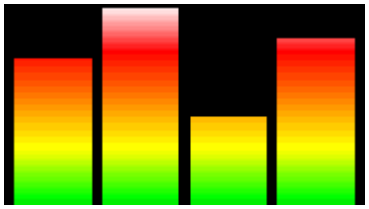
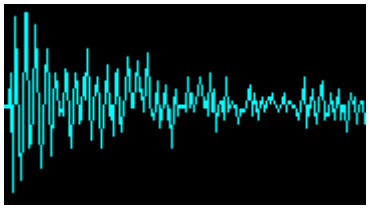
# Tutorials Listed By Subject

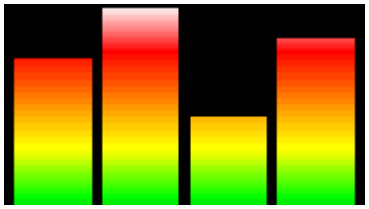
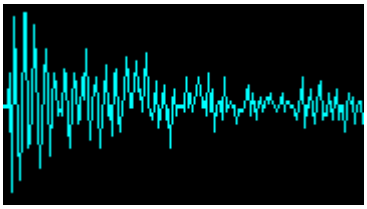
This section contains all tutorials indexed by subject for orx, an opensource, portable, lightweight, data-driven & 2D-oriented game engine.

Contributions are very welcome.

Search

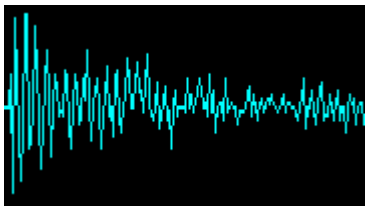
## Audio


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

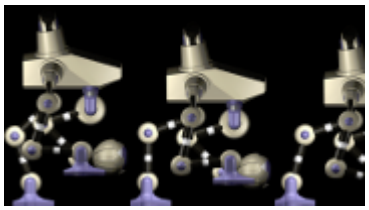
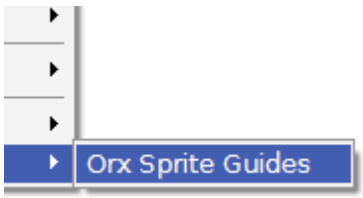
Project Android Demo as a template project

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

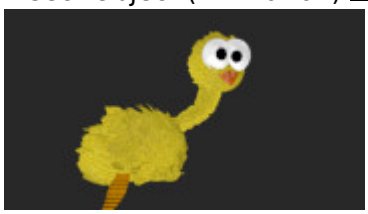
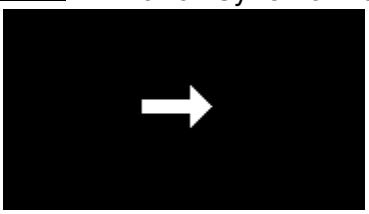
 Realistic Walk Movement  Creating Particle Explosions 


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

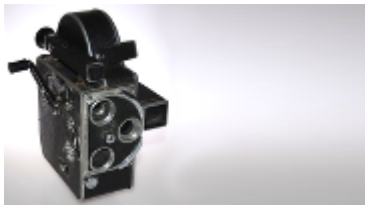
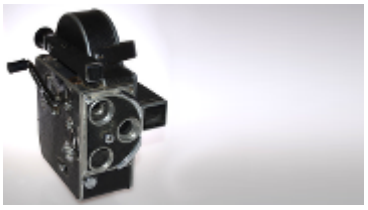
## C++

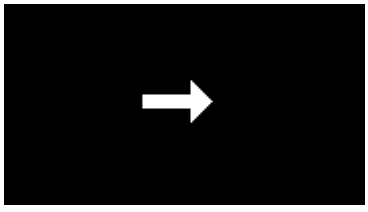
 Localization  Stand Alone Application

 Using orxObjects in Classes with an EventHandler

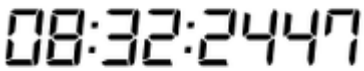
 An Introduction to orx/Scroll  Compiling hidapi in a game

