



September, 2013

CREATING CONTENT IN THE ADL SANDBOX

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supporting the ADL Initiative

What is the Sandbox?

- The Sandbox is a persistent virtual environment
- It runs on top of a platform called the Virtual World Framework
- It allows users to create “worlds” and share them
 - Worlds can be instructional
 - Worlds can be art
 - Worlds can be fun

What features does the Sandbox Support?

- Collaborative editing
- 3D asset import
- Particle systems
- Spatial audio effects
- Video and text chat
- Reusable behaviors and scripts
- Geospecific and procedural terrains
- Basic 3D modeling tools

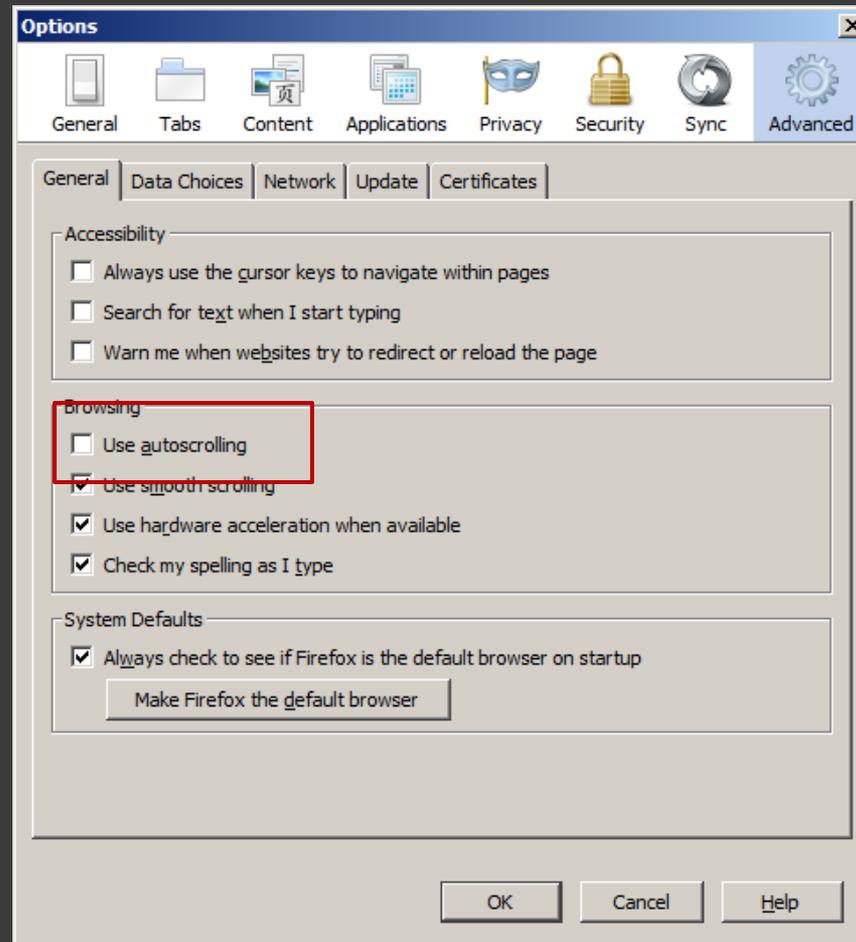
What we'll cover today

- Introduction to the Sandbox
- Signing up for an account and logging in
- Visiting worlds
- Exploring the user interface
- Manipulating the camera
- Selecting objects
- Basic editing

