S-128 Nautical Product Catalogue Standards

Update of S-128 development

Republic of Korea (**KHOA)**

International Hydrographic Organization
Organisation Hydrographique Internationale

Table of contents

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1. Introduction

- S-128 Development

  - KHOA was tasked to develop S-128 Nautical Product Catalogue Standards

  - KHOA reported the draft S-128 application schema and PS documents in the NIPWG6

  - NIPWG6 discussed the application schema and agreed with continuing the development of S-128 for version 1.0

1. Introduction

- NIPWG6 assigned action items about S-128

  - Action Item 6/15 - KHOA to update S-128 to S-100 ed. 4

  - Action Item 6/16 - NIPWG to check S-128 for the usefulness of Catalogue items and report any issues to KHOA to improve the data model

  - Action Item 6/17 - KHOA to check S-128 for the usefulness of the Catalogue data for up-to-date synchronization of S-100 products
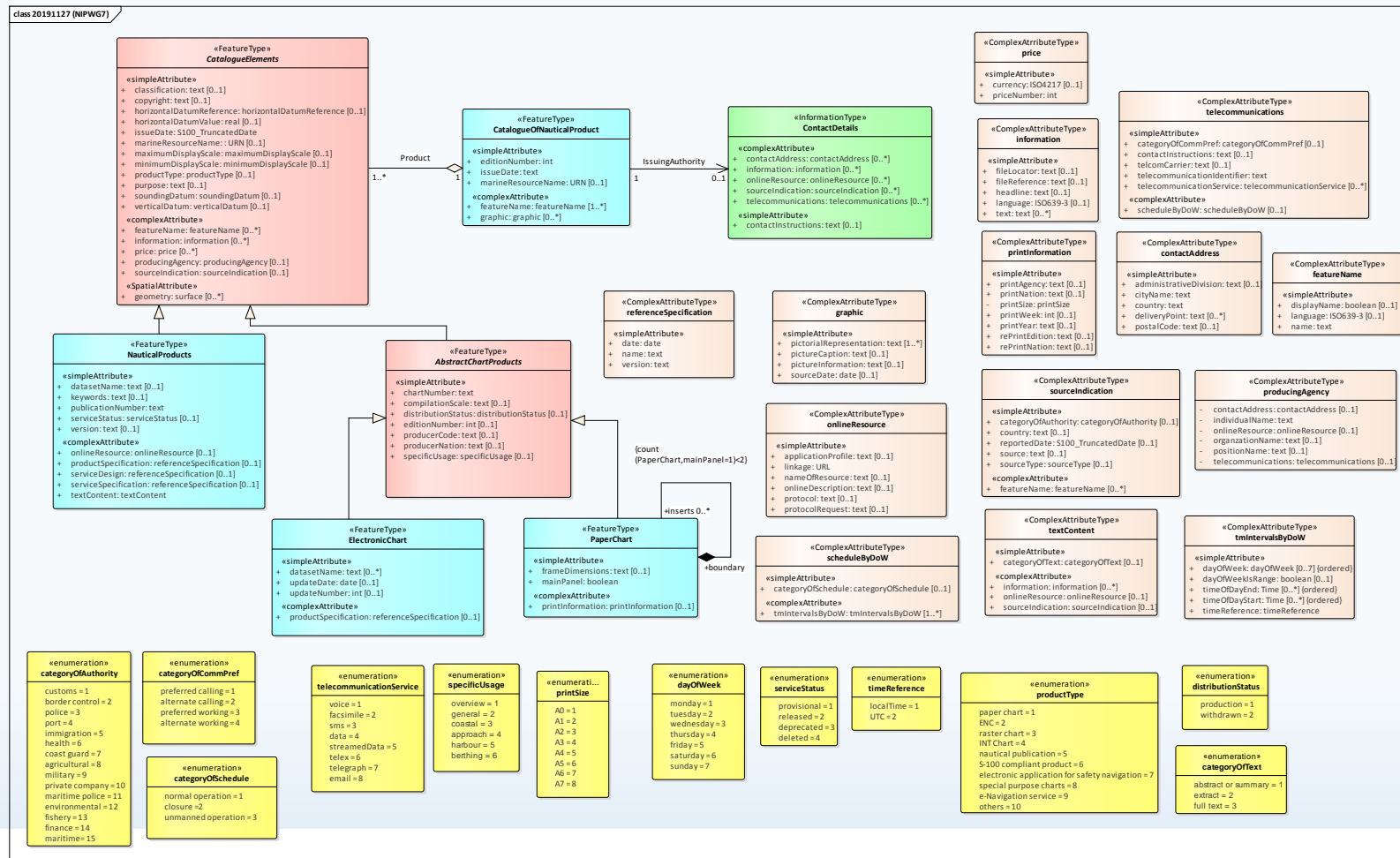
2-1. Update S-128 following S-100 4.0

