

Paper for Consideration by TSMAD/DCEG**Overlapping Survey Areas**

Submitted by:	United States/DQWG
Executive Summary:	Proposal for the allowance of overlapping surveying areas in S-101
Related Documents:	S-101, DCEG
Related Projects:	S-100

Introduction / Background

The Data Quality Working group has indicated that in S-101 survey areas may overlap if one of the surveys is classified as a swept survey. This would involve the objects Swept Area and the data quality objects Quality of Bathymetric Data and Quality of Survey.

Analysis/Discussion

Quality of Survey is used to give additional information about individual surveys within a Quality of Bathymetric Data area object. Therefore Quality of Survey object should be able to overlap but must be contained with a Quality of Bathymetric Data object. That is to say that Quality of Survey objects may not cross any Quality of Bathymetric Data objects. Also Quality of Survey objects may not be present without a Quality of Bathymetric Data object covering it.

If an area is covered by two surveys one that uses a technique to survey the seafloor and another that uses some type of sweeping device that does not measure the depth of the seafloor, Quality of Bathymetric Data objects should be able to overlap. The most common example of this is an area that used an echo sounder to measure the depths of the sea floor at one time and is regularly swept to get a safe clearance depth after winter ice or a spring freshet. The area surveyed by echo sounder would be covered by a Quality of Bathymetric Data object with no Depth range maximum value encoded. The area covered by a sweep would overlap this area and have Depth range maximum value encoded with the clearance depth. The overlapping Quality of Bathymetric Data (swept area) must have a coincident Swept Area object with Depth range maximum value encoded with the identical value. This would also require a changed to the Swept Area object guidance; it currently says that the Depth range minimum value should be used not Depth range maximum value. This should be discussed to make sure guidance is consistent.

Recommendations

DQWG recommends that DCEG and TSMAD consider the following:

- Allowing Quality of Survey objects to overlap with a Quality of Bathymetric Data object.
- Allowing Quality of Bathymetric Data to overlap.

Action Required of DCEG/TSMAD

The DCEG/TSMAD:

- a. discuss the United States proposal
- b. agree to the overlap of objects or require DQWG to work on and alternative recommendation for the use of objects.

Graphics

3.5.X.X Example of overlapping Quality of Bathymetric Data objects

An area covered by three quality types at different depths