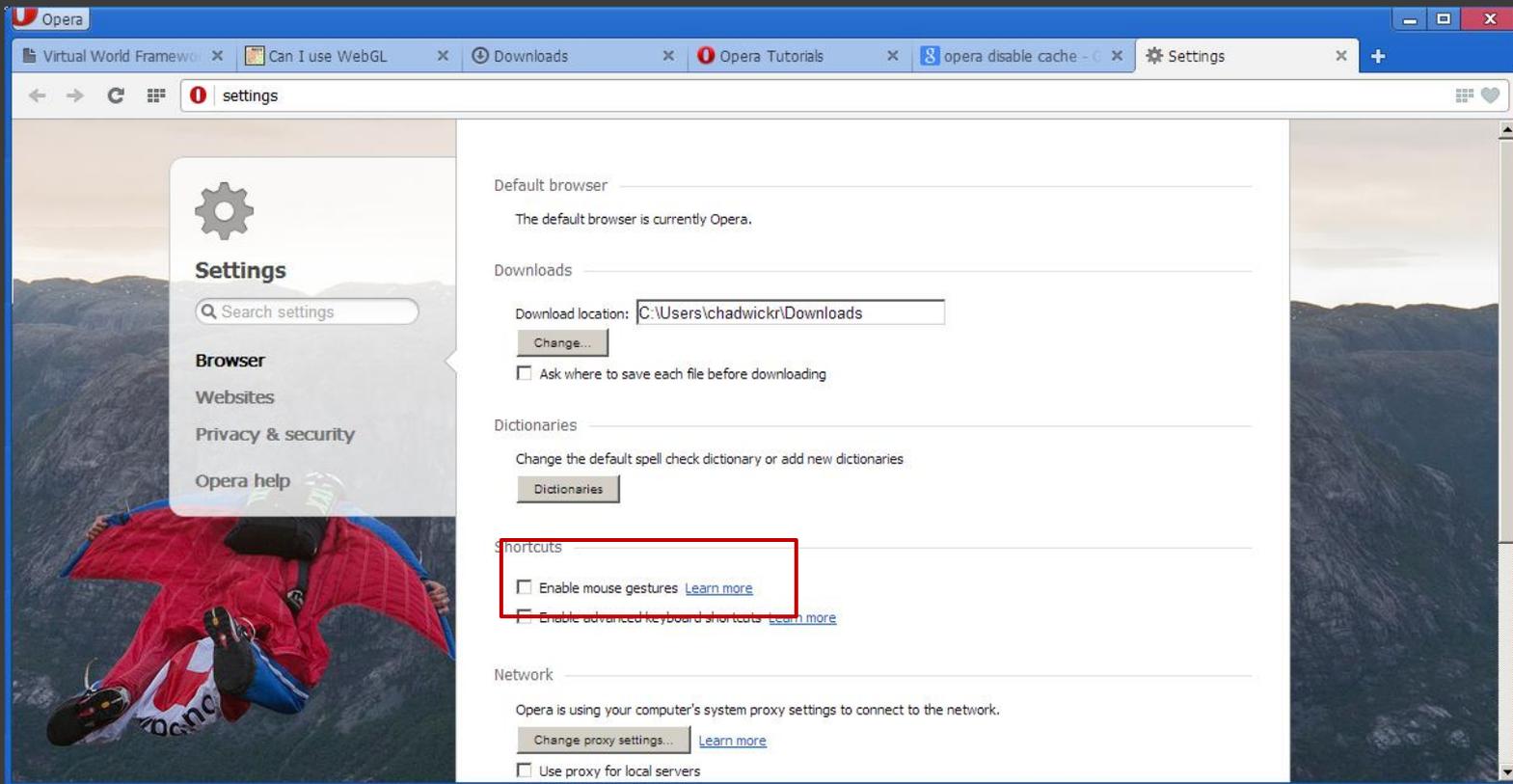
System Requirements

- ⦿ First, a word on system requirements
- ⦿ You'll need a web browser that supports WebGL
 - Chrome 27 +
 - Opera 16
 - Firefox 22 +
- ⦿ The Sandbox application requires a three button mouse, preferably with a mouse wheel.
- ⦿ Because we use all three mouse buttons, you'll also need to set a few preferences.
- ⦿ In Firefox, disable "Auto Scroll"
- ⦿ In Opera, disable "Mouse Actions"

