



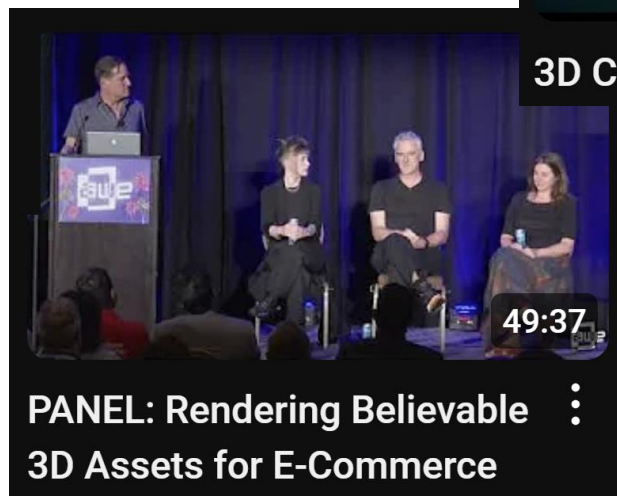
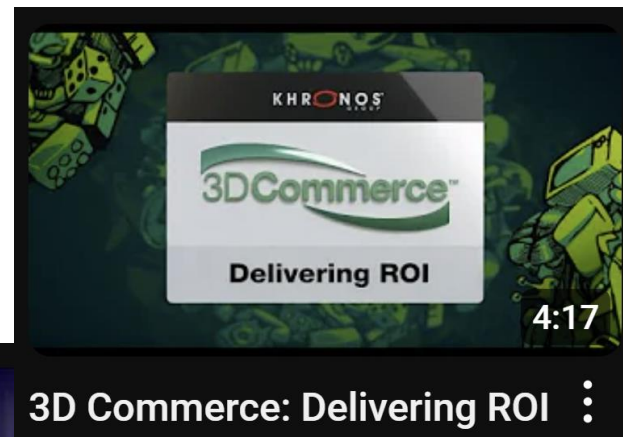
3D Commerce - Video Production

Eric Chadwick

3D Commerce Video Production



- 3D return on investment
- Interviews with decision makers
- 3D Commerce case studies





3D Commerce - Visual Consistency

Emmett Lalish, Eric Chadwick

3D Commerce Visual Consistency



The challenge is real!

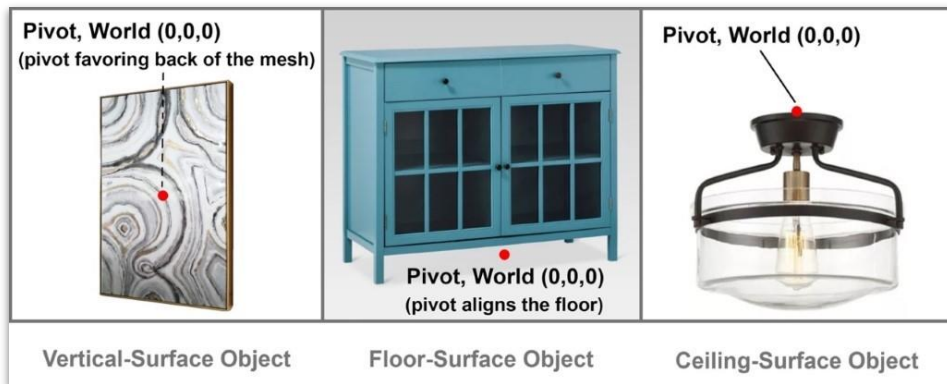


3D Commerce Visual Consistency



Asset Creation Guidelines

- Streamline the creation of 3D assets
- To be easily and reliably used by merchants
- On multiple delivery platforms
- Best practices and standards for highest quality

