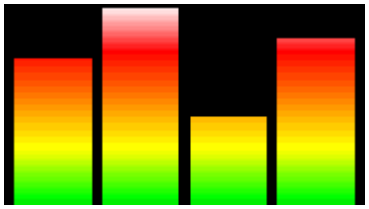
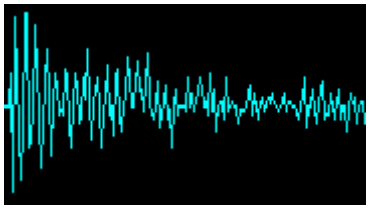
# Tutorials Listed By Subject

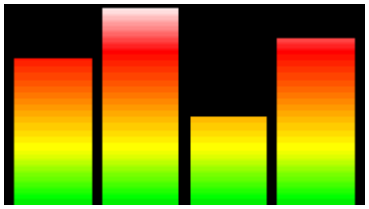
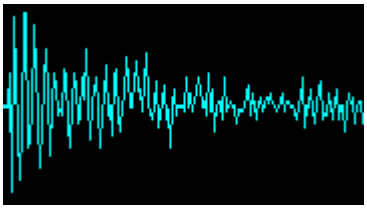
This section contains all tutorials indexed by subject for orx, an opensource, portable, lightweight, data-driven & 2D-oriented game engine.

**Those tutorials operates under a model of community contribution**, ensuring its content is both created and utilized by its members. So **your contributions will be very welcome**. If you spot any problems, or if anything is not clear, please get in touch with us on the Orx Discord's Server. Thank you and Happy reading!

Search

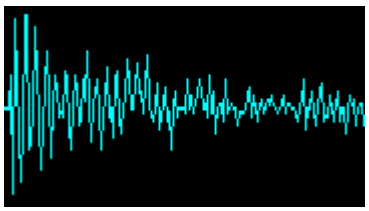
## Audio

 Sound & Music  Sound Recording

 Sound Buses  Audio Filters



Audio filters, miniaudio & audio extensions Video

 Sound Spatialization

## Android

 Working with Android (new users start here!) 



Android Studio, NDK, and Orx library Compiling Orx Library & Demo Project



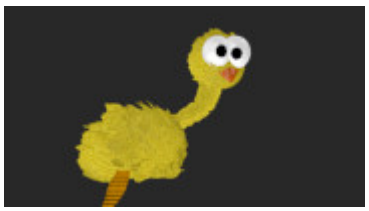
Android Demo as a template project





Using SWIG to talk to Java on Android Android Packaging Scripts for continued deployments

## Animation



New Animation System Walkthrough



Basic Animation



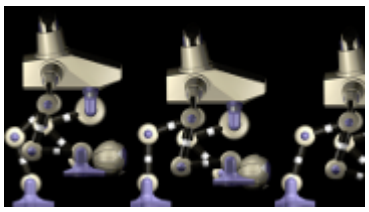
Animation and Clearing Targets



Animation Inheritance with Prefixes



Text Animation



Realistic Walk Movement

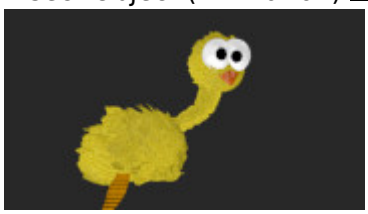
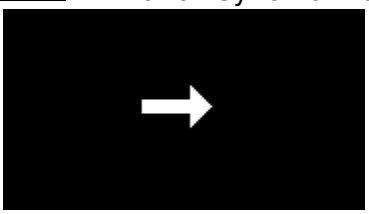


Creating Particle Explosions




Addin for The Gimp to Extract Guides for Configuration



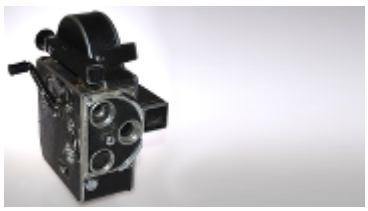
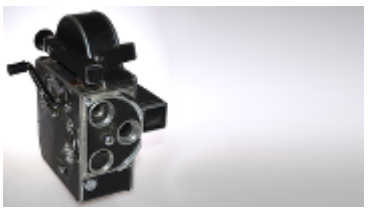
Mouse over effect for buttons  Creating an Insect Object (Animation)  Animation Synchronization  Zero Length Frames  See more Animation Examples