Firefox Options

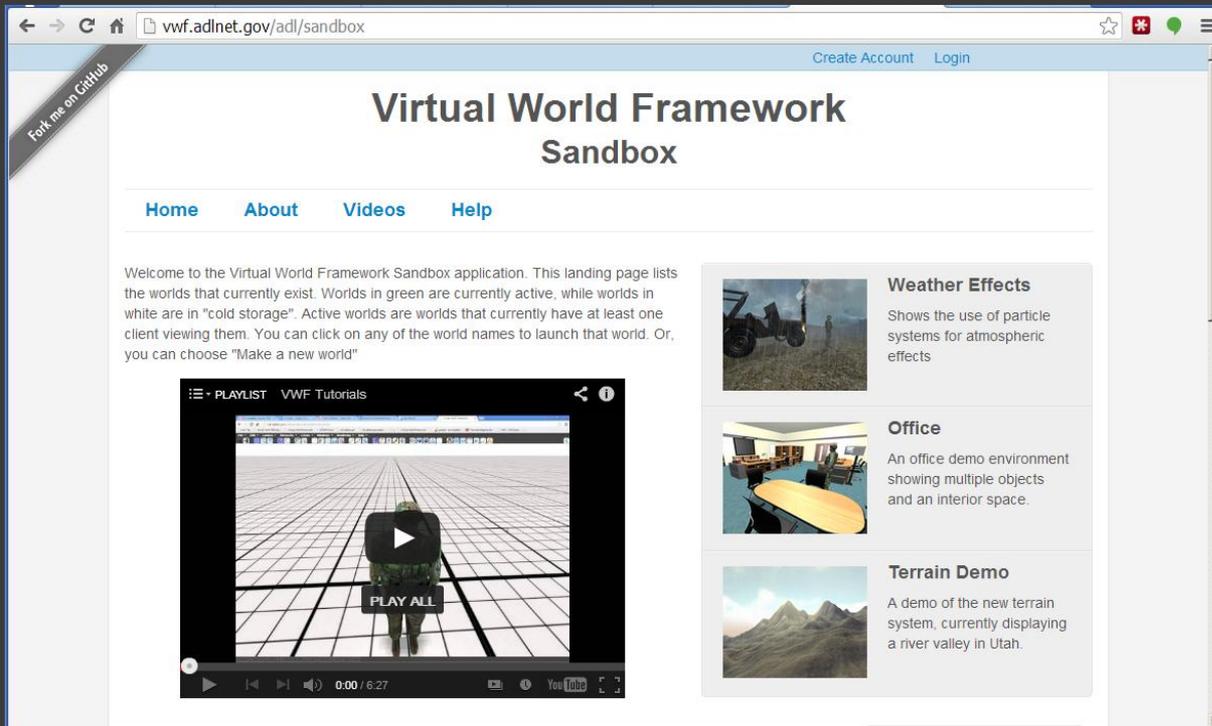


Opera Options



How do I start?

- Visit vwf.adlnet.gov
- Create an account
- Create a world



The screenshot shows a web browser window displaying the Virtual World Framework Sandbox application. The browser's address bar shows the URL vwf.adlnet.gov/adl/sandbox. The page features a navigation menu with links for Home, About, Videos, and Help. A central text block provides a welcome message and instructions on how to interact with the worlds. Below this text is a video player showing a 3D grid environment with a character and a 'PLAY ALL' button. To the right, there are three featured world demos: Weather Effects, Office, and Terrain Demo, each with a small image and a brief description.

