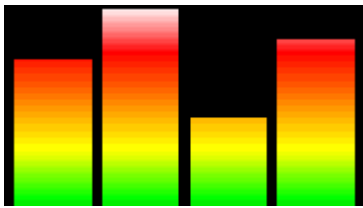


# Tutorials Listed By Subject

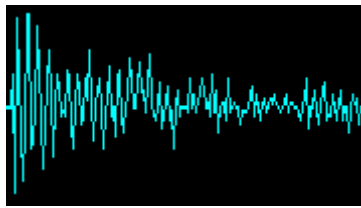
This section contains all tutorials indexed by subject for [orx](#), an opensource, portable, lightweight, data-driven & 2D-oriented game engine.

Contributions are very welcome.

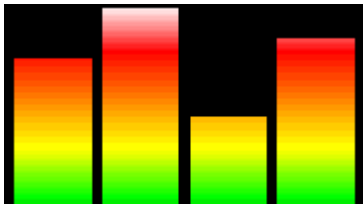
## Audio



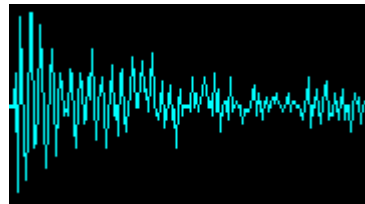
Sound & Music



Sound Recording



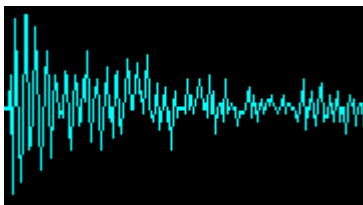
Sound Buses



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

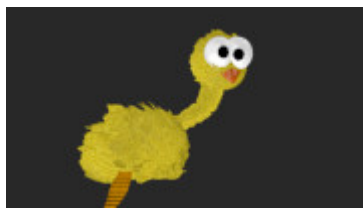
Android Demo as a template project



Using SWIG to talk to Java on Android continued deployments

Android Packaging Scripts for

### Animation



New Animation System Walkthrough



Basic

Animation



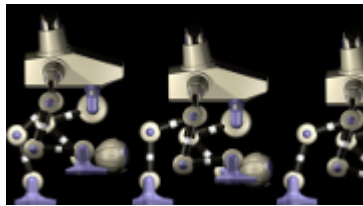
Animation and Clearing Targets



Animation Inheritance with Prefixes



Text Animation

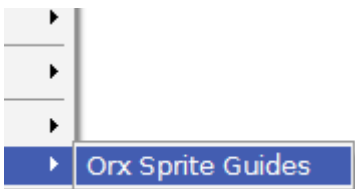


Realistic Walk Movement



Creating Particle

Explosions



Addin for The Gimp to Extract Guides for Configuration



Mouse over effect for buttons



Creating an

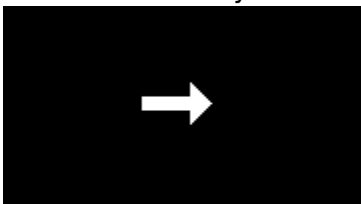


Insect Object (Animation)

