Resource Reloading

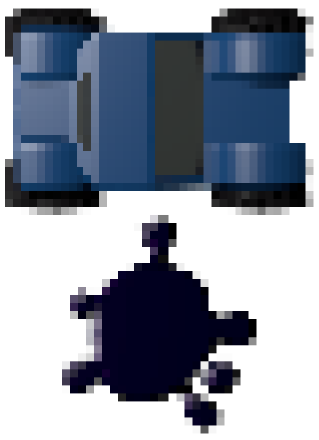
You are able to support swapping sets of assets at runtime effortlessly. This could be used for swapping between low/high resolution assets, or switching themes. Let's work through an example of switching between high and low resolution assets.

Setting up a new project

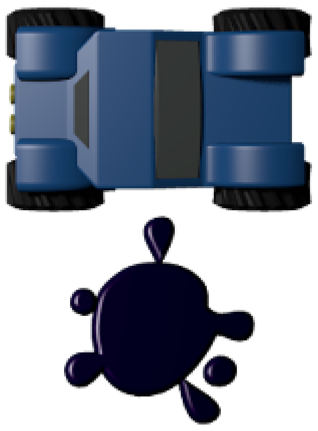
To help you work through this tutorial, first create a new blank project using the init script.

The assets

Download these two sprite textures and save them to a `data\texture\lowres` folder in your project.



Download these two sprite textures and save them to a `data\texture\highres` folder in your project.



Setting up resources

Edit the config file and replace the `Resource` section with:

```
[Resource]
Texture = @ResourceLowRes
Sound   = @ResourceLowRes

[ResourceHighRes]
Texture = ../data/texture/highres
Sound   = ../data/sound/highres

[ResourceLowRes]
Texture = ../data/texture/lowres
Sound   = ../data/sound/lowres
```

This sets the texture and sound resources as a default to the lowres paths. Notice that sound is also defined, but we won't be covering sound in the tutorial.

Setting up the Buggy and Oil objects

Replace the `Object` section in the config with:

```
[Object]
Graphic         = @
Texture         = buggy.png
Pivot           = center
```

Compile and run. You will see the lowres buggy displayed on screen.

Add an Oil object for the car to avoid. Nice to have a second object. Add this to the config:

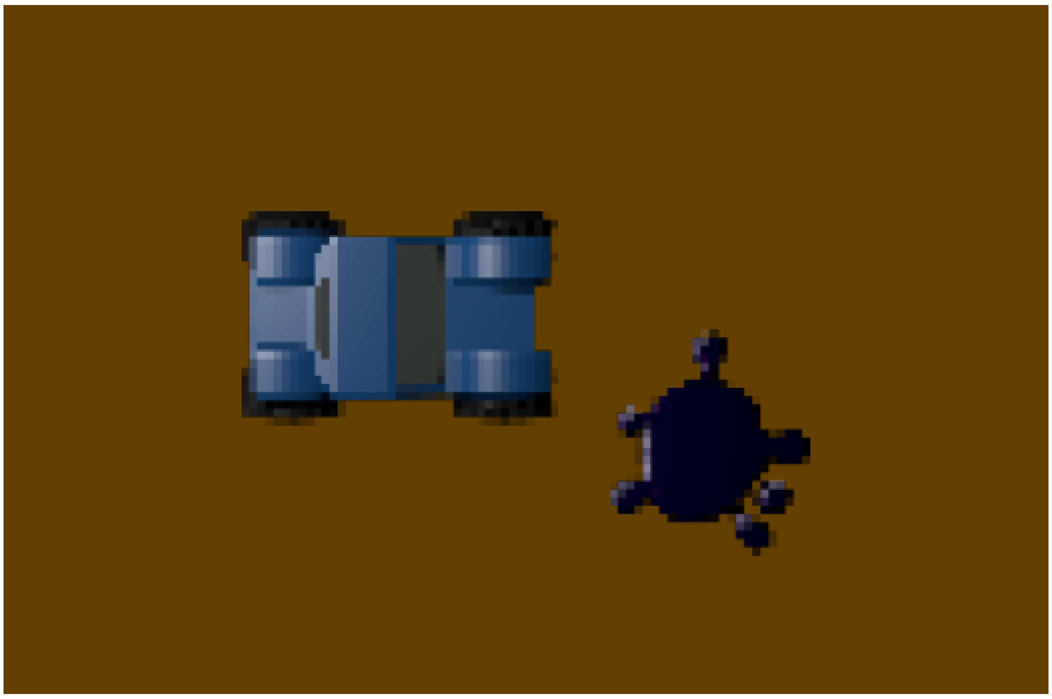
```
[Oil]
Graphic         = @
Texture         = oil.png
Pivot           = center
Position    = (150, 60)
```

And add the Oil object to the scene with:

```
[Scene]
ChildList       = Object # Sound # Oil
```

Just for aesthetics, let's change the background color to contrast the darker object colors:

```
[MainViewport]
Camera          = MainCamera
BackgroundColor = (100, 64, 0)
```



Swapping to high-res using Commands

While the app is running, press the ~ key (tilde) to open the Orx Console.