[Fork me on GitHub](#)

Create Account Login

Virtual World Framework Sandbox

[Home](#) [About](#) [Videos](#) [Help](#)

Welcome to the Virtual World Framework Sandbox application. This landing page lists the worlds that currently exist. Worlds in green are currently active, while worlds in white are in "cold storage". Active worlds are worlds that currently have at least one client viewing them. You can click on any of the world names to launch that world. Or, you can choose "Make a new world"

PLAYLIST VWF Tutorials

PLAY ALL

0:00 / 6:27

Weather Effects
Shows the use of particle systems for atmospheric effects

Office
An office demo environment showing multiple objects and an interior space.

Terrain Demo
A demo of the new terrain system, currently displaying a river valley in Utah.

Let's take a moment for a demo

- All these worlds were created with the Sandbox tools

File Edit Camera Hierarchy Create Tools Windows Rendering Location Help



FPS: 69.0 30-63



Not Saved No Selection Pick: None Snaps: 15deg, 5m, 1% Axis: -1 World Coords Move [0.0, 0] [0.0, 0]



Not Saved plane2_wmf-c483395f-6e08-4f60-1a42-9d5b002762e Pick: None Snaps: 15deg, 5m, 1% Axis: x1 World Coord: Move [0,0,0] [0,0,0]

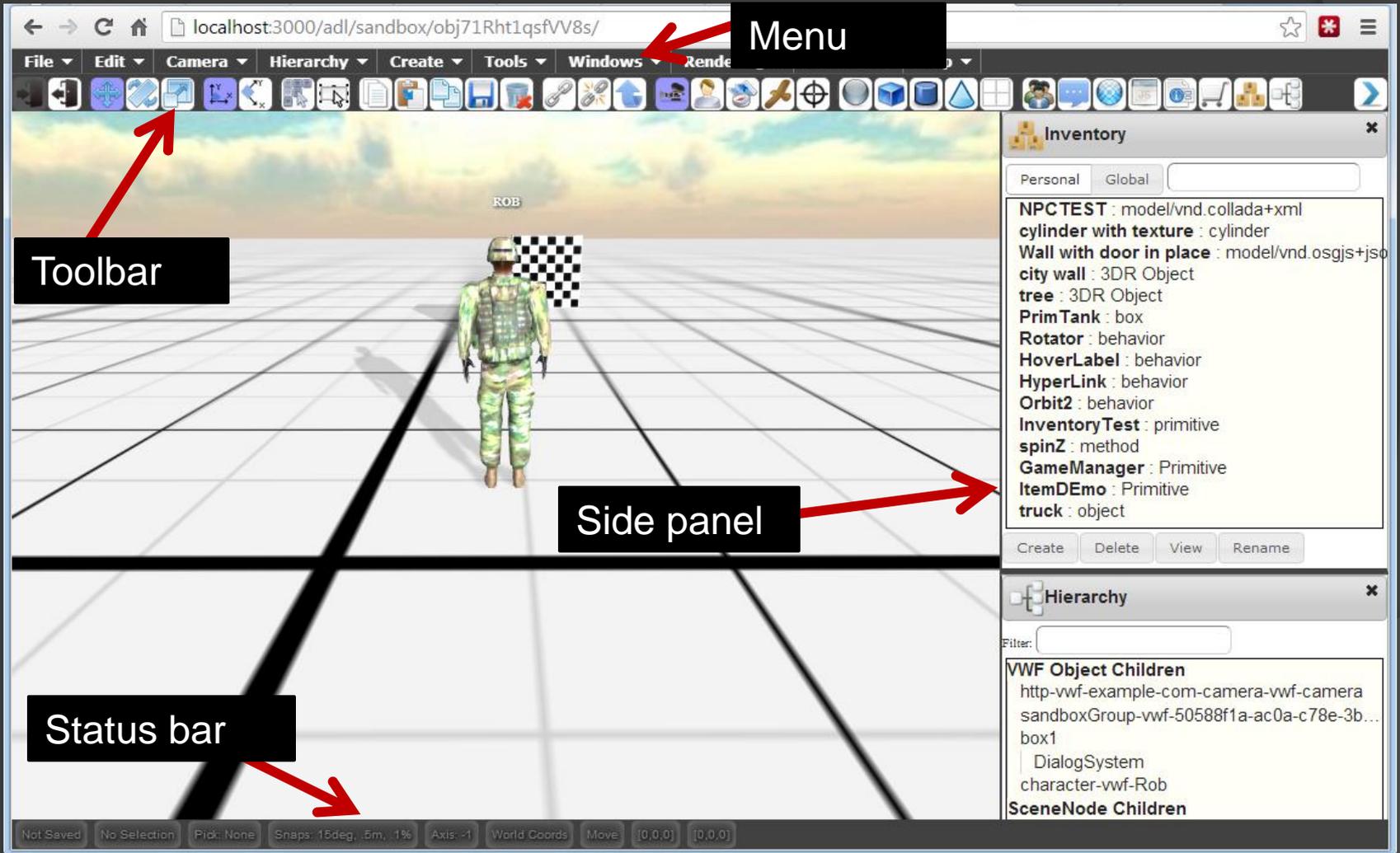
File Edit Camera Hierarchy Create Tools Windows Rendering Location Help

