

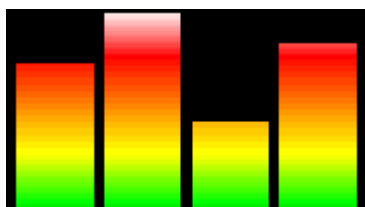
# Tutorials Listed By Subject

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

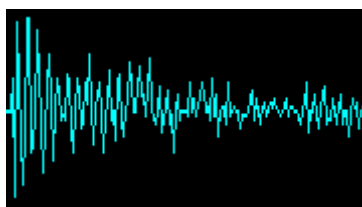
Those tutorials operates under a model of community contribution, ensuring its content is both created and utilized by its members. So your contributions will be very welcome. If you spot any problems, or if anything is not clear, please get in touch with us on the [Orx Discord's Server](#). Thank you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

 Search

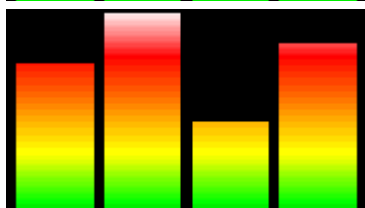
## Audio



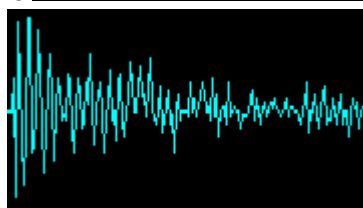
Sound & Music



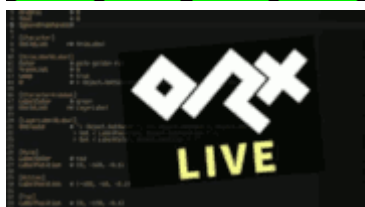
Sound Recording



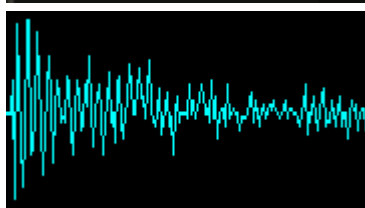
Sound Buses



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

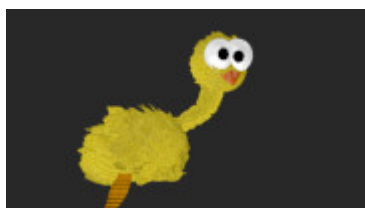
Android Demo as a template project



Using SWIG to talk to Java on Android continued deployments

Android Packaging Scripts for

### Animation



New Animation System Walkthrough



Basic



Animation

Animation and Clearing Targets



Animation Inheritance with Prefixes

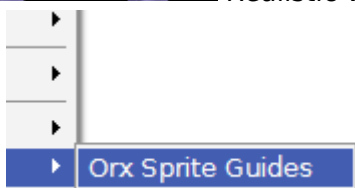
Text Animation



Realistic Walk Movement



Creating Particle



Explosions

Addin for The Gimp to Extract Guides for Configuration



Mouse over effect for buttons

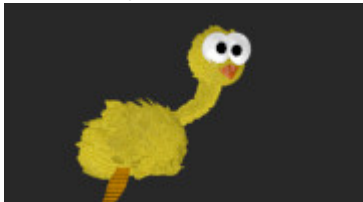


Creating an

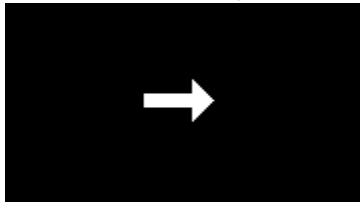


Insect Object (Animation)