## C++

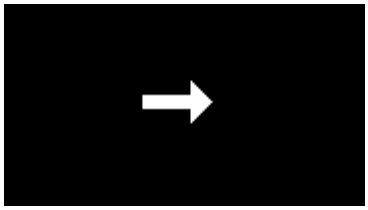
 Localization 

Stand Alone Application  Using orxObjects in Classes with an EventHandler  An Introduction to orx/Scroll  Compiling hidapi in a game

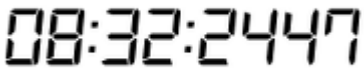
## Cameras

 Viewport and Camera  Cameras and Frustums



orxScroll, Cameras and Viewports  See more Camera Examples

## Clocks

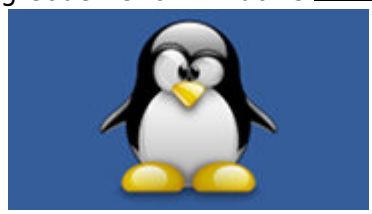


Clock

## Code::Blocks

 Getting Code::Blocks for Windows  Building the Orx Library with Code::Blocks on Mac OS X  Building the Orx Library with Code::Blocks on Linux

## Codelite

 Getting Codelite for Windows  Building the Orx Library with Codelite on Mac OS X  Building the Orx library on Linux with

Codelite  Setting up Codelite on Linux 

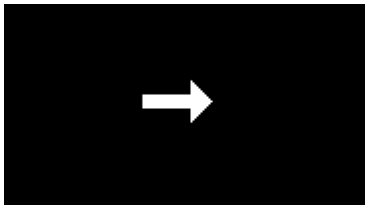
Stand Alone Application 

Codelite & Environment Variables Video

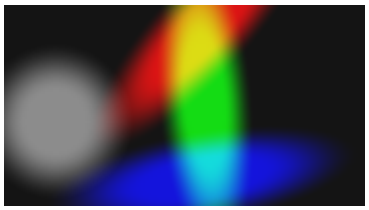
## Color / Colour

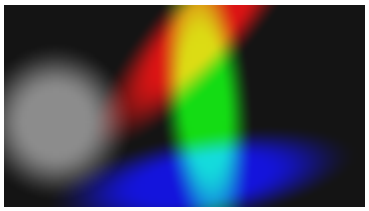
 orxCOLOR and how to colour an object 

Converting a percentage to a color  Web Color Literals

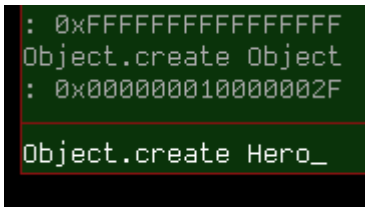
 A natural-looking glowing ball effect  See more Color Examples

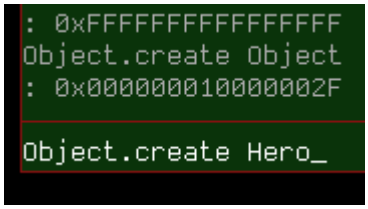
## Compositing

 Compositing (2D lighting with offscreen rendering)

