May, 2nd 2023

Time

9am Pacific

Agenda

Zoom

Notes

Namespace Editing

First question : what happens when a hiearchy is modified?
Santa Monica studio (Jeremiah Zanin) is using Maya a lot. How to handle when references are broken?

Thomas Trently suggested to use the resolver. The namespace eidting would be the way of managing (With the resolver we could use GUID, databases, etc).

Varun Talwar explained that there are some discussions to clean the code up to relocate in SdF.

At Ubisoft (Charles Flèche), they are adding ID in metadata. All USDs are transient. There is Database of Ids per asset. One asset is 1 id in the Db.

Thomas Trently in custom engines, when moving data around, we need the source and all the linked data to follow around (eg : redirector in Unreal Engine). The source of truth is the engine asset. So the DCCs need to access this engine. Rename, move should be handled.

How do you handle variants??

At Ubisoft, the path to an asset is not clear : the asset is in the data model : the actual 3D Scene is somewhere else. Referencing by path is not possible. A character is an entity.

Nick Porcino is wondering what GUID solve vs what asset path solve?

Thomas Trently is also wondering is there is there an higher solution for games?

Nick Porcino if you have a long term IP, you should be able to grab all the data.
GUID requieres tooling whereas pathing does not.

Blazej Floch explained that there a cultural way of doing it.

Thomas Trently explains that having a backlog of assets in USD is a good selling point. Like that, new iterations of games can have assets already.

Nick Porcino added that having a backcatalog is great for references, for marketing.

Thomas Trently or to have a lot of generic assets (See Pixar's Backlot https://dl.acm.org/doi/fullHtml/10.1145/3450623.3464654)

How can we standardize this? WOuld it belong to the cookbook?

In Unreal, (Matt Johnson) there is nothing specific to handle all of this.

In Unity, there are some investigations. There is a big desire with this. They are waiting for the standard.

Levi Biasco When moving things around, it is where GUID are important. A semantic connection like GUIDs that can reliably point to a scene object even if it was moved in its original file is more important than hard path connections if renaming/reparenting is a frequent operation.
There are 2 graphs:

- a scene graph
- a conceptual graph with semantics links

There is a mental model to break : how to represent that for the team?

Thomas is also asking how to use USD lights in game engine.

Next meeting topics

- Semantic connections
- Usage of USDLight in video game

Attendance

- [x] François Devic, Co-Lead
- [x] TJ Trently, Co-Lead, NetEase Games
- [x] Alex Schwank - WG Co-chair, Apple
- [ ] Nick Porcino - WG Co-chair, Pixar
- [ ] Michael Min - USD Camera WG, Netflix
- [ ] Roman Zulak - USD on the web WG, NVIDIA
- [ ] Aaron Luk, NVIDIA
- [ ] Adam Harder
- [ ] Alan Blevins, NVIDIA
- [ ] Alessandro Bernardi - Ubisoft - HELIX Studio
- [ ] Alex Gerveshi, AWS
- [ ] Alex Wilkie
- [ ] Alexander Kalyuzhnyy, Wizart Animation
- [ ] Allen Hastings, Foundry
- [ ] Aloys Baillet, Animal Logic
- [ ] Alson Entuna, Crytek
- [ ] Alyssa Reuter
- [ ] Andy Biar, Warner Bros.
- [ ] Ana Gomez
- [ ] Anandhaiyappan, Botvfx
- [ ] Angelo Gabriel Sapaula
- [ ] Anthony Tan, Autodesk
- [ ] Anton Palmqvist
- [ ] Arash Keissami, Nira.app
- [ ] Arielle Martin, Foundry
- [ ] Ashwin Bhat - USD and MaterialX, Autodesk
- [ ] Barry Ruff
- [ ] Ben Chung-Hoon, NVIDIA
- [ ] Ben Deniz
- [ ] Bernard Kwok, Autodesk
- [ ] Bill Dwelly
- [ ] Bill Spitzak, Dreamworks Animation
- [x] Blazej Floch
- [ ] Brian Gyss, 5th Kind
- [ ] Bruno Ebe
- [x] Bruno Landry (Unity)
- [ ] Carlos Felipe Garcia Murillo
- [ ] Carolin Colón
- [ ] Carson Brownlee, Intel
- [ ] Charleen Chu, SPI
- [x] Charles Flèche, Ubisoft Montréal
- [ ] Chris King
- [ ] Christopher Lexington
- [ ] Chris Rydalch, SideFX
- [ ] Claire Chen
- [ ]
- [x]