Animation Synchronization



Zero Length Frames



See more Animation

Examples

### C++



Localization



Stand Alone Application



Using orxObjects in Classes with an EventHandler



in a game

An Introduction to orx/Scroll



Compiling hidapi

### Cameras



Viewport and Camera

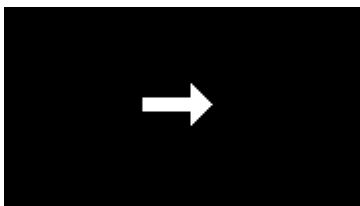


Cameras and Frustums



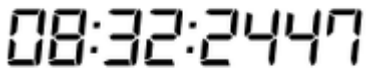
Camera Examples

orxScroll, Cameras and Viewports



See more

# Clocks



Clock

# Code::Blocks



Getting Code::Blocks for Windows



Building the



Orx Library with Code::Blocks on Mac OS X  
Code::Blocks on Linux

Building the Orx Library with

# Codelite



Getting Codelite for Windows



Building the Orx



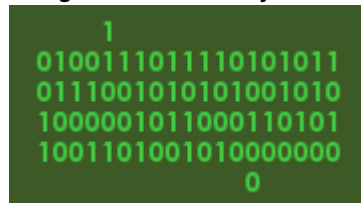
Library with Codelite on Mac OS X

Building the Orx library on Linux with

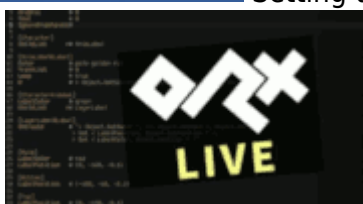


Codelite

Setting up Codelite on Linux



Stand



Alone Application

Codelite & Environment Variables Video

## Color / Colour

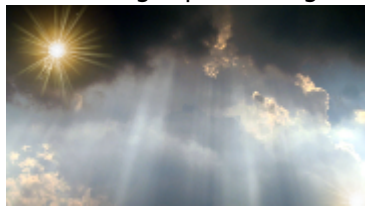


OrxCOLOR and how to colour an object

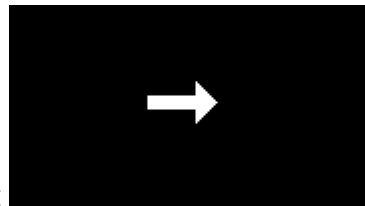


Converting a percentage to a color

Web Color Literals



A natural-looking glowing ball effect



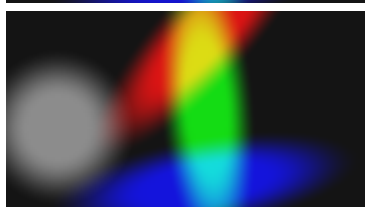
See more

Color Examples

## Compositing



Compositing (2D lighting with offscreen rendering)



Viewport Render to Texture

## Console

```
: 0xFFFFFFFFFFFFFFFF
Object.create Object
: 0x000000010000002F
Object.create Hero_
```

Guide to the Orx Console and Commands



The

```
: 0xFFFFFFFFFFFFFFFF
Object.create Object
: 0x000000010000002F
Object.create Hero_
```

Bounce Demo

Custom Console Colors

## Command Module

```

: 0xFFFFFFFFFFFFFFFF
Object.create Object
: 0x000000010000002F

Object.create Hero_

```

Command Module Syntax

```

: 0xFFFFFFFFFFFFFFFF
Object.create Object
: 0x000000010000002F

Object.create Hero_

```

Command and

Timeline Notes

## Config

```

[ShipObject@ObjectDefaults]
Graphic = ShipGraphic
Position = (400, 550, 0)
Scale = (4, 4, 0)
Body = ShipBody

```

Encrypting Config Files

```

[ShipObject@ObjectDefaults]
Graphic = ShipGraphic
Position = (400, 550, 0)
Scale = (4, 4, 0)
Body = ShipBody

```

Saving information to a

config file

```

[ShipObject@ObjectDefaults]
Graphic = ShipGraphic
Position = (400, 550, 0)
Scale = (4, 4, 0)
Body = ShipBody

```

Changing the Default Config File



Changing the Default Config File for orx/Scroll

```

[ShipObject@ObjectDefaults]
Graphic = ShipGraphic
Position = (400, 550, 0)
Scale = (4, 4, 0)
Body = ShipBody

```

Retrieving and Updating

Config Values

```

[ShipObject@ObjectDefaults]
Graphic = ShipGraphic
Position = (400, 550, 0)
Scale = (4, 4, 0)
Body = ShipBody

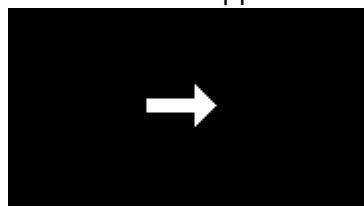
```

