ANARI Working Group Update

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SIGGRAPH 2022 Khronos Fast Forward
Comparing ANARI and Vulkan

High-level API to build scene description
- NO rendering details
  - Not a scene graph
  - No application-specific structures, traversals, and metadata
- Unidirectional
  - Data flows from the app to ANARI
- Same scene description can be used to drive any backend rendering
  - Code portability

Scene Description in Memory

Low-level explicit control of GPU rendering and compute
- Can be complex to program
- Used to implement back-end rendering engines
- Can accelerate a wide diversity of rendering techniques

~1 billion atom protocell membrane w/ ~1400 proteins (VMD)
ANARI Rendering Interface API Goals

### 3D Rendering Portability

Common API to describe 3D objects in a scene

API to build the description of a scene rather than specifying the details of the rendering process

Rendering details left to the implementation of the API

Subset of more general scene graph APIs

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Acceleration APIs:
- Embree, OptiX, Radeon Rays, CUDA, OpenCL, Vulkan etc.

Hardware:
- CPUs, GPUs etc.

Renderers:
- Intel OSPRay, Radeon ProRender, NVIDIA VisRTX etc.

Viz Apps and Engines
- ANARI
- Scene Graphs
- Custom Apps
- MathWorks
- ParaView
- VTK
- FieldView
- FieldView
- ANARI
ANARI Timeline

- **Analytic Rendering Exploratory Group**: Formed November 2019
- **ANARI Working Group**: Announced 3rd March 2020
- **ANARI Provisional Specification**: 2nd November 2021
- **TARGET First ANARI Specification**: TBD
ANARI: A 3-D Rendering API Standard

Publisher: IEEE

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Full
Text Views

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**ANARI-SDK**: github.com/KhronosGroup/ANARI-SDK
Get Involved in Developing ANARI!

Join Khronos and the ANARI Working Group
Have a voice and a vote in the design of the ANARI specification
Fast track ANARI for your own renderer or hardware

Send us your feedback and requirements
What rendering features important to your application domain?
What new application domains and use cases would you use ANARI for?

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