



# ANARI Working Group Update

Jefferson Amstutz, NVIDIA  
SIGGRAPH 2022 Khronos Fast Forward

# Comparing ANARI and Vulkan



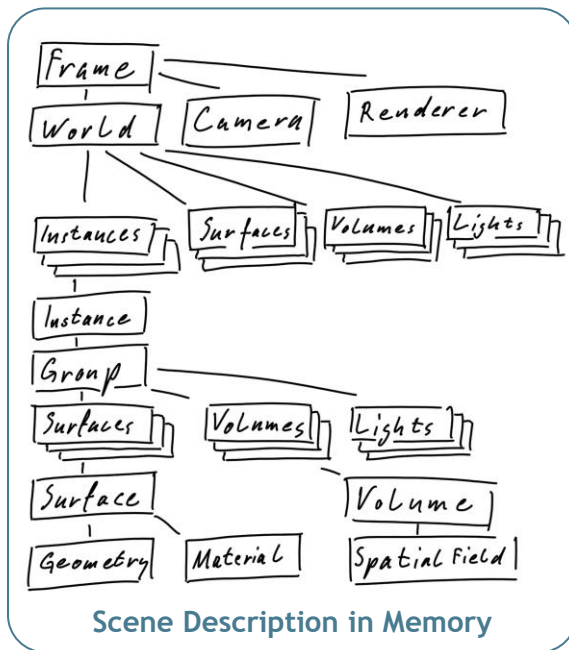
High-level API to build scene description  
NO rendering details

Not a scene graph  
No application-specific structures,  
traversals, and metadata

Unidirectional

Data flows from the app to ANARI

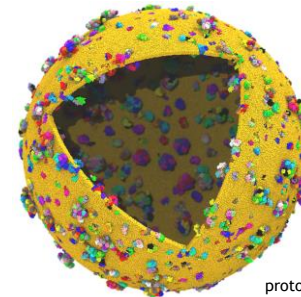
Same scene description can be used to  
drive any backend rendering  
Code portability



Low-level explicit control of GPU  
rendering and compute  
Can be complex to program

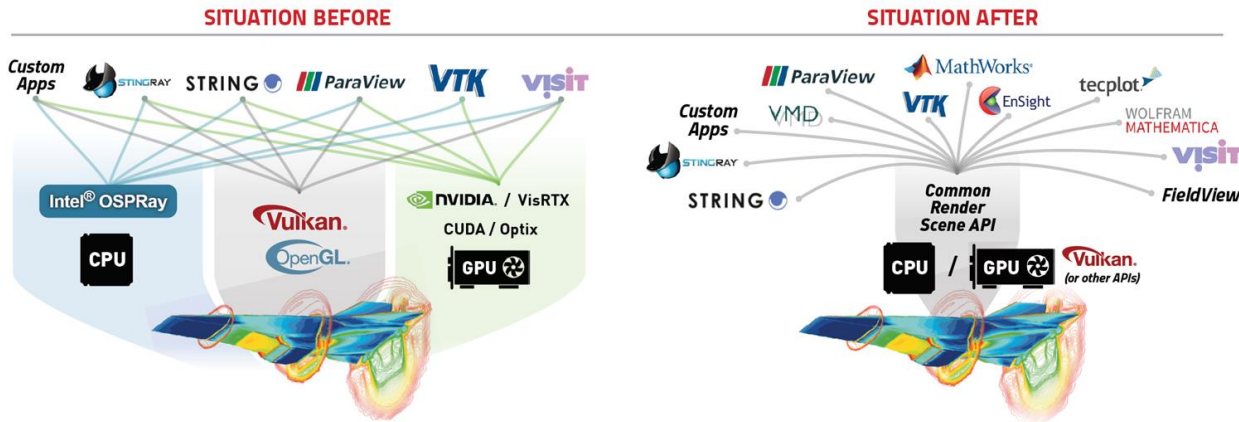
Used to implement  
back-end rendering engines

Can accelerate a wide diversity  
of rendering techniques



-1 billion atom  
protocell membrane  
w/ -1400 proteins (VMD)

