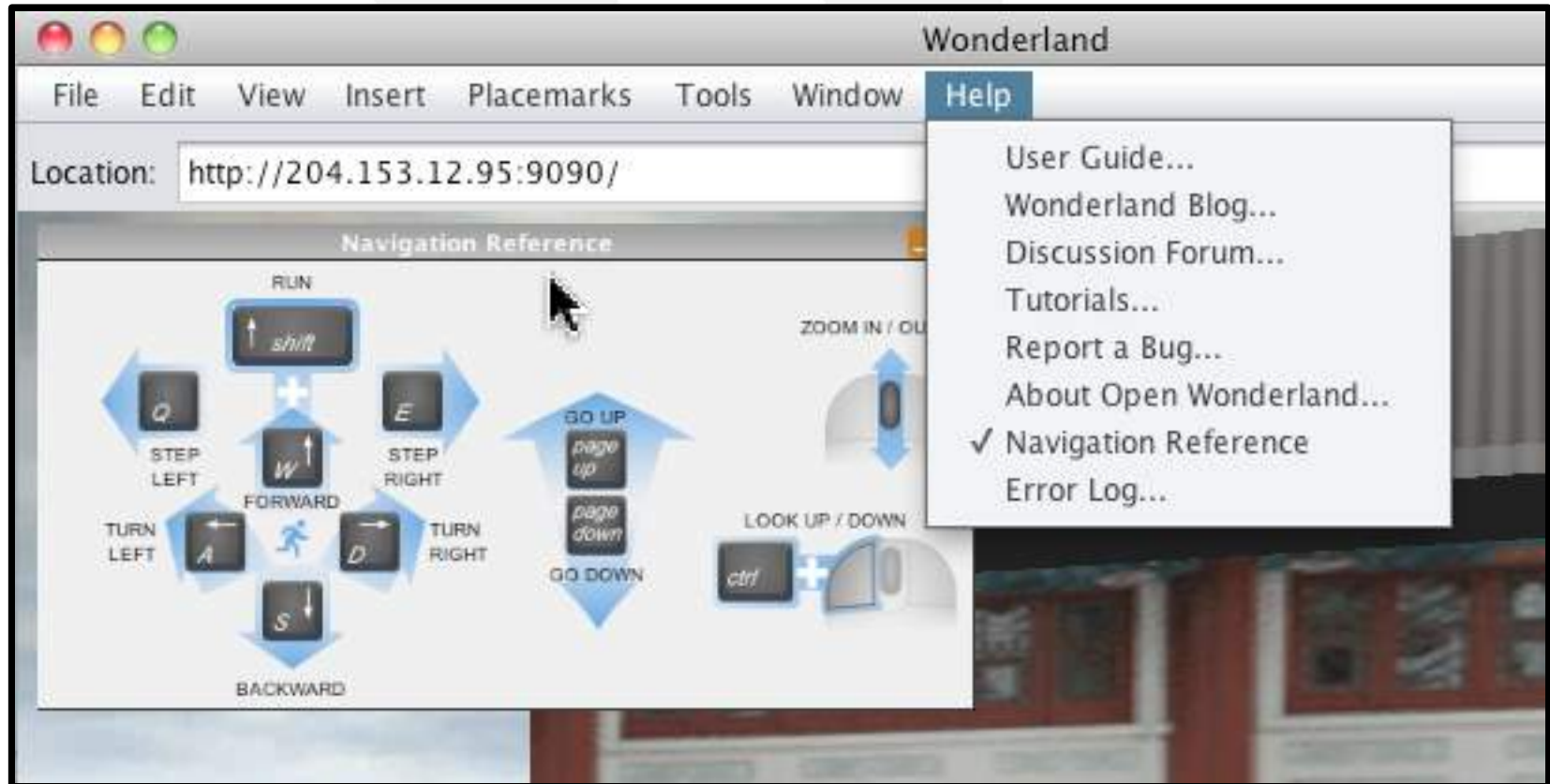
In-world Access to Modules

- Three primary places modules appear to end users
- Modules can add functionality to Insert Object palette
- Allows users to create multiple instances