## Cameras

 Viewport and Camera  Cameras and Frustums

 orxScroll, Cameras and Viewports  See more Camera Examples

## Clocks

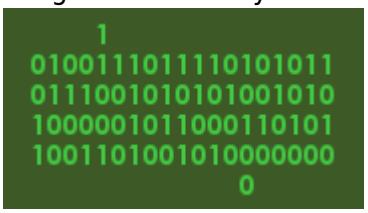


Clock

## 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

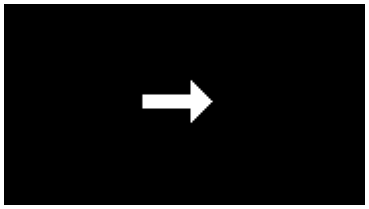
## Codelite

 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

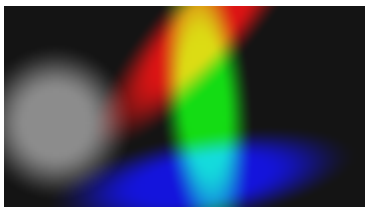
## Color / Colour

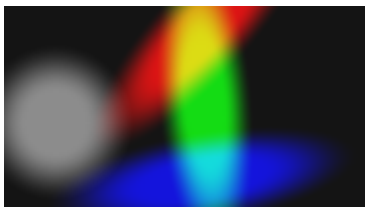
 orxCOLOR and how to colour an object 

Converting a percentage to a color  Web Color Literals

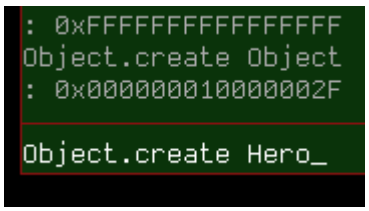
 A natural-looking glowing ball effect  See more Color Examples

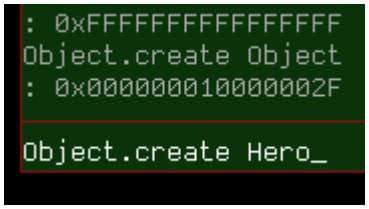
## Compositing

 Compositing (2D lighting with offscreen rendering)

