Scaling up 3D Asset Creation for E-Commerce
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About Me

Speaker introduction

CTO at DGG
  • Creators of RapidCompact platform for 3D data optimization

Tech / 3D Graphics Background
  • PhD on automating 3D data optimization, former researcher at Fraunhofer
  • Contributed to 3D standards (X3D, glTF)

Co-Chair of 3D Commerce Asset Creation TSG at Khronos
AR in E-Commerce Today!

Example applications

Which of these is the “real one”? Source: Shopify
https://www.youtube.com/watch?v=ajF5Rasyq3o&t=428s

Images: OTTO, IKEA, Shopify
One Challenge: Starting **Without** Any 3D Files

3D assets for real-time apps: AR + Web technology

glTF = optimized, cross-platform delivery format

Images: IKEA
Another Challenge: The “Offline / Real-Time Content Gap”

3D assets for real-time apps: AR + Web technology

gltf = optimized, cross-platform delivery format

Images: IKEA
3D Content Creation Services – Tackles Challenge I

Hire 3D modelling expertise
Create immersive shopping experiences with realistic 3D versions of your products. Browse experts or get expert help based on your needs.

https://experts.shopify.com/services/visual-content-and-branding/create-3d-models-ar

https://cgibotto.de/en/

Images: Shopify, OTTO
Three Paths to Real-Time 3D Content

**Manual / semi-manual 3D modeling**
- Typical workflow: 3D asset modeled from reference photos
- Post-processing needed to make data fit all platforms (Challenge II)

**Conversion from existing CGI or CAD data**
- Hard to perfectly solve all edge cases
  (complex materials, context knowledge may be required)
- Post-processing needed to make data fit all platforms (Challenge II)

**3D scanning**
- Not suitable for all kinds of objects / materials, but for many
- Post-processing needed to make data fit all platforms (Challenge II)
Automating 3D Asset Optimization – Tackles Challenge II

For 3D data from manual / semi-manual 3D modeling
• Simplification, Texture Baking, Compression
• Applications: 3D commerce apps, online shops, ...

For 3D data converted from existing CGI or CAD data
• Tessellation & geometry cleanup, automatic materials assignment
• Applications: Trade shows, product demos using Unity / Unreal, ...

For 3D scanned objects
• Simplification, Texture Baking, Compression
• Applications: Virtual catalogs, virtual exhibitions, ...

[3] https://twitter.com/nebulousflynn/status/1372589608165384201

Images: Sketchfab, Markgraph, OTTO
Goal: Assets that are “Ready to Render” in Real-Time

Leveraging glTF to enable photorealistic, real-time 3D content for E-Commerce
Khronos 3D Commerce Working Group

Removing barriers to deploy 3D in e-commerce - at scale!
3D Commerce Asset Creation TSG

Establishing 3D asset creation guidelines for e-commerce

Get involved on GitHub, or via Khronos:

Your insights and pain points will help us evolve and simplify the 3D asset creation and deployment process for the benefit of everyone in the industry!

Insights are not limited to glTF usage, but can be applied to other formats / pipelines as well.

https://www.khronos.org/3dcommerce/
3D Commerce Workflow Example

Images: Wayfair
Takeaways

3D Commerce is already there, today!

- There are a lot of 3D scans, CGI & CAD data sets to be made “real-time ready”
- **Automating** optimization is key!
- Relying on **3D standards** is key!