Stepped Random Values



Local-

only Config Overriding Video

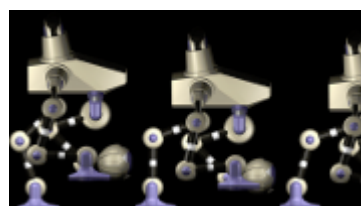


See more Config Examples

## Controls



Interaction, Control and Physics



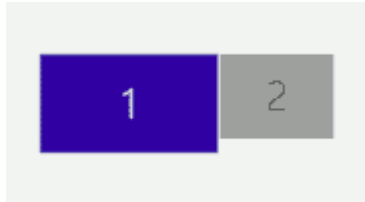
Realistic Walk



Movement

Creating Particle Explosions

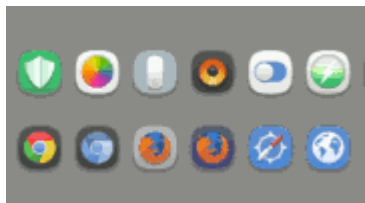
### Display



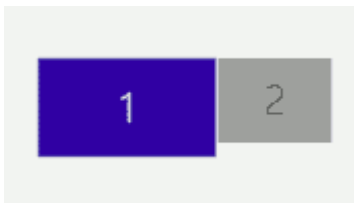
Multiple Monitors



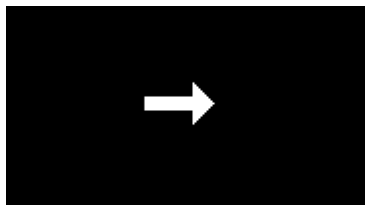
Custom Mouse Cursors



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



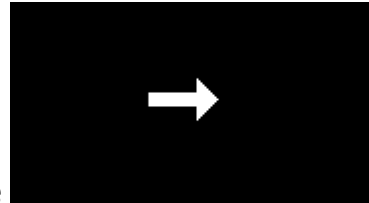
Fun with Text and Shaders



orxFontGen



Font tool for unicode, including Chinese



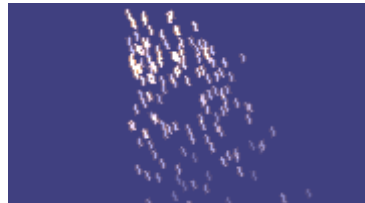
See

[more Font Examples](#)