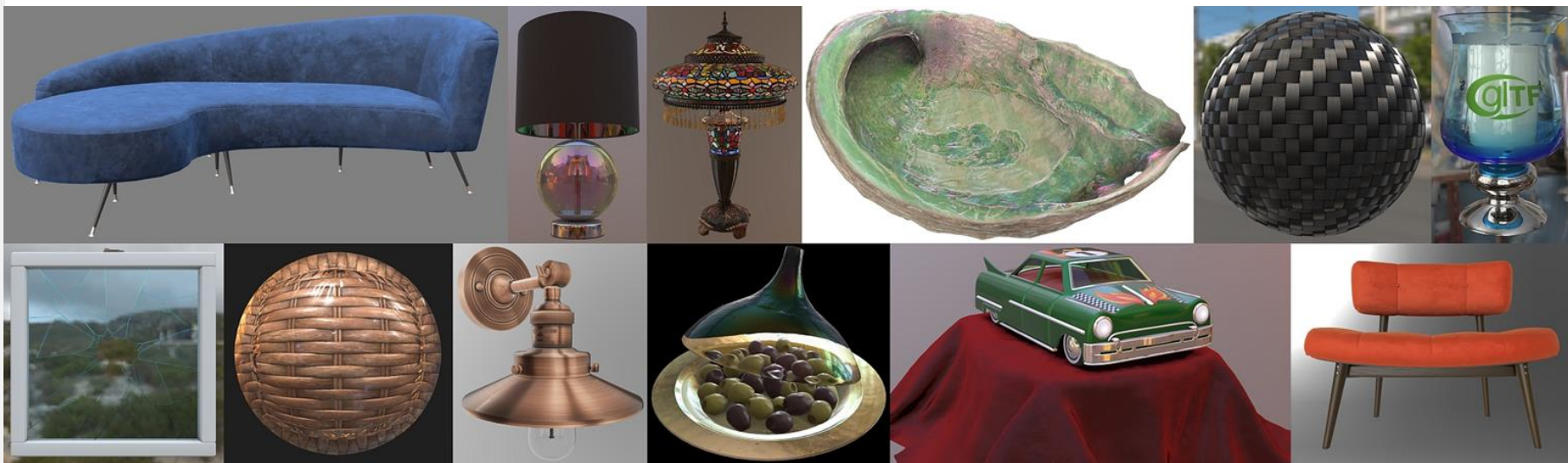


3D Commerce Visual Consistency

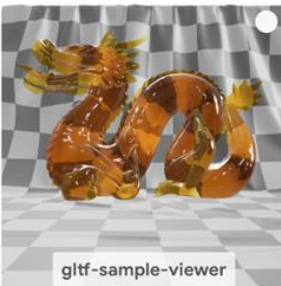
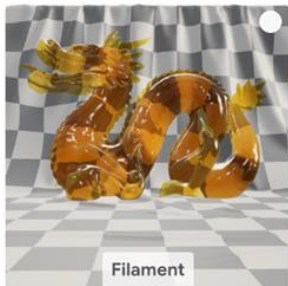


[glTF Sample Assets](#)

- Real-world assets from IKEA, Wayfair, etc.
- Compare renderers
- Improve tools & pipelines



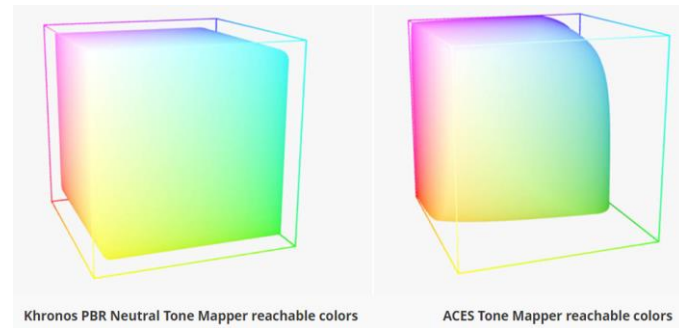
Render Fidelity



- **Comparison of popular glTF renderers**
 - Real-time rasterizers as well as path-tracers
 - Visual showcase of shaders, bugs, and compliance
 - Sample assets include realistic & debug models
 - Khronos took over this tool from <model-viewer> (Google)
- **Coming soon:**
 - Better inspection [website](#)
 - More renderers
 - Staying up-to-date

