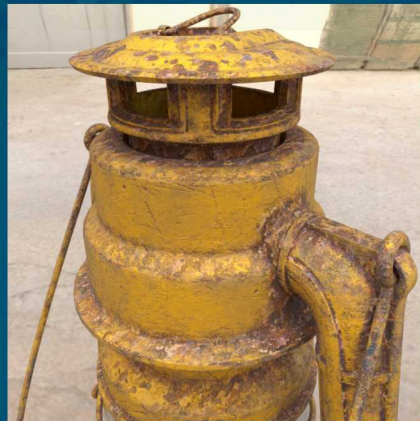


Impactful Visualizations Paraview – Houdini FX - VR



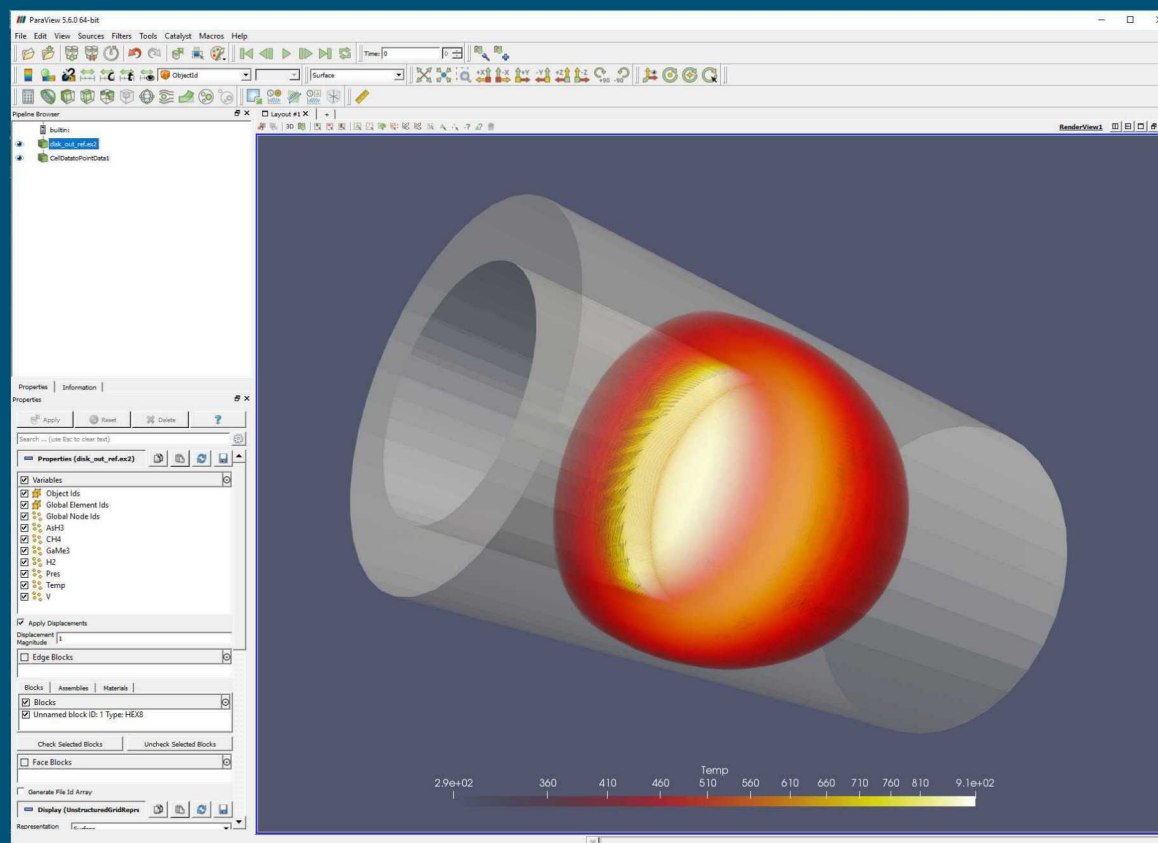
