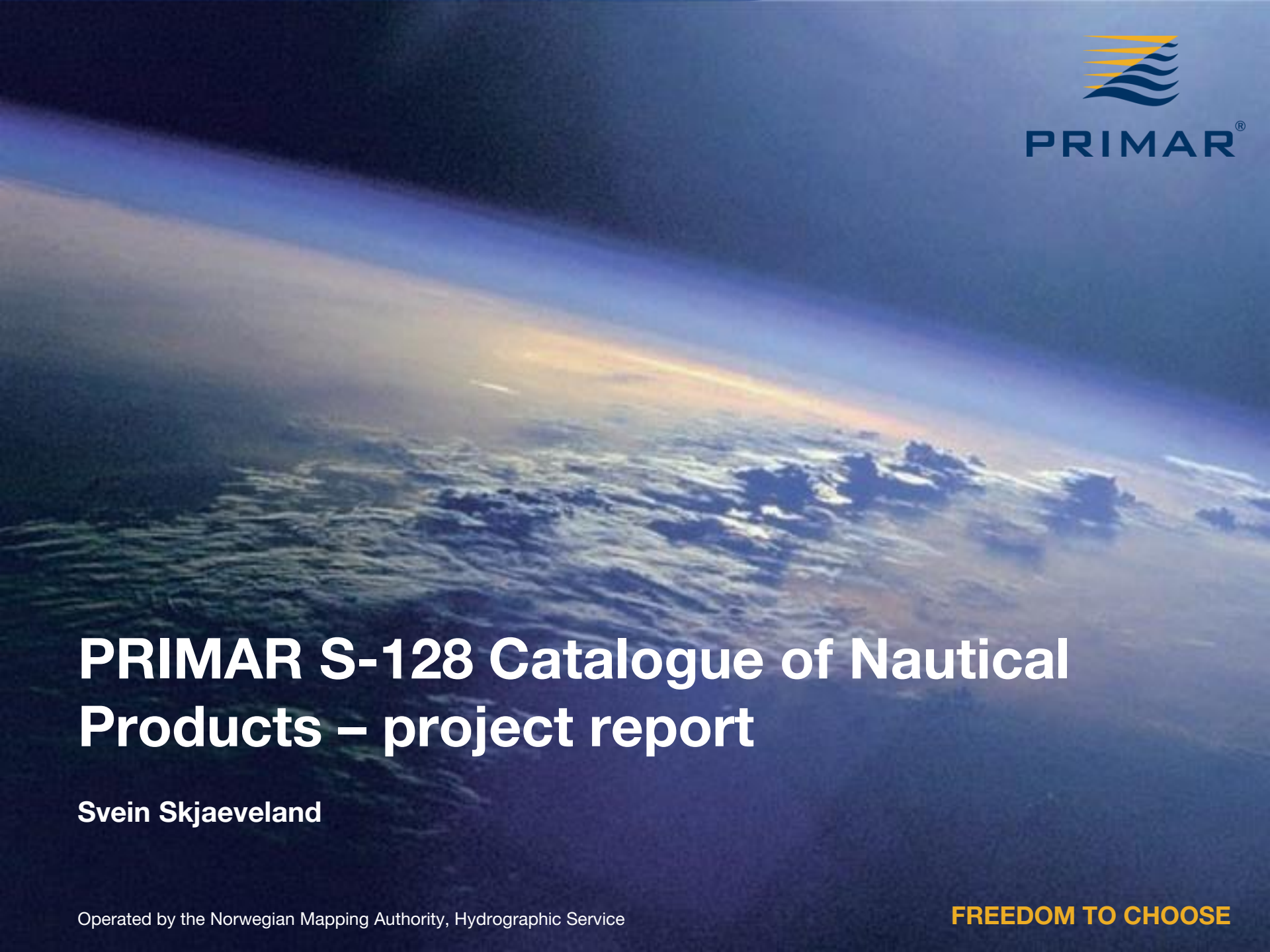


PRIMAR®

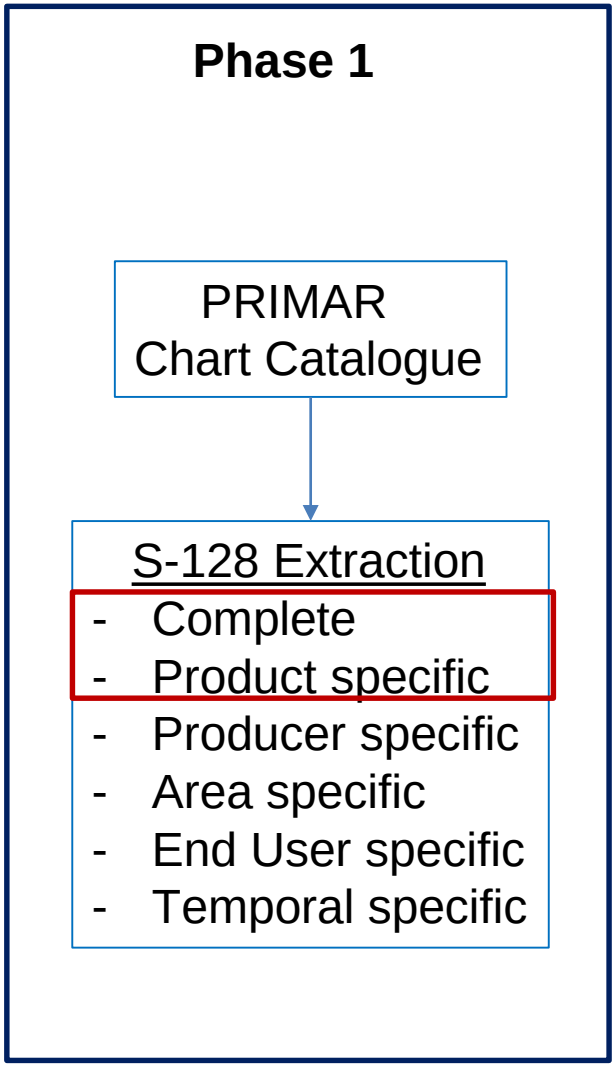
PRIMAR S-128 Catalogue of Nautical Products – project report