 Viewport Render to Texture

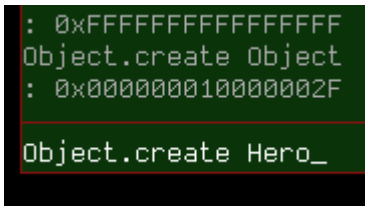
## Console

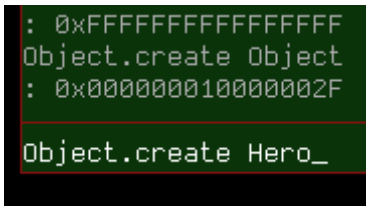


Guide to the Orx Console and Commands  The Bounce Demo 

Custom Console Colors

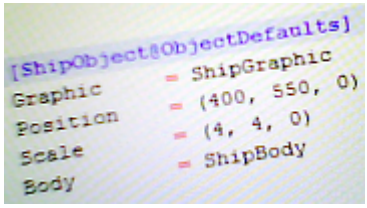
## Command Module

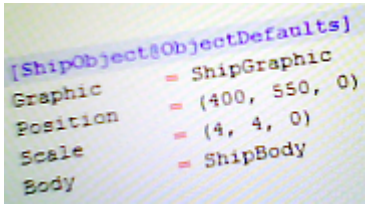


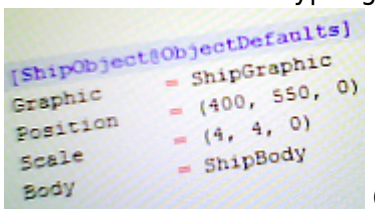
Command Module Syntax 

Command and Timeline Notes

## Config

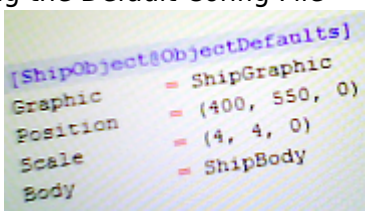


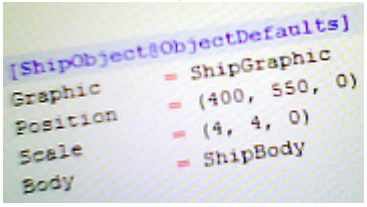
Encrypting Config Files 

Saving information to a config file 

Changing the Default Config File

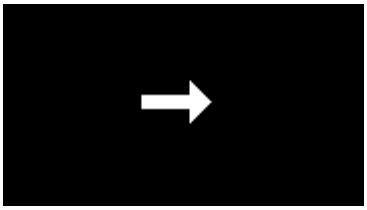



Changing the Default Config File for orx/Scroll 

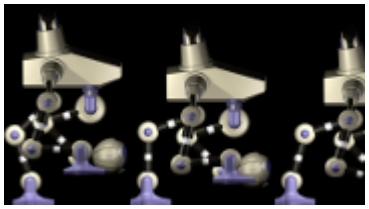
Retrieving and Updating Config Values 

Stepped Random Values 

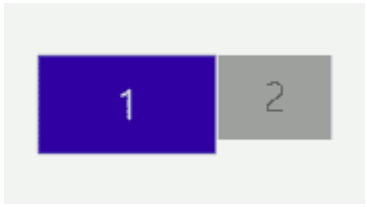
Local-

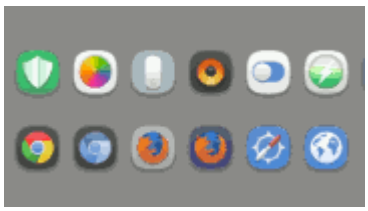
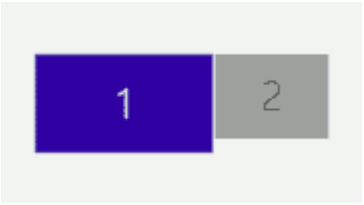
only Config Overriding Video  See more Config Examples

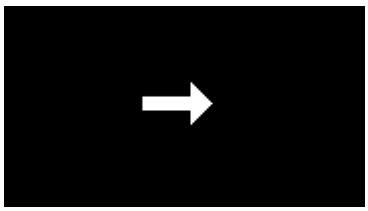
## Controls

 Interaction, Control and Physics  Realistic Walk Movement  Creating Particle Explosions

## Display

 Multiple Monitors  Custom Mouse Cursors

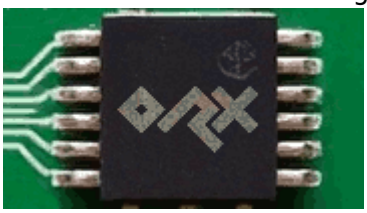
 Application Icons  Borderless Window Mode

 See more Display Examples

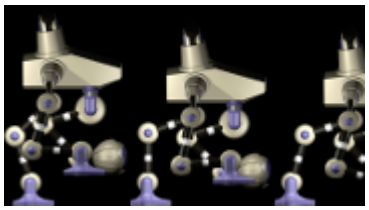
## Downloads

 Getting Started with Orx

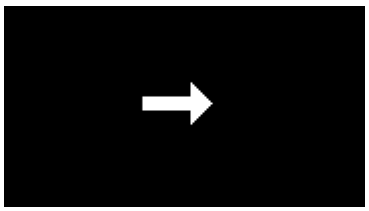
## Engine

 Embedding parts of Orx in other engines  Orx Extensions  Extending Orx with Plugins and Bundling

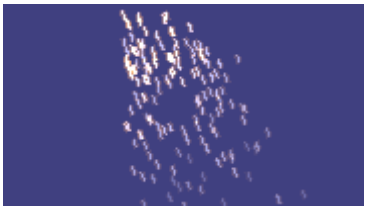
## Events

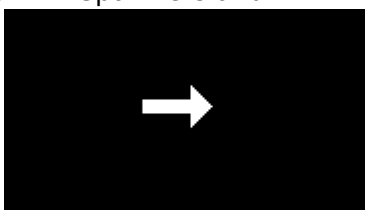
 Realistic Walk Movement  Using orxObjects in Classes with an EventHandler  Creating Particle Explosions