PRESENTED BY

Brad Carvey

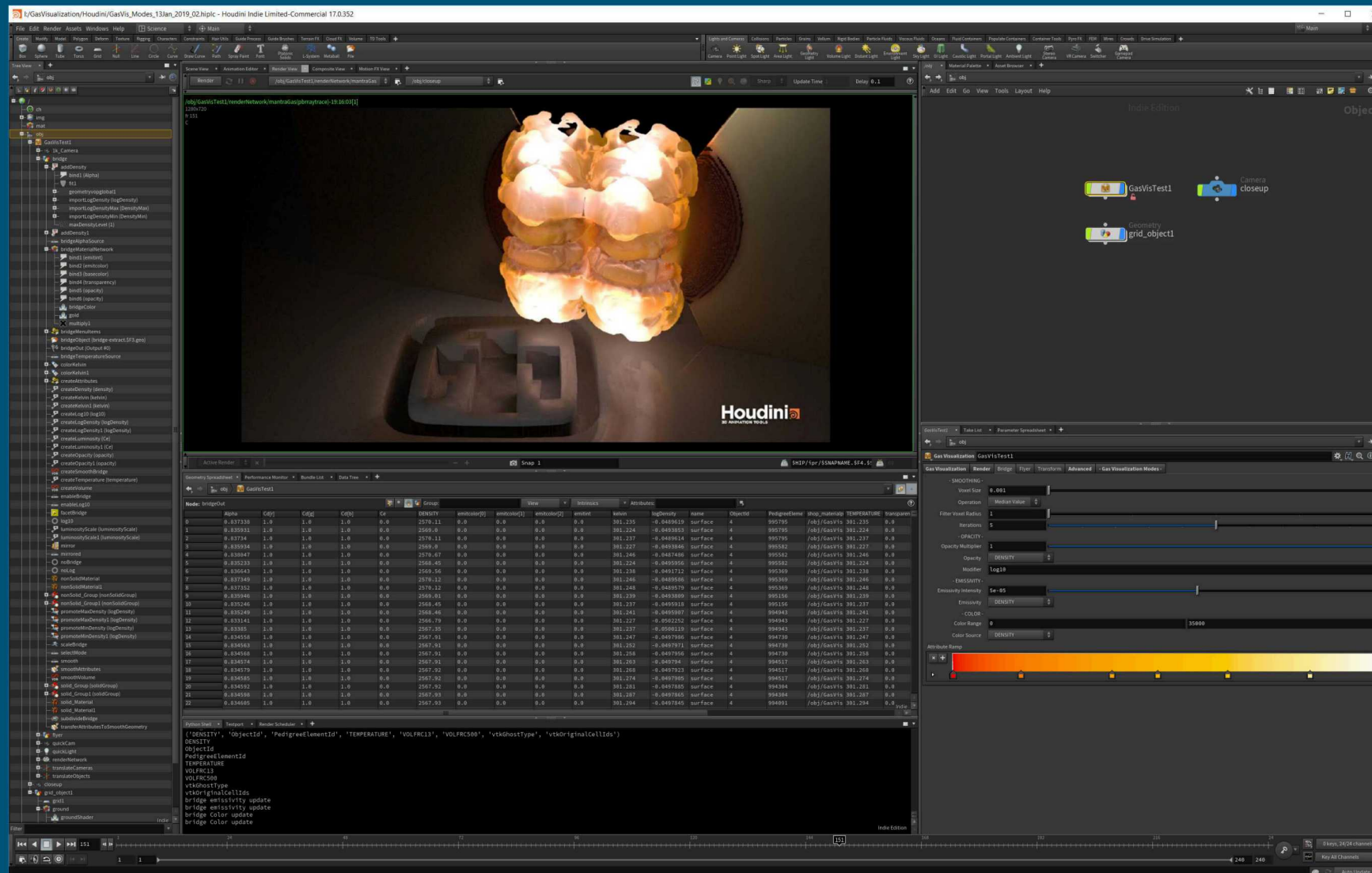


Paraview

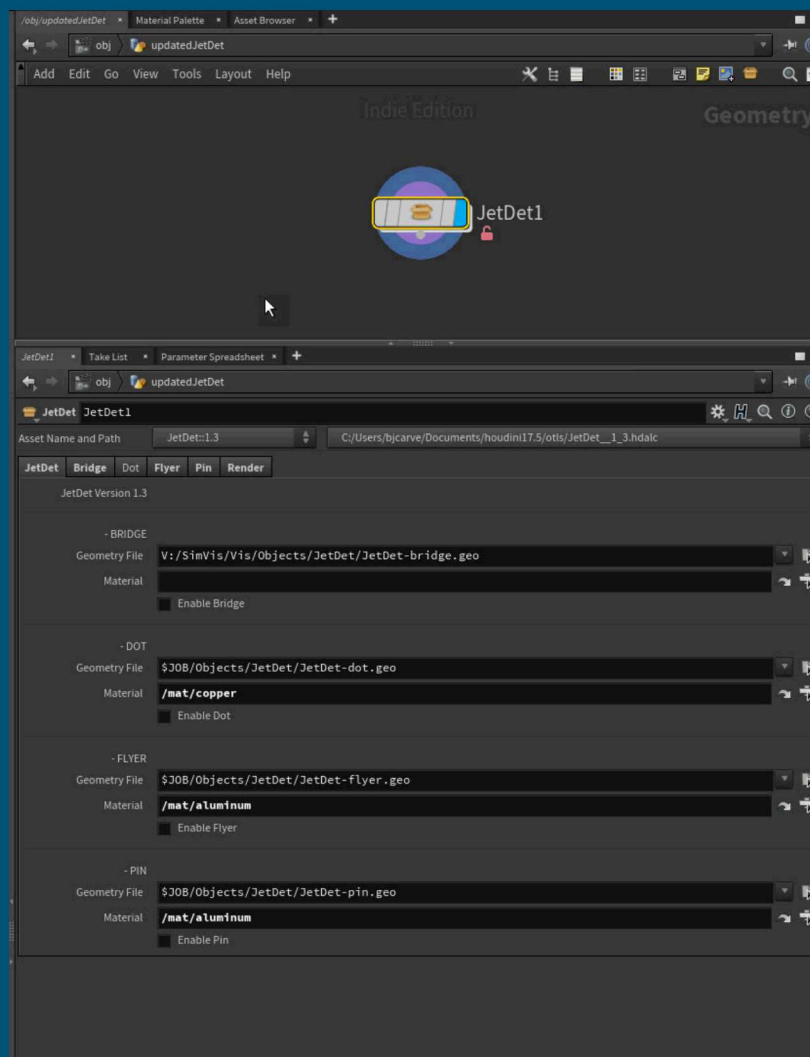
- Import Simulation data
- Apply Filters
- Export Houdini Data with Field Data (px, py, pz, velocity, density, temperature, volfric ...)