## FX



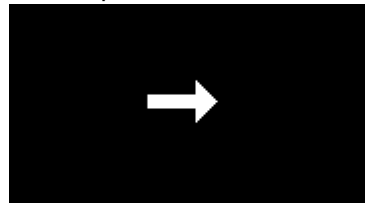
FX



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



a game to the iPad

Using compressed textures on the iPad



Porting

### Input



Joystick / Gamepad Control

8 Way Joystick / Gamepad Control



Analog



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



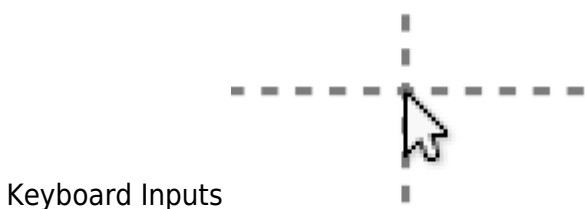
Mouse

over effect for buttons



Notes on input





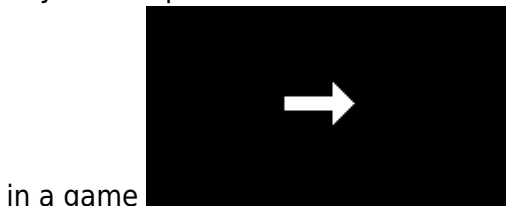
Keyboard Inputs



Mouse Grab



Compiling hidapi



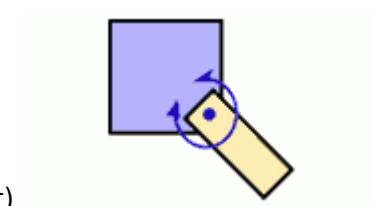
in a game

See more Input Examples

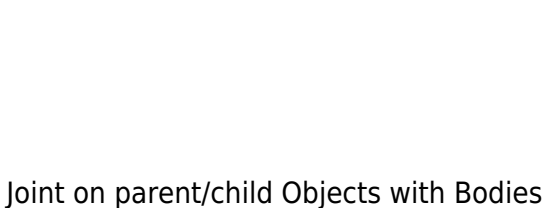
## Joints



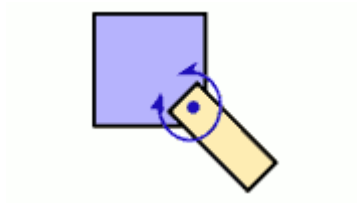
Creating an Insect Object (Revolute Joint)



Weld

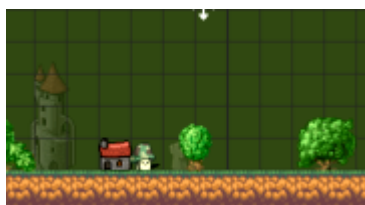


Joint on parent/child Objects with Bodies

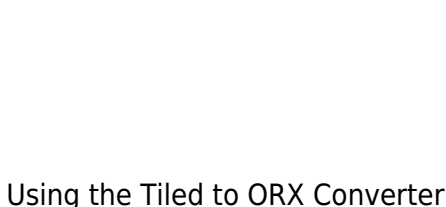
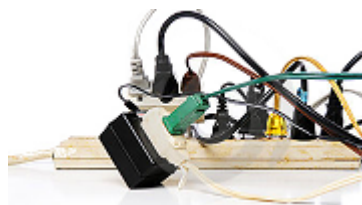