## Fonts

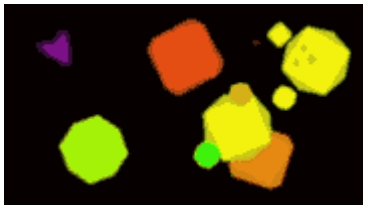
 Fun with Text and Shaders  orxFontGen  Font tool for unicode, including Chinese  See more Font Examples

## FX


FX 
Sparks with Spawners and FX


Creating an Insect Object (Speed FX) 
See more FX Examples

## Game Writing Guides


Writing a local multiplayer Asteroids game 
Beginner's Guide - Platform Game 
Beginner's Guide - 2D UFO Game


Beginner's Guide - UFO Game Video Version

## iPad / iOS / iPhone


Using compressed textures on the iPad 
Porting a game to the iPad

## Input



8 Way Joystick / Gamepad Control



Analog Joystick / Gamepad Control



Analog Stick Threshold



Overriding a Controller Mapping



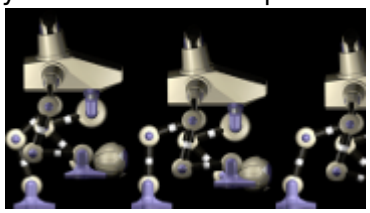
Remapping Controller Inputs



Testing Key, Joystick and Mouse Inputs



Interaction, Control and Physics



Realistic Walk Movement



Creating Particle Explosions




Mouse over effect for buttons



Notes on input



Keyboard Inputs



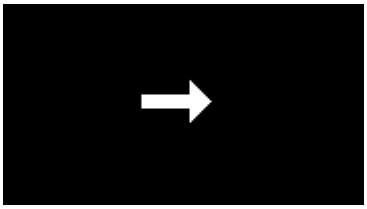
Mouse Grab



Compiling hidapi in a game

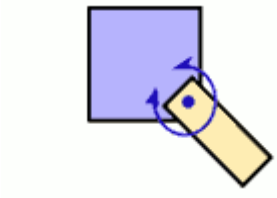
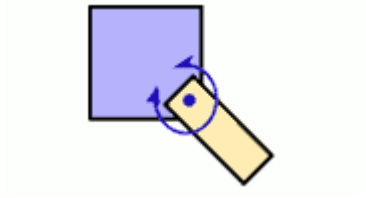


Input Triggers

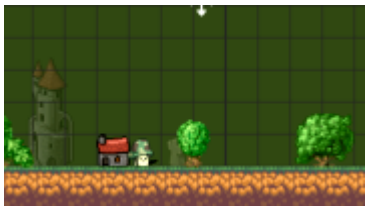
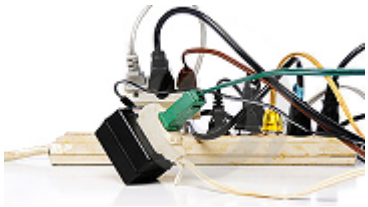


See more Input Examples

## Joints


Creating an Insect Object (Revolute Joint)

Weld Joint on parent/child Objects with Bodies

Z-order of Objects with Joints

## Level Mapping


Semi-dynamic Objects and Level Mapping

Using the Tiled to ORX Converter

Hexagon Grid Tutorial

Creating Maps in ScrollEd

Pathfinding

## Linux


Setting up a Development Environment on Linux

Linux Setup (brief overview)

Building the Orx

library on Linux with Codelite  Codelite in Linux 
Building the Orx Library with Code::Blocks on Linux

## Localisation

 Localization  Localization and Multiple Languages

## Mac OS X

 Setting up a Development Environment for Mac OS X

 Cloning and building the Orx library on Mac OS X

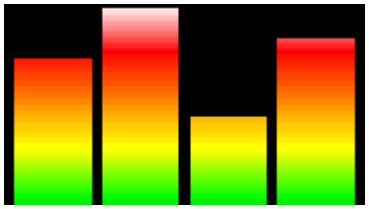
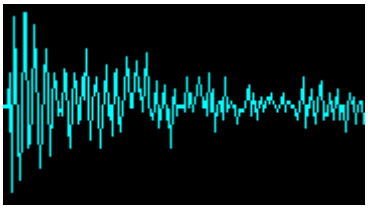
 Building the Orx Library with Xcode on Mac OS X