# ANARI Rendering Interface API Goals



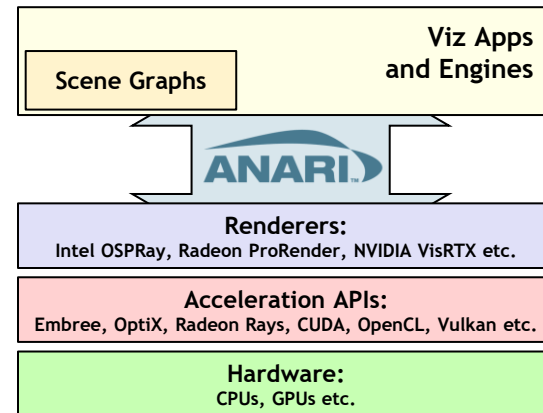
## 3D Rendering Portability

Common API to describe 3D objects in a scene

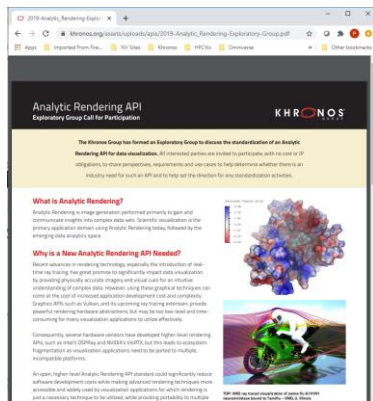
API to build the description of a scene rather than specifying the details of the rendering process

Rendering details left to the implementation of the API

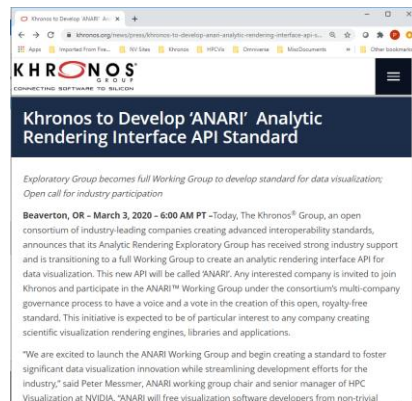
Subset of more general scene graph APIs



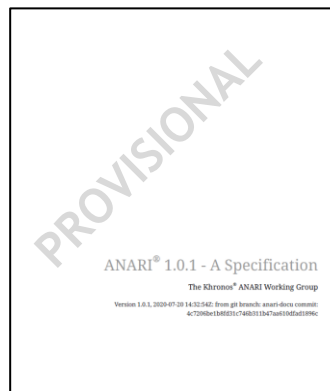
# ANARI Timeline



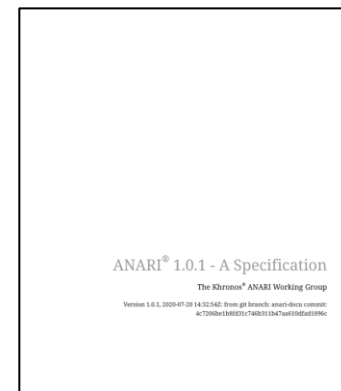
**Analytic Rendering  
Exploratory Group  
Formed  
November 2019**



**ANARI  
Working Group  
Announced  
3rd March 2020**



**ANARI Provisional  
Specification  
2nd November  
2021**



**TARGET  
First ANARI  
Specification  
TBD**

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Journals & Magazines > Computing in Science & Engine... > Volume: 24 Issue: 2 ?

## ANARI: A 3-D Rendering API Standard

Publisher: IEEE

Cite This

PDF

John E. Stone ; Kevin S. Griffin ; Jefferson Amstutz ; David E. DeMarle ; William R. Sherman ; Johannes Günther [All Authors](#)

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# Khronos Website: khronos.org/anari



