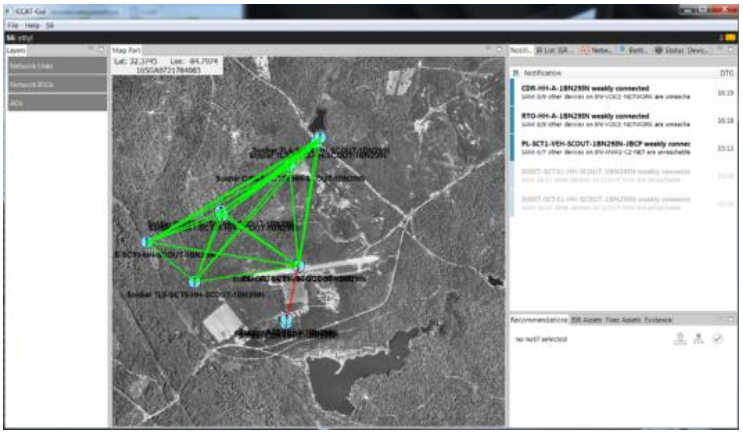
S6 I-DECIDE:An Intelligent Agent for Network Management

S6 I-DECIDE OVERVIEW

The S6 NetOps officer spends days assembling data, and creating a Visio diagram, to plan a node-less network topology for the Army. Once the plan is implemented, the S6 uses many disparate tools to monitor, and maintain the various networks that comprise the battlespace network. The S6 I-DECIDE program can use the same data to create the network diagram in seconds, and provides a single user interface for network and spectrum management, as well as information assurance.



WHAT IS AN INTELLIGENT AGENT?

An intelligent agent simulates the behavior and decisions of a human, whether in battle field operations, medical diagnosis, or equipment condition assessment. Intelligent agents behave intelligently because they incorporate domain knowledge provided by experts. S6 I-DECIDE intelligent agent uses the SNMP network protocol, VMF, WINT-T tools and protocols, and DTED2 terrain data, to plan, and monitor, warfighting node-less networks and to provide recommendations for their maintenance.

WHY IS THIS IMPORTANT?

Creating a document for a network topology that covers all of the protocols, security, and separate networks in an Army network is a complex and time consuming task for the BN S6. Once created, the plan quickly becomes outdated as the network is implemented, and necessary adjustments are made. Monitoring and maintaining the network is critical to mission success, but difficult to achieve using disparate tools, and interfaces, which must themselves be maintained and updated. S6 I-DECIDE automates the creation of the network plan, using the same data the S6 NetOps officer assimilates manually, eliminating days of planning, as well as human error. S6 I-DECIDE also provides a single user interface with the data, tools, and protocols necessary for maintaining the network once it has been implemented.

HOW DOES IT WORK?

S6-IDECIDE Network Planner first reads the assimilated network data in an LDIF+ Excel format. Using Microsoft Visio plugins, the planner then automatically draws a network plan, including expandable/collapsible subnets, representative icons for platforms, devices, vehicles, and soldiers. The planner publishes the network plan in a shared Service Oriented Architecture (SOA). S6 I-DECIDE components in the SOA receive the network plan, and then expose the data, tools, and protocols the S6 officer needs in a single user interface, including navigable trees for subnets, a Network Common Operating Picture (N-COP) with MIL STD 2525 symbols, tools for updating software remotely, software that automates the collection of data from radios and devices, and an intelligent agent that provides recommendations for maintaining the network to ensure mission success.

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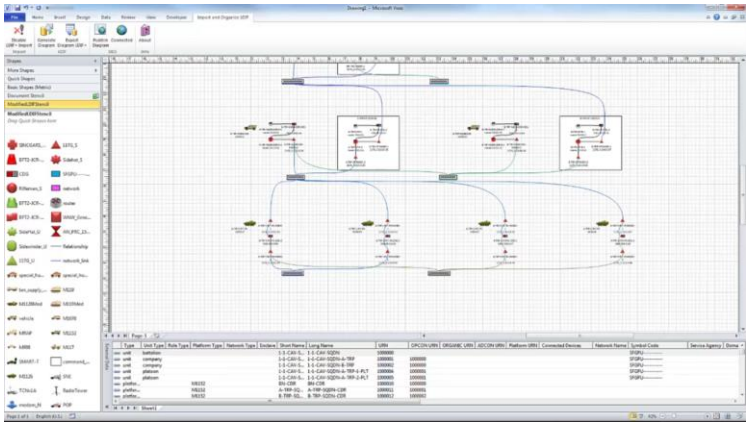
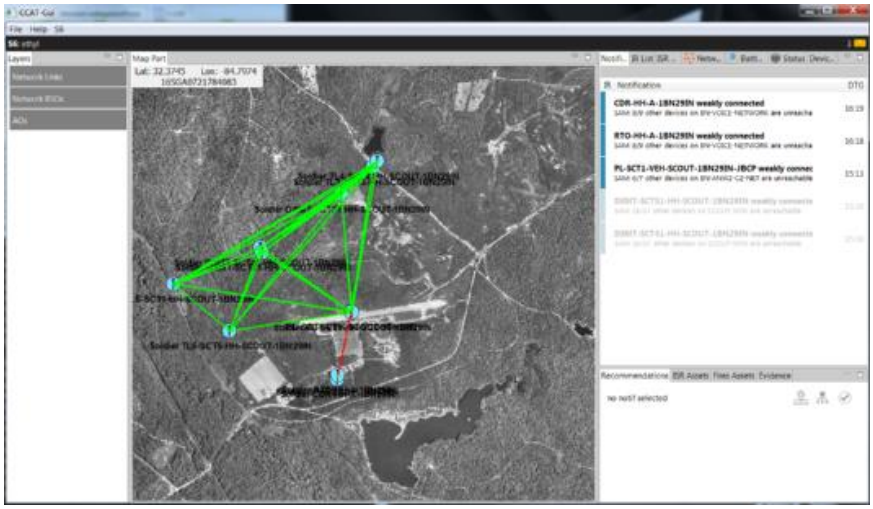
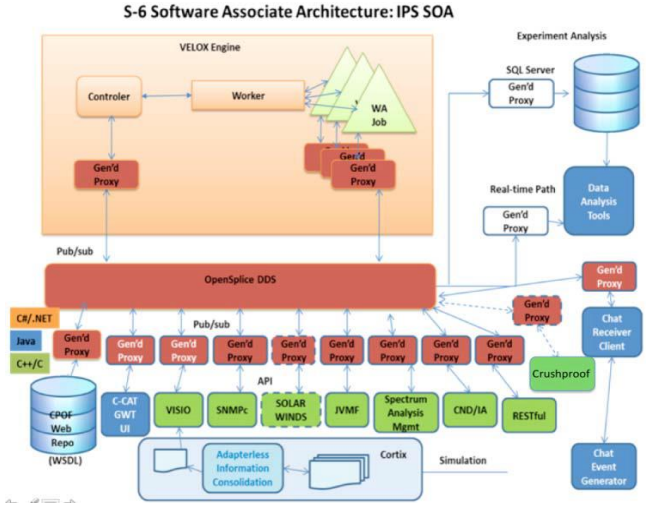
Automated Network Planning



Intuitive Network Monitoring



Intelligent Network Maintenance



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