- Claire Yb
- Claude Robillard
- Connor Smith, Magic Leap
- Cory Omand, TWDS/Pixar
- Curtis Andrus
- Dan Herman
- Dan Lee
- Dan Rolinek
- Daniel Heckenberg, Animal Logic
- Daniel Lanner
- Dave Hale, Riot Games
- David Aguilar, Walt Disney Animation
- David Larsson, Adobe
- Dean Jackson, Apple
- Deke Kincaid, Digital Domain
- Dhruv Govil, Apple
- Divyansh Mishra
- Domenico Alessi
- Dominic Couture
- Doug MacMillan, Tippett Studio
- Edward Slavin, NVidia
- Élie Michel
- Eric Chadwick, Wayfair
- Eoin Murphy, NVidia
- Eric Enderton, NVidia
- Eric Majka, Psyonix/Epic Games
- Erik Ostsjo
- Étienne Archambault
- F. Sebastian Grassia, Pixar
- Fabrice Macagno, Animal Logic
- Felix Herbst, Prefrontal Cortex
- Fernando Leandro
- Francois Lord, NAD-UQAC / Rodeo FX
- Frieder Erdmann, Ubisoft Massive
- Gary Jones, Foundry
- Georgie Challis
- Gordon Bradley, Autodesk
- Gordon Cameron, Epic Games
- Guido Quaroni, Adobe
- Guillaume Laforge, Autodesk
- Guy Martin, NVIDIA
- Hendrik Helpach
- Henrik Edstrom, Autodesk
- Henry Vera, DNEG
- James Pedlingham, Foundry
- Jeff Bradley, Dreamworks
- Jenna Bell, Disney / Invisible Thread

- [ ] Jennifer Horowitz, Maxar
- [ ] Jenny Zhang
- [x] Jeremiah Zanin, Santa Monica Studio
- [ ] Jeremy Cowles - USD Assets WG Chair, Unity
- [ ] Jerran Schmidt, NVIDIA
- [ ] Jerry Gamache
- [ ] Jesse Barker
- [ ] Jesse Ng, Metropolitan Museum of Art
- [ ] Joe Hultgren
- [ ] John Burnett, Bonfire Studios
- [ ] John Creighton, Apple
- [ ] John Hood, SPI
- [ ] John Mertic, Linux Foundation
- [ ] Jon Creighton, Apple
- [ ] Jon Wade, Spotify
- [ ] Jonah Friedman, Autodesk
- [ ] Jonathan Gerber
- [ ] Jonathan Stone
- [ ] Jonghwan Hwang
- [ ] Jordan Soles, Rodeo FX
- [ ] Jordan Thistlewood, Epic
- [ ] Joshua Miller
- [ ] Joseph Goldstone
- [x] JT Nelson, Pasadena Open Source Consortium/SoCal Blender group
- [ ] Julien Dubuisson
- [x] Kev Kirkland
- [ ] Kevin Bullock
- [ ] Kelvin Chu, Riot Games
- [ ] Kimball Thurston, Weta
- [ ] Koen Vroeijenstijn, Activision / Infinity Ward
- [ ] Kristof Minnaert, Remedy Entertainment
- [ ] Kurtis Schmidt
- [ ] Laura Scholl
- [ ] Larry Gritz, SPI
- [ ] Lee Kerley, SPI
- [x] Levi Biasco, Santa Monica Studio
- [ ] Louis Marcoux, NVIDIA
- [ ] Lucas Morante, Illusorium
- [ ] Luca Scheller, RiseFX
- [ ] Luiz Kruel, R* NYC
- [ ] Luke Titley
- [ ] Manuel Köster, Crytek
- [ ] Mark Alexander
- [ ] Mark Elendt, SideFX
- [ ] Mark Final, Foundry
- [ ] Mark Masson
- [ ] Mark Manca
- [ ]