Khronos PBR Neutral Tone Mapper

- **True-to-Life Color Rendering of 3D Products**
 - [Released](#) in May 2024
 - [Specification and sample implementation](#)
- **1:1 match for colors up to a certain maximum value**
 - The remainder of color space used as headroom for compressed highlights
- **Wide adoption and support by 3D tools and engines**
 - <model-viewer>, Autodesk, Babylon.js, Blender, Dassault, Filament
 - London Dynamics, Phasmatic, Three.js, and ThreeKit



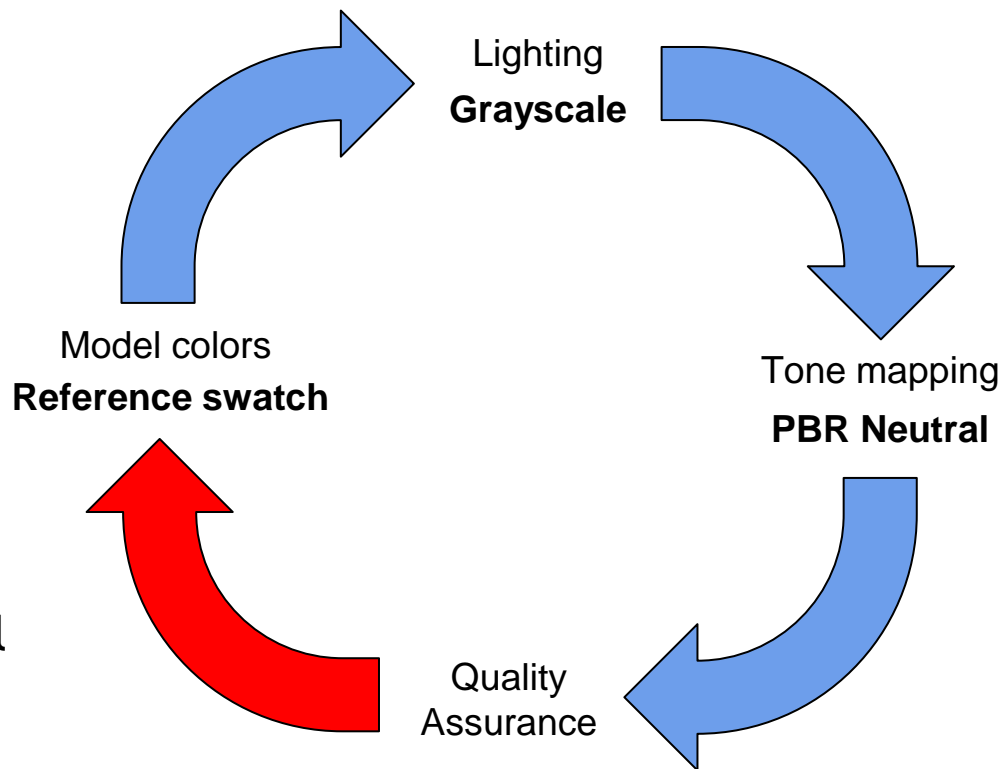
What problem are we solving?

- Color accuracy in Physically-Based Rendering (PBR)
 - eCommerce
 - Brand colors
 - Side-by-side with product photos
- Simplify production
 - Approved sRGB = texture color
 - Lighting for desired look
 - Verifiable color workflow



Should I change my pipeline?

- **QA loop is expensive!**
 - Ensure consistency
 - Lighting
 - Tone mapping
- **Already paid?**
 - Leave it
- **New models?**
 - Design for PBR Neutral
 - Break the cycle!



What's next?