Z-order of Objects with Joints

## Level Mapping



Semi-dynamic Objects and Level Mapping



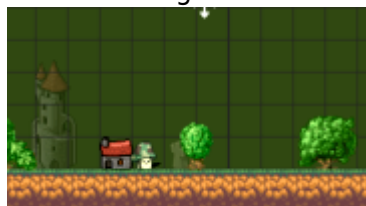
Using the Tiled to ORX Converter



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



Languages



Localization

Localization and Multiple

### 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

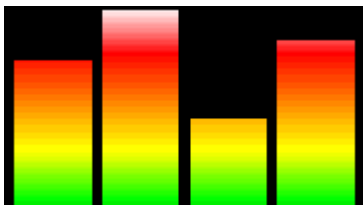


Building the Orx Library with Code::Blocks on Mac OS X

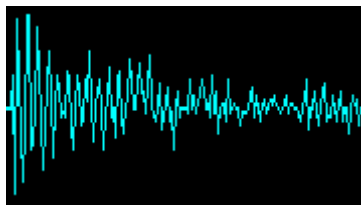


Setting up a game project on Mac OS X

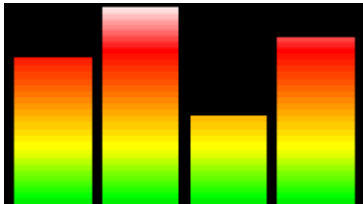
## Music



Sound & Music



Sound Recording

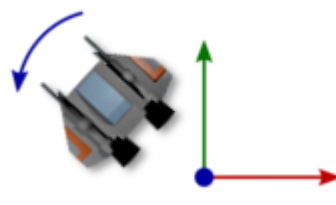


Sound Buses

## Objects



Basic Object



Object Transformation



Semi-dynamic Objects and Level Mapping





Objects in Classes with EventHandlers

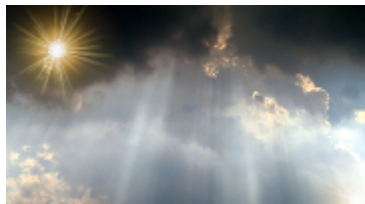
The Binding of Objects



Object Traversing



Notes on Rotation



A natural-looking glowing ball effect



Creating



an Insect Object

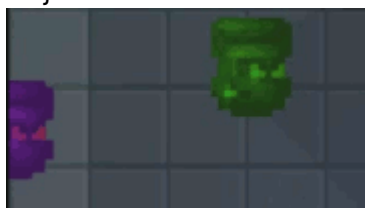
Creating an Object made of many Parts



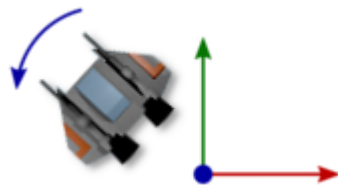
Passing items from one Object to another



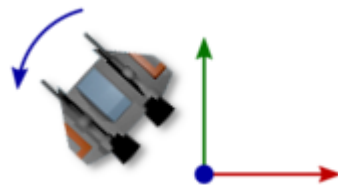
Object Lifetime



Teleporting on Screen Edges



Relative Object Positioning and Scaling



Literals for

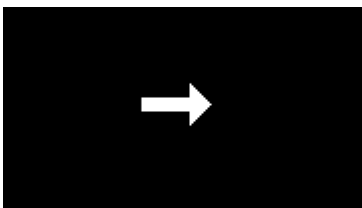
Objects



Command Hooks for Object Events



Aged Objects



See more Object Examples

## Orx Code (General)

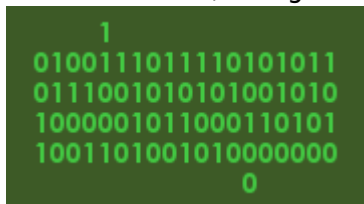


orxSTRINGS, strings and chars



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



SCROLL

Objects



Creating an orx/Scroll project using 'init'



SCROLL

Colliding

Creating Maps in ScrollEd



SCROLL

ScrollObjects with Orx Objects

Access Scroll class from ScrollObject



SCROLL



SCROLL

ScrollObject to ScrollObject Communication



SCROLL

Changing the Default Config File for orx/Scroll

Moving a ScrollObject along



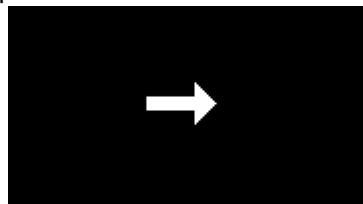
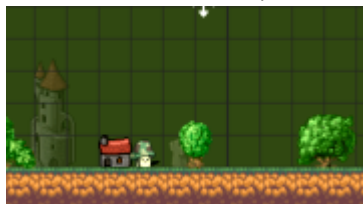
SCROLL



SCROLL

a curve

orxScroll, Cameras and Viewports



ProgressBars in orxScroll  
orx/Scroll Examples

Pathfinding

See more

### Physics



Basic Physics and Collisions



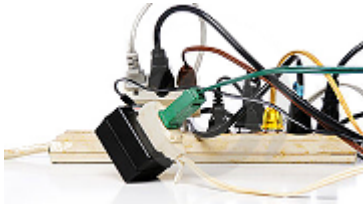
Physics



Raycasting



Interaction, Control and Physics



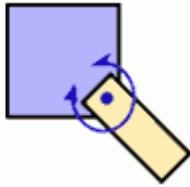
Using the Inkscape SVG to ORX Converter



Creating an Object made of many Parts



Creating an Insect Object



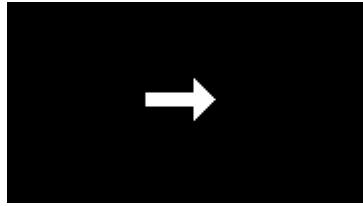
(Animation)

