



Seabed Survey Data Model (SSDM)

Frequently Asked Questions

Version v.2 December 2016

1. Why are infrastructure and installation features not included in the SSDM?

The role of the SSDM in pipeline inspection survey is limited, and existing data models (APDM/PPDM/PODS/Pipeline Operators Forum) for ROV inspection survey domain are available. It is recognized that seabed surveys are often carried out on or around existing infrastructure and installations in the field. The infrastructure and installation component is left undefined in the SSDM and the SSDM is expected to be used in conjunction with existing data models (e.g. APDM) that have been adopted by an O&G company, in order to capture the full range of acquired data and referenced data sets. Please refer to GN462-03 “Guidance Note for Interface between Pipeline Data Models and the IOGP Seabed Survey Data Model”.

2. How can updates be made to the data model itself and how will this be governed by IOGP?

For an O&G company, the core SSDM *must* be implemented to constitute a valid IOGP SSDM implementation. However, O&G companies *may* extend the data model (feature datasets, feature classes, domains and feature attributes) to address their company-specific requirements.

Following are considerations for long-term sustainability and maintenance of the SSDM Schema.

- Maintenance of the SSDM is the process of supporting a data model after delivery to correct a problem/error in the existing data model and provide assistance, direction, coordination from 6 months to 1 year along with the delivery of documentation.
After completion of the maintenance period SSDM Task Force will be formally closed.
- Enhancement of the Data Model is the process of modifying a data model after delivery intended to increase or decrease functionality and capability from the existing design.
For enhancements to the original data model, clear scope will be defined and the participation and interest from the industry will be solicited again and formed as the new Task Force.

3. Is the SSDM capable of dealing with 3D data?

The SSDM geodatabase and its feature classes are “Z” and “M” aware. As a result, tracklines, contours, faults, isopachs, etc. that are acquired as 3D objects can be loaded and visualized in the 3D environment.

4. Can the SSDM integrate with IVS Fledermaus?

Yes, at version 7.2. IVS have built in ArcGIS integration capabilities where Fledermaus can connect to and read data from personal, file or ArcSDE geodatabases including ESRI raster datasets. The integration will allow Fledermaus to map the data in 3D if the Z aware feature classes are populated with 3D data.

5. What is the difference between the SURVEY_ID and SURVEY_ID_REF fields?

These fields are designed to store a unique identifier for each survey job. Both fields have been included in the OGP SSDM to cater for different methods of uniquely identifying survey activities. The "SURVEY_ID" field is a unique long integer number to identify each survey; it can be a running number, or a user defined format e.g. YYYYnnnn for 20101234. "SURVEY_ID_REF" serves the same purpose but utilizing an alpha-numeric numbering system for survey project identification e.g. H20101234 or S20101234, where H is Engineering survey project and S is Geophysical survey project.

6. How do I load and edit data in the SSDM?

Some basic guidelines are provided in the SSDM guidelines document; however, this is by no means a complete guideline. Loading data into the SSDM is fairly straightforward and can be handled using all of the out of the box functionality of ArcGIS. It is recommended that when implementing the SSDM into your organization that the Geomatics, GIS and/or spatial data management groups are engaged and they will be able to utilize their expertise to help with the workflows of loading and editing data via ArcGIS. Workflow automation is possible by using ArcGIS or other Spatial Extract, Transform, Load (ETL) software tools.

7. Is there a guideline for how the SSDM can be implemented in ArcSDE?

Yes, the OGP SSDM Task Force has provided an SSDM Server Side implementation guideline as part of the SSDM material (OGP_SSDM_v1_ServerSide_Guide.pdf).

8. Does my organization have to adopt the IOGP SSDM Symbology?

No, this is not mandatory. The IOGP SSDM Stylesheets (GIS and CAD) have been supplied, however, O&G companies may extend the symbology codes and define their own cartographic symbology for the existing IOGP core codes and new codes. When utilizing a non-IOGP stylesheet it is important that each symbol name contains the IOGP SYMBOLOGY CODE in the company's stylesheet.

9. How are raster datasets (bathymetry surfaces, backscatter mosaic etc.) handled in the SSDM?

These raster datasets can be loaded directly into the geodatabase templates. Alternatively, these raster files can be stored in the "Images" folder as described in the deliverable folder structure discussed in GN462-02. If preferred, raster grids and colour images could be provided outside of the geodatabase using grids format such as ESRI grids, JPEG2000, GeoTIFF or Erdas Imaging file format. At the SDE level the same applies, however, utilizing SDE raster catalogs (managed or unmanaged) can help your company managed the storage of your bathymetry, side scan sonar, and backscatter imagery whether stored inside SDE or on a file share.

10. What is the role of the "T_Survey_JobDetails" table?

The role of the T_Survey_JobDetails table is to manage the details of the survey such as assurance plans, scope of work documentation, work order numbers etc. This is particularly useful during the planning phase; however, historically this information can be just as useful. Essentially, it is envisaged that this documentation would be stored in a corporate document management system where hyperlinks could be defined in the T_Survey_JobDetails table to this material.

11. How is metadata handled within the SSDM?

Sample metadata stylesheets are provided as part of the IOGP SSDM V2 material, however, O&G companies are encouraged to adopt their own company metadata standards where applicable. It should be noted that the SSDM feature class tables have been designed to include a lot of feature level metadata. If the feature class tables are completed this information will provide a lot of information to the end users e.g. Survey Keysheet provides details on equipment used, survey dates, contractor used, vertical datum used, survey type, etc.

12. How can dataset updates be handled within the SSDM?

Each feature class table within the SSDM has the LAST_UPDATE and LAST_UPDATE_BY fields which can be used to store who has edited the data and when it was updated.

Furthermore, iterative deliverables from survey contractors can also use these fields. The Survey Keysheet feature class also provides a SURVEY_JOB_STATUS field that provides the following domain values:

101-Job Proposed / Requested

102-Data Acquisition in Progress

103-Data Acquisition Done.

104-Data Processing/Charting/Reporting in Progress

105-Data Processing/Charting/Reporting completed.

These values can be used to track the status of the survey job.

13. Is there any standardization of ArcGIS layer files or Map Document (MXD) for the SSDM?

No. This should be clearly outlined by the O&G Company. The layers could be setup any number of ways using queries or presentations, so it is best to leave that up to each company.