

### VisNet Defense takes rapid prototyping of mobile networks to a whole new level of speed and productivity.

In modern warfare, the network is the battlefield. Given what's at stake, it's critical that network designs, including software-, hardware-, human, and Internet-in-the-loop behavior, be examined and understood in the context of the environment they will need to survive in.

### Visualize. Design. Optimize.

VisNet Defense is a new network planning tool that combines the realism and ease of a Google Earth™ type visualization with ultra-high fidelity network simulation. VisNet enables non-cyberspecialist users to view and quickly grasp the mechanics of the network, then easily construct simulated networks for operations planning and review. No network protocol knowledge is needed; users just click-and-drag components from a pre-populated list of devices and applications.

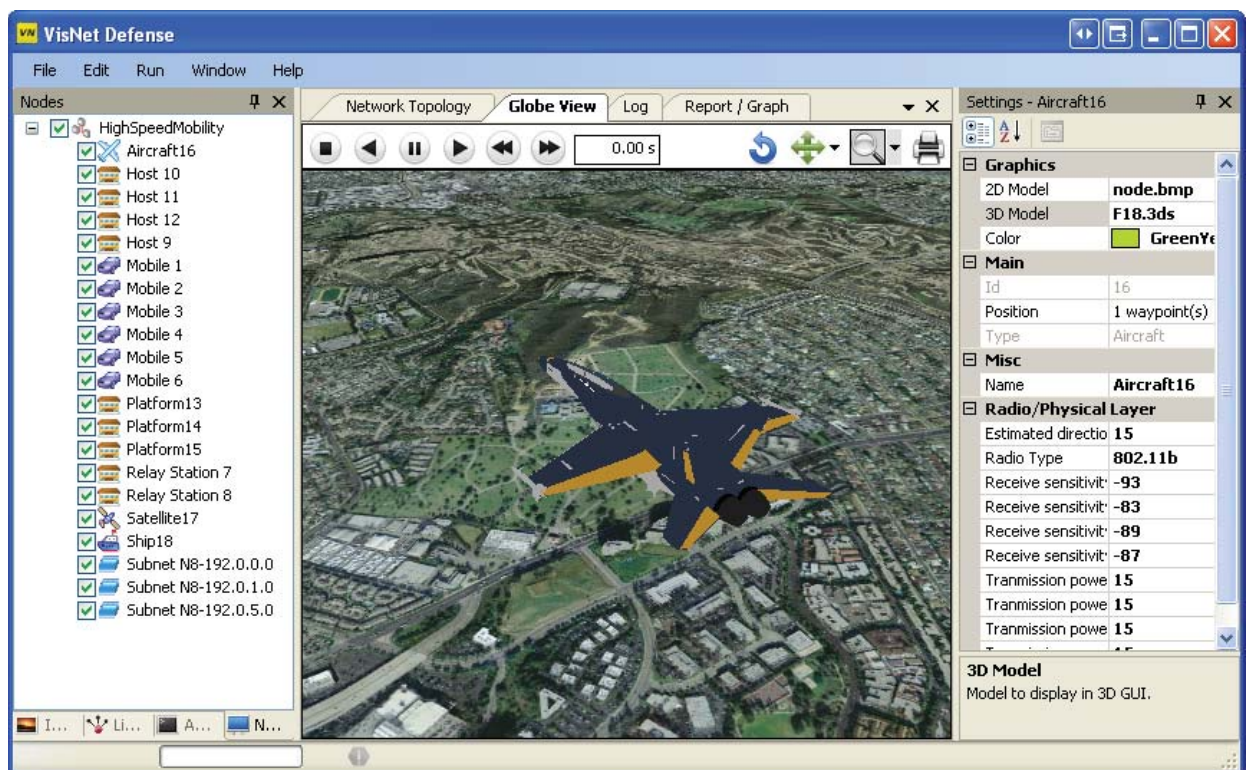
VisNet Defense displays a 21-node military network that took five minutes to set up. Network components, such as an aircraft, satellite and mobile nodes are displayed in a high definition GIS-enabled Graphical User Interface, alongside key network performance parameters.