Weld Joint on parent/child Objects with Bodies



Physics Examples

Applying a force at a position point



See more

## 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

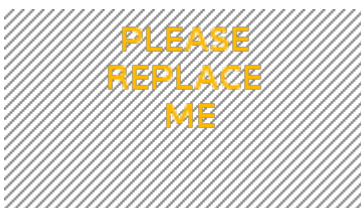


Android Packaging Scripts for continued deployments



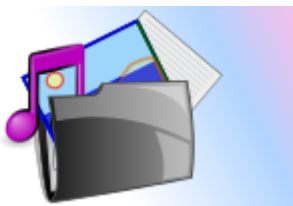
Common Release Checklist

## Scrolling

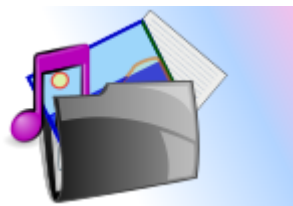


Scrolling

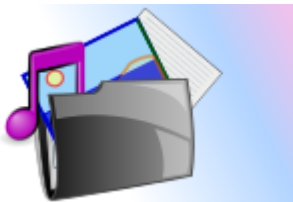
## Resources



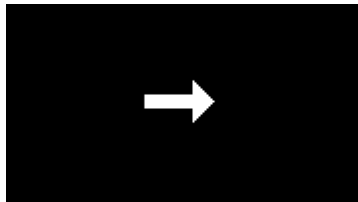
Zip Archive Resources



Resources over HTTP



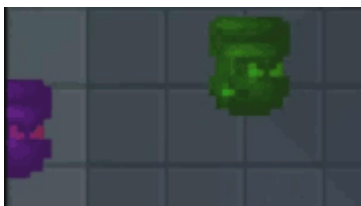
Resource Reloading



See more Resource

Examples

## Scenes



Data-Driven Scene Transitions

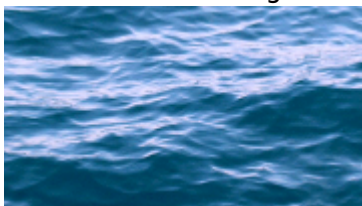
## Shaders



Getting started with Shaders in Orx



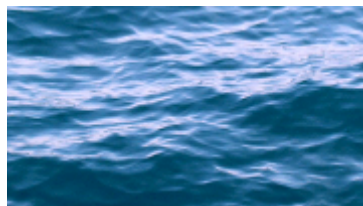
Shaders in



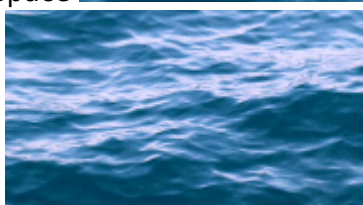
Screen Space



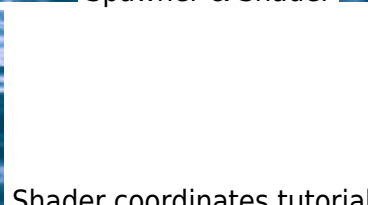
Spawner & Shader



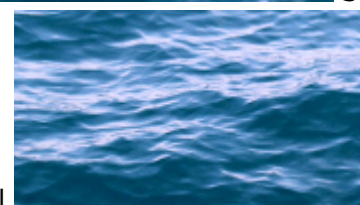
Shader &



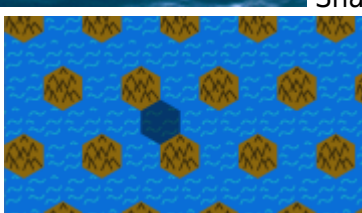
Lighting



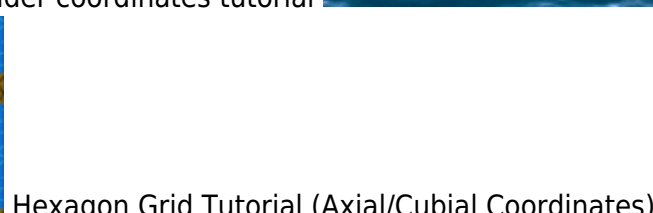
Shader coordinates tutorial



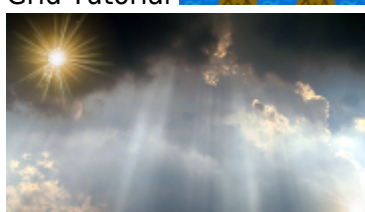
Hexagon



Grid Tutorial



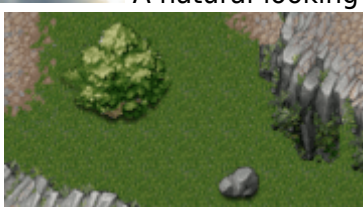
Hexagon Grid Tutorial (Axial/Cubial Coordinates)