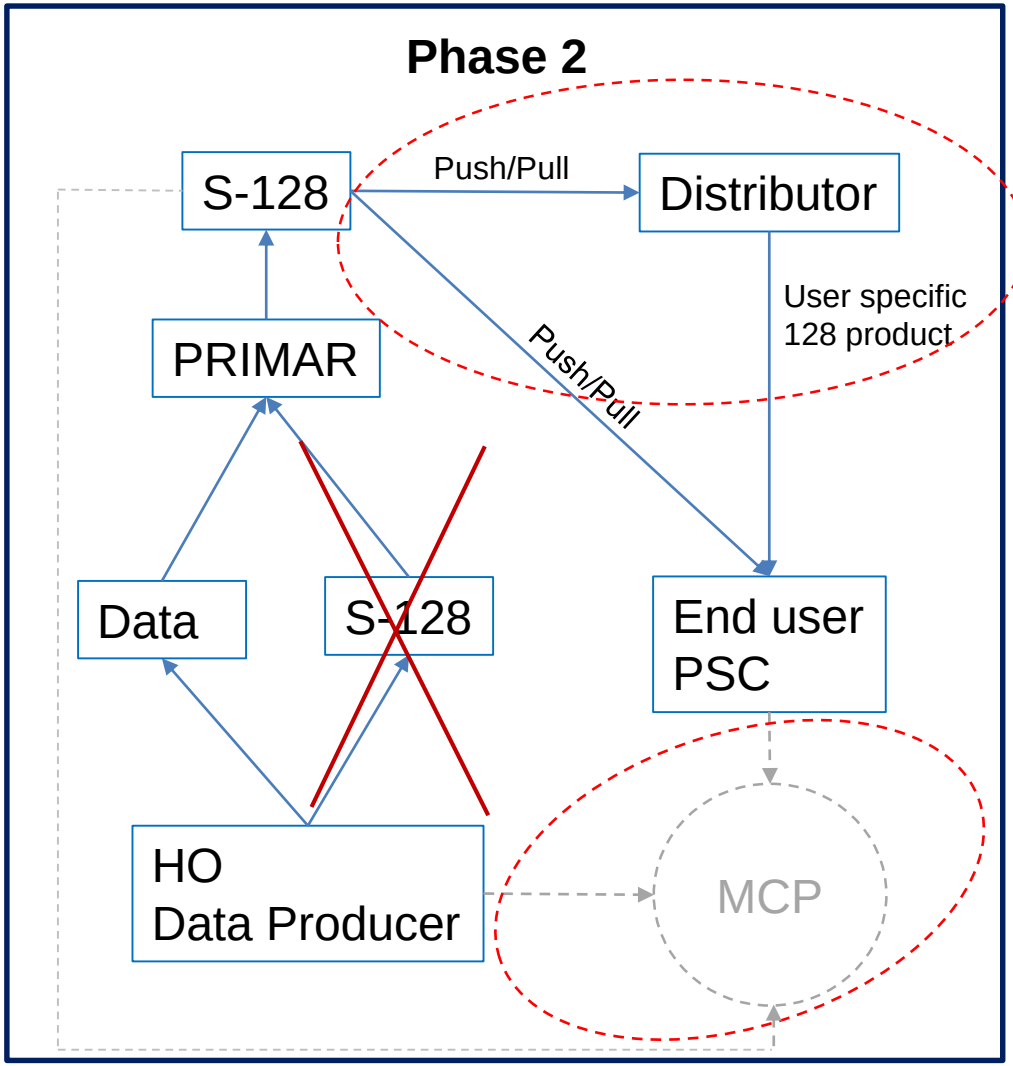
Svein Skjaeveland

Operated by the Norwegian Mapping Authority, Hydrographic Service

FREEDOM TO CHOOSE

The project phases





Phase 1 Activities

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A. Map out Information to be included in S-128 dataset extraction.
B. Extract S-128 datasets.
C. Identify and engage with distributor/OEM.
D. Phase 2 preparations.
E. IHO and PAC reporting.

