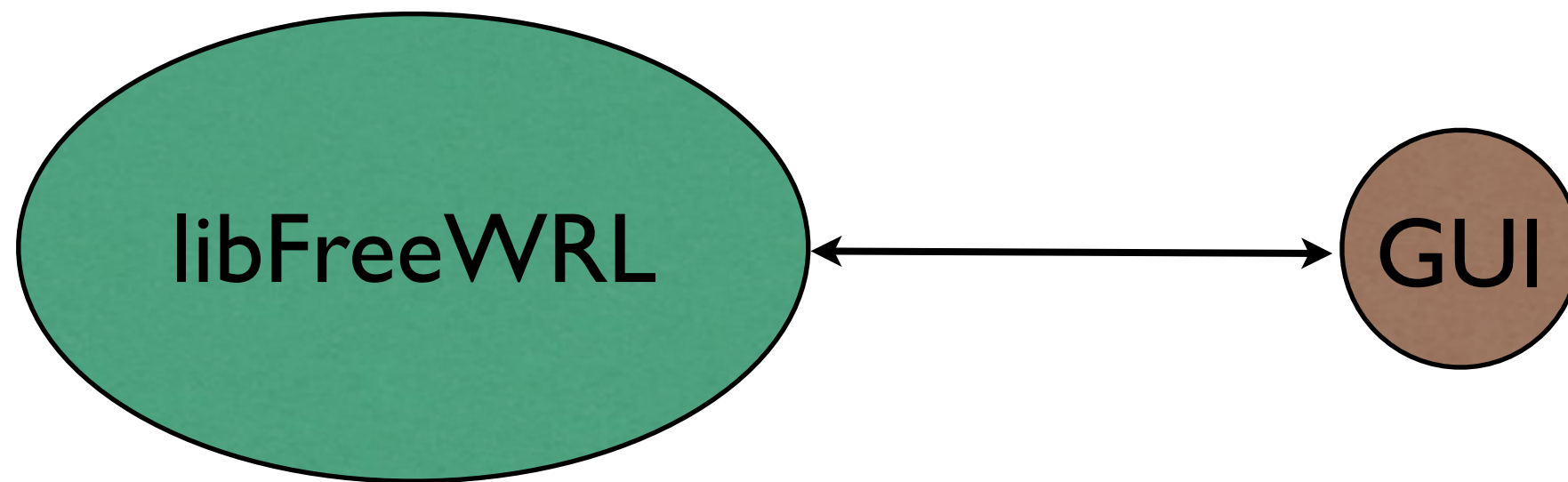


Embedding FreeWRL -or- Writing your own UI

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99% of FreeWRL is
in the platform-independent
library

1% is in the GUI



some commands
go back and forth

GUI handles:

mouse
touch
keys
file access
drawing loop

We'll focus on
files and **drawing**

NOTE: Assume that the library is built
with
FRONTEND_HANDLES_DISPLAY_THREAD
and
FRONTEND_GETS_FILES
turned on

Drawing Loop

- Allow GUI to draw when it wants;
- change frame rate depending on battery;
- drawing loop simple, but must look out for the library wanting resources like textures, etc.

iPhone Drawing

```
int frontEndGettingFile = false;

- (void)drawView:(GLView*)view;
{
    //NSLog(@"drawing");
    if (fwg_frontEndWantsFileName() != NULL) {
        if (!frontEndGettingFile) {
            frontEndGettingFile = true;

            ... get file in another thread ...

        }
        fwl_RenderSceneUpdateScene();
    }
}
```

Getting files

```
// get the data. If invalid ref, len=0.  
len = [receivedData length];  
myData = malloc (len);  
[receivedData getBytes:myData];  
  
// if bad ref, return (NULL, 0) below  
fwg_frontendReturningData((unsigned char*)  
    myData,len);  
  
free (myData);  
frontendGettingFile = false;
```

That's it!

- look at code downloads for mouse, viewpoint, etc. (`GLViewController.m` for iPhone)
- other access methods for other actions;
- function defs in `../freex3d/src/lib/libFreeWRL.h`