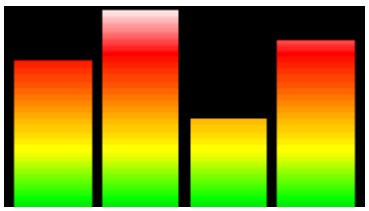
 Building the Orx Library with Codelite on Mac OS X

 Building the Orx Library with Code::Blocks on Mac OS X

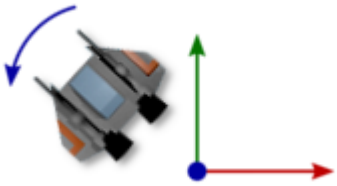

Setting up a game project on Mac OS X

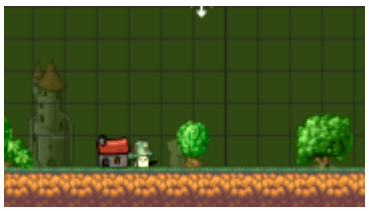
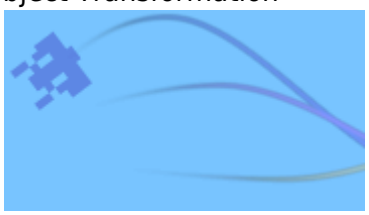
## Music


Sound & Music 
Sound Recording

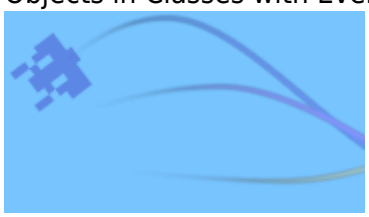

Sound Buses

## Objects

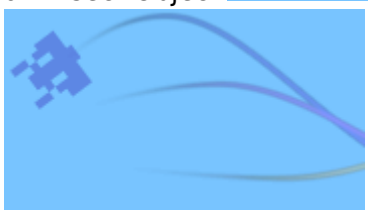

Basic Object 
Object Transformation

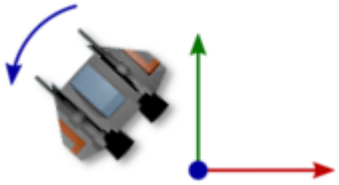

Semi-dynamic Objects and Level Mapping 

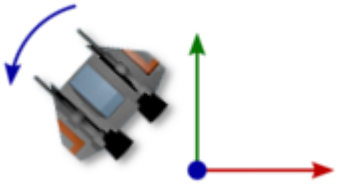
Objects in Classes with EventHandlers 
The Binding of Objects

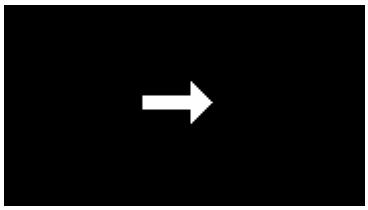

Object Traversing 
Notes on Rotation

 A natural-looking glowing ball effect  Creating an Insect Object  Creating an Object made of many Parts

 Passing items from one Object to another 

 Object Lifetime Relative Object Positioning and Scaling

 Teleporting on Screen Edges  Literals for Objects  Command Hooks for Object Events 

Aged Objects  See more Object Examples

## Orx Code (General)



orxSTRINGs, strings and chars  orxCOLOR and

how to colour an object 

Lists, HashTables and Trees

## Orx (Setting up)

 Cloning Orx from Github  Using Premake to create a Build Project to compile ORX from scratch  Compiling Orx with mingw32/gmake  Download a pre-built Orx for your environment  The Bounce Demo 

Getting & setting up Orx Video

## Orx/Scroll (C++ Abstraction layer for Orx)



An Introduction to Orx/Scroll 

The Binding of Objects 

Creating an orx/Scroll project using 'init'


Creating Maps in ScrollEd

Colliding

ScrollObjects with Orx Objects

Access Scroll class from ScrollObject

ScrollObject to ScrollObject Communication

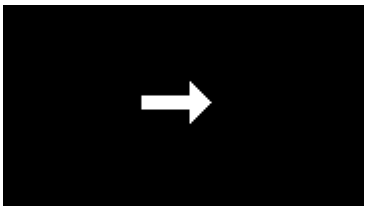
Changing the Default Config File for orx/Scroll

