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
3D Commerce - Apparel & Virtual Try-On

Eric Chadwick (DGG)
3D Commerce Apparel & Virtual Try-On

Apparel Technical Sub-Group
Special thanks: Patrick Hadley of Snapchat
3D Commerce Apparel & Virtual Try-On

Industry Challenges

- Lack of standards limit reusability & interoperability

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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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