

Model and Data Access Architecture in the Geophysical Monitoring System

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Sandia National Laboratories is developing the Geophysical Monitoring System (GMS) to modernize the United States National Data Center (USNDC) waveform processing system. The United States is providing the common architecture and processing components of GMS as a contribution in kind to accelerate progress on International Data Centre (IDC) re-engineering. A key aspect of GMS architecture is the Common Object Interface (COI) specification, which includes a data model and an access application programming interface (API). The data model is a collection of data structure definitions describing all the data stored by GMS and the access API specifies the available query and storage operations. The COI specification is independent of any storage solution. This decoupling facilitates changes to the storage solution with minimal impact to the GMS application software; likewise, the data model and GMS applications can be updated with minimal changes to the storage solution or schemas. One GMS COI implementation, the data bridge, provides clients access to legacy system data through web services. This poster describes GMS COI and data bridge architecture.

Promotional text

The GMS improves the software used for nuclear-test-ban monitoring. The GMS COI data model describes a modern system data model. Researchers or applications external to the GMS may use the COI access API to obtain system data in COI format.

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