- Major changes of S-100 4.0 are as follows:
  - Online Communication - inclusion of a set of components and processes needed to specify and online exchange of information, streaming data
  - Scripting Language – definition of a standard mechanism for scripting support in S-100 based products using the Lua language
  - Lua Portrayal Support – Implementation of the Lua scripting language
  - Harmonization of the HDF5 encoding used by S-102 and S-111
  - Metadata models, file naming rules, and maintenance rules

- Since the S-127 Marine Traffic Management PS has been developed to reflect S-100 4.0, KHOA has updated S-128 PS by reference

2-1. Update S-128 following S-100 4.0

- Update of S-128 Application Schema

2-2. Usefulness of the Catalogue synchronization

- Review S-128 for the usefulness of the Catalogue data for up-to-date synchronization of S-100 products

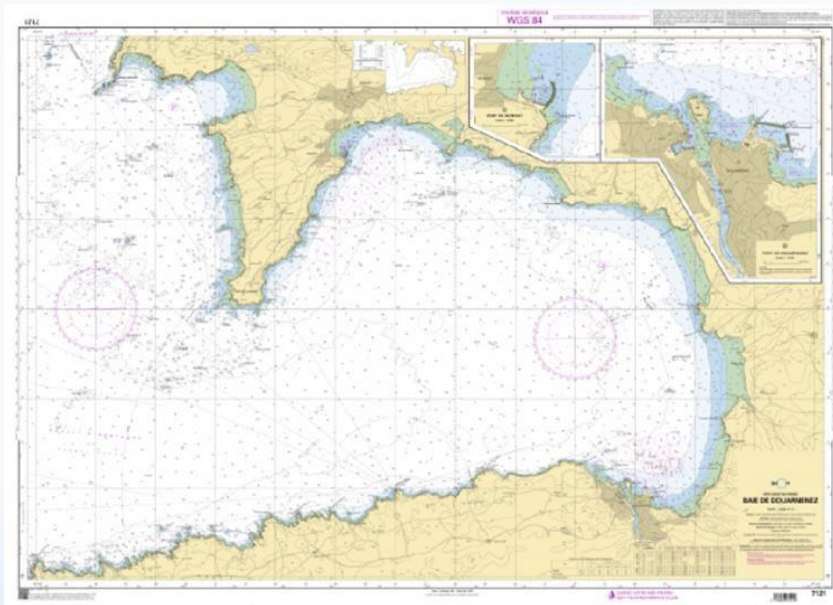| Event	File Extension	EDTN	UPDN	UADT	ISDT	Comments
New ENC Cell	.000	1	0	19950104	19950104	UADT< or = ISDT
Update 1	.001	1	1	Prohibited	19950121	ISDT only
Update 2	.002	1	2	Prohibited	19950225	ISDT only
...						
Update 31	.031	1	31	Prohibited	19950905	ISDT only
Re-issue of an ENC Cell	.000	1	31	19950905	19950910	UADT < or = ISDT
Update 32	.032	1	32	Prohibited	19951023	ISDT only
...						
Update 45	.045	1	45	Prohibited	19951112	ISDT only
New edition of ENC Cell	.000	2	0	19951201	19951201	UADT < or = ISDT
Update 1 to edition 2	.001	2	1	Prohibited	19960429	ISDT only

«InformationType»
ProducingInformation

«simpleAttribute»
- + copyright: S100:copyright [0..1]
- + dataProtection: S100:dataProtection [0..1]
- + description: S100:description [1..*]
- + editionNumber: S100:editionNumber [0..1]
- + issueDate: S100:issueDate [0..1]
- + producerCode: CharacterString [0..1]
- + producerNation: CharacterString [0..1]
- + producingAgency: S100_ProducingAgency [1..*]
- + producingType: ProducingType [0..*]
- + updateApplicationDate: S100:updateApplicationDate [0..1]
- + updateNumber: S100:updateNumber [0..1]