FPS: 30.0 29/30



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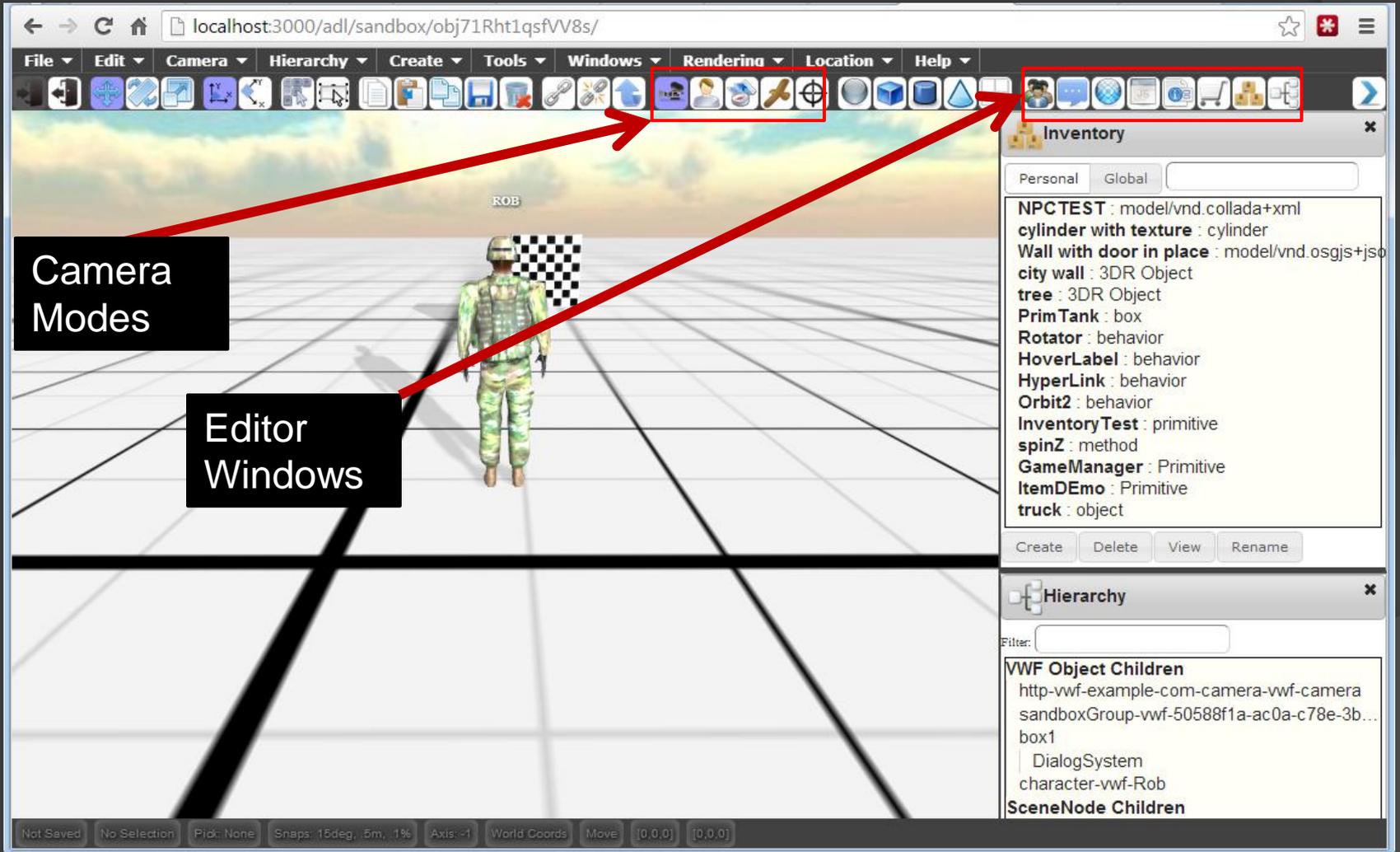
Basic Interface Elements



