

KTX2 Viewer

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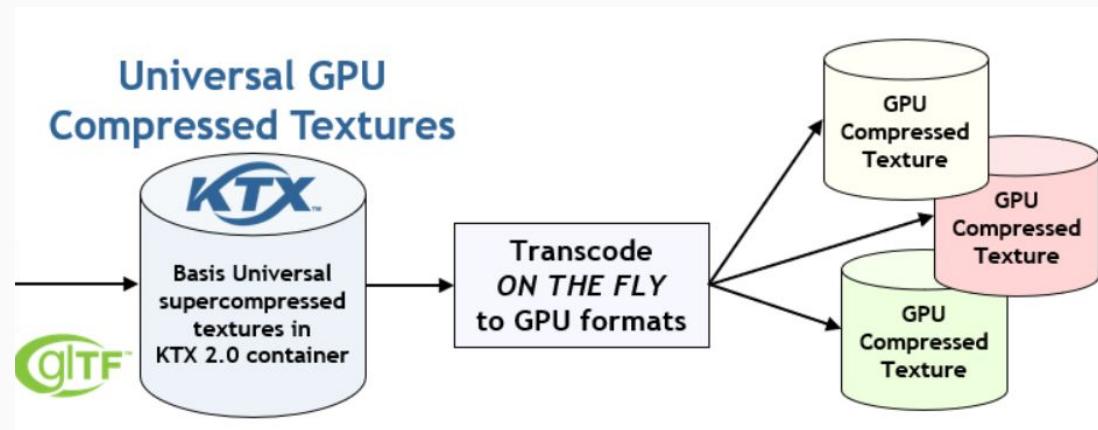
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Overview

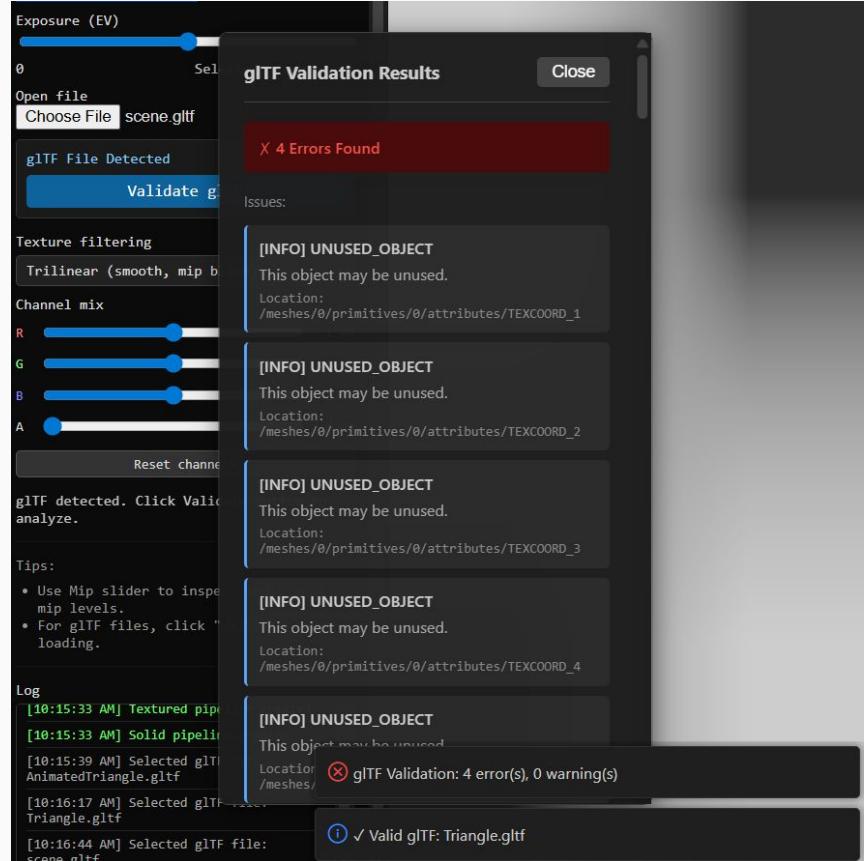
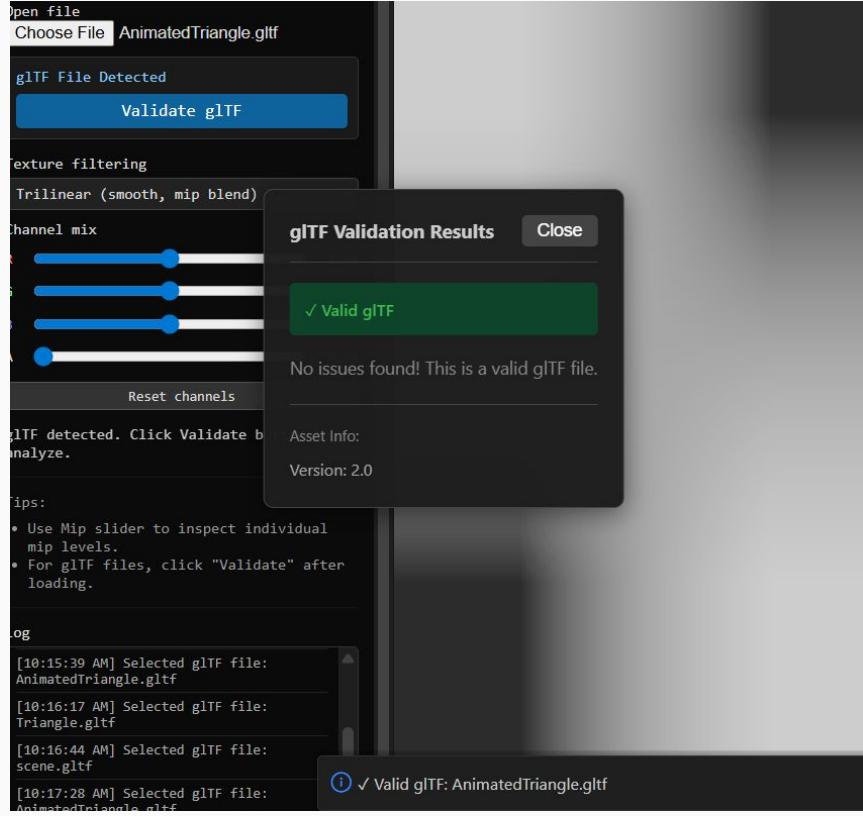
Support HDR **KTX2** Viewing within 2 pipelines: VSCode and RenderDoc