## ANARI™

### SCALABLE 3D DATA VISUALIZATION

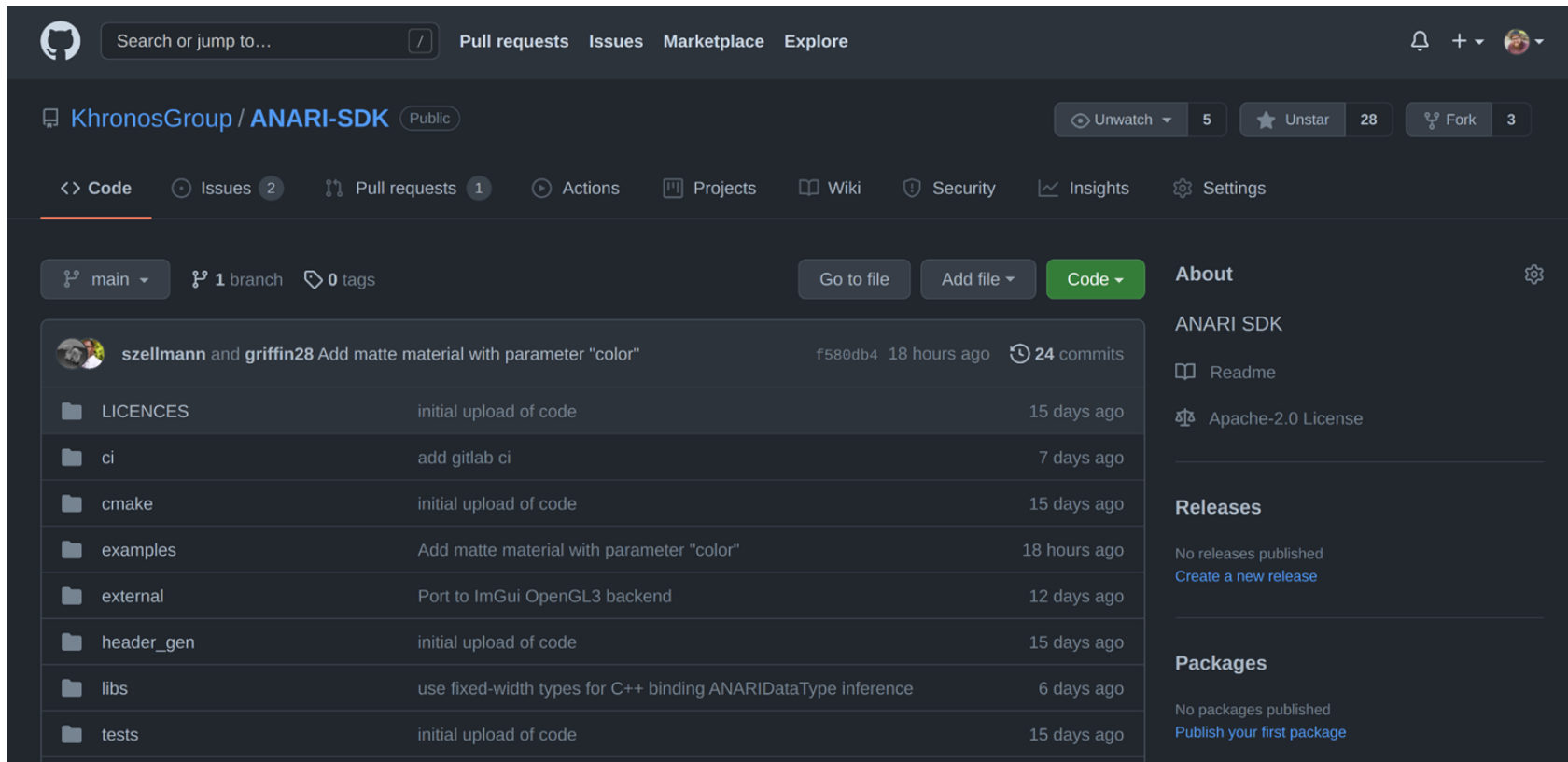
The ANARI (Analytic Rendering Interface) API enables users to build the description of a scene to generate imagery, rather than specifying the details of the rendering process, providing simplified visualization application development and cross-vendor portability to diverse rendering engines, including those using state-of-the-art ray tracing.