 Viewport Render to Texture

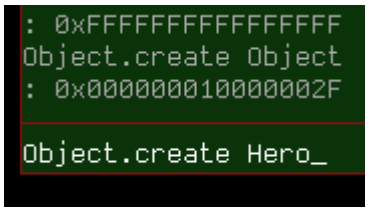
## Console

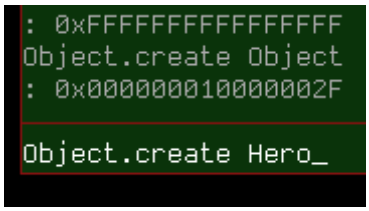



Guide to the Orx Console and Commands  The Bounce Demo 


Custom Console Colors

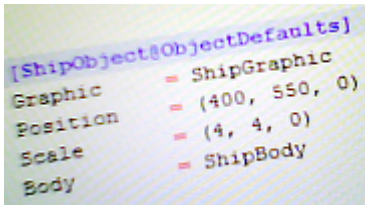
## Command Module

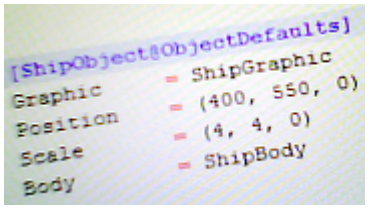


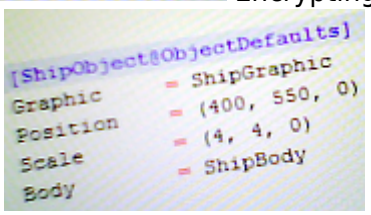
Command Module Syntax 

Command and Timeline Notes

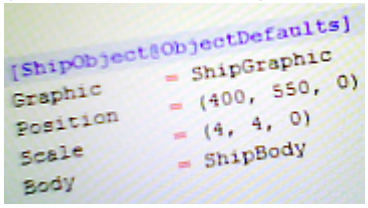
## Config

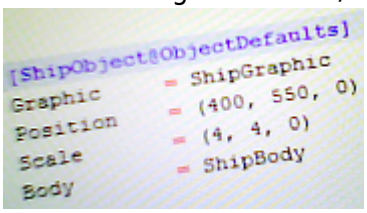


Encrypting Config Files 

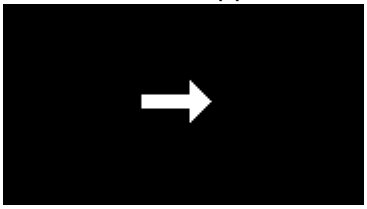
Saving information to a config file 

Changing the Default Config File 

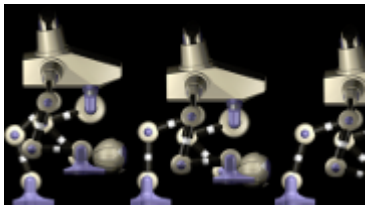
Changing the Default Config File for orx/Scroll 

Retrieving and Updating Config Values 

Stepped Random Values 

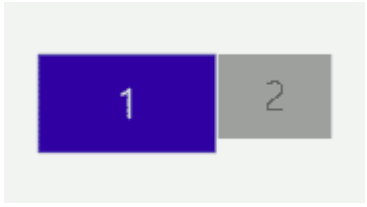
Local-only Config Overriding Video 
See more Config Examples

## Controls

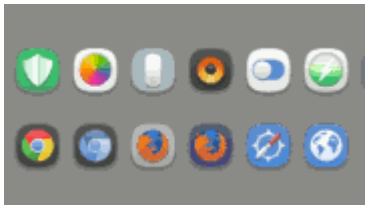
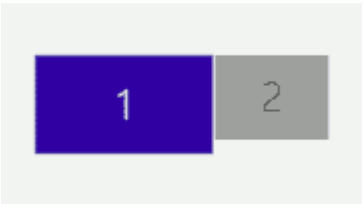

Interaction, Control and Physics 
Realistic Walk

Movement  Creating Particle Explosions

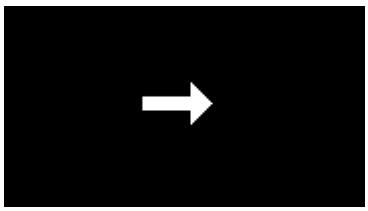
## Display



Multiple Monitors  Custom Mouse Cursors

 Application Icons 

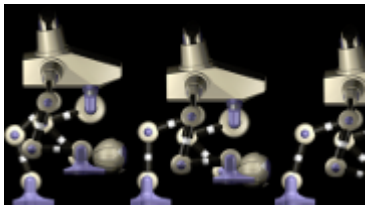
Borderless Window Mode

 See more Display Examples

## Downloads

 Getting Started with Orx

## Events

 Realistic Walk Movement 

Using orxObjects in Classes with an EventHandler  Creating Particle Explosions

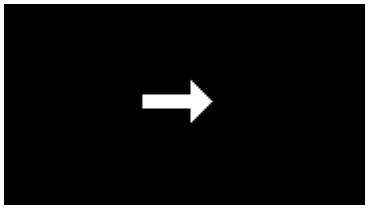
## Fonts



Fun with Text and Shaders 

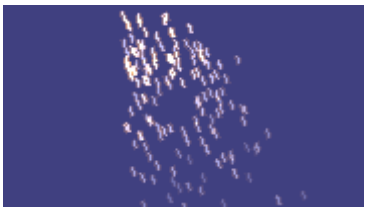
orxFontGen

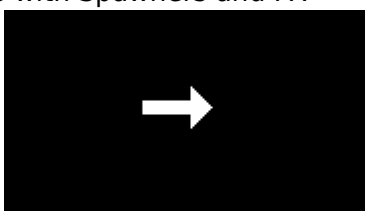


Font tool for unicode, including Chinese 

See more Font Examples

## FX


FX 
Sparks with Spawners and FX


Creating an Insect Object (Speed FX) 

See more FX Examples

## Game Guides


Beginner's Guide - Platform Game 
Beginner's Guide - 2D UFO Game 
Beginner's Guide - UFO Game Video Version