A: Map out information to be included in S-128 dataset extraction

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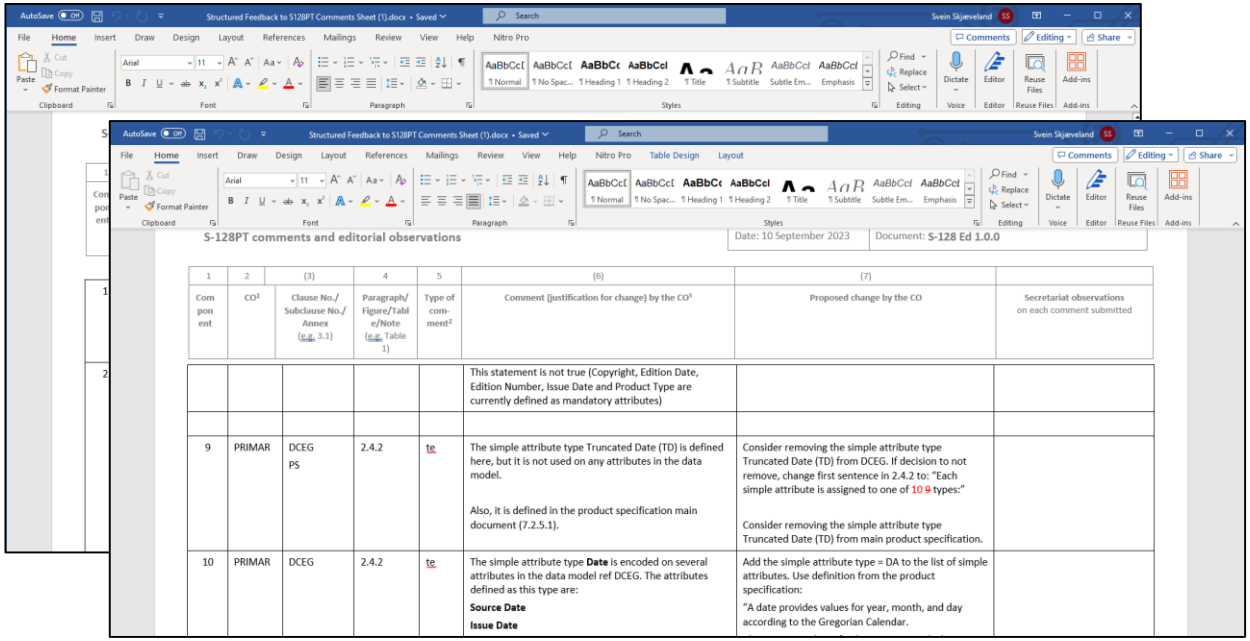
1. Analysis mandatory information:
   a. Create an overview of the mandatory information that must be captured in the S-128 datasets according to the data model defined in S-128 1.0.0.
2. Analysis non-mandatory information:
   a. Create an overview of the non-mandatory information (if any) that must be captured in the S-128 datasets according to the data model defined in S-128 1.0.0.
3. Identify destination of relevant mandatory and non-mandatory (if any) information within the products.
4. Define Metadata profile:
   a. What to be encoded in CATALOG.XML for the S-128 product.
5. S-98 Annex C review
   a. Review to better understand the intended use of S-128 in ECDIS and the level of services we may provide.

Green: Completed

Yellow: Ongoing/TBS

A: Map out information to be included in S-128 dataset extraction



S-128PT comments and editorial observations

Date: 10 September 2023 Document: S-128 Ed 1.0.0

1	2	(3)	4	5	(6)	(7)	
Component	CO[1]	Clause No./ Subclause No./ Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note (e.g. Table 1)	Type of comment[2]	Comment (justification for change) by the CO[3]	Proposed change by the CO	Secretariat observations on each comment submitted
					This statement is not true (Copyright, Edition Date, Edition Number, Issue Date and Product Type are currently defined as mandatory attributes)		
9	PRIMAR	DCEG PS	2.4.2	te	The simple attribute type Truncated Date (TD) is defined here, but it is not used on any attributes in the data model. Also, it is defined in the product specification main document (7.2.5.1).	Consider removing the simple attribute type Truncated Date (TD) from DCEG. If decision to not remove, change first sentence in 2.4.2 to: "Each simple attribute is assigned to one of 10 ~~9~~ types:" Consider removing the simple attribute type Truncated Date (TD) from main product specification.	
10	PRIMAR	DCEG	2.4.2	te	The simple attribute type **Date** is encoded on several attributes in the data model ref DCEG. The attributes defined as this type are: **Source Date** **Issue Date**	Add the simple attribute type = DA to the list of simple attributes. Use definition from the product specification: "A date provides values for year, month, and day according to the Gregorian Calendar.	

- Not registered GI Registry
- Textual inconsistencies
- Data model considerations - mandatory information/logic of certain elements.

