gltf

graphics library Transmission Format

https://github.com/KhronosGroup/gltf

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Overview

• status
• motivations
• design principles
• glTF pipeline
• scope
• early support and adoption
• demos
Status

- COLLADA Working group initiative.
- Work in progress - Not a ratified specification yet.
- Community feedback welcomed on GitHub.
Motivations

• Bridge the gap between 3D formats and GL based APIs.
• Reduce duplicated effort in content pipeline.
• A common format for contents providers.
Design principles

• Streamline rendering: size, speed and ease of implementation
• Offload processing from runtime.
• Maps well to GL APIs and Typed Arrays.
glTF Pipeline - overview

Author: Maya, Blender, ...
Interchange: COLLADA
Converter: COLLADA2GLTF
Delivery: glTF
API: OpenGL/ES, WebGL, OpenGL
glTF Pipeline - overview
gltf Pipeline - COLLADA2GLTF

Mandatory transformations
• Triangulate
• Unify indices
• Split meshes
• Generate shaders
• Axis up conversion

Planned optimizations & transformations
• Minify shaders
• Flatten hierarchy & combine meshes
• Convert images
• Compress meshes
• Interleave vertices
• ... Suggestions welcomed !
Scope

1.0
- node hierarchy with geometry, materials/lights (shaders), and cameras
- Key-frame animations
- Skinning

- Mesh compression discussions engaged with partners.
- Target feature complete draft for late summer 2013.
- Community feedback welcomed on GitHub!
Early support and adoption

- **Montage.js**: [http://montagejs.org](http://montagejs.org) & [https://github.com/montagejs/](https://github.com/montagejs/)  
  Implementation and JS API on-going.
- **Cesium**: [https://github.com/AnalyticalGraphicsInc/cesium](https://github.com/AnalyticalGraphicsInc/cesium)
- Sample **Three.js** loader in glTF repo:  
  [https://github.com/KhronosGroup/gltf](https://github.com/KhronosGroup/gltf)
Demos

- **Model Viewer**: Fabrice Robinet.
  awesome cloud shader by Iñigo Quílez

- **WebLVC Viewer using Cesium**: Patrick Cozzi.
Thank you - See you on GitHub!

Converter: [https://github.com/KhronosGroup/gltf/wiki/Converter](https://github.com/KhronosGroup/gltf/wiki/Converter)