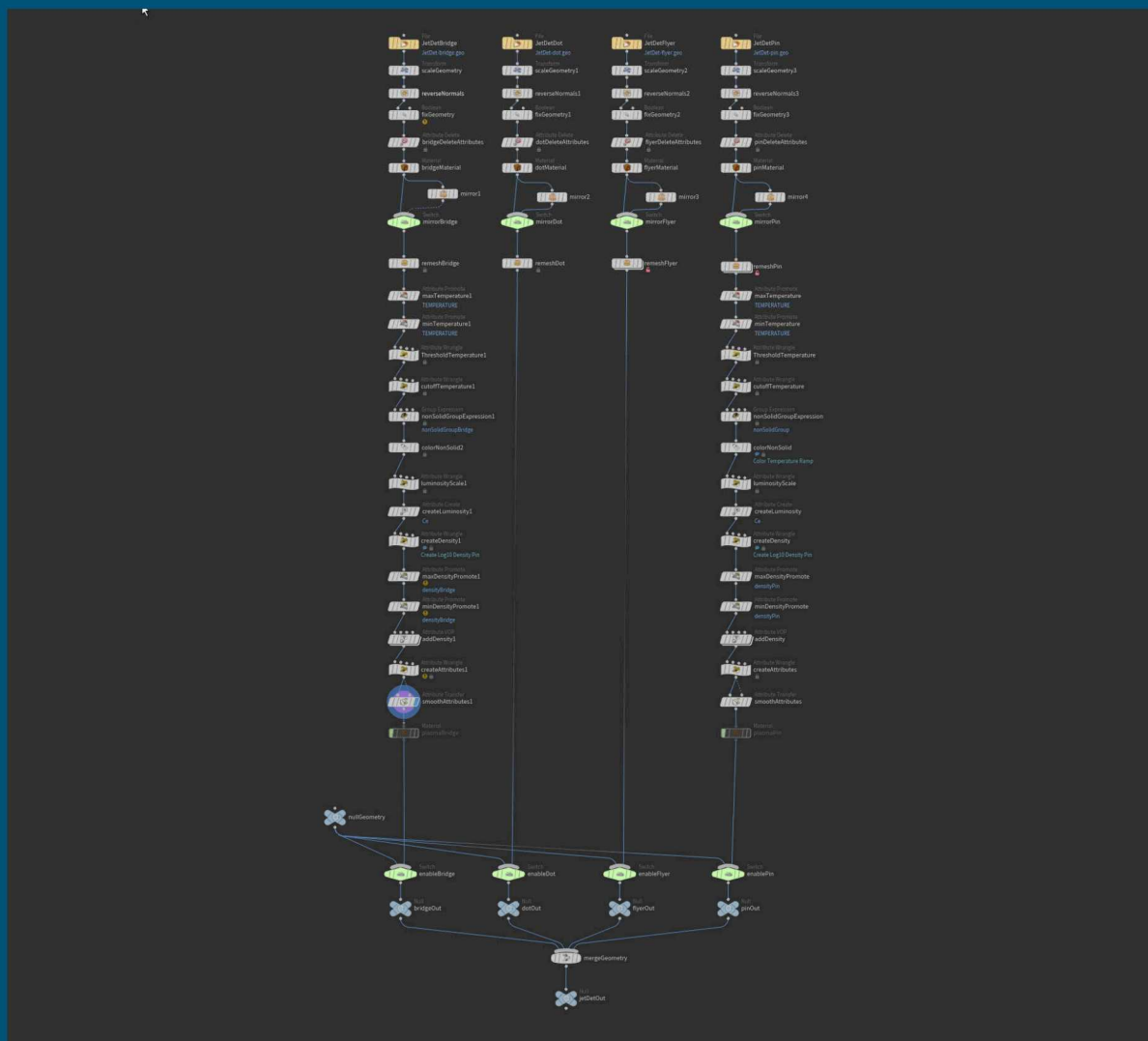
Houdini



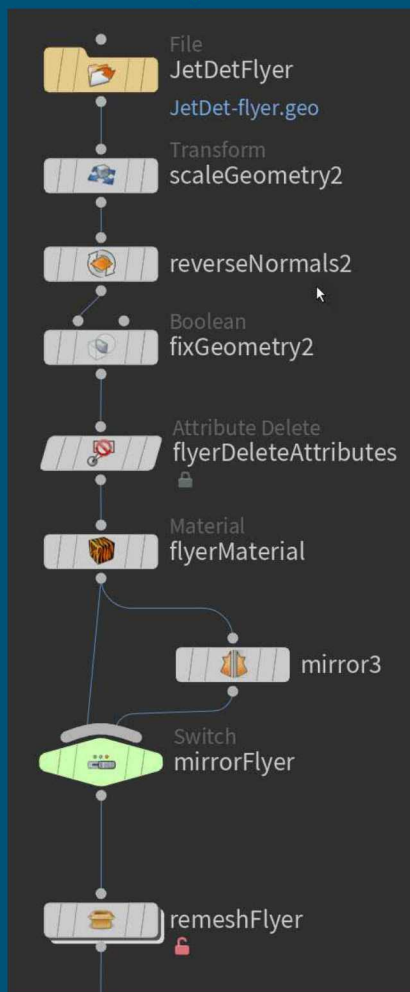
Houdini Digital Assets



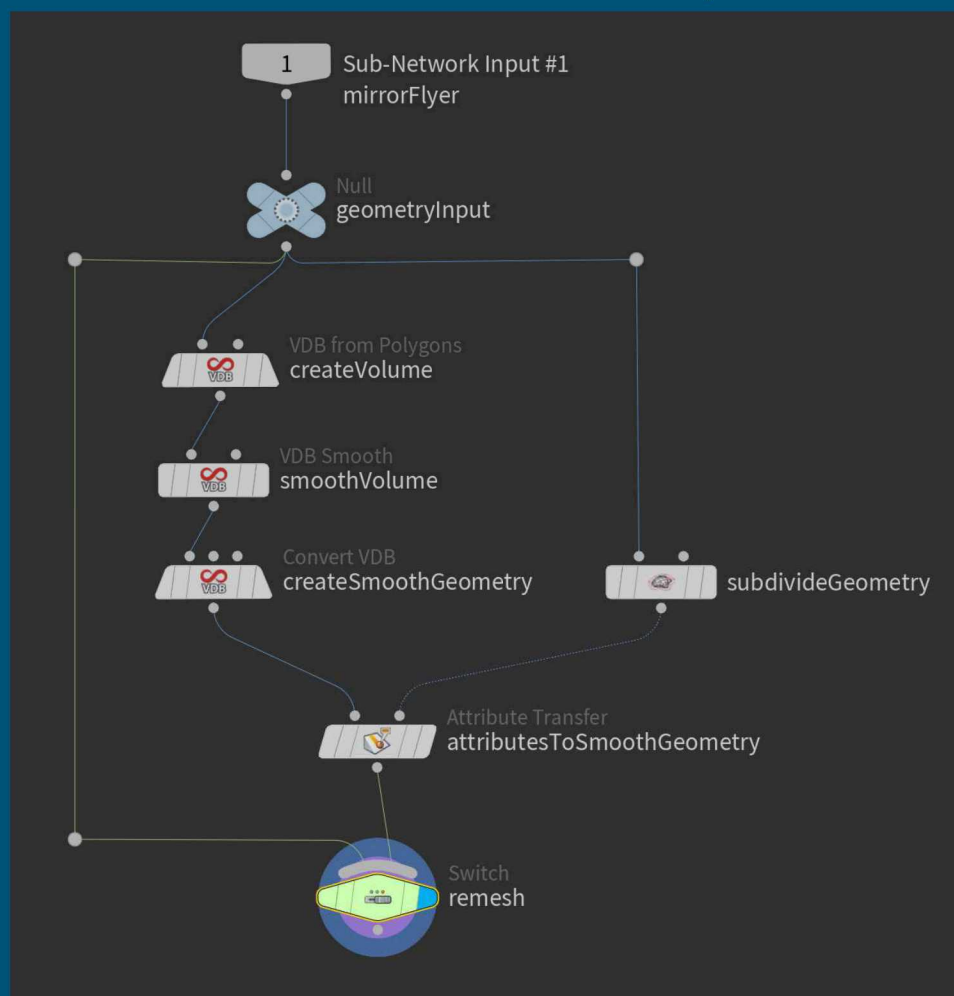
Hidden Complexity



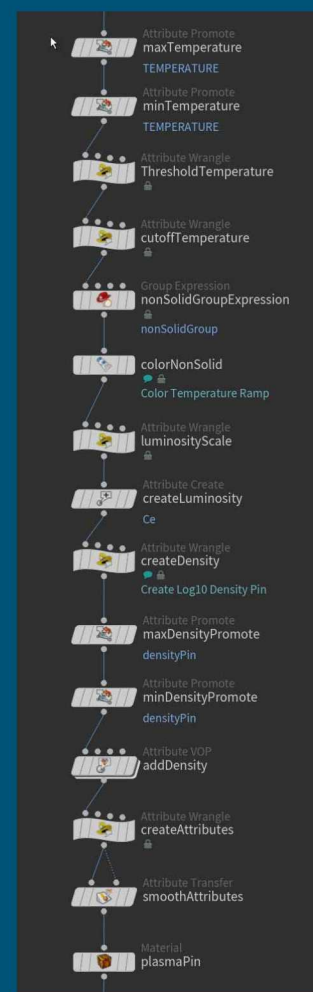
Import



Smooth Geometry

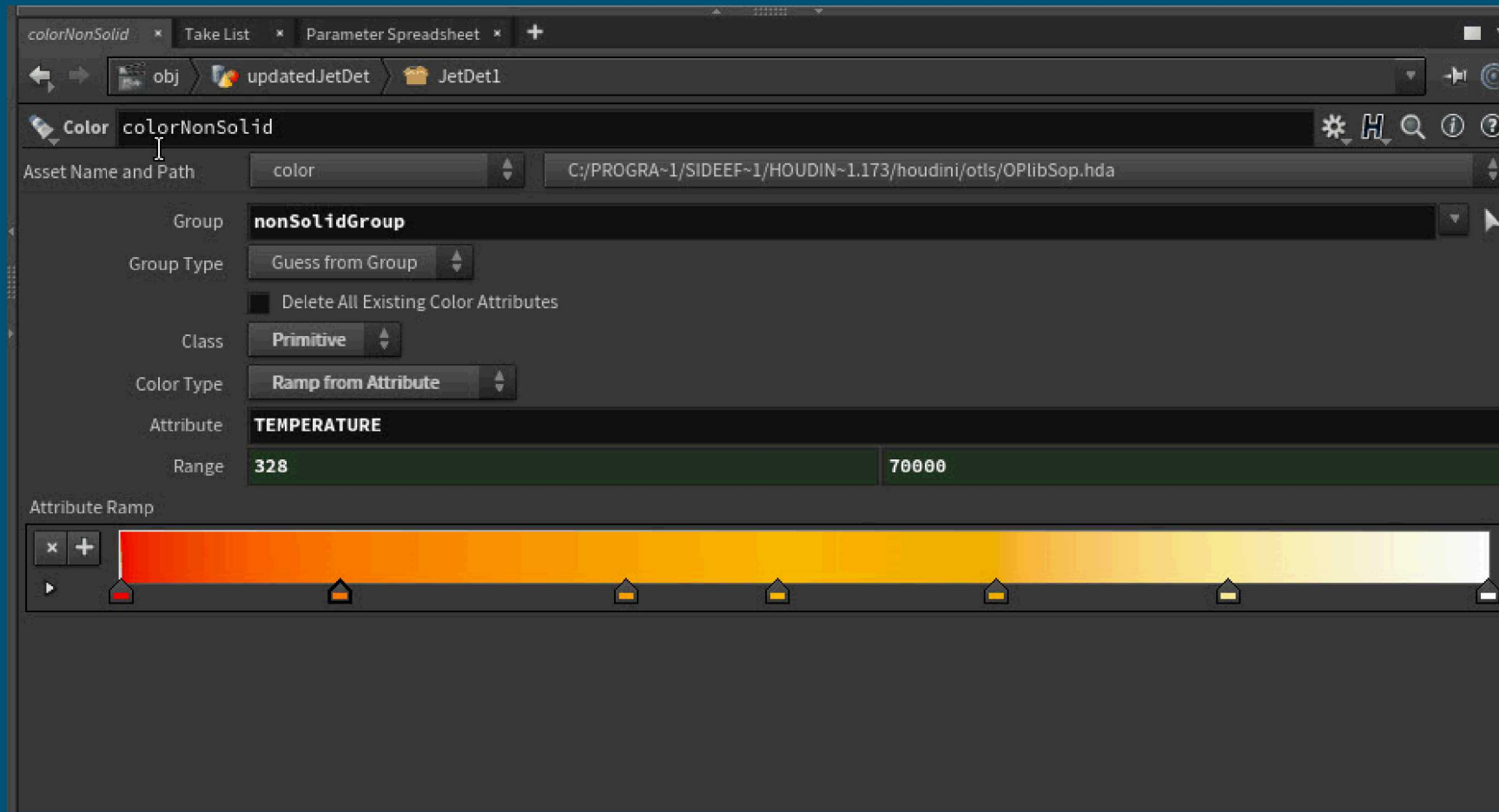