Goals:

- Adding UI
- Mobile Deployment
- GLTF Validate
- Tonemapping



glTF Validate



UI and Web Deployment

- Greatly enhanced UI
- Added previewing features
- Added texture info and log
- Ported everything to the web using github pages ([click here](#))



Texture filtering

- Nearest (sharp/pixelated)
- Trilinear (smooth, mip blend)
- Bilinear (smooth, sharp mips)
- Nearest (sharp/pixelated)**
- Anisotropic (high quality)

Texture Info

Dimensions: 4096 × 2048 (2.000:1)

Format: BC6H FLOAT

Mip Levels: 13

File Size: 10.67 MB

GPU Memory: 42.67 MB

Compression: 4.00x (GPU/File)

Supercompression: None

KVD: KTXswizzle, KTXwriter

DFD: colorModel=133, transfer=1

Mipmap preview

Show only selected mip

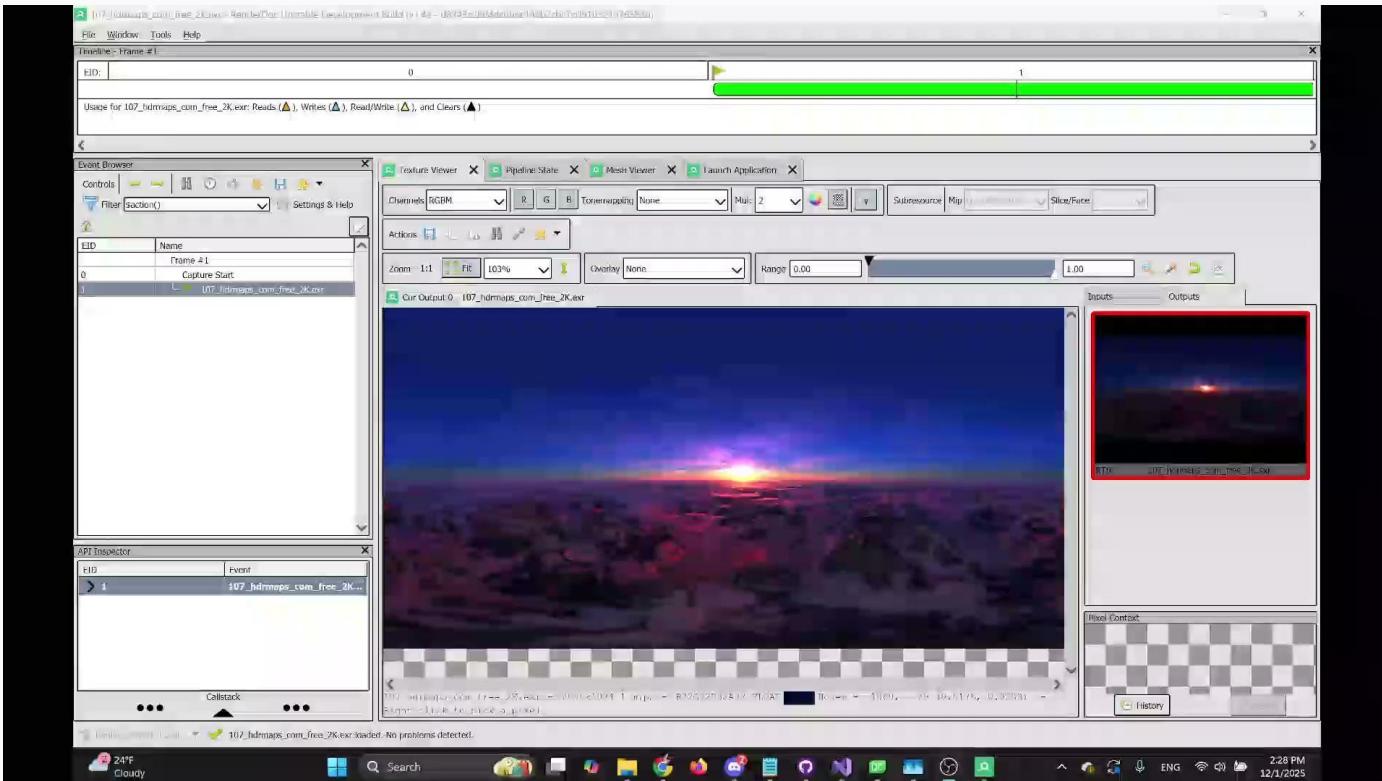
Channel mix

R: 1.00, G: 1.00, B: 1.00, A: 0.00

Log

```
[11:57:42 AM] WebGPU initialized successfully
[11:57:42 AM] Shaders compiled
[11:57:42 AM] Textured pipeline created