S-128 PRIMAR Service

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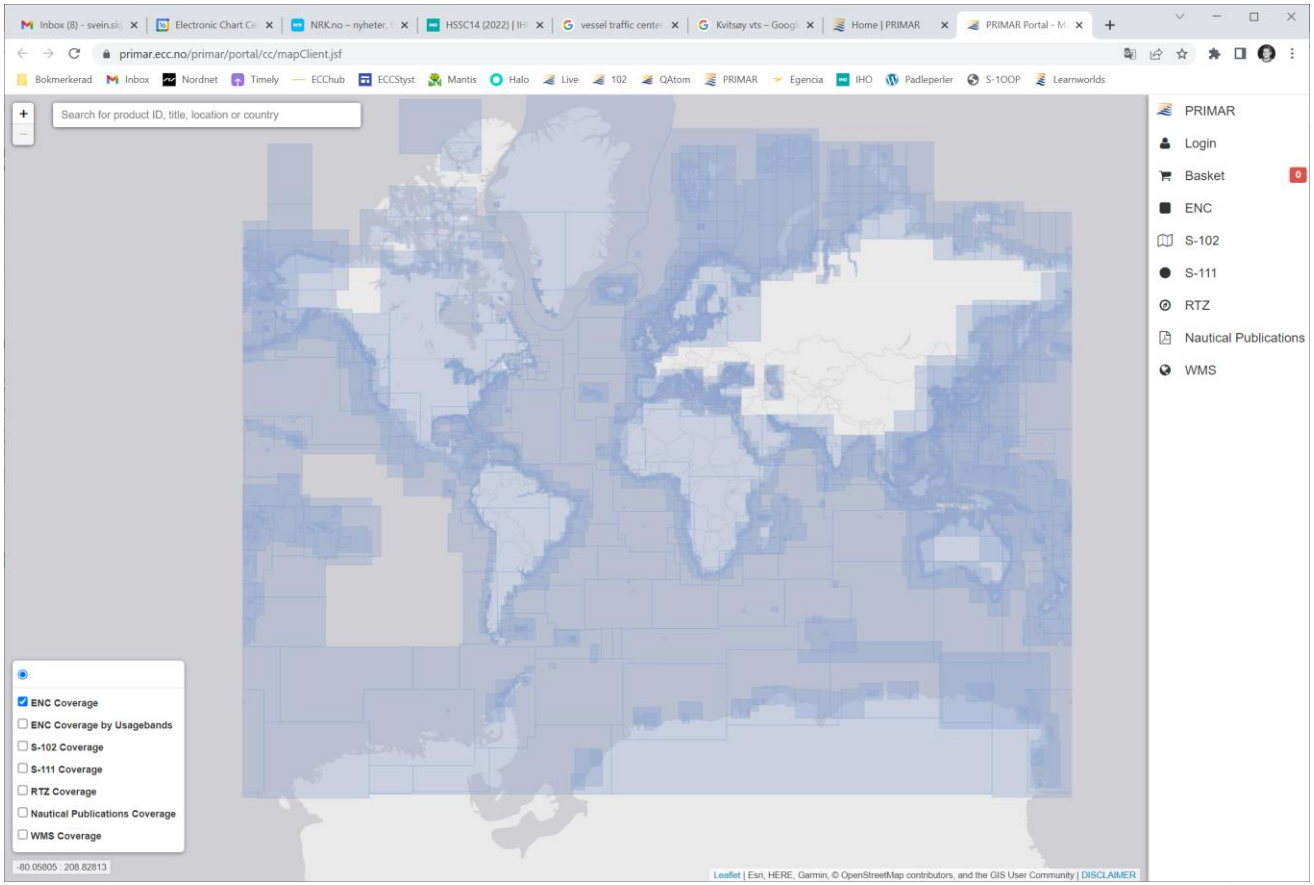
S-57



«enumeration»
productType

paper nautical chart = 1
ENC = 2
raster nautical chart = 3
INT Chart = 4
nautical publication = 5
S-100 compliant product = 6
electronic application for safety navigation = 7
special purpose charts = 8
e-Navigation service = 9
others = 10

