



V E R S A R

Your Needs. Our Mission.

Metaverse – Leveraging geospatial data in restrictive collaborative environments

26 July 2022

Since 1969, Versar has provided program and project management support to federal, state, and local government clients as well as to industries worldwide. Versar offers tailored and secure solutions even in the harshest environments:

- [Program & Construction Management](#)
- [Environmental Services](#)
- [Security Systems](#)
- [Military Services](#)

Partnerships

From a worldwide network of offices, Versar forms partnerships with our clients to help them comply with regulations, avoid liability, solve environmental problems, and improve infrastructure. We strive to provide the best services to our customers and by teaming with diverse groups of individuals and organizations from around the globe with whom we collaborate and develop unique strategies to solve complex issues.



Coastal Resilience and Planning

Sources

Data types ():

- Elevation
- Bathymetry
- Buildings
- Vegetation
- Terrestrial built Features
- Subterranean Features
- Waterfronts
- Climate Adaptations



Transformations

Processing:

- Registration
- Projection to single precision
- Tile slicing
- Geometry operations: i.e., decimation for LODs (selective)
- Re-organize scenes to reduce draw calls
- compressing X3D to binary for fast download



Products

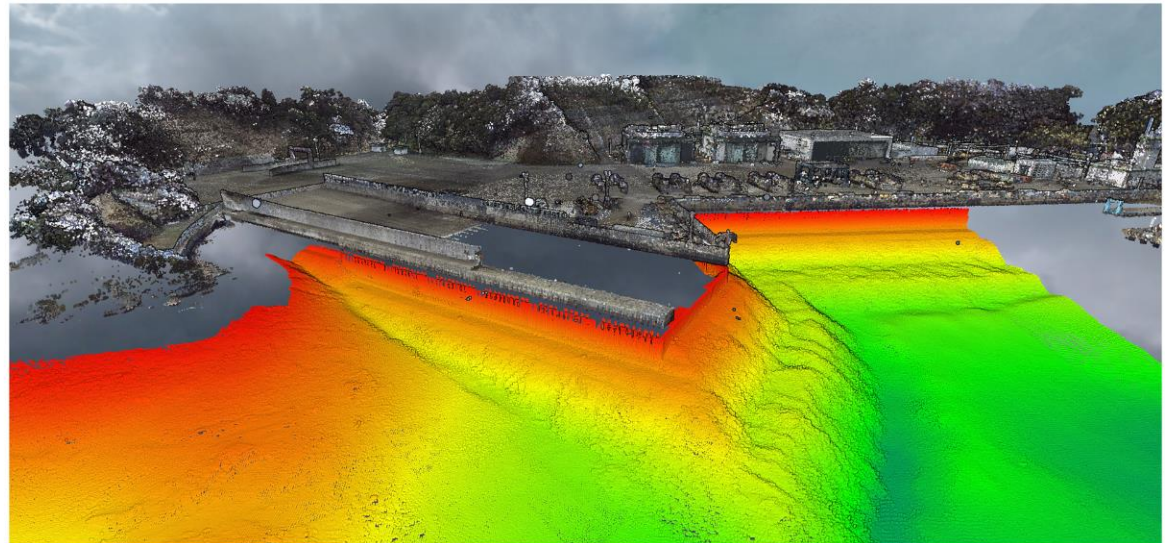
3DVE Scenarios:

- Published in Standard formats for Realtime deliver over the WWW
- Viewpoints defined
- Toggle 3D layers including mitigations
- Explore climate scenarios in 2035, 2065, 2100



LiDAR data capture

- Geospatially Accurate
- Facilitate Planning and Readiness
- Scalable foundation for testing and evaluation of multiple scenarios



SPIDERS3D

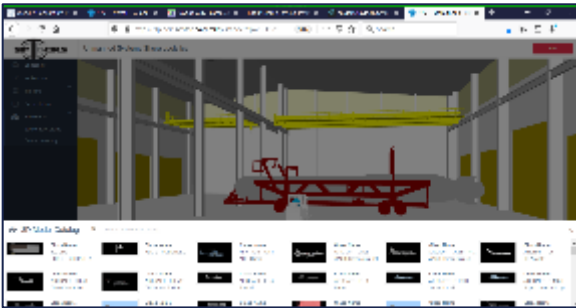
- X3D model-based, geo-enabled 3D Virtual Environment (3DVE) module
- Developed to enable shared visualization of model-based systems engineering data
 - Integrates disparate engineering, environmental & scientific data sets
 - Reduces very large native datasets for optimized publishing over constricted network bandwidth (Terabytes/Gigabytes reduced to Megabytes/Kilobytes)
 - Contextualize & optimize weapon system designs and CONOPS
 - Leverages and repurposes disparate data investments for publishing interactive 3D data

SPIDERS3D - Model-Based Workflow



3D Models and Data from OEM, SYSCOM Designers & Providers Saved as X3D format

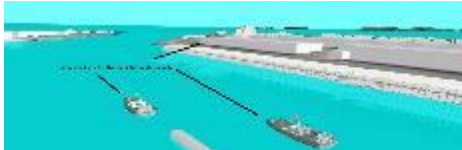
Disparate Data Unlocked and Web-Enabled



X3D Files Uploaded to Network Server 3D Model Catalog

3D Visualization for Resilience Planning

Enterprise-Scale, Real-Time Shared 3D Visualization & Collaborative Storyboarding



In Progress: X3D Simulation Playbacks



Iterate as Needed

Stakeholders Access Geo-Enabled 3DVE via the Web to Collectively Visualize System Design & CONOPS for Shared Insights & Accelerate Technical Consensus

SPIDERS is a DOD platform leverages X3D technology in a secure environment.



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Thank You

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