- [ ] Mark Sisson
- [ ] Mark Tucker, SideFX
- [ ] Marteinn Oskarsson, Sony Imageworks
- [ ] Martin Karlsson
- [ ] Mathieu Bertrand
- [ ] Mathieu Mazerolle, Foundry
- [ ] Matias Codesal, NVIDIA
- [x] Matt Johnson, Epic Games
- [x] Matt Kuruc, NVIDIA
- [ ] Matthew Levine, WDAS
- [ ] Matthew Low, DWA
- [ ] Michael B. Johnson, Apple
- [x] Michael Blain, Unity
- [ ] Michael Buckley
- [ ] Michael Kass, NVidia
- [ ] Michael Min
- [ ] Mika Vehkala, Remedy Entertainment
- [ ] Mikko Haapoja, Shopify
- [ ] Nat Brown
- [ ] Natasha Tatarchuk, Unity
- [ ] Neil Chodorowski
- [ ] Niall Redmond, Foundry
- [ ] Nicolas Popravka, Soul Machines
- [ ] Nicolas Savva
- [ ] Nishanth Singaraju
- [ ] Oliver Dunn
- [ ] Oscar Sebio, Autodesk
- [ ] Paolo Selva, Weta
- [ ] Paul Baaske, Jellyfish Pictures
- [ ] Paul Molodowitch, NVIDIA
- [ ] Patrick Palmer
- [ ] Peter Arcara
- [ ] Pete Segal
- [ ] Phil Sawicki, NVIDIA
- [ ] Prapanch Swamy, Disney / Invisible Thread
- [ ] Pier Paolo Ciarravano, MPC
- [ ] Pierre-Luc Bruyere
- [ ] Quentin Birrer
- [ ] Ramesh Santhanam
- [ ] Rebecca Hallac
- [ ] Richard Frangenberg
- [ ] Richard Kerris, nVidia
- [ ] Richard Lei, Weta
- [ ] Rob Pieké
- [ ] Rob Stauffer, SideFX
- [x] Robert Krupa, Elemental Games
- [ ] Robin Rowe, CinePaint
- [ ]

- [ ] Rohit Khonde
- [ ] Rory Woodford, Foundry
- [ ] Ryan Stelzleni
- [ ] Scott Geffert, Metropolitan Museum of Art
- [ ] Scott Keating
- [ ] Sean Looper, AWS
- [ ] Sean McDuffee, Intel
- [ ] Seb Schmidt, Weta
- [ ] Sebastian Herholz, Intel
- [ ] Sebastian Grassia, Pixar
- [ ] Sebastian Rath, Snowtrack Montréal
- [ ] Sebastien Dalgo, Unity
- [ ] Sergei Shaykin, Apple (usdzconvert)
- [ ] Sergio Rojas, Different Dimension
- [ ] Serguei Kalentchouk, Netflix
- [ ] Shane Davis, SideFX
- [ ] Shawn Dunn, Epic Games
- [ ] Silvia Palara
- [ ] Sneha Jaikumar
- [ ] Spencer Luebbert
- [ ] Stefan Habel, Foundry
- [ ] Stephan Leroux, Shopify
- [ ] Steve Agland, Animal Logic
- [ ] Steve Hwan, DD
- [ ] Steve LaVietes
- [ ] Steven Anichini, Disbelief
- [ ] Sue Sauer, Sunrise Productions
- [ ] Sylvain Trottier, NVIDIA
- [ ] Thibault Lambert
- [x] Thomas Chollet
- [ ] Thomas Kumlehn
- [ ] Tiago Carvalho
- [ ] Tim Fowler
- [ ] Tzung-da Tsai
- [ ] Vadim Slyusarev
- [ ] Varun Talwar
- [ ] Wayne Wu
- [ ] Will Telford, NVIDIA
- [ ] Xiaoxi Liu, Unity
- [ ] Yassine Mankai
- [ ] YJ Jang