S-128 PRIMAR Service

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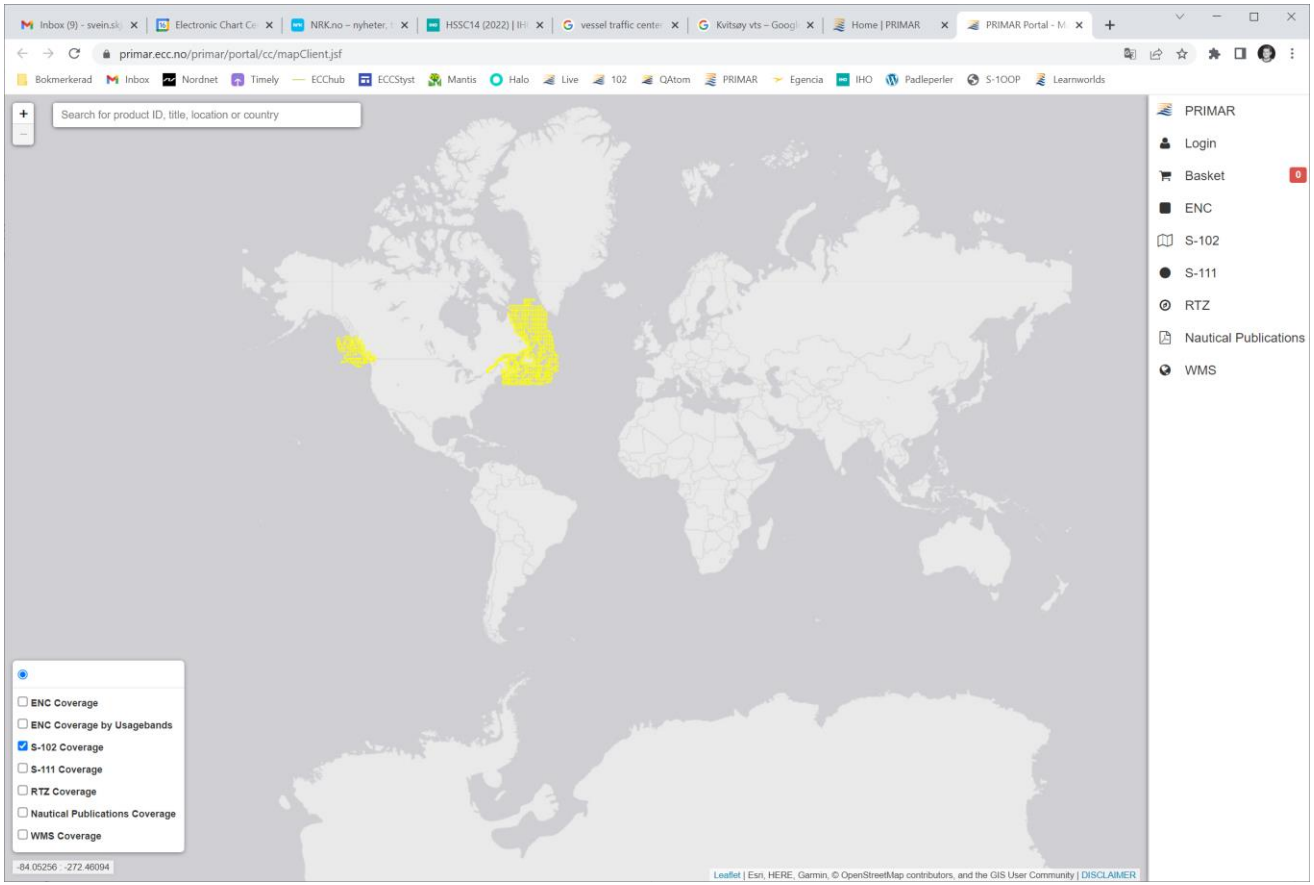
S-102