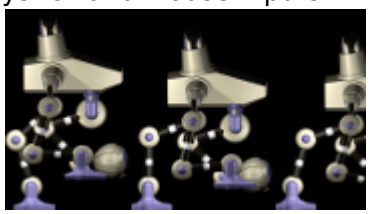
## iPad / iOS / iPhone


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

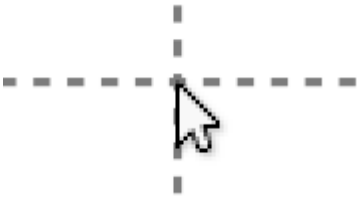
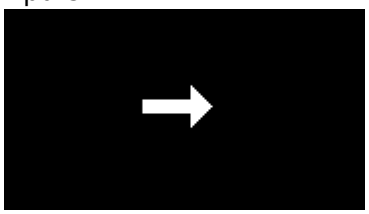
## Input


8 Way Joystick / Gamepad Control 
Analog Joystick / Gamepad Control 
Analog Stick Threshold

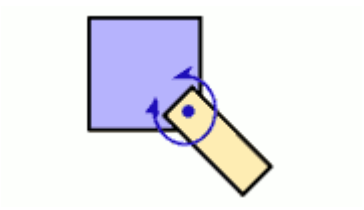
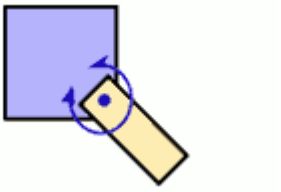

Overriding a Controller Mapping 
Remapping Controller Inputs 
Testing Key, Joystick and Mouse Inputs


Interaction, Control and Physics 
Realistic Walk Movement 
Creating Particle Explosions 

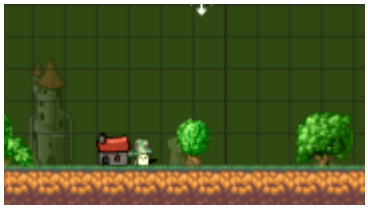
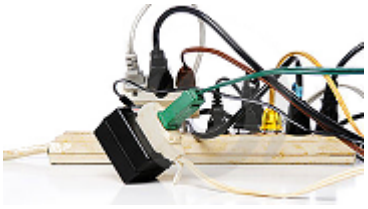
Mouse over effect for buttons 
Notes on input 


Keyboard Inputs Mouse Grab  Compiling hidapi in a game  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