Animation Synchronization



Zero Length Frames



See more Animation

Examples

### C++



Localization



Stand Alone Application



Using orxObjects in Classes with an EventHandler



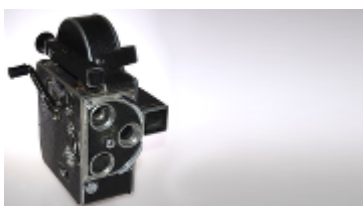
in a game

An Introduction to orx/Scroll

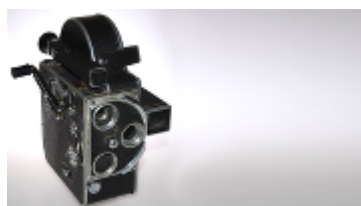


Compiling hidapi

### Cameras



Viewport and Camera

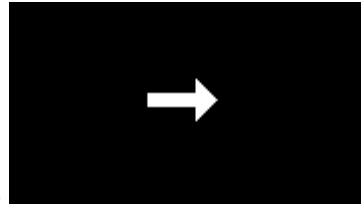


Cameras and Frustums



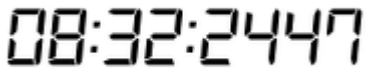
Camera Examples

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



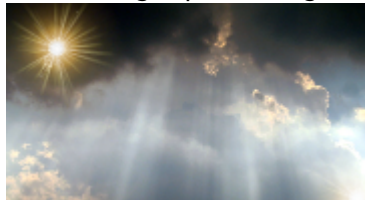
OrxCOLOR and how to colour an object



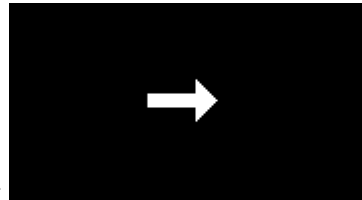
Converting a percentage to a color



Web Color Literals



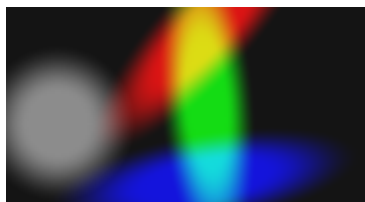
A natural-looking glowing ball effect



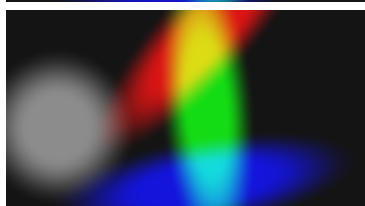
See more

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

```

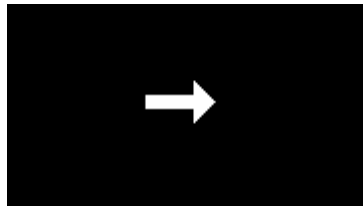
[ShipObject@ObjectDefaults]
Graphic      = ShipGraphic
Position     = (400, 550, 0)
Scale       = (4, 4, 0)
Body        = ShipBody

```

Stepped Random Values



Local-



only Config Overriding Video

See more Config Examples

### Controls



Interaction, Control and Physics



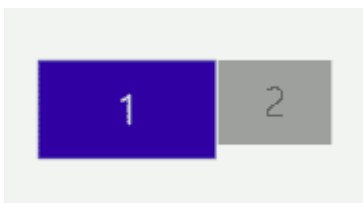
Realistic Walk



Movement

Creating Particle Explosions

### Display



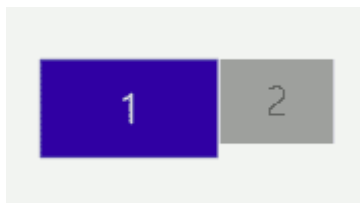
Multiple Monitors



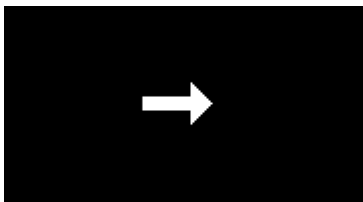
Custom Mouse Cursors



Application Icons



Borderless Window Mode



See more Display Examples

### Downloads

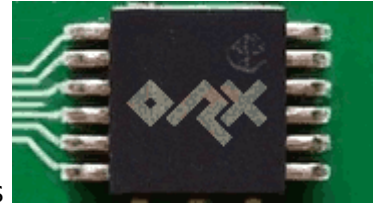


Getting Started with Orx

## 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

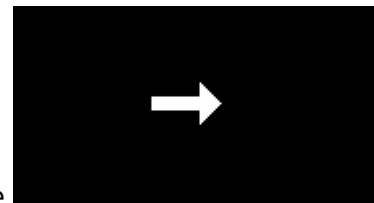


orxFontGen



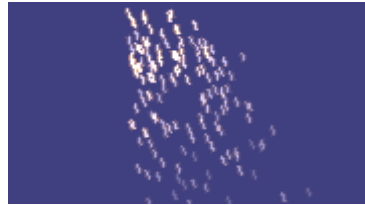
more Font Examples

Font tool for unicode, including Chinese



See

## FX

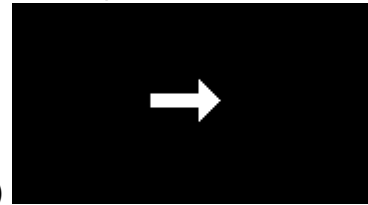


FX

Sparks with Spawners and FX



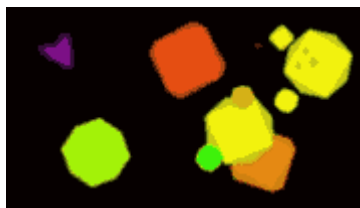
Creating an Insect Object (Speed FX)



