



The Content Pipeline In the Cloud

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About Mechanicality...

- **Alan Chaney**
 - CTO and Founder
- **Los Angeles Startup**
 - Formed mid-2010
- **First Product**
 - Molly3D
- **Software Consultancy Services**
 - Web-based Asset Management of 3D content
 - Data Visualization



Taking the Content Pipeline to the Cloud

- **Advantages**

- Simplify workflow
- Improve collaboration
- Homogeneous delivery platforms

- **Opportunities**

- Tools
- Low-cost application delivery
- Asset management

Why Tools?

- **Cloud Means**
 - Lower installation costs
 - Lower operational costs
 - Collaboration
- **COLLADA**
 - breaks the proprietary tool-chain
- **Ideally suited for 'cloud-based' tool-set**

COLLADA === COLLABORATION

- **COLLADA**
 - Addressable Content Component Model
 - Data Model
- **Use Cases**
 - Simple Level Editors

Use Cases

- **“End-user” delivery**
 - Games
 - Applications
 - Visualizations
 - Simulations
- **Content creation/editing**
 - Mechanically’s principle interest

Data Exchange

- **Text**
 - XML
 - JSON
- **Binary**
 - proprietary
 - 'Image'
- **Other**
 - BINHEX

Object Model

- **Document Object Model**
 - A COLLADA document is an XML Document

- **CRUD**
 - Create
 - Retrieve
 - Update
 - Delete

Web Technologies

- **WebGL**
- **REST**
- **JSON**
- **HTML5**
- **XML**

WebGL

- **Khronos Specification**
- See <http://www.khronos.org/webgl/>
- **Advantages**
- **Disadvantages**

JSON and COLLADA

- **JSON**
 - Javascript Object Notation
- **JSON Flavors**
 - Simple – no possible backward conversion
 - Use markup to indicate entities

REST and COLLADA

- **COLLADA is already 'internet addressable'**
 - internal references can be URLs
 - inter-document references can be URLs
- **REST**
 - "Representational State Transfer"
 - Stateless mechanism for manipulating content via the WEB
- **Also**
 - HATEOAS – "Hypermedia as The Engine of Application State"

Molly3D Open-source Libraries

- **Molly3DWebGL**
 - Simple binding of WebGL API to a GWT-compatible library
 - used by MollyRuntime and MollyDataObjects
 - <http://code.google.com/p/molly3dwebgl>
- **MollyTypedArray**
 - Server-side implementation of the TypedArray specification
- **MollyDataObjects**
 - Mechanism for wrapping binary data in URI addressable objects
- **MollyRuntime**
 - Default, 'common-profile' runtime for Molly3D applications

Conclusion

- The cloud is out there
 - Leverage it with the right kind of tool
 - Break the proprietary tool-chain
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