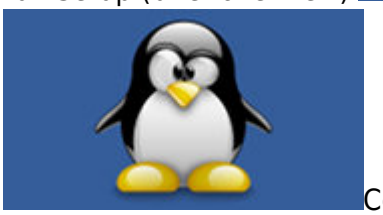
Creating Maps in ScrollEd  Pathfinding

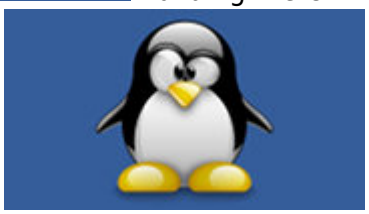
## Linux


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

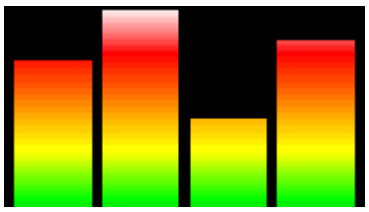

Building the Orx Library with Xcode on Mac OS X

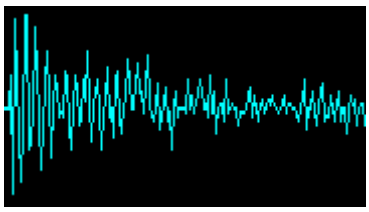

Building the Orx Library with Codelite on Mac OS X

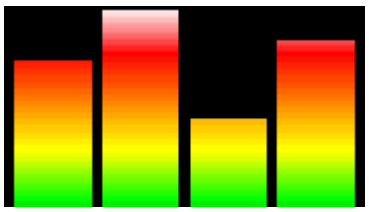

Building the Orx Library with Code::Blocks on Mac OS X


Setting up a game project on Mac OS X

## Music

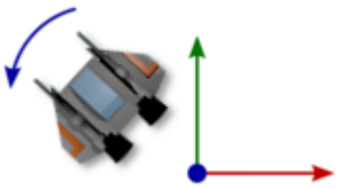

Sound & Music


Sound Recording

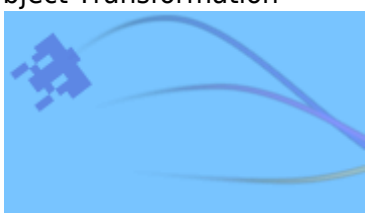

Sound Buses

## Objects

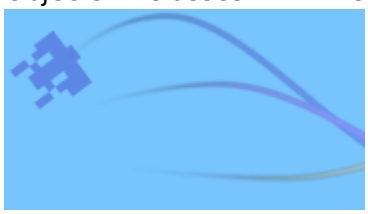

Basic Object


Object Transformation

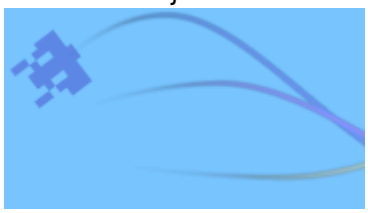
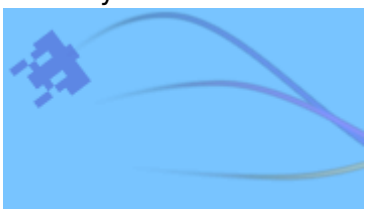

Semi-dynamic Objects and Level Mapping

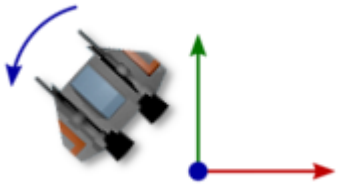


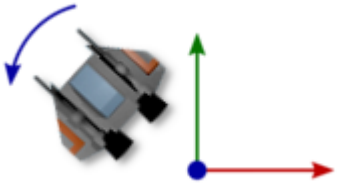
Objects in Classes with EventHandlers  The Binding of Objects

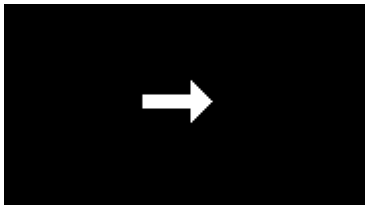
 Object Traversing  Notes on Rotation

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

 Passing items from one Object to another 

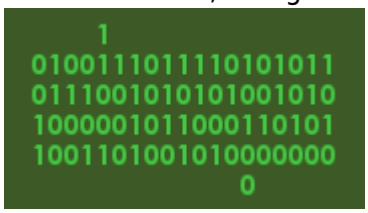
 Object Lifetime Relative Object Positioning and Scaling

 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

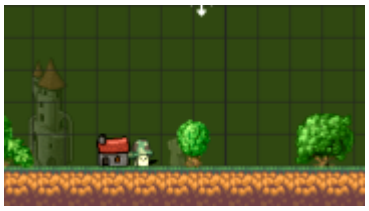
Access Scroll class from ScrollObject

ScrollObject to ScrollObject Communication

Changing the Default Config File for orx/Scroll

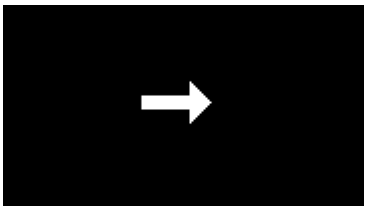
Moving a ScrollObject along a curve

orxScroll, Cameras and Viewports



ProgressBars in orxScroll

Pathfinding



See more orx/Scroll Examples

## Physics

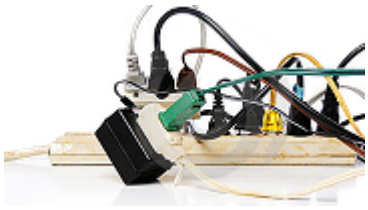
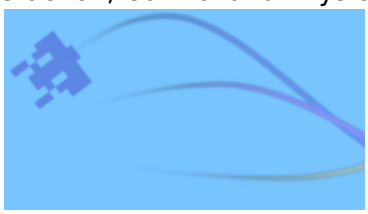