[11:57:42 AM] Solid pipeline created
[11:58:06 AM] Loading KTX2 bc6h_test.ktx2...
[11:58:06 AM] Successfully loaded KTX2
```

Tonemapping (Renderdoc)



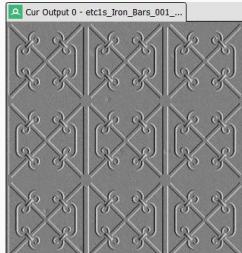
Next Steps

Final Presentation Goals:

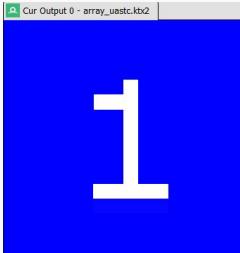
- User Interaction
 - Transfer function toggle + dithering
 - Tonemapping (VSCode)
 - Min/max exposure controls
- Steph/Rich update
- Get ETC working on mobile

Tonemapping

RenderDoc



ETC1s/UASTC (supercompressed mobile)

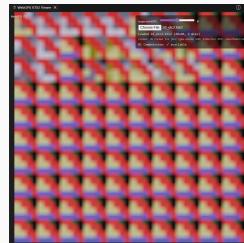


ETC2 WIP

VSCode



ETC1S WIP



ETC2 WIP

img	vkFormat	model
BASIS ETC1S	-	KHR_DF_MODEL_ETC1S
BASIS UASTC	-	KHR_DF_MODEL_UASTC

img	vkFormat	colorspaces
ASTC 4x4	ASTC_4x4_SRGB_BLOCK	"srgb"
ETC1	ETC2_R8G8B8_SRGB_BLOCK	"srgb"
ETC2	ETC2_R8G8B8A8_SRGB_BLOCK	"srgb"
BC1	BC1_RGB_SRGB_BLOCK	"srgb"
BC3	BC3_SRGB_BLOCK	"srgb"
BC5	BC5_UNORM_BLOCK	"srgb"
BC7	BC7_SRGB_BLOCK	"srgb"

From Don Mccurdy's KTX2 Samples repo