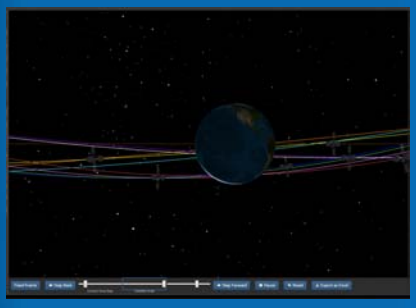
ZIN Technologies

SCaN Center for Engineering, Networking, Integration, and Communications (SCENIC)

SOFTWARE MODELING AND SIMULATION



ZIN supports NASA GRC SCaN Center for Engineering, Networking, Integration, and Communications (SCENIC) in developing an advanced, virtualized, and integrated engineering analysis environment for space communications architectures and systems

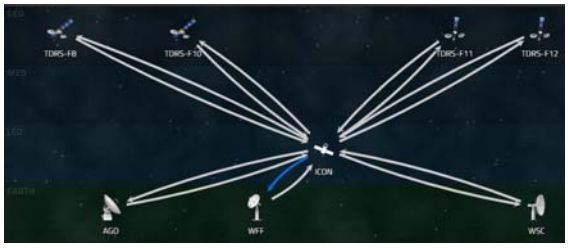
CAPABILITIES:

- Link budget analysis
- Coverage analysis
- Loading analysis
- Navigation analysis
- Risk/Reliability analysis
- Network Performance analysis

EXPERTISE:

- Agile/Kanban Methodology
- Continuous Integration (CI)
- Test-driven Development
- Rapid Prototyping
- User Experience (UX)
- NASA and Industry Software Engineering Standards
- IT Security Requirements and Best Practices

Designing a new space communications architecture currently involves separately modeling each of the three SCaN networks: the Near Earth Network (NEN), the Space Network (SN), and the Deep Space Network (DSN). Each of these models must then be fully integrated prior to quantifying network performance based on metrics such as link capacity, data latency, coverage availability, mission satisfaction, or network reliability.



The ZIN software development team supports NASA GRC who is responsible for the design, develop, and implementation of a web-based user interface (UI) that will allow users to view pre-populated standard space communications architecture and spacecraft models, modify and build custom models, perform architecture, system, and technology analyses, and query information from custom-developed databases built within the SCENIC environment and existing databases managed, verified, and validated at participating SCaN centers.

- **With each successful release of new capabilities, the SCENIC software development project provides verified, validated, and credible modeling and analysis for architecture, system, and technology trade studies.**
- **Agile software development methodology increases and improves customer engagement during the development effort, enables rapid prototyping, and provides high-quality software products through continuous integration and testing.**
- **Open-source software and design concepts reduce development time and the cost of software development and sustainment.**
- **Designed with collaboration in mind, the software architecture designed by ZIN enhances compatibility with software products outside of the SCENIC project and allows the flexibility and extensibility to other engineers and developers within the SCaN Program and NASA.**

SCENIC

ZIN Technologies Inc.
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ZIN Technologies, Inc.

Founded in 1957, ZIN provides engineering services and products to NASA and the aerospace industry. ZIN has managed the development of Mission Critical Class A/B space flight hardware (aerospace/space systems) from formulation, design, and development through to fabrication, integration, testing, verification, and mission operations.

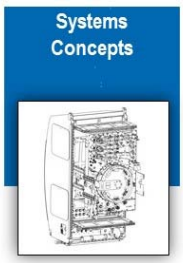
Our experience includes the development and validation of new technologies (sensors, inertial navigational measurement units (IMUs), composites, advanced acoustic resonant attenuation, optics, power, additive manufacturing and wireless/RF).

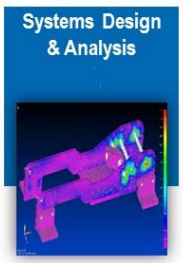
ZIN provides hardware and service for ISS research investigations, space launch systems, satellite systems, and space based human research projects enabling future space and science missions.

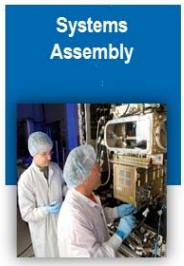
NSF-ISR Registered to AS9100

Focus on Quality - Certified and Compliant with Industry and Government Quality Standards

OUR PRODUCTS & SERVICES







- **Minority Owned-SDB**
- **AS9100Ccertified**
- **DCAA Approved Forward Pricing**
- **Headquartered Cleveland Ohio**
- **Award Winning Capabilities**

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