Enter the following commands to switch to the high resolution assets:

```
Resource.RemoveStorage Texture
```

This removes all storages for Texture.

```
Set Resource Texture @ResourceHighRes
```

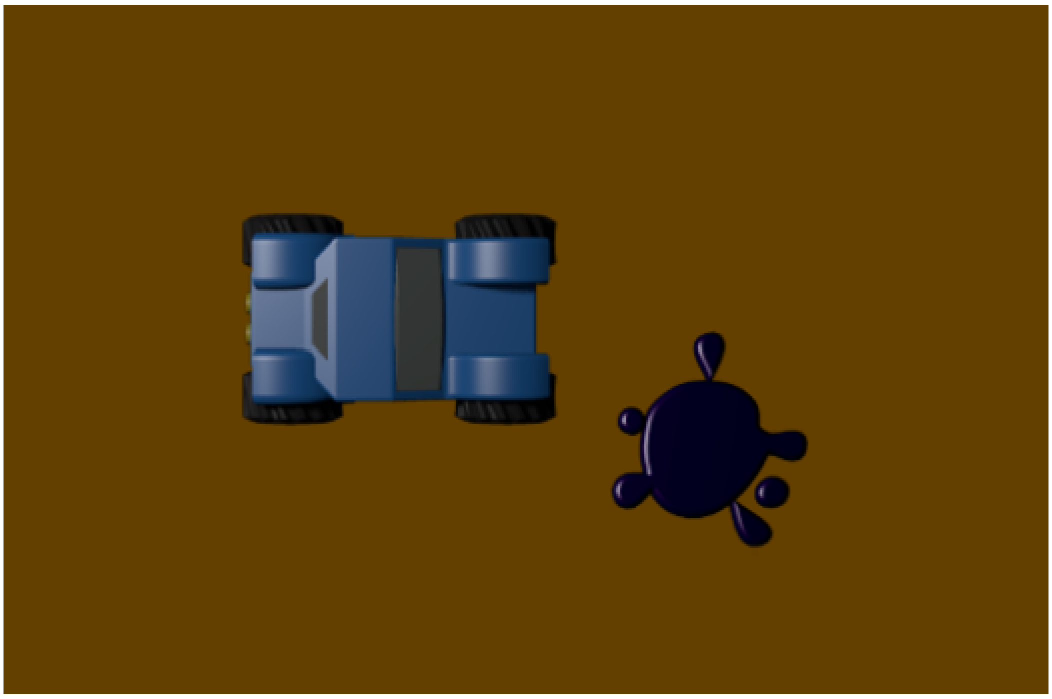
Set the `Texture` property in the `Resource` section in the config to point to the `ResourceHighRes` section.

```
Resource.ReloadStorage
```

Reloading storages from the config.

```
Resource.Sync
```

As soon as the resource sync is triggered, all the currently used textures would be replaced. And the new texture not yet loaded would now come from `data/texture/highres` instead of `data/texture/lowres`.



This works with any kind of resource, not just textures. And can be used to swap themes, for example.

Swapping to high-res using Code

In code it would be the same procedure. Add this to the end of the Init() function:

```
orxResource_RemoveStorage("Texture", orxNULL);

orxConfig_PushSection("Resource");
orxConfig_SetString("Texture", "@ResourceHighRes"); // Switch to the high-res textures
orxConfig_PopSection();

orxResource_ReloadStorage(); // Reloads storages from config
orxResource_Sync(orxNULL); // Syncs all resources from all groups
```

Rules and Notes

1. For this to all work, the resources themselves should have the same names, just located at different places (for example: `data/texture/high` versus `data/texture/low`).
2. `orxResource_Sync(const orxSTRING _zGroup);` can be restricted to particular object groups if you wish.
3. `orxResource_RemoveStorage(const orxSTRING _zGroup, const orxSTRING _zStorage)` can optionally be restricted to both a particular resource group and a particular resource storage.