Paper for Consideration by S-101 PT

Proposals from NATO GMWG for S-101

Submitted by:	NATO Geospatial Maritime Working Group
Executive Summary:	This paper makes some specific proposals to change the draft S-101 product specification based on experience within the GMWG extended S-101 for military purposes.
Related Documents:	S-101 DCEG ITU-R M.595-4
Related Projects:	S-100

Introduction / Background

The NATO Geospatial Maritime Working Group (GMWG) is currently developing a new AML+ data product specification built on S-100 and following a similar approach to that used for S-57 AML. In developing this specification the working group's technical panel has identified some specific items where it would like to suggest changes to S-101. This paper presents these proposals which the S-101 PT is invited to consider. It is recognised that S-101 is about to begin a period of test and further development. Therefore the GMWG sees no immediate urgency to include these changes in the S-101 documentation.

Analysis/Discussion

Proposal A

S-101 adds the new simple attribute MMSI code to allow Maritime Mobile Identity Service codes to be attributed on relevant features. The GMWG observes that an MMSI code may have a preceding zero and therefore using the data type Integer for this simple attrviute may not be appropriate. The GMWG suggests that the data type of the MMSI code simple attribute is amended to string.

The format of MMSI codes are laid out in ITU recommendation ITU0R M.585-4 Assignment and use of maritime mobile service identities. **LINK**

Proposal B

S-101 logically include the attribute orientation uncertainty within the Orientation complex attribute in order to carry quantitative uncertainty information where known. GMWG observes that for some features uncertainty is illogical for orientation as the value is established rather than measured. This mainly applies to routeing measures which have an orientation but this does not represent a physical object which can be measured. The GMWG suggests removing the complex attribute Orientation from such features and adding Orientation value in its place. The following S-101 features should be considered;

S-57 Acronym	S-101 Feature name
M_ACCY	Quality of non-bathymetric data
M_NSYS	Navigation system of marks

RECTRC	Recommended track
FAIRWY	Fairway
RCRTCL	Recommended route centreline
TWRTPT	Two-way route part
RCTLPT	Recommended traffic lane part
DWRTCL	Deep water route centreline
DWRTPT	Deep water route part
TSSLPT	Traffic separation scheme lane part
RDOCAL	Radio calling-in point
RADLNE	Radar line

Proposal C

Within S-101 a refined list of attribute values for the simple attribute Vertical datum has been developed. GMWG observes that mean tide level which is synonymous with half tide is not an allowable value. The GMWG requests that the S-101PT add the value mean tide level to the list of attribute values for S-101. This will avoid the need to make numerous extensions within future AML specifications.

Recent research articles describe the difference between mean tide level and mean sea level and advice from tidal experts is that no other current value could cover mean tide level.

Proposal D

S-101 includes the feature Mooring/Warping Facility in mapping this feature to other data models the GMWG noted the complexity of attribution as this feature covers objects which have different characteristics. For instance it caters for both fixed and floating objects. The GMWG suggests that the S-101PT consider separating Mooring buoy as a new feature thus allowing the attributes Buoy shape, colour and Colour pattern to be removed.

Action Required of S-101PT

The S-101PT is invited to consider these proposals which will enhance the S-101 ENC product specification.