Moving a ScrollObject along a curve

orxScroll, Cameras and Viewports


ProgressBars in orxScroll

Pathfinding


See more orx/Scroll Examples

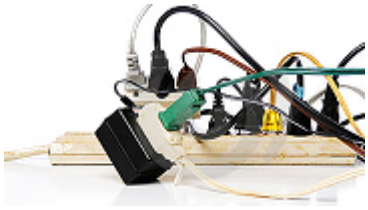
## Physics


Basic Physics and Collisions

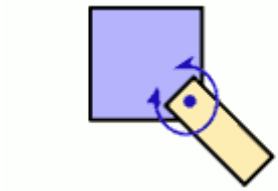

Physics

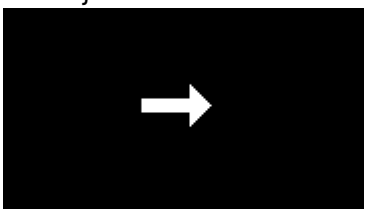

Raycasting


Interaction, Control and Physics

 Using the Inkscape SVG to ORX Converter 

Creating an Object made of many Parts  Creating an Insect Object

(Animation)  Weld Joint on parent/child Objects with Bodies

 Applying a force at a position point  See more Physics Examples

## Premake (deprecated)



Using Premake to create a Build Project to compile ORX from scratch

## Projects



Creating your own project using 'init'  The 'init' command & available extensions Video  How to update an existing project






Creating an orx/Scroll project using 'init' How to use Premake to create a build configuration for your own project in any IDE/OS



XCode 3 Tutorial



Working with Android



~~Native Tutorial~~ (deprecated)



Using the Android Demo as a template for your own projects

## Publishing



Preparing for a release under Windows





Preparing for a release under MacOSX

Console-less Applications



Android Packaging Scripts for continued deployments



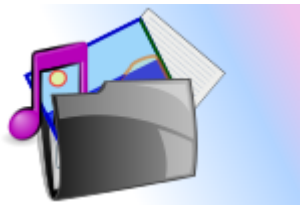
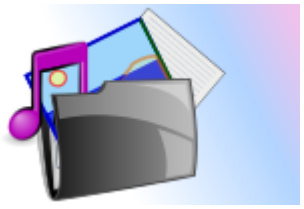
Common Release Checklist

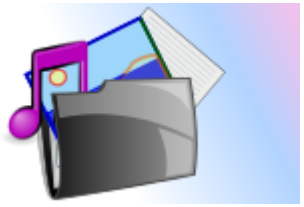
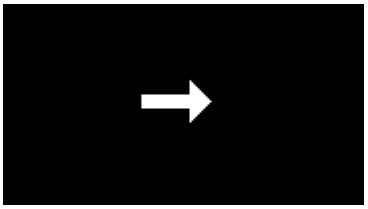
## Scrolling



Scrolling

## Resources

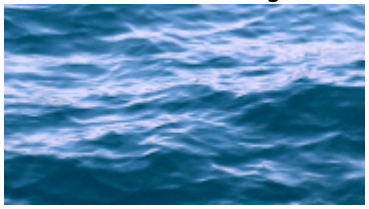

Zip Archive Resources 
Resources over HTTP

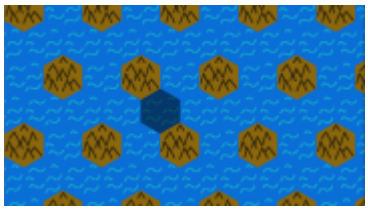

Resource Reloading 
See more Resource Examples

## Scenes

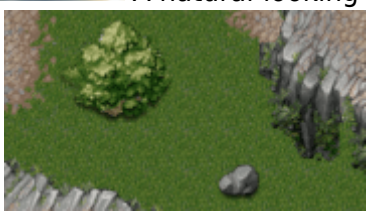
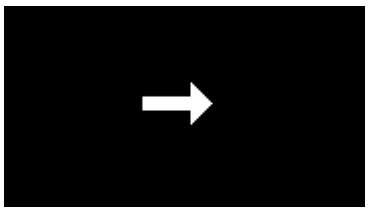

Data-Driven Scene Transitions

## Shaders

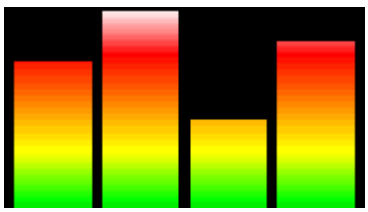
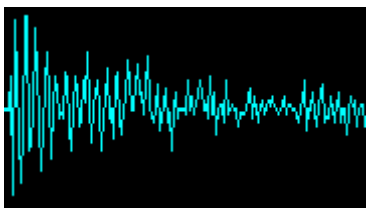