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



a game to the iPad

Using compressed textures on the iPad



Porting

### Input



8 Way Joystick / Gamepad Control



Analog

Joystick / Gamepad Control



Analog Stick Threshold



Overriding a Controller Mapping



Remapping

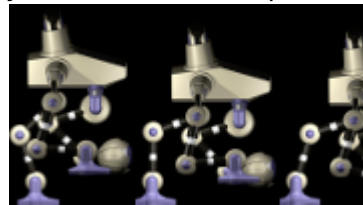
Controller Inputs



Testing Key, Joystick and Mouse Inputs



Interaction, Control and Physics



Realistic Walk

Movement



Creating Particle Explosions



Mouse

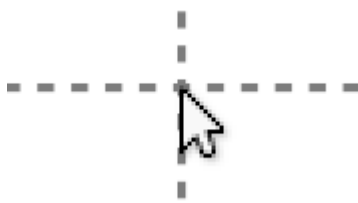
over effect for buttons



Notes on input



Keyboard Inputs



Mouse Grab

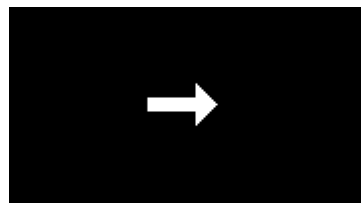


Compiling hidapi

in a game Examples



Input Triggers

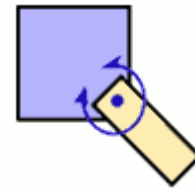


See more Input

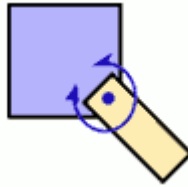
# Joints



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



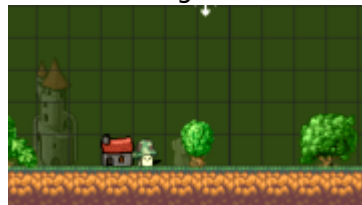
Using the Tiled to ORX Converter



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  
Building the Orx Library with Code::Blocks on Linux

Codelite in 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

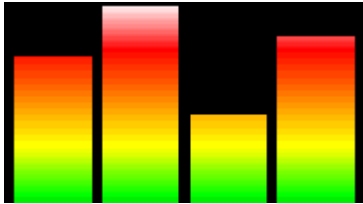


Building the Orx Library with Code::Blocks on Mac OS X

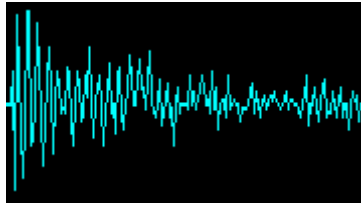


Setting up a game project on Mac OS X

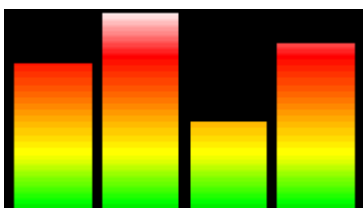
### Music



Sound & Music



Sound Recording

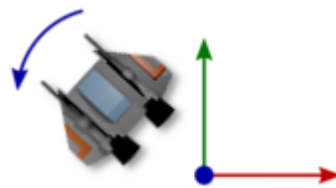


Sound Buses

### 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



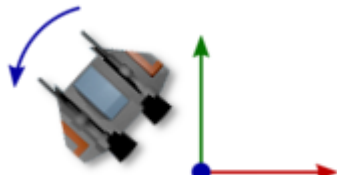
Passing items from one Object to another