Process



Houdini Materials from Properties

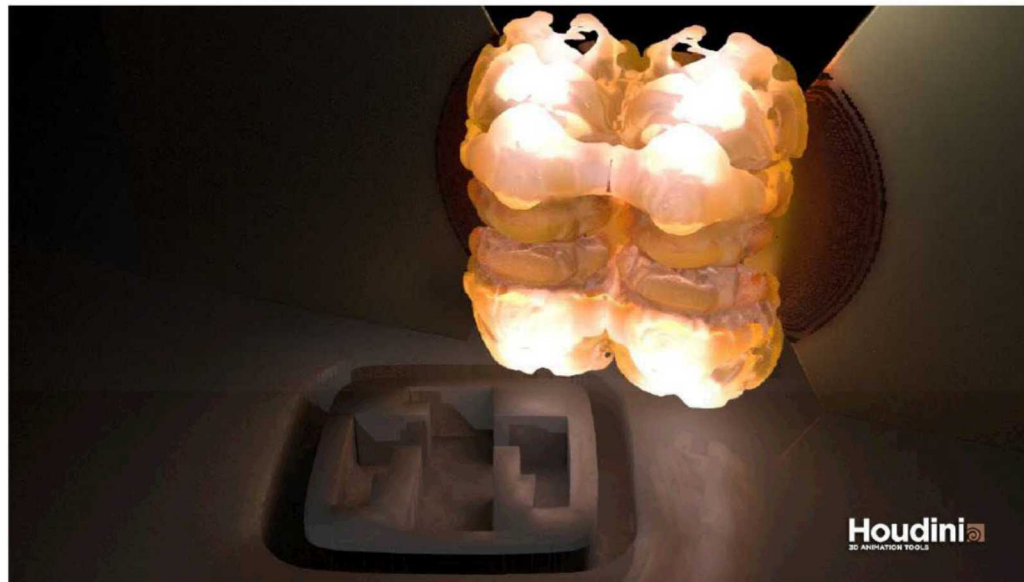
Temperature







Sandia National Laboratories



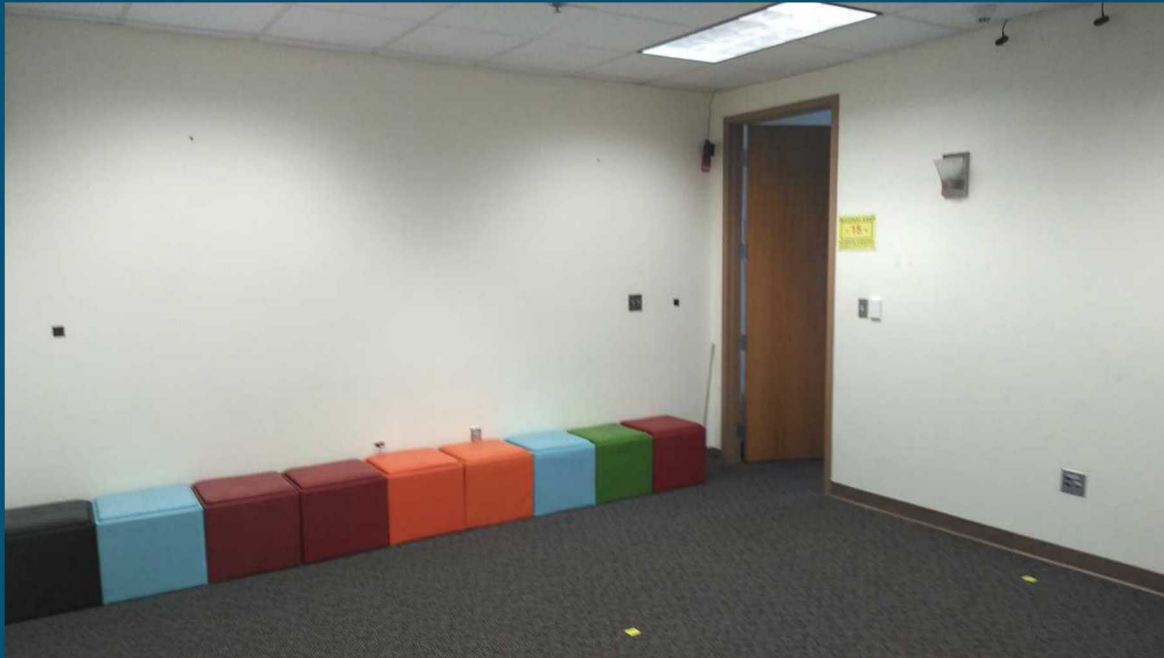
Simulating Rapid Phase Changes in Metal Foils

Ray-tracing visualization of an electrically exploding bow-tie metallic foil. High performance computing simulations are used to study how electrical current can cause phase transitions from ambient metal conditions to low-density high-temperature plasma. The resulting pressurization of the surrounding region is useful for energetic components.

Credits: Christopher Garasi, Brad Carvey, ALEGRA-MHD modeling

SAND No: SAND2018-11139 C

CARVR Idea Lab



- Observer area with 80" Monitor
- Wireless Vive Pro Headsets
- Magic Leap AR Headset
- Hololens AR Headsets
- Knuckle Controllers
- 3d Printed Trackable Objects