Interface Element details

- The side panel will open and close when you open or close editor windows
- Some actions may cause the side panel to reload or close
- Buttons on the toolbar light up to show you what modes you are in
- The status bar shows information about the currently selected objects and the editor modes

Toolbar button info



Selecting objects

- There are many ways to select objects
- We'll cover the basics
- The 'Hierarchy' panel lets you select objects by name
- You can also enter 'select by clicking' mode on the toolbar
- This lets you click on objects in the view to select them

Object properties

- ⦿ All objects have some properties that can be edited
- ⦿ You can see them on the object properties panel
- ⦿ This panel has several tabs, and will show new tabs for each behavior or modifier on an object
- ⦿ Open tabs by clicking them – inside, you will find buttons, sliders and checkboxes for the corresponding properties

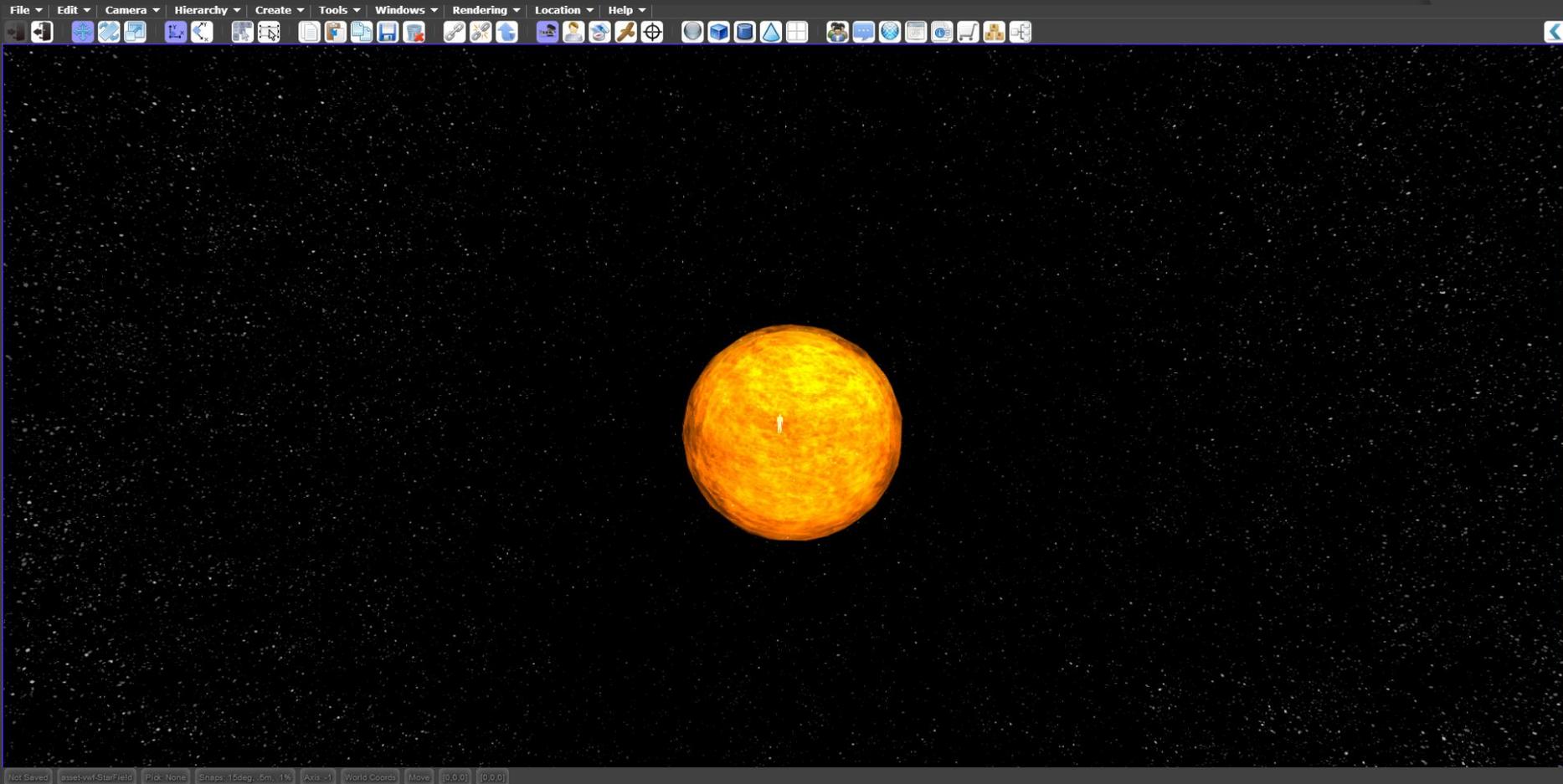
Camera Modes

- There are many ways to control the camera
- The default mode is 'orbit' mode
- This allows you to rotate around a point in space
- Use the right mouse button to rotate, the middle to pan, and roll the wheel to zoom.
- You can change between the modes with the toolbar buttons
- Use the target toolbar button to focus the camera on the selected object

Demo

- ⦿ We're going to create an Earth to orbit the Sun in our demo scene
- ⦿ You can follow along in your own world, or play back this presentation later as a tutorial
- ⦿ To accomplish this, we will create a sphere, apply a texture, create a circle, and use some behaviors to make the Earth orbit
- ⦿ The goal of this exercise is just to become familiar with the interface- there is lots more to learn!