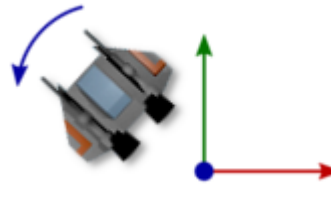
Object Lifetime



Teleporting on Screen Edges



Relative Object Positioning and Scaling



Literals for

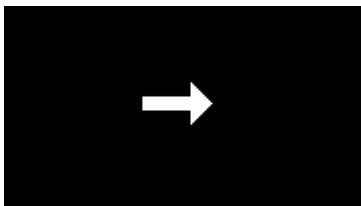
Objects



Command Hooks for Object Events

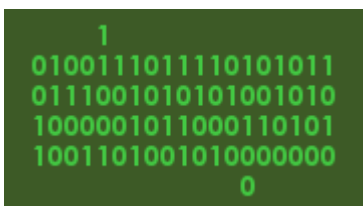


Aged Objects



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



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



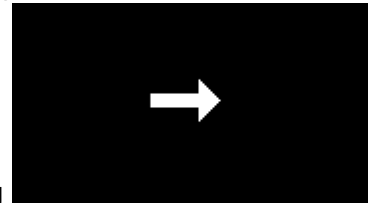
Changing the Default Config File for orx/Scroll

Moving a ScrollObject along



a curve

orxScroll, Cameras and Viewports



ProgressBars in orxScroll  
orx/Scroll Examples

Pathfinding

See more

## Physics



Basic Physics and Collisions



Physics



Raycasting



Interaction, Control and Physics



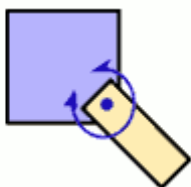
Using the Inkscape SVG to ORX Converter



Creating an Object made of many Parts

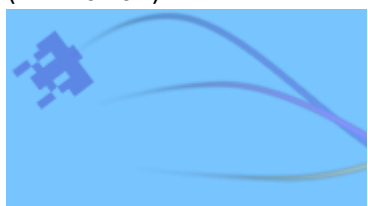


Creating an Insect Object

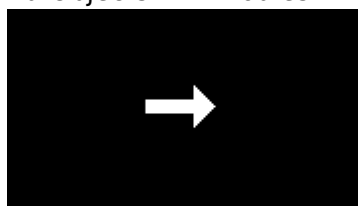


(Animation)

Weld Joint on parent/child Objects with Bodies



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' to use Premake to create a build configuration for your own project in any IDE/OS