- **Beyond sRGB output**
 - Parametrize for HDR screens
 - WebGL/WebGPU tone mapping
- **Beyond sRGB input**
 - Wide gamut glTF textures
 - Gamut mapping (hard!)
- **Other use cases**
 - Non-PBR: skip correction
 - Parameterize for broadly HDR scenes





SIGGRAPH 2024
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K H R O N O S
GROUP



3D Commerce - Apparel & Virtual Try-On

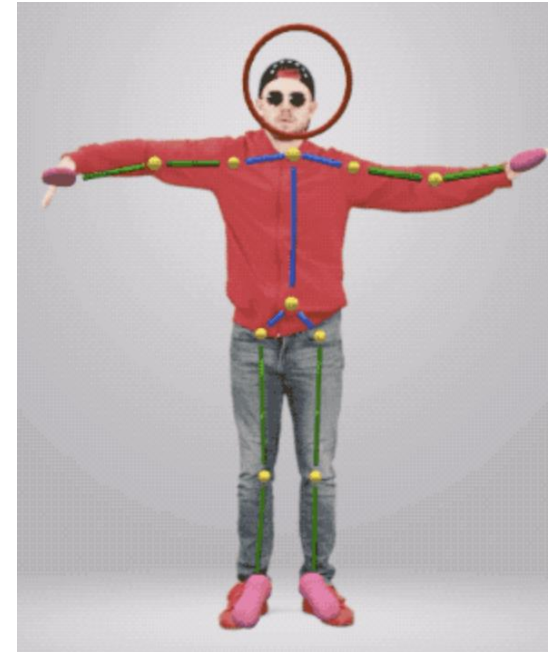
Eric Chadwick (DGG)

3D Commerce Apparel & Virtual Try-On

Apparel Technical Sub-Group Snapchat




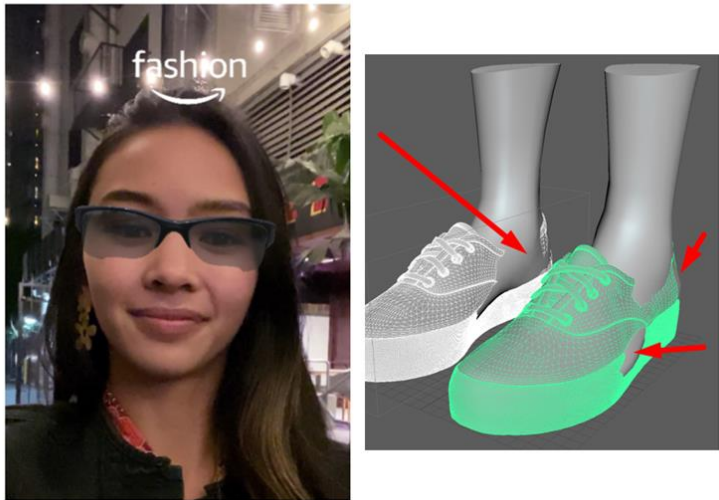
Special thanks: Patrick Hadley of



3D Commerce Apparel & Virtual Try-On

Industry Challenges

- Lack of standards limit reusability & interoperability

Placement	Clipping / Collisions
	

3D Commerce Apparel & Virtual Try-On

Apparel Technical Sub-Group - Key Findings

- Apparel industry needs are unique in e-commerce
- Focus on R&D and product development (vs. user-facing websites)
- Struggling to answer the ROI question
- Lots of legacy processes and specific domain knowledge
- 3D seen as burdensome and risky
- Many stakeholders - pattern makers, designers, etc. and unique tools
- Unique challenges: fabric material properties, high fidelity logos
- Need for standards: attachment points for virtual try-ons

Khronos Group Networking Reception

Wednesday, July 31: 6:00pm - 9:00pm MDT

Location: Hyatt Regency Denver (Room: Capitol Ballroom 6+7)

Network with Khronos enthusiasts and enjoy refreshments after a long day of sessions. See live demos in action and make some new connections!

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