Collada Standards and Interoperability in Virtual Worlds

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Agenda

• Background on Forterra Systems and OLIVE
• Asset interoperability needs among Virtual Worlds
• COLLADA and OLIVE
  • Today
  • Tomorrow
Forterra’s OLIVE

Virtual World Solutions
- Training
- Group rehearsals
- Therapy
- Conferencing and meetings
- Collaboration
- Market research
- Experimentation
- Visualization
- Product and process prototyping
Transforming Enterprise Activities

- Market research
  - Product configuration testing

- Formal training
  - Informal learning

- Meetings
  - Project teams
  - Informal discussions

- Customer Interaction

- Focus groups
  - Sales
  - Customer support

- Networking
  - Employee SIGs
  - BofAF
  - Geographic

- Collaboration
  - Facilities design
  - Operational optimization
  - Facility management
  - IT management
  - Emergency preparedness

- Product Development
  - Design
  - Prototyping
  - Test

- Training

- Operations

Realistic Environments

- Immersive
- Realistic avatar look and behavior
- 3D spatial audio
- Import 3D models
- Media rich; easily deploy presentations, video or other documents
- Develops a sense of trust
Asset Interoperability

- 3D asset interoperability is key to virtual world interoperability

- To achieve this, one needs a neutral exchange file format with the following characteristics:
  - Must be widely adopted by tool vendors and developers
  - Must be standards driven
  - Must be a lossless format

- COLLADA clearly meets these needs
COLLADA and OLIVE Today

• Forterra’s adoption of COLLADA began in late 2007
• Very eager to participate in conformance suites
• OLIVE currently supports COLLADA for the following types of objects:
  • All static objects and geometry: terrain, culturals (lamp posts, buildings, etc)
  • Simple interactive objects: traffic cones, bull horn, radio, etc.
• DAE files are compiled to a compact-binary runtime format for the OLIVE engine
COLLADA and OLIVE Tomorrow

- OLIVE COLLADA support will be extended to include:
  - Complex, articulated content object geometry
    - Includes geometry, animation and meaningful node hierarchies
    - Objects like cars, helicopters, hospital beds, etc.
  - Avatars—most complex OLIVE object
    - Includes geometry, animation, node hierarchies, and morphing
Requested COLLADA Enhancements

- OLIVE needs the following COLLADA enhancements:
  - Partial-body animation
  - Partial-mesh morphing
  - Per primitive attributes