Basic Physics and Collisions

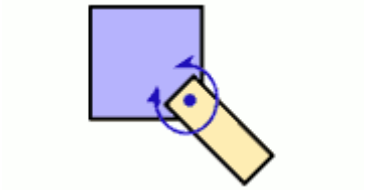


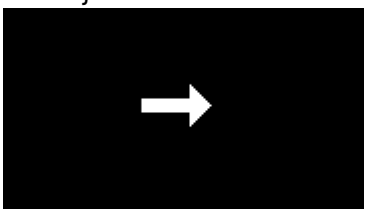
Physics

 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




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



~~Using orxhub~~ (deprecated)

## Publishing



Preparing for a release under Windows





Preparing for a release under MacOSX

Console-less Applications



Android Packaging Scripts for continued deployments



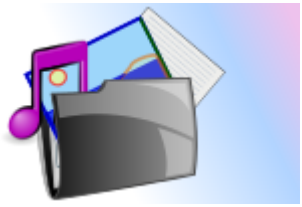
Common Release Checklist

## Scrolling

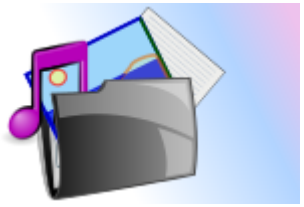



Scrolling

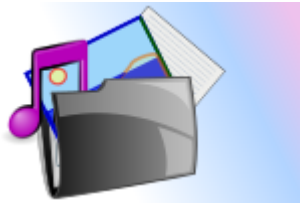
## Resources



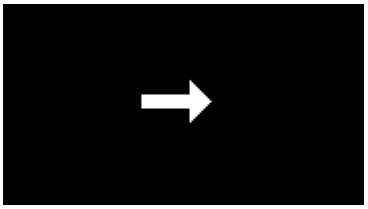
Zip Archive Resources



Resources over HTTP



Resource Reloading



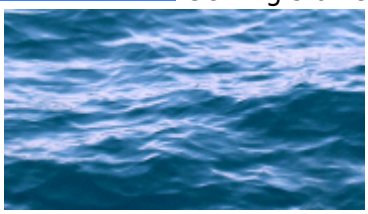
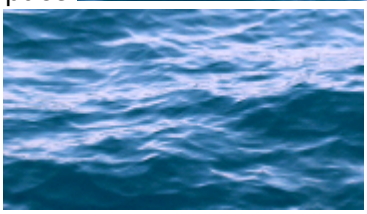
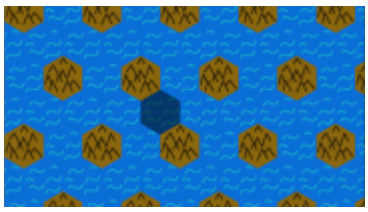
See more Resource Examples

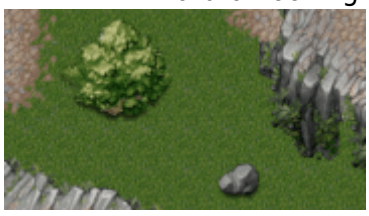
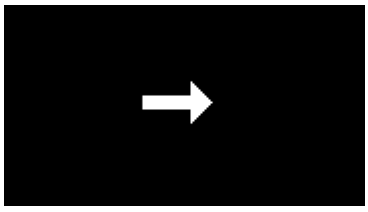
## Scenes



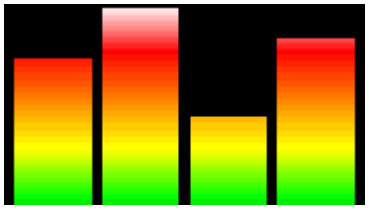
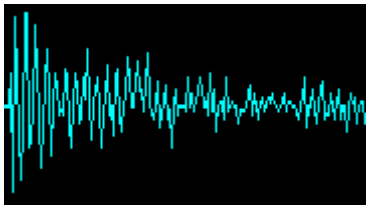
Data-Driven Scene Transitions