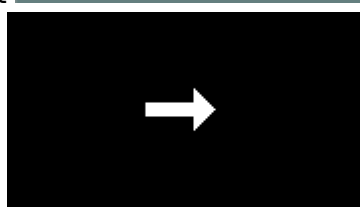
A natural-looking glowing ball effect



Fun with



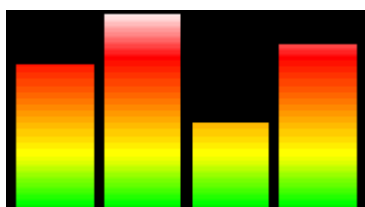
Maps in a Shader



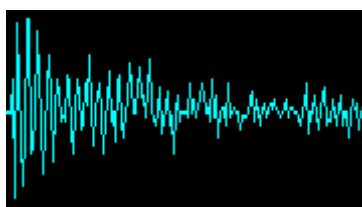
See more

Text and Shaders  
Shader Examples

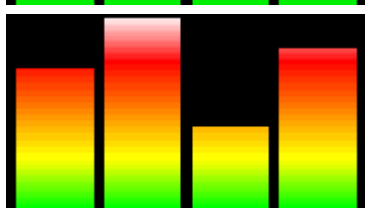
### Sound



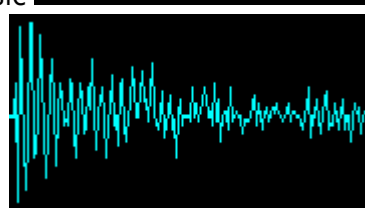
Sound & Music



Sound Recording



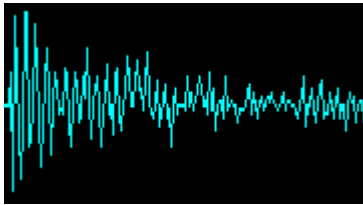
Sound Buses



Audio Filters

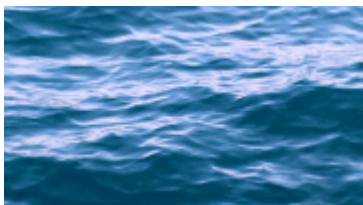


Audio filters, miniaudio & audio extensions Video



Sound Spatialization

## Spawners



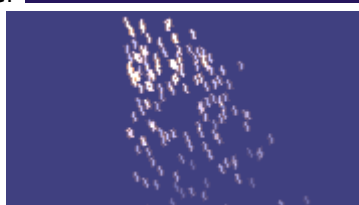
Spawner & Shader



Creating Particle Explosions



Spawning Bullets



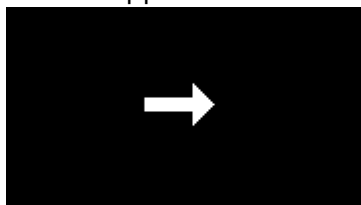
Sparks with Spawners and



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

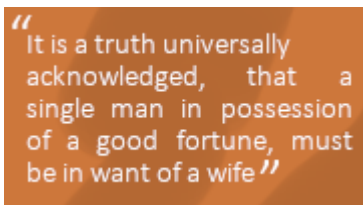


Drag and Drop



Commandline Parameters

## Text



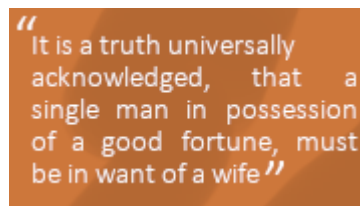
Text Boundaries



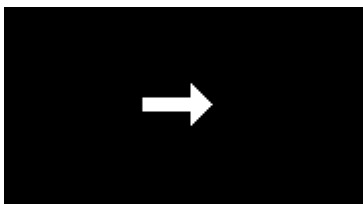
Fun with Text and Shaders



orxFontGen



Text Background



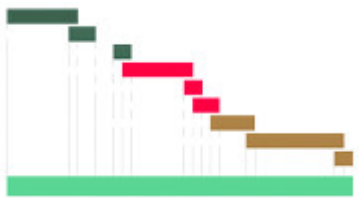
See more Text Examples

## Textures



Using compressed textures on the iPad

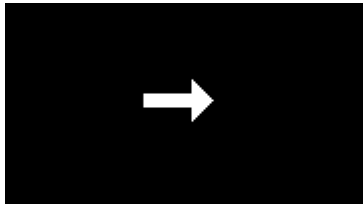