Getting started with Shaders in Orx 
Shaders in Screen Space 
Spawner & Shader 
Shader &

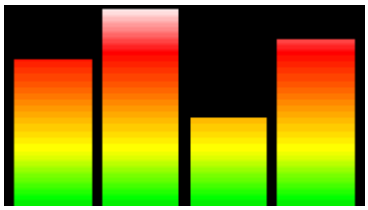
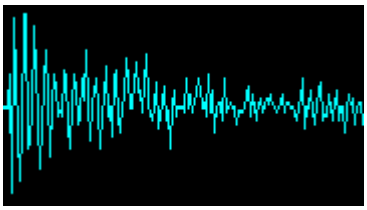

Lighting Shader coordinates tutorial 
Hexagon Grid Tutorial 
Hexagon Grid Tutorial (Axial/Cubial Coordinates)


A natural-looking glowing ball effect 

Fun with Text and Shaders 
Maps in a Shader 
See more Shader Examples

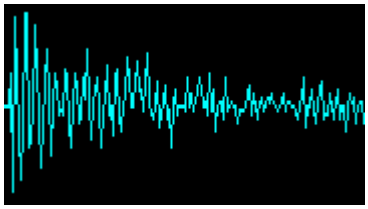
## Sound


Sound & Music 
Sound Recording


Sound Buses 
Audio Filters

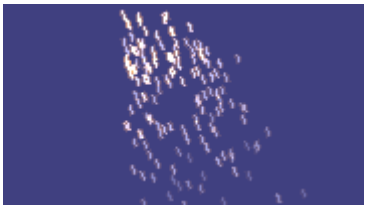
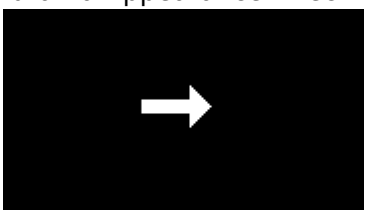


Audio filters, miniaudio & audio extensions Video

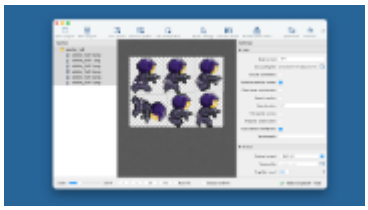

Sound Spatialization

## Spawners

 Spawner & Shader  Creating Particle Explosions

 Spawning Bullets  Sparks with Spawners and FX  Futurama Appearance Effect  Spawners using Relative Position and Scale  See more Spawner Examples

## Sprites

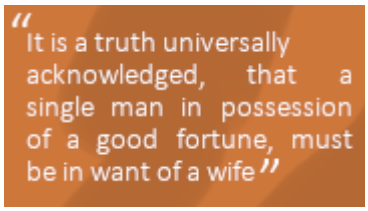
 Creating sprite sheets with TexturePacker

## System

 The Clipboard  Drag and Drop

 Commandline Parameters

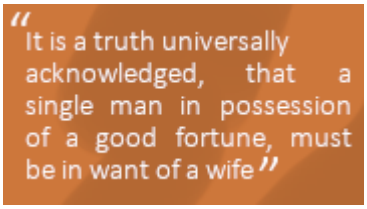
## Text



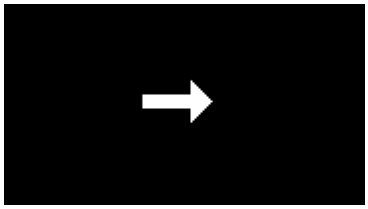
Text Boundaries 

Fun with Text and Shaders



orxFontGen 

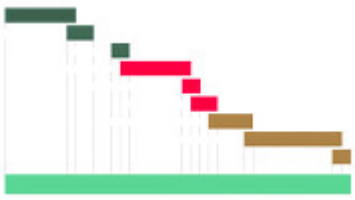
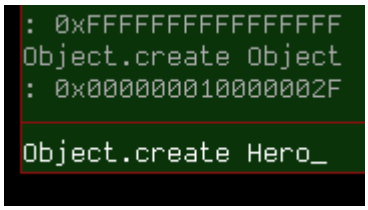
Text Background