How



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



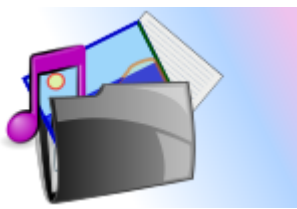
Common Release Checklist

### Scrolling

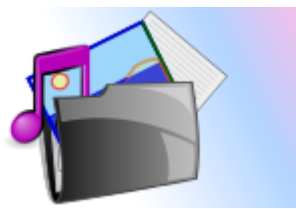


Scrolling

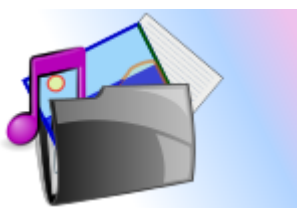
### Resources



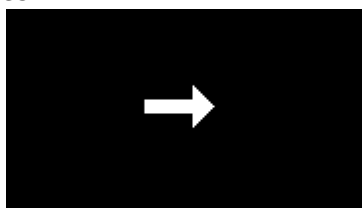
Zip Archive Resources



Resources over HTTP



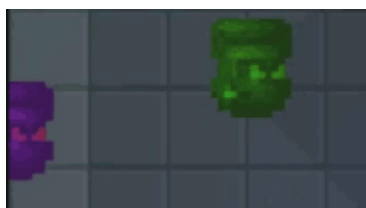
Resource Reloading



See more Resource

Examples

### Scenes



Data-Driven Scene Transitions

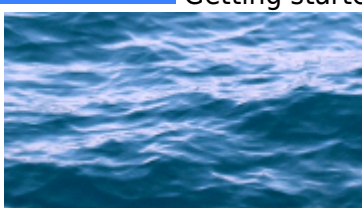
### Shaders



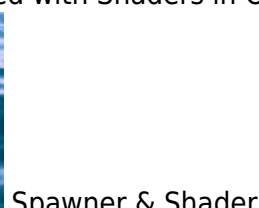
Getting started with Shaders in Orx



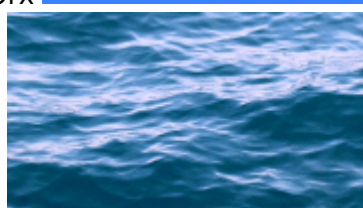
Shaders in



Screen Space



Spawner & Shader



Shader &

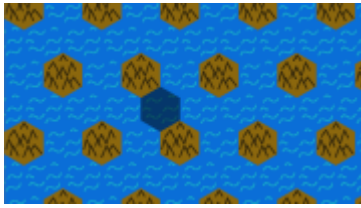


Lighting

Shader coordinates tutorial



Hexagon



Grid Tutorial

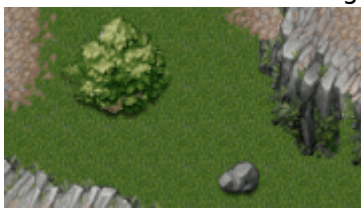
Hexagon Grid Tutorial (Axial/Cubial Coordinates)



