Agenda: New Alliances and Collaborations

Cesium Ecosystem Grant Award

Integrating OGC 3D Tiles with X3D for advanced geospatial visualization

New AI and X3D Working Group

Exploring the intersection of artificial intelligence and 3D web standards

X3D Ecosystem Support

Expanding compatibility with commercial tools and open-source implementations

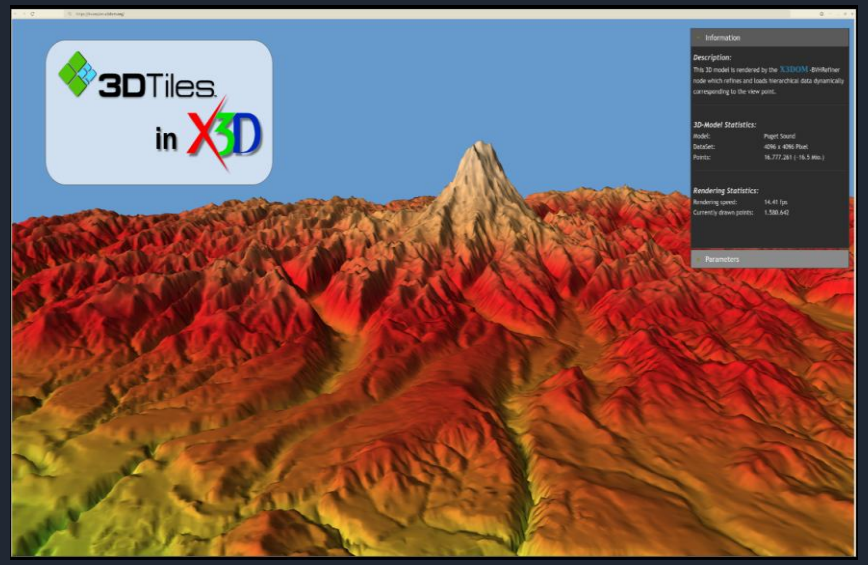
Discussion on USD Support in X3D

Exploring integration with Universal Scene Description format

Metaverse Standards Forum

Proposed standards for 3D web interoperability in the metaverse

Grant Award: Bentley System's Cesium Ecosystem OGC 3D Tiles in X3D



This fulfills a critical need for X3D & 3D Tiles users, integrating large scale OGC 3D Tiles content with X3D geospatial content

Grant Award

In August 2025, the Web3D Consortium received funding from the Cesium Ecosystem Grant program to advance OGC 3D Tiles support in X3D formats

Project Goals

Enhance interoperability and streamline integration of large 3D geospatial data sets into various applications

Collaboration

Working with Web3D members to align these important standards and advance geospatial visualization capabilities

We thank Bentley Systems for this award!

Press Release

Web Geospatial Ecosystem

Web3D Consortium Specification

- Interactive 3D scenes on the Web in real-time
- Wide range of 3D graphics features
- Multiple coordinate projections
- Double-precision data types

OGC Specification

- Efficient delivery of industrial geospatial datasets
- Streaming and rendering large-scale data
- Hierarchical Level of Detail (HLOD)
- Optimized for real-time applications

Khronos Specification

- Efficient transmission format for 3D scenes
- Optimized for runtime performance
- Physically-based rendering materials
- Lightweight 3D model delivery

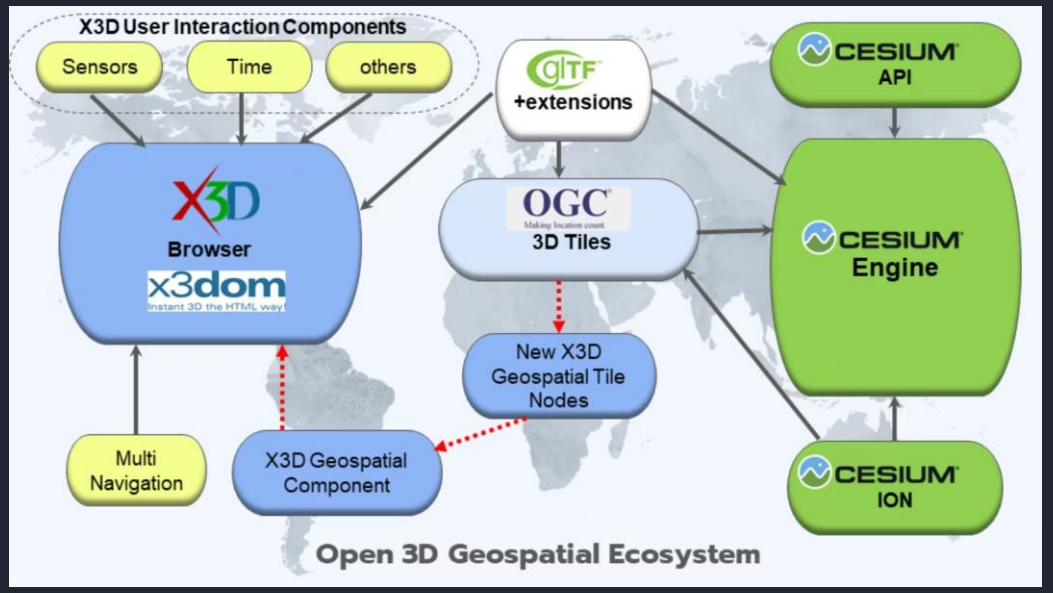
These complementary standards create a robust ecosystem for web-based 3D geospatial visualization, each addressing different aspects of the technical challenge.

