gst-plugins-gl: GStreamer 1.x + OpenGL

Matthew Waters

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WhoAmI

- Computer Science student
- Started work on gst-plugins-gl early-mid last year because I was bored and something didn't work (it still doesn't)

The Idea

- Attempt to abstract away the pain points of OpenGL contexts for GStreamer with respect to platform features and threading
- Provide a simple layer for OpenGL objects (not precluding using OpenGL directly)

What's been done

- Basic port to GStreamer 1.0
- WGL, GLX, EGL (x11, wayland, android, dispmanx) backends
- Mac OS X (Cocoa) might
- Compile time choice between OpenGL or OpenGL | ES 2.0
- GstGLMemory
- GstGLBufferPool

WIP

- GstContext – window system 'display' handles/OpenGL context
- GstGLContext – OpenGL context abstraction

What we should do

- GstVideoGLTextureUploadMeta
- GstCapsFeatures
- EGLImage
- EAGL (for iOS)
- OpenGL 3.0+ context for all platforms (EGL\WGL\GLX_ARB_create_context)
- Vsync handling

What we should do

- Async up/downloads
- VideoMeta (crop, stride, etc)
- Navigation events
- Context lost events (ARB_robustness)

What we should do

- Matrix library (internal or optional? dependency)
- Model viewing
- Move to gst-plugins-bad
- libvisual-gl element

Thanks

- http://cgit.freedesktop.org/gstreamer/gst-plugins-gl