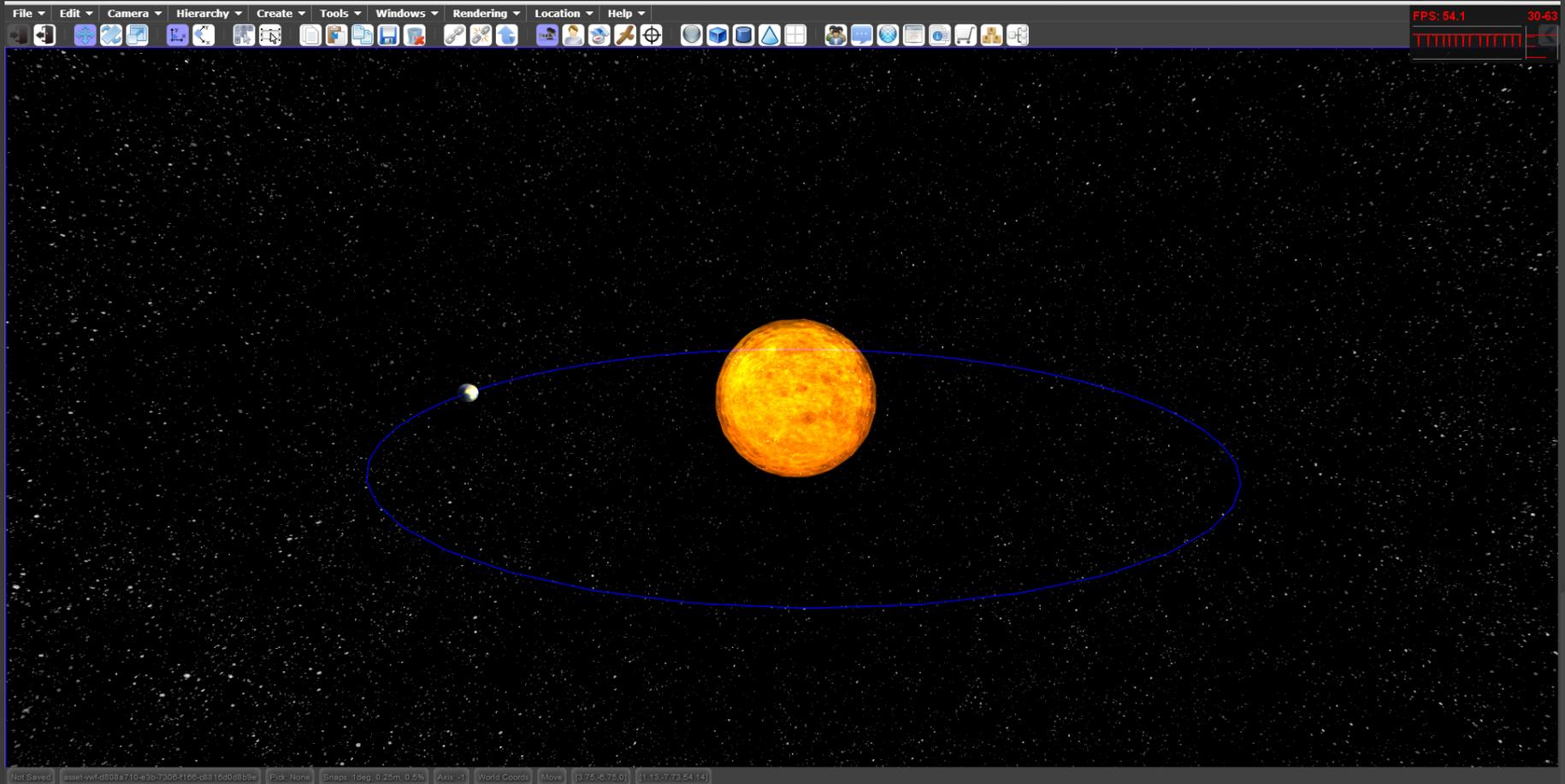
Tutorial Start



Live Demo

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Tutorial End



Recap

- ⦿ You probably saw a lot of little actions during that demo
- ⦿ We should have:
 - Selected and deselected objects
 - Edited some properties in the object properties window
 - Assigned a material and a texture
 - Worked with the side panel, toolbar and main menu
 - Assigned a behavior to an object

Questions?

- Let's take some time to answer questions



Links

- ◎ Sandbox source code:
 - <https://github.com/adlnet/Sandbox>
- ◎ Sandbox Website:
 - <https://vwf.adlnet.gov>
- ◎ Email me
 - robert.chadwick.ctr@adlnet.gov
- ◎ Webinar Resource Page
 - <http://www.adlnet.gov/webinars/adl-sandbox-application-to-create-virtual-environments-webinar/>.



More Links

◎ Solar System Demo

- <http://vwf.adlnet.gov/adl/sandbox/OxOVV8FPNfTshuqD>

◎ Helicopter Demo:

- <http://vwf.adlnet.gov/adl/sandbox/hXjftblpjibkl5bl>