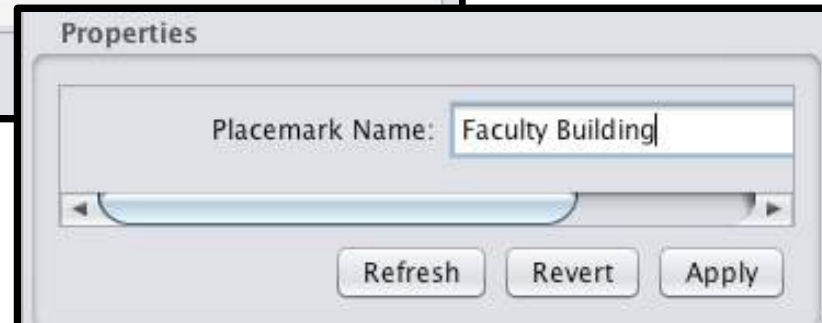
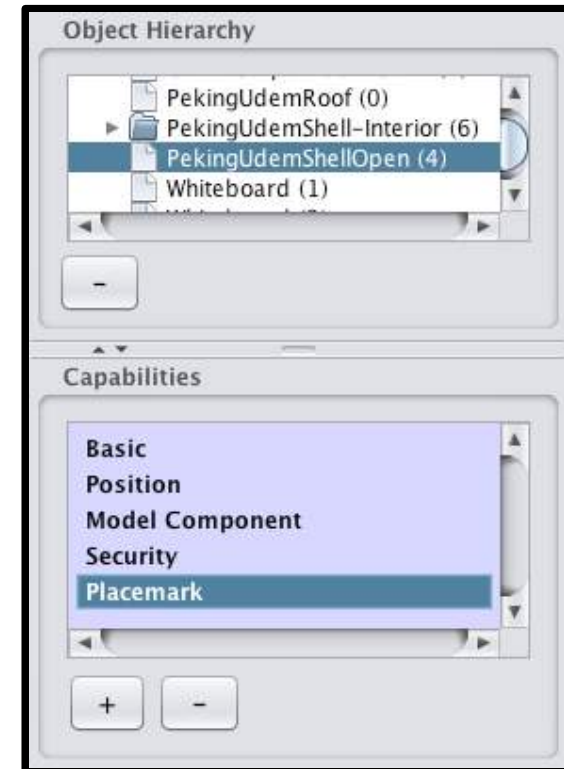
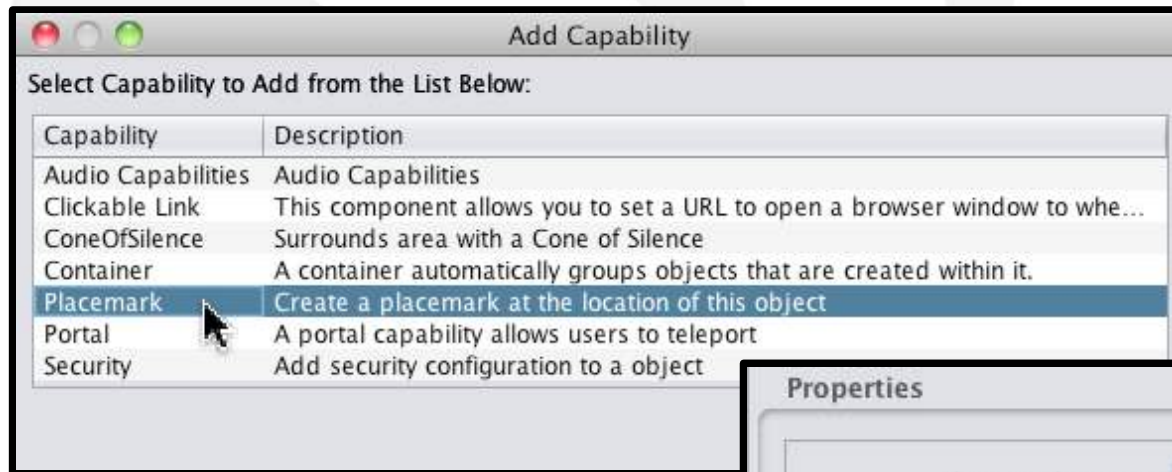
Modules can add Menu items