See more Text Examples

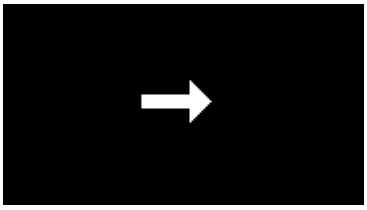
## Textures


Using compressed textures on the iPad

## Timelines / Tracks

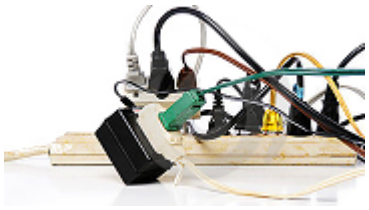
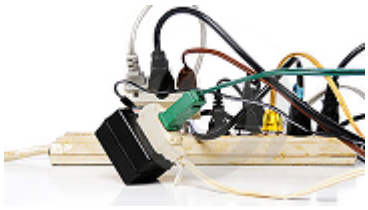

Timelines / Tracks 

Command and Timeline

Notes 
See more Track and Command Examples

## Tools

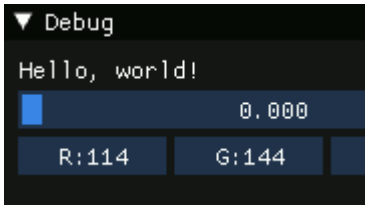
 The Orx Profiler  orxFontGen

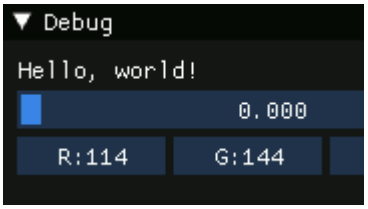
 Using the Inkscape SVG to ORX Converter 

Using the TMX to ORX Converter  Using the darkFunction to ORX Converter

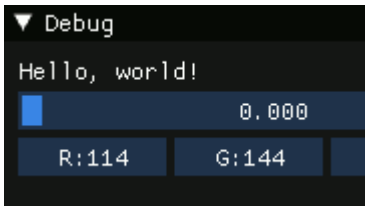
 Using SWIG to talk to Java on Android  Logging all Structures to a Tree

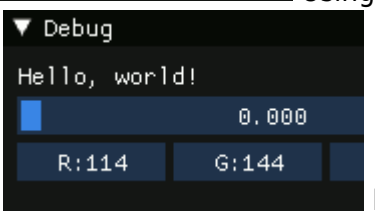
## UI / User Interface

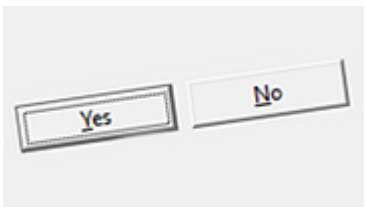


Using ImGui with Orx 

Using Nuklear with Orx



Nuklear Font Management 

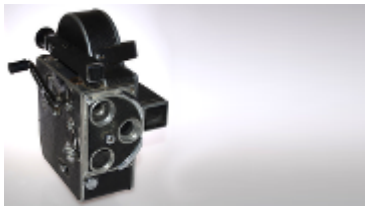
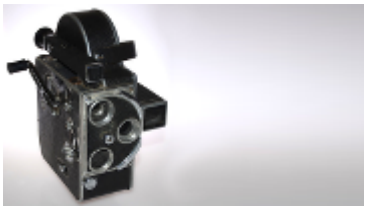
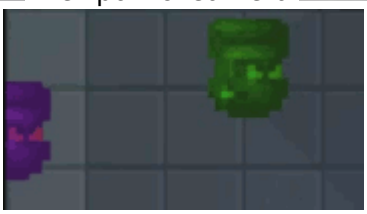
Notes on Nuklear with Orx 

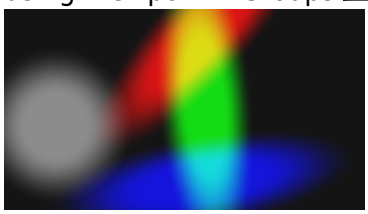
File Dialogs and Messageboxes



Mouser over effect for buttons

## Viewports

 Viewport & Camera  Heads Up Display (HUD) using Viewport + Groups  Teleporting on Screen Edges

 Viewport Render to Texture

## Visual Studio

 Building the Orx library with Visual Studio 

Stand Alone Application

## Windows

 Compiling Orx with mingw32/gmake  Building the Orx library with Visual Studio

## XCode

 Xcode4 Scroll, Console-less, Resources 
Building the Orx Library with Xcode on Mac OS X

From:
https://www.orx-project.org/wiki/ - **Orx Learning**

Permanent link:
**https://www.orx-project.org/wiki/en/tutorials/main**

Last update: **2025/12/08 12:09 (12 months ago)**