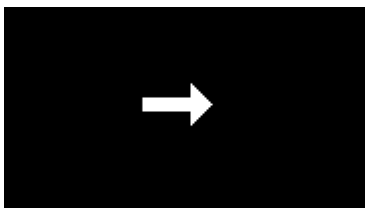
A natural-looking glowing ball effect



Fun with



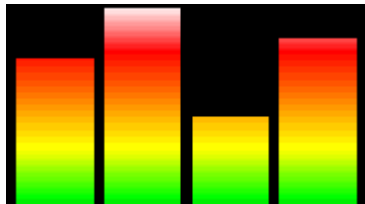
Maps in a Shader



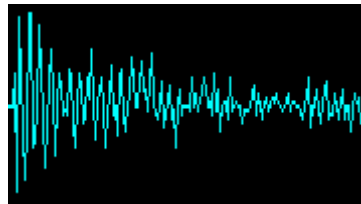
See more

Text and Shaders  
Shader Examples

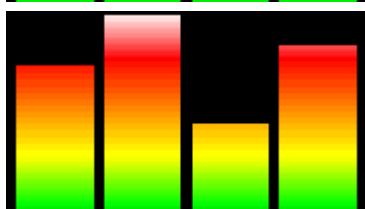
## Sound



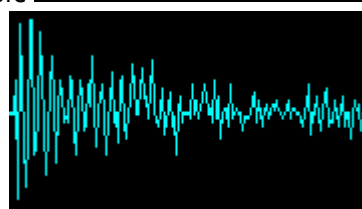
Sound & Music



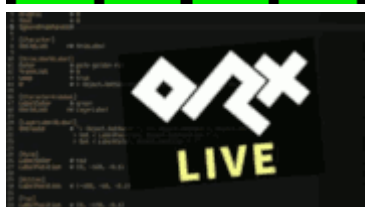
Sound Recording



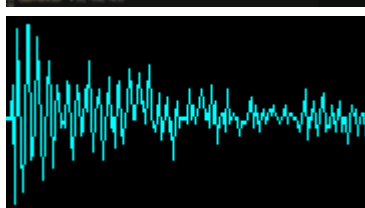
Sound Buses



Audio Filters



Audio filters, miniaudio & audio extensions Video



Sound Spatialization

# Spawners



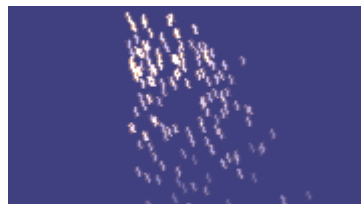
Spawner & Shader



Creating Particle Explosions



Spawning Bullets



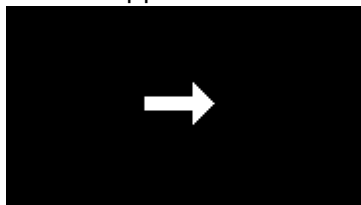
Sparks with Spawners and



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

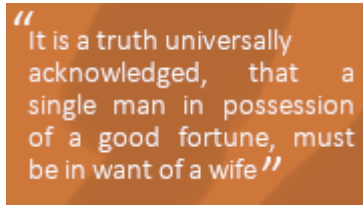


Drag and Drop



Commandline Parameters

## Text



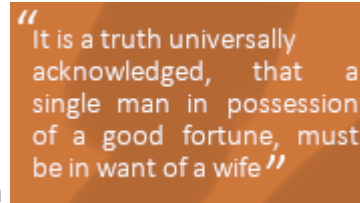
Text Boundaries



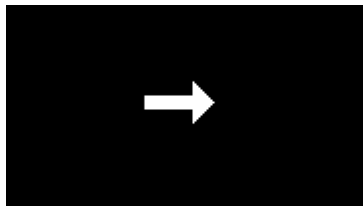
Fun with Text and Shaders



orxFontGen



Text Background



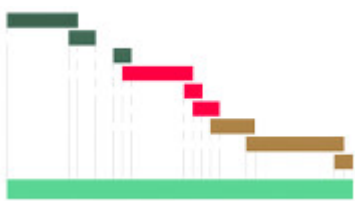
See more Text Examples

## Textures

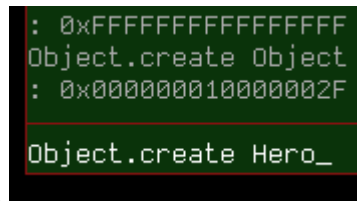


Using compressed textures on the iPad

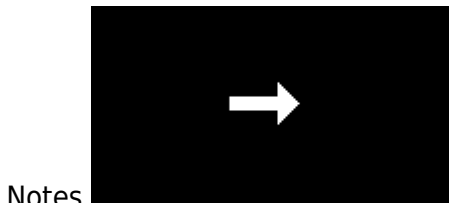
## Timelines / Tracks



Timelines / Tracks

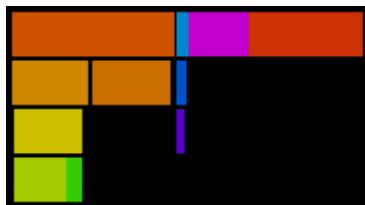


Command and Timeline



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



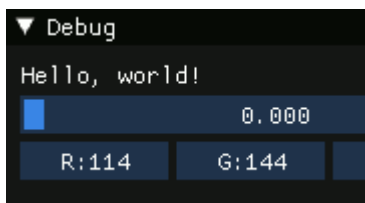
all Structures to a Tree

Using SWIG to talk to Java on Android

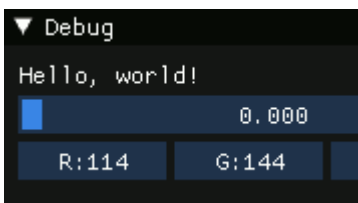


Logging

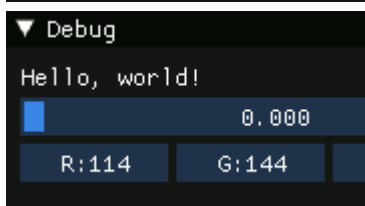
## UI / User Interface



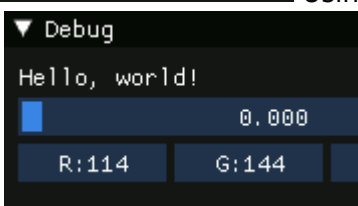
Using ImGui with Orx



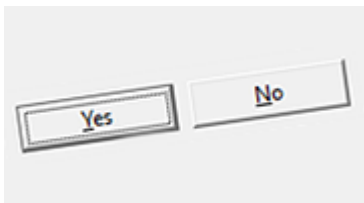
Using Nuklear with Orx



Nuklear Font Management



Notes on Nuklear



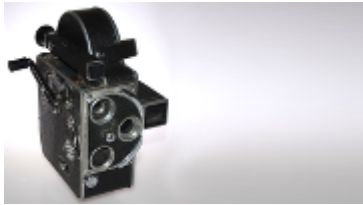
with Orx

File Dialogs and Messageboxes

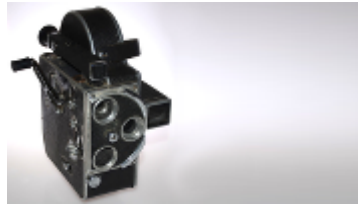
Mouser over effect for buttons



## Viewports

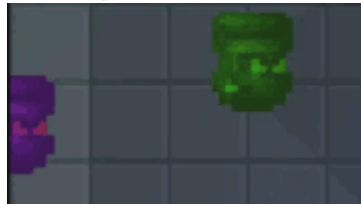


Viewport & Camera



Heads Up Display (HUD)

using Viewport + Groups



Teleporting on Screen Edges

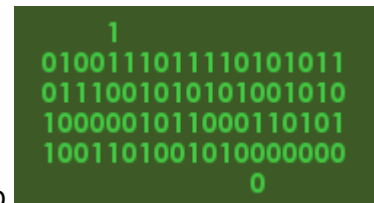


Viewport Render to Texture

## 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

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