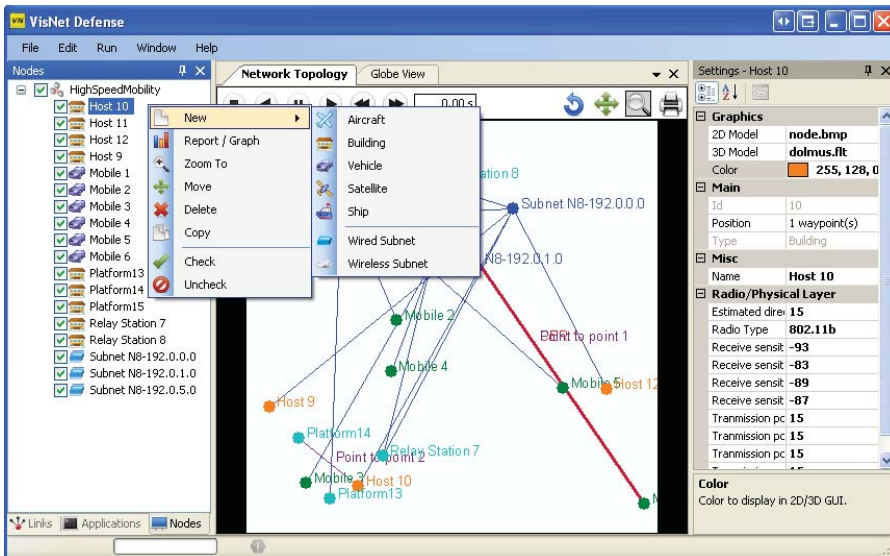
The technical complexities of network construction are stripped out for ease of use by non-technical teams. Yet the breakthrough power of VisNet is that it is based on the world's most advanced network simulation engine, making it possible for viewers to open and view scenarios with tens, hundreds, or thousands of devices.

VisNet Defense enables technical and non-technical teams to collaborate on network design, development, and deployment using a common set of simulation models and device configurations. Scenario files can be directly output to advanced simulation and emulation tools for later-stage test, evaluation, and deployment.

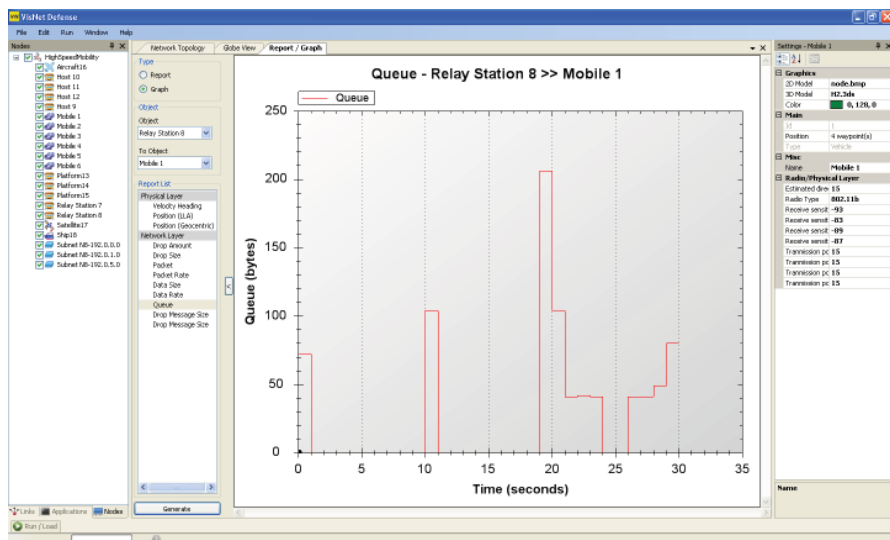
### Powerful GIS and Network Visualization

VisNet incorporates the same computing technology that powers Scalable Network Technologies' QualNet® and EXata® software. The network simulation engine in VisNet accurately represents network devices, transmitters, antennas, terrestrial characteristics, and human interactions-- at real time speed. Because of SNT's super-efficient parallel kernel, VisNet can support high fidelity network models while still maintaining real-time speed, even in large-scale networks.





VisNet Defense has easy click-and-drag menus for setting up the network entities.



VisNet Defense showing network performance metrics from a simulation.

Behind VisNet's highly realistic graphics is ESRI's geographic information system (GIS) software for visualizing, managing, creating, and analyzing geographic data. VisNet also supports the ArcView API, thus enabling other ArcView-based GIS applications to interface with VisNet

Examples of the components modeled in VisNet include:

### Network Information

- wired links
- wireless links (802.11 & 802.16 abstract radio devices)
- LANs/WANs/MANs
- logical relationships of nodes such as user definable subnets
- pre-defined military network entities: vehicles, aircraft, buildings, ships, etc.
- pre-defined devices: hubs, switches, routers, computers, etc.
- enterprise applications such as VoIP, web browsing, email, chat, video, etc.
- military applications such as call for fire, evaluation request, and situation report

### Environmental Information

- Terrain effects (surface, mobility, weather)
- latitude/longitude,
- standard QualNet signal propagation models (pathloss, shadowing, fading, etc.)

In addition, optional add-on modules are available that allow users to configure a variety of commercial and military communication networks. VisNet runs on the Windows operating system.



## About Scalable Network Technologies

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Scalable Network Technologies (SNT) develops and supports high-fidelity evaluation software for predicting network performance. SNT is the undisputed leader in parallel processing technology for network simulation and emulation and the software runs on multicore, cluster, and cloud computing environments.

SNT's products include QualNet®, EXata®, Network Centric Forces and VisNet Defense™.