- S-63 defines EDTN, UPDN, UADT, ISDT for catalogue information
- S-128 PS covers those information for chart product as a property
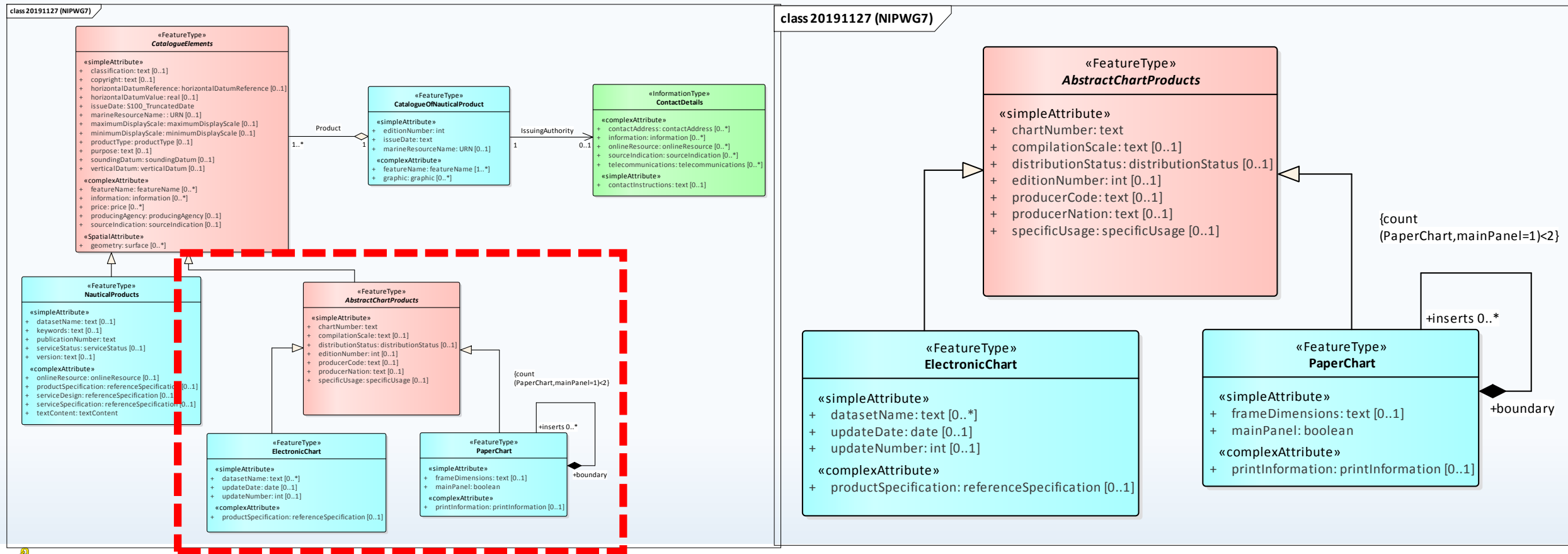- It can be used as utilization of S-10X data as up-to-date sync

2-3. NIPWG comments about S-128 PS

- NIPWG with France SHOM commented
  - How S-128 PS can model the paper chart (the product) with inserts (cf S-4, paragraph B.254) and if this is possible
    - a) The chart sheet is composed of a main chart part + insert(s)
    - b) The chart sheet is composed of inserts without main chart part.

2-3. NIPWG comments about S-128 PS

- KHOA updated S-128 application schema to cover 2 cases of paper chart

3. Future plan of S-128 development

- Updated S-128 satisfied Level 1 - TRL5 of S-100 Readiness Levels

Required product specification component	(TRL5) Level 1 v1.0.0	(TRL6) Level 2 v1-2.0.0	(TRL7) Level 3 >v2.0.0	(TRL8) Level 4 >v2.0.0	(TRL9) Level 5 >v2.0.0
Main Document (Defines the relevant parts of S-100 that are required for the product specification)	X	X	X	X	X
A Default Encoding	X	X	X	X	X
S-100 Compliant Feature Catalogue	X	X	X	X	X
DCEG	X	X	X	X	X
S-100 Compliant Portrayal Catalogue NOTE: Not every specification will need a portrayal catalogue – this should be determined as part of the development process and stakeholder feedback		X	X	X	X
Data Quality Checks		X	X	X	X
Test Data Sets		X	X	X	X
Data Validation (and test datasets)		X	X	X	X
Exchange Catalogue		X	X	X	X
Encryption / Digital Signatures			X	X	X
Interoperability				X	X[1]
Alerts and Indications				X	X[1]
Operational data					X

(X[1] = ECDIS only)

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NIPWG-7, Tallinn, Estonia 25 – 29 November 2019

3. Future plan of S-128 development

- KHOA updated the application schema and S-128 PS document

- As S-128 PS document and application schema has been developed during NIPWG5-7, KHOA requested NIPWG to approve S-128 as version 1.0

- After NIPWG7, KHOA request comments from stakeholders and will update S-128 data model with NIPWG chair to approve version 1.0

- In the future, S-101 ENC standard will be released as test version 1.0 in accordance with IHO Resolution 2/2007, KHOA will test the S-128 e.d 1.0 and update the application schema and related parts in accordance with the additional requirements of Member States and users to develop the S-128 2.0 version.