Integration Proposal

- OGC 3D Tiles content can be assigned a geoSystem value during X3D integration
- Stream only those tiles from large datasets that are most important for a given 3D view
- Optimize performance while maintaining visual quality
- Implementation planned for open-source frameworks like X3DOM

OGC 3D Tiles support in X3D

Benefits



Standards Convergence

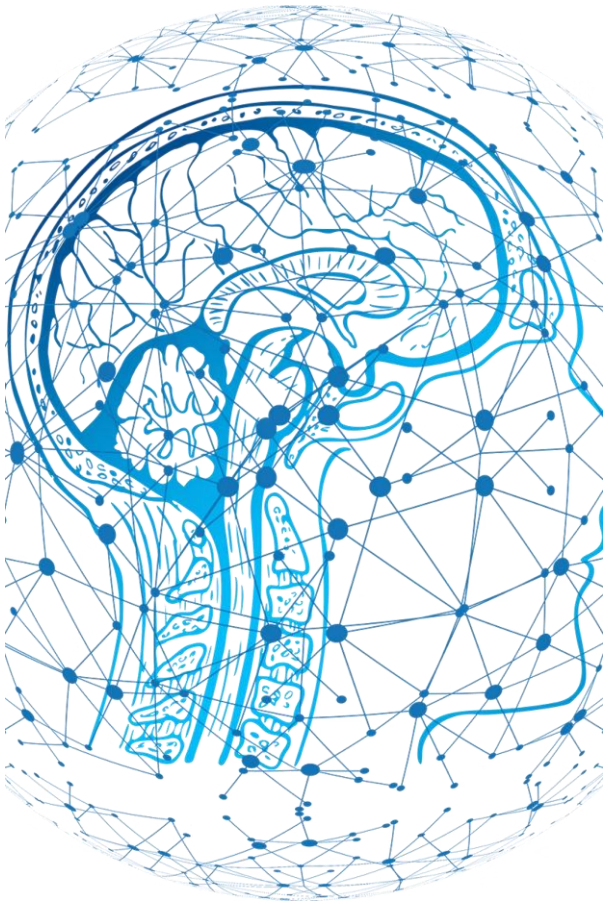
Creating connections between three key standards (X3D, OGC 3D Tiles and glTF) for seamless interoperability

Enhanced Visualization

Transmitting and visualizing large-scale 3D scenes including industrial 3D geospatial datasets, buildings, terrain, and point clouds in real-time with additional 3D graphics features

Broader Adoption

Encouraging content creators to adopt 3D Tiles for streaming industrial 3D geospatial datasets embedded in X3D's rich 3D feature set



X3D

Working Group

Web3D and AI

https://www.web3d.org/working-groups/ai-x3d

X3D

Metaverse Standards Forum

3D Web Interoperability for the Metaverse

Discuss the directions of the 3D Web Interoperability Domain Group from the Metaverse Standards Forum. Web of Worlds – This project to link virtual worlds highlights a compelling analogy between the World Wide Web—a unified system of URL-addressable, interconnected interactive experiences—and what we envision as a cohesive metaverse platform. This envisioned platform comprises numerous addressable and interconnected spatial experiences, or virtual worlds, collectively forming what we call the “Web of Worlds.” Just as websites create a networked digital ecosystem, these spatial-first experiences would interconnect to create a seamless virtual world.

We welcome contributions from developers, researchers, and industry professionals interested in advancing 3D web technologies.

Join Web3D Geospatial Working Group

Learn X3D – Resources and Tools

Attend our conferences and webinars

YouTube Channel

Thank You!

www.web3d.org

Join us at www.web3d.org to learn more about X3D standards and how to get involved with the Web3D Consortium.