

**IALA S-201**

**Product Specification**

**Draft 0.0.6 – January 2017**

IALA AtoN Product Specification

**Overview**

**S-201 Aids to Navigation Information Product Specification - Overview**

**1 Introduction**

The Aids to Navigation (AtoN) Information Product Specification provides a common structure for the exchange of information about AtoNs. This includes buoys, beacons, racons, lights, sound signals and AIS. The product contains the positions, properties, operational status and general comments related to an AtoN.

The Product Specification can be used to exchange AtoN information in a consistent form between Lighthouse Authorities, Hydrographic Offices and other organizations, including commercial and professional agencies.

**2 Contents of the Specification**

Main document

The AtoN Information Product Specification follows the format set out in the IHO Standard S-100 for geo-spatial information. This describes the scope, data content and structure, specifies procedures for data maintenance and quality and details the encoding of the data.

**3 Annexes**

The annexes provide information about use of the specification, as described in the following table.

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| Title | Description |
| Annex A DCEG | The Data Classification and Encoding Guide has been developed to produce consistent and standardized instructions for encoding S-201 datasets. Input from the S-57 Use of the Object Catalogue has been utilized as a starting point for these instructions, which has then been amended as necessary to comply with S-100 and the S-201 data model. |
| Annex B 1 Annex B Data Product Format, Schemas | This package contains the S-100 Part 10b compliant GML schemas for the specification of the data product encoding for S-201 datasets. |
| Annex B 2 Annex B Data Product Format, Schema document | This package contains the documentation of the GML schema in a human readable form, and lists each element with their associations and definitions. |
| Annex C | Placeholder for a future implementation guideline. More experience with the format is needed, in addition to a need for S-201 to further mature and undergo testing, before this document can be written. |
| Annex D 1 Feature Catalogue | This package is generated from the accompanying XML S-201 feature catalogue and presents the feature catalogue in a reader-friendly form. In its current form, it is intended to facilitate reviews of the content of the XML feature catalogue. It therefore focuses on showing the entire content of the XML feature catalogue 'as-is' for review purposes, instead of providing a final publication format. |
| Annex D 2 Feature Catalogue XML | The package contains the S-201 feature catalogue in a machine readable XML format, which complies with the IHO S-100 feature catalogue schema. This document is meant for use by systems that are intended to read/write S-201 datasets. |
| Annex E | Placeholder for a future portrayal catalogue. Currently considered not needed. |
| Annex F Application Schema Tables | This package contain the S-201 application schema documentation, and is meant to accompany the S-201 data model as it's documentation. This document is meant for use by system developers in any work with developing S-201 compliant systems. |
| Annex G  | Placeholder for a future conversion guideline of S-201 data to S-57, and potentially other formats.  |
| Annex H Data Validation tests | This package contains validation checks for S-201 datasets. The tests should be utilized to ensure that data that claim conformance to the S-201 product specification actually comply. Within the document are a description of the layout, a classification of the validation checks, and guidance on the check syntax, operators, values and statements utilized within the validation checks.  |
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**4 Method of Use**

Given the complexity of the specification it is envisaged that some form of user interface will be needed. The developers of this interface will need to understand the full scope and content of the specification and will be required to validate it, to ensure that the data output is identical to the data input. However, the interface operator should not need to understand the specification beyond its purpose. They should be given on-screen prompts for data inputs and the output format would be similarly annotated to make clear the meaning of the resulting data.