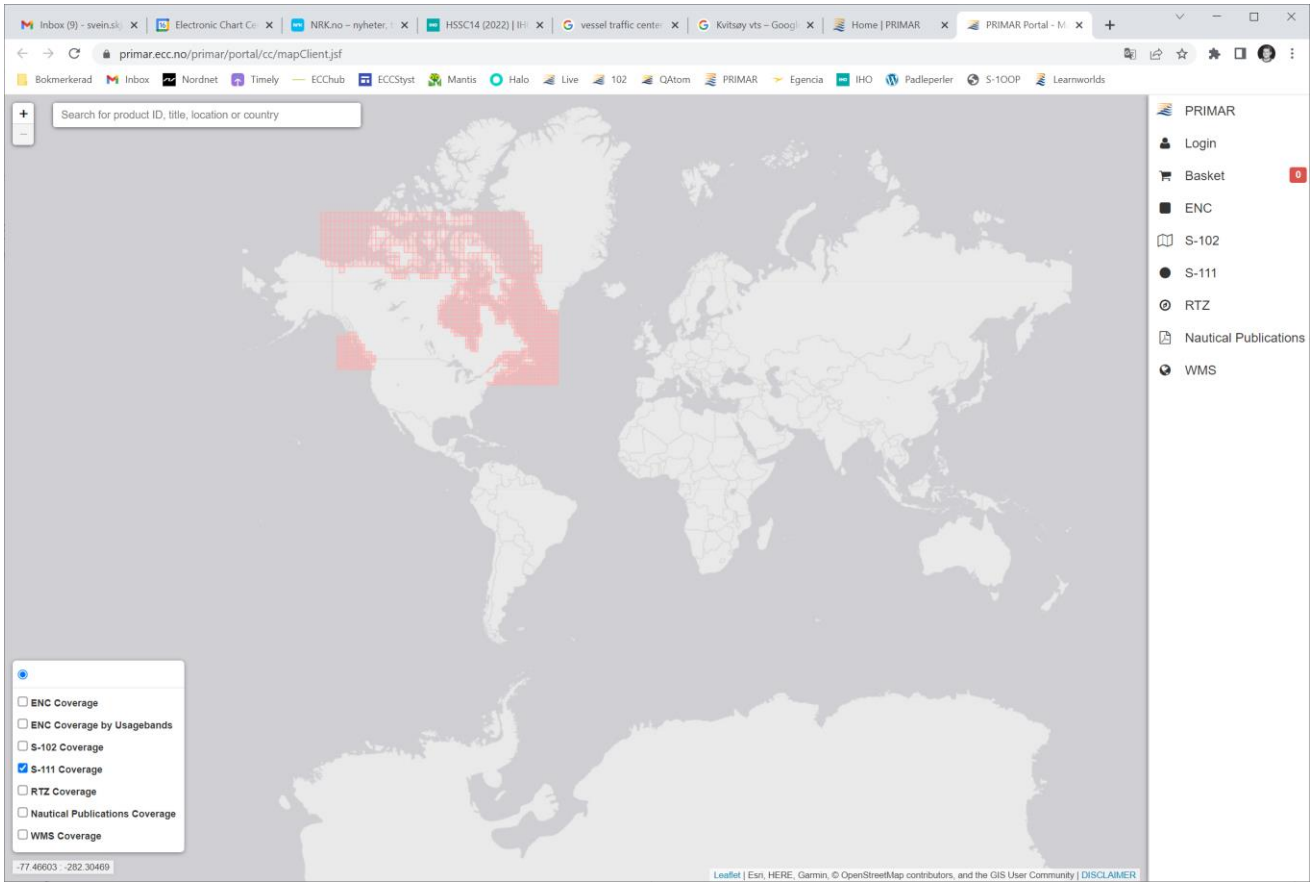
«enumeration»
productType

paper nautical chart = 1
ENC = 2
raster nautical chart = 3
INT Chart = 4
nautical publication = 5
S-100 compliant product = 6
electronic application for safety navigation = 7
special purpose charts = 8
e-Navigation service = 9
others = 10

S-128 PRIMAR Service

PRIMAR®

S-111



«enumeration»
productType

paper nautical chart = 1
ENC = 2
raster nautical chart = 3
INT Chart = 4
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S-100 compliant product = 6
electronic application for safety navigation = 7
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e-Navigation service = 9
others = 10

