

Paper for Consideration by HSSC 7**S-121 – Maritime Limits and Boundaries**

Submitted by:	Australia
Executive Summary:	Report on the development of the Product Specification on Maritime Limits and Boundaries (S-121).
Related Documents:	HSSC6/36
Related Projects:	None

1 Background

- 1.1 This report details the current status of the S-121 Maritime Limits and Boundaries Product Specification as requested by HSSC6/36.
- 1.2 The purpose of this product specification is to provide a suitable format for the exchange of digital vector data pertaining to the maritime boundaries, limits and zones of States.
- 1.3 The specification will describe a digital format with the necessary geometry, precision, and attribution to act as the format for the exchange of information between States, the support of Marine Cadastres and for depositing electronic maritime boundary information with the United Nations for UNCLOS purposes.
- 1.4 Australia commenced the establishment of an S-100 Maritime Limits and Boundaries Product Specification in 2012, since that time Canada has joined Australia in the S-121 development programme.
- 1.5 HSSC5 recognised the suitability of a Maritime Limits and Boundaries Product Specification as belonging within the S-100 specification due to the inherent dependency of UNCLOS on the hydrographic process.
- 1.6 The successful implementation of a maritime limits and boundaries product specification will deliver greater certainty to the location and status of international and national maritime zones and limits, thereby contributing to the security and economic well-being of all States.

2 Discussion

- 2.1 Australia recognises the invaluable knowledge and experience Canada brings to the development of the S-121 product specification.
- 2.2 S-121 has progressed to a stage where the first documents will shortly be released to Member States for comment (expected Dec 2015).
- 2.3 S-121 is the first product specification in S-100 not primarily intended to support nautical charting. This demonstrates the capacity of S-100 to meet one of the original intentions of the Universal Hydrographic Data Model; to support non-navigational marine applications.
- 2.4 To accommodate the legal origin of maritime limits and boundaries and their connection to domestic and international law, S-121 utilises several concepts from the ISO 19152 Land Domain Administration Model. These concepts provide a mechanism for managing the complex relationships between parties, rights, responsibilities and restrictions (PRRR) found in UNCLOS. S-121 contains only those parts of ISO 19152 required for consistent UNCLOS implementation. The inclusion of PRRR will not affect other product

specifications in S-100, unless it is considered desirable to include it in those specifications.

- 2.5 S-121 introduces Intrinsic Nature geometry in S-100 for the first time. This is necessary to support the product-independent geometry found in the non-navigational marine applications of S-100. Intrinsic Nature allows for the tight coupling of features to legal concepts regardless of scale. For instance, an Exclusive Economic Zone (EEZ) is a zone regardless of scale, there are no legal provisions for the EEZ to exist as a line or point. Intrinsic Nature allows for the EEZ to be legally defined as a zone and still be represented as a line or point for cartographic purposes without altering the status of the EEZ. The inclusion of Intrinsic Nature will not affect other product specifications in S-100, unless it is considered desirable to include it in those specifications.
- 2.6 In February 2015 Australian and Canadian representatives of the S-121 collaboration held discussions with a delegation from the United Nations Division of Oceans And Law of the Sea (DOALOS) on the suitability of S-121 to form the recommended format for States to deposit maritime limits and boundaries data with the United Nations in accordance with UNCLOS responsibilities. The DOALOS delegate expressed a strong interest in S-121 and requested to remain informed of progress.
- 2.7 The S-121 Product Specification includes several simple Encoding models designed for minimum-cost implementation to ensure use of the specification will not adversely hinder developing States from submitting their limits and boundaries to the UN under UNCLOS.
- 2.7 Australia and Canada request an S-121 Working Group be formed and invite Member States to participate.
- 2.8 Australia requests a representative from Australia be appointed the Chair and Canada will consider becoming the Editor of this working group.
- 2.9 Australia and Canada are continuing work on Registers for S-121 and request a Feature Concept Dictionary (FCD) domain for Maritime Limits and Boundaries, called "MLB", be created in the S-100 FCD Register to support S-121 objects.

3 Recommendations

- 3.1 That:
 - a. an S-121 Maritime Limits and Boundaries Working Group be formed and interested Member States invited to participate;
 - b. HSSC invite a representative from Australia to be appointed Chair of this working group;
 - c. HSSC invite Canada to consider a representative from Canada be appointed Editor of this working group, and
 - d. a Feature Concept Dictionary domain, called "MLB", be created for S-121 in the S-100 FCD Register.

4 Action Required of HSSC

4.1 The HSSC is invited to:

- a. **note** this report;
- b. **consider** the recommendations in paragraph 3, and
- c. **take** any action as appropriate.