## Timelines / Tracks



Timelines / Tracks

```
: 0xFFFFFFFFFFFFFFFF
Object.create Object
: 0x000000010000002F
Object.create Hero_
```

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



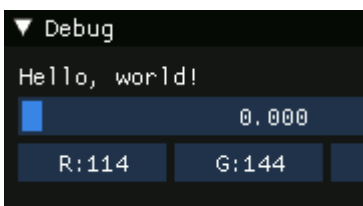
all Structures to a Tree

Using SWIG to talk to Java on Android

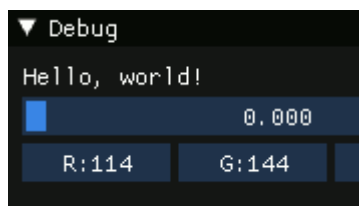


Logging

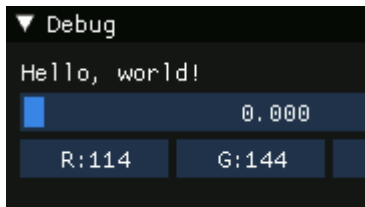
## UI / User Interface



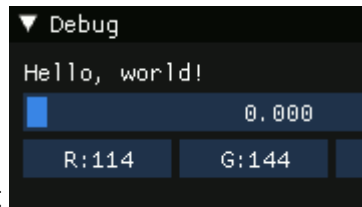
Using ImGui with Orx



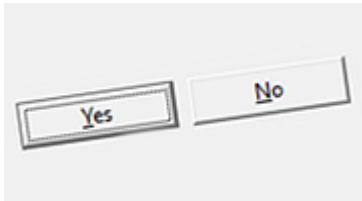
Using Nuklear with Orx



Nuklear Font Management



Notes on Nuklear



with Orx  
Mouser over effect for buttons

File Dialogs and Messageboxes



## Viewports



Viewport & Camera

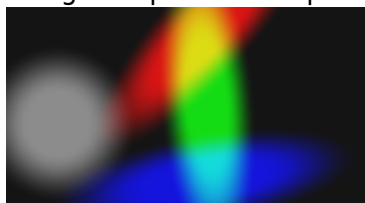


Heads Up Display (HUD)



using Viewport + Groups

Teleporting on Screen Edges



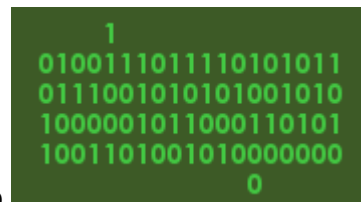
Viewport Render to Texture

## Visual Studio



Stand Alone Application

Building the Orx library with Visual Studio



## Windows



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



Building

## XCode



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

From:

<https://orx-project.org/wiki/> - **Orx Learning**

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