

Case Study: DCGS SIGINT

BACKGROUND:

The Distributed Common Ground Surface/System (DCGS) defines multi-intelligence, interoperable reconnaissance infrastructure across the Department of Defense (DoD) which includes signal intelligence (SIGINT). The DCGS program covers airborne tasking, processing, exploitation, and dissemination capabilities and corrects deficiencies where multiple systems are unable to pass or share information. The DCGS Integration Backbone makes data visible and accessible via the metadata catalog.



PROBLEM:

- Overwhelmed analyst
- Ambiguous reporting
- Mediation between DCGS-Army systems
- Processing structured and unstructured data

SOLUTION:

Modus Operandi has several DCGS-A efforts focused on the challenge of processing structured and unstructured data, such as analyst gist or voice transcriptions. First, MO built a tool to help migrate unstructured legacy data sources to a service-oriented architecture (SOA) by mapping sections of report, a situational report (SITREP) or other messages to a web service. Once the message is exposed, another built-in capability publishes the report via a real-time communications channel. An entity extractor is subscribed to the channel and semantically tags concepts within the report based on the Joint Command, Control and Consultation Information Exchange Data Model (JC3IEDM) ontology. The semantically enriched message is indexed and made searchable. Another capability is to auto gist the search results so the analyst quickly can determine, at least at a high level, a summary of all the information returned in the search. The result is the analyst is able to process unstructured work products more quickly by finding embedded entities and searching in a vocabulary native to their domain.

RESULTS:

- Actionable intelligence within tactically useful timelines
- Improved situational awareness
- Tighter geo-location

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