S-128 PRIMAR Service

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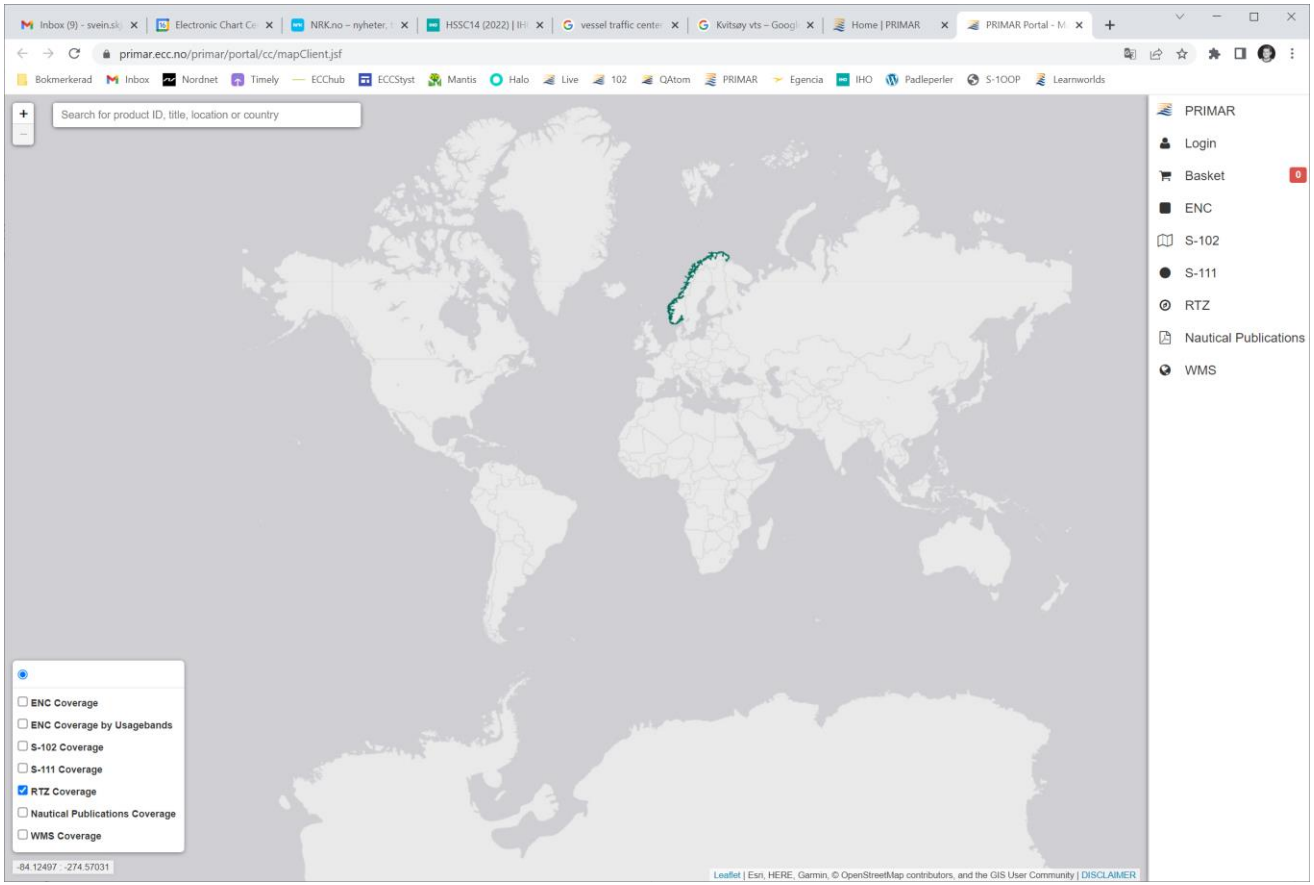
RTZ



«enumeration»
productType

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raster nautical chart = 3
INT Chart = 4
nautical publication = 5
S-100 compliant product = 6
electronic application for safety navigation = 7
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