- New functionality appears in menu hierarchy



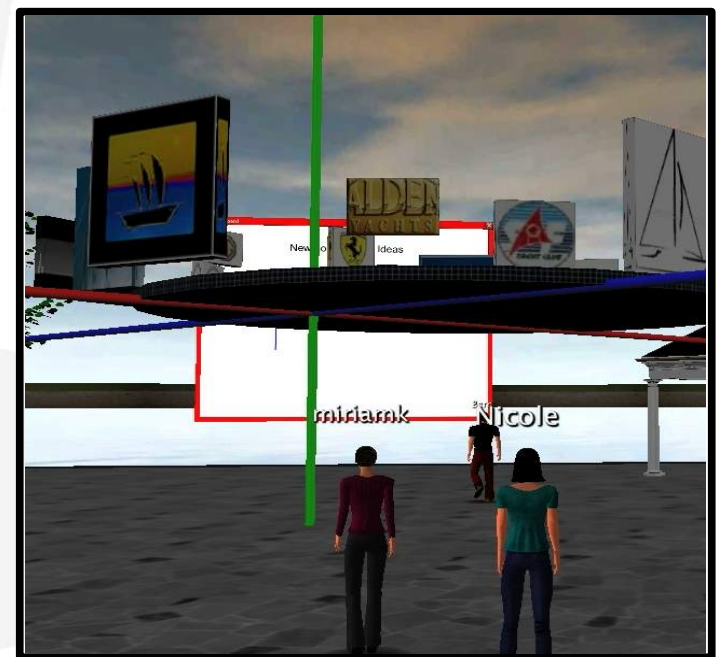
Also Through Capabilities Dialog

- Capabilities are functionality that can be applied to any in-world object
- Each can optionally include a property sheet



Capability Examples

- Audio
 - > Add recorded audio or audio stream
- Container
 - > Group objects; contained objects inherit properties



Security

- Authentication
 - > Database, LDAP, SSO
- Object-level security
- Cone of Silence



Team member's view



Visitor's view

Benefits of Modular Architecture

- Tailor functionality
 - > Program new features without changing core of system
 - > Integrate with real back-end systems, external data, or real product user interfaces
- Refine user experience
 - > Easily add and remove modules from configuration
 - > Simplify UI or add additional functionality
- Use the appropriate license
 - > Modules can be open source
 - > Or can be proprietary
- Enables ecosystem

Learn More

- Other Wonderland-related talks and workshops
 - > Electromagnetism – Friday 2:00pm
 - > Behind the Firewall Workshop – Saturday 2:00pm
 - > Music Browser – Sunday 9:30am
 - > Medical Training – Sunday 9:30am
 - > Future of Immersive Ed Panel – Sunday 10:00am
 - > MiRLTE, SIMiLLE, +Spaces – Sunday 12:30pm
 - > Wonderland World-Building Workshop – Sunday 2:00pm
 - Bring your own laptop!
 - Please install current version of Java

Open Wonderland Resources

- **Open Source Project Site**

- > <http://OpenWonderland.org>
- > Download: binary, source code, examples
- > Learning: architecture, roadmap, FAQ
- > Community: latest news/blogs, forums, mailing lists
- > Tutorials, technical articles, troubleshooting
- > Suggestions for student projects

- **WonderBlog - Official Wonderland Blog**

- > <http://blogs.openwonderland.org>

- **Facebook and Twitter**

- > <http://facebook.com/openwonderland>
- > <http://twitter.com/openwonderland> - use hashtag: [#openwonderland](#)

Wonderland Ecosystem