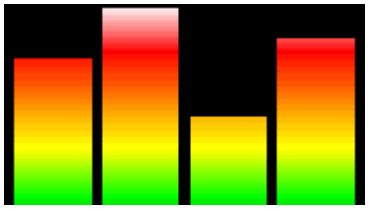
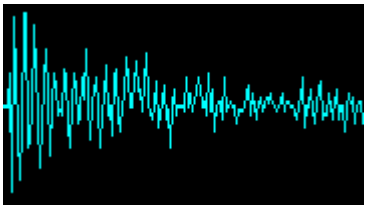
## Shaders

 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

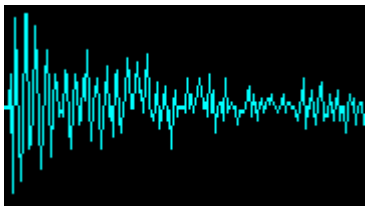
## Sound

 Sound & Music  Sound Recording

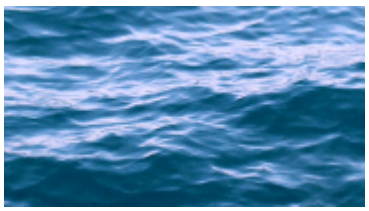
 Sound Buses  Audio Filters



Audio filters, miniaudio & audio extensions Video

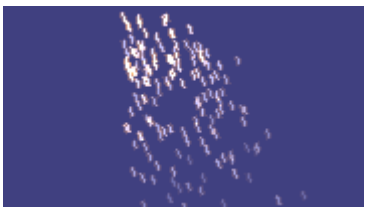

Sound Spatialization

## Spawners


Spawner & Shader

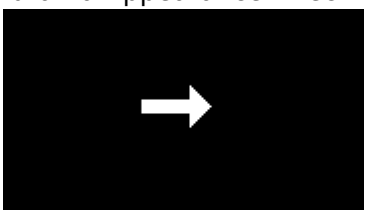

Creating Particle Explosions


Spawning Bullets

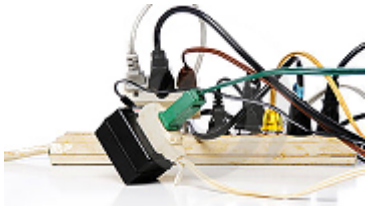

Sparks with Spawners and FX

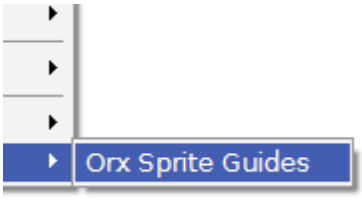

Futurama Appearance Effect


Spawners using Relative Position and Scale


See more Spawner Examples

## Sprites


Using the darkFunction to ORX Converter Addin for The Gimp to Extract Guides for Configuration



## System



The Clipboard

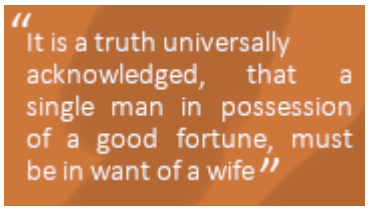


Drag and Drop



Commandline Parameters

## Text



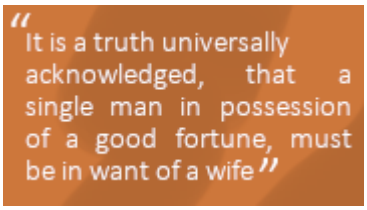

Text Boundaries



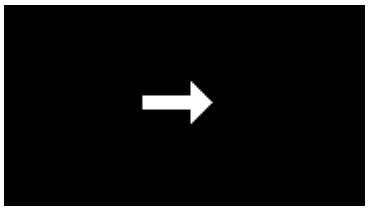

Fun with Text and Shaders




orxFontGen




Text Background



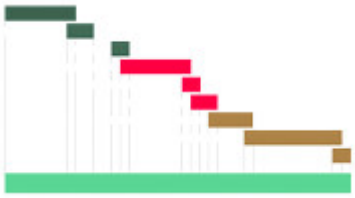
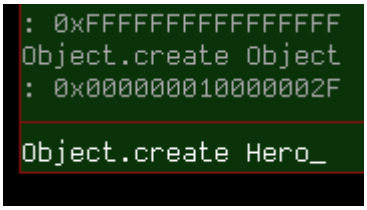
See more Text Examples

