

# Case Study: Army Guardrail

## BACKGROUND:

Guardrail I was initiated by the National Security Agency (NSA) to create an airborne communications intelligence (COMINT) system and eventually became an Army enterprise level asset. By 1991, other COMINT systems and electronics intelligence systems would be merged into the Guardrail Common Sensor (GRCS). GRCS provides near real-time signal intelligence and targeting information to Army battle field commanders. The Guardrail program continues to evolve through technology modernization efforts to meet new threats.

## PROBLEM:

- New enemy tactics need to be exploited inside their decision cycle
- Largely stove-piped data components
- Mission critical capabilities need migrated and integrated to a modern net-centric intelligence system known as Distributed Common Ground System-Army (DCGS-A)



## SOLUTION:

Modus Operandi is responsible for the development of deployment ready software, legacy software enhancements, test and validation, and in theater software baseline fielding on the Army GRCS sustainment and modernization project. A significant portion of this effort involves migrating legacy applications for use in DCGS-A, which will consolidate over ten legacy systems spanning seven intelligence domains. These migration efforts include normalizing and exposing GRCS data via a service-oriented architecture (SOA) for network based index and search services. GRCS data was exposed via a semantic model, or ontology, which is capable of mediating and harmonizing heterogeneous structured and unstructured data stores. These SOA-based services provide the user with a common operating picture while leveraging existing programs and accessing real-time data.

## RESULTS:

- Superior situational awareness
- Improved efficiency and responsiveness
- Rapidly deployable, mobile Army force
- Tighter control of user access
- Highly intuitive and flexible user interface
- More accurate emitter locations
- Reduced maintenance costs
- Improved reliability
- SOA-based services suitable for use by several agencies

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