## ANARI 1.0 Provisional is Here!

Launched November 2nd, 2021

- [Press Release](#)
- [Overview Video](#)
- [Overview Presentation](#)
- [Specification](#)
- [Specification Source for Feedback](#)
- [Open Source SDK](#)

# ANARI-SDK: [github.com/KhronosGroup/ANARI-SDK](https://github.com/KhronosGroup/ANARI-SDK)



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ANARI SDK

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Releases

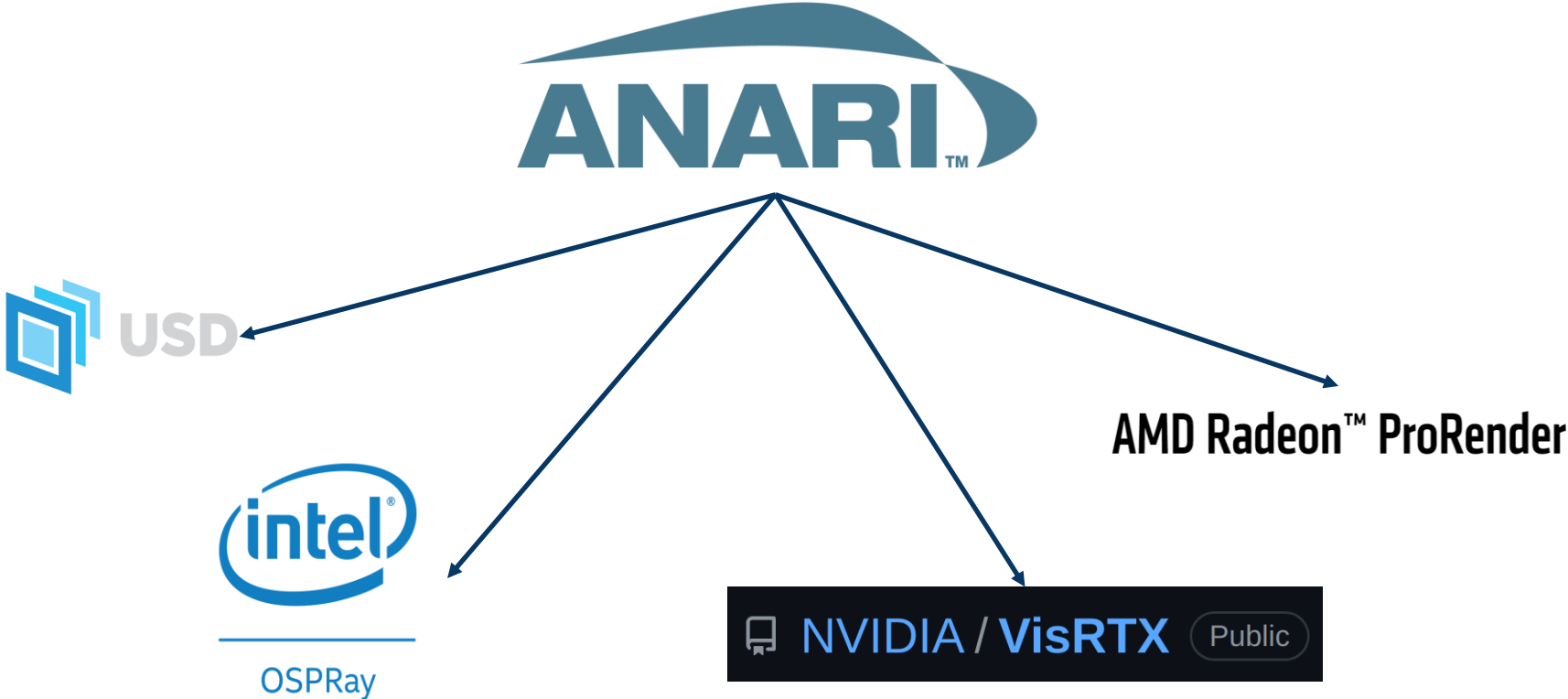
No releases published  
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Packages

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Folder	Commit Message	Commit Hash	Time Ago	Commits
LICENCES	initial upload of code	f580db4	15 days ago	24
ci	add gitlab ci		7 days ago	
cmake	initial upload of code		15 days ago	
examples	Add matte material with parameter "color"		18 hours ago	
external	Port to ImGui OpenGL3 backend		12 days ago	
header_gen	initial upload of code		15 days ago	
libs	use fixed-width types for C++ binding ANARIDataType inference		6 days ago	
tests	initial upload of code		15 days ago	

# Available Implementations





# 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?

<https://www.khronos.org/anari>  
[anari-chair@lists.khronos.org](mailto:anari-chair@lists.khronos.org)