## Textures

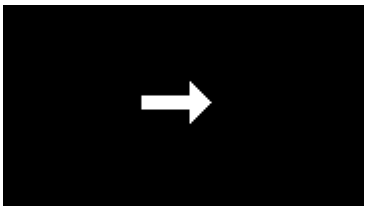


Using compressed textures on the iPad

## Timelines / Tracks

 Timelines / Tracks 

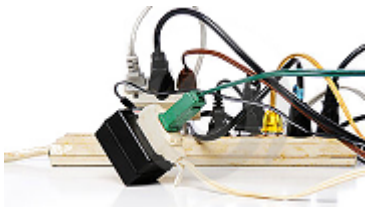
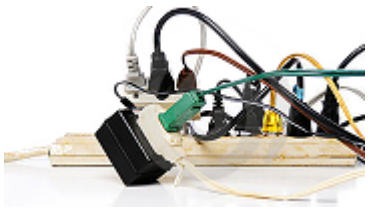
Command and Timeline

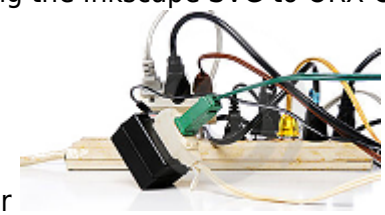
Notes  See more Track and Command Examples

## Tools

 The Orx Profiler 

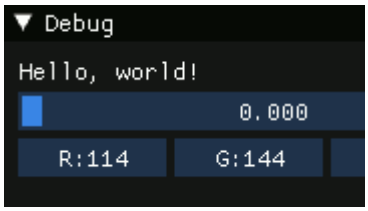
orxFontGen

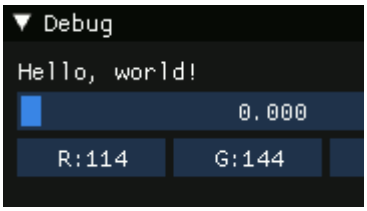
 Using the Inkscape SVG to ORX Converter 

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

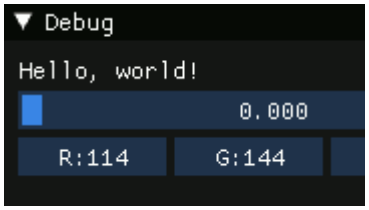
 Using SWIG to talk to Java on Android  Logging all Structures to a Tree

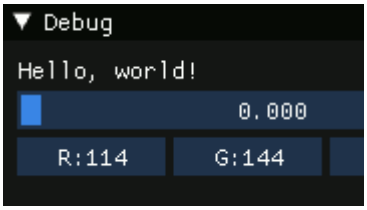
## UI / User Interface

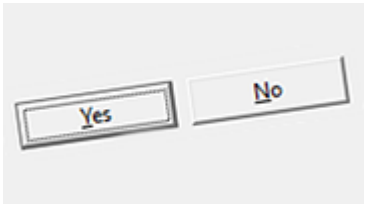


Using ImGui with Orx 

Using Nuklear with Orx



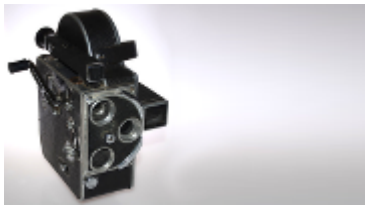
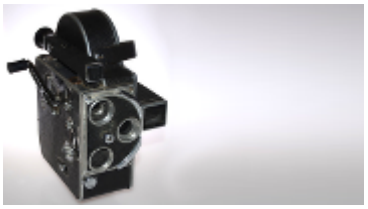
Nuklear Font Management


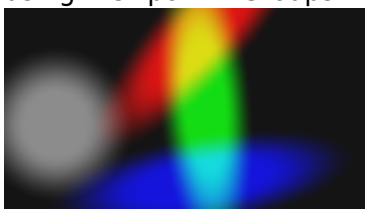
Notes on Nuklear with Orx


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?rev=1732100526**

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