

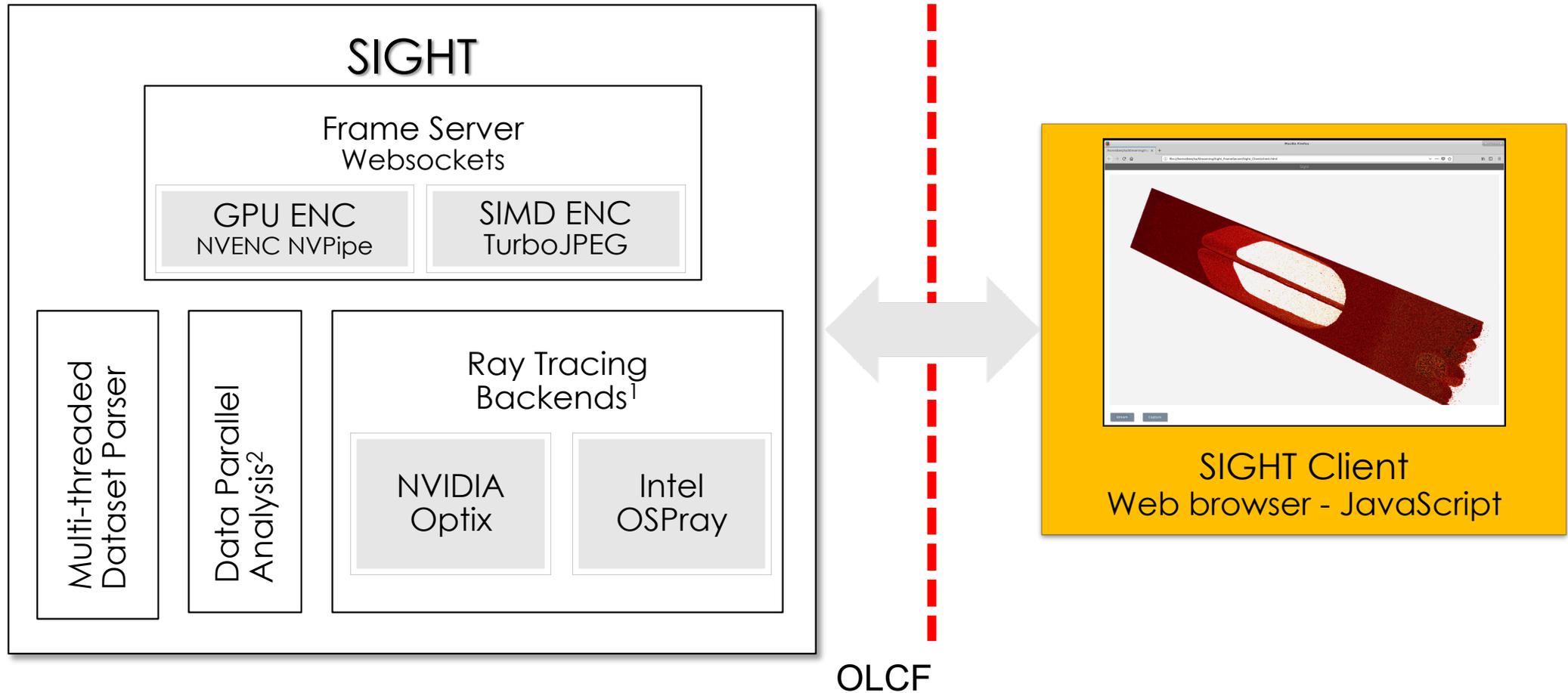
# IXPUG In Situ Analysis Hackathon

## OLCF

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# SIGHT's System Architecture



<sup>1</sup>S7175 Exploratory Visualization of Petascale Particle Data in Nvidia DGX-1  
Nvidia GPU Technology Conference 2017

<sup>2</sup>P8220 Heterogeneous Selection Algorithms for Interactive Analysis of Billion Scale Atomistic Datasets  
Nvidia GPU Technology Conference 2018

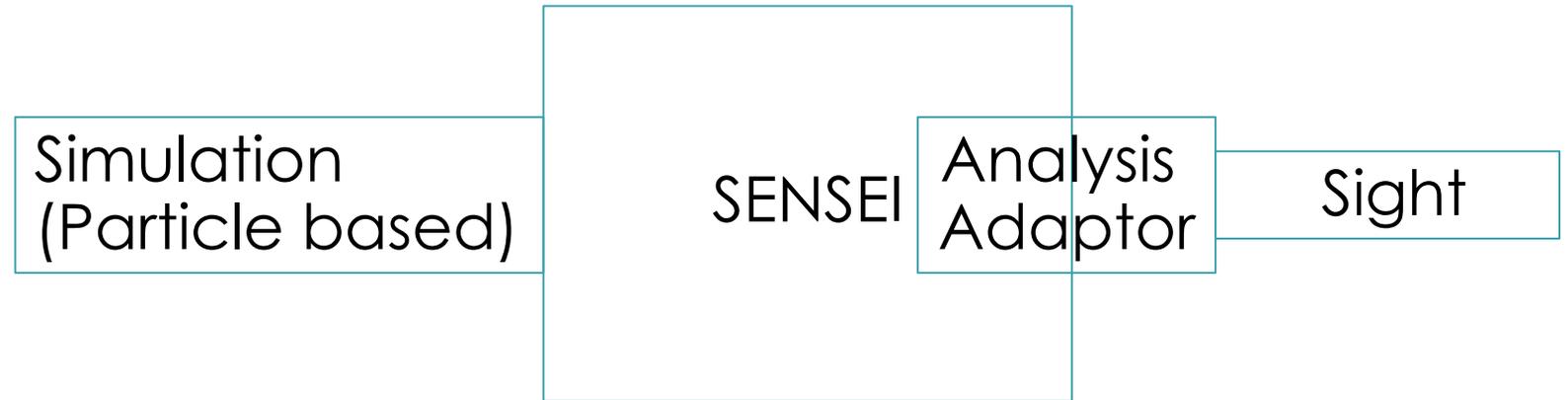
# Enhancing SIGHT Frame Server

Simultaneous and independent user views

- Video

<https://youtu.be/0nremmyPyG0?t=71>

# Sight-Sensei Integration



- Objective:
  - Provide ray traced remote visualization to particle based simulation codes
- Initial design of Sight's analysis adaptor class
- Extending Sight to support buffers coming from the analysis adaptor class
- Evaluate options for in transit visualization

# Sensei + Catalyst with EGL/OpenGL in Summit

- Harvey code (Duke University), ALCF, OLCF, LLNB
  - Software stack needed for performance analysis of In-situ visualization of hemodynamics simulations
    - Simulation runs in GPUs, analysis and visualization on CPU (Power9)
    - New tests: Simulation, analysis and visualization running in GPUs
      - How this affect the simulation performance, find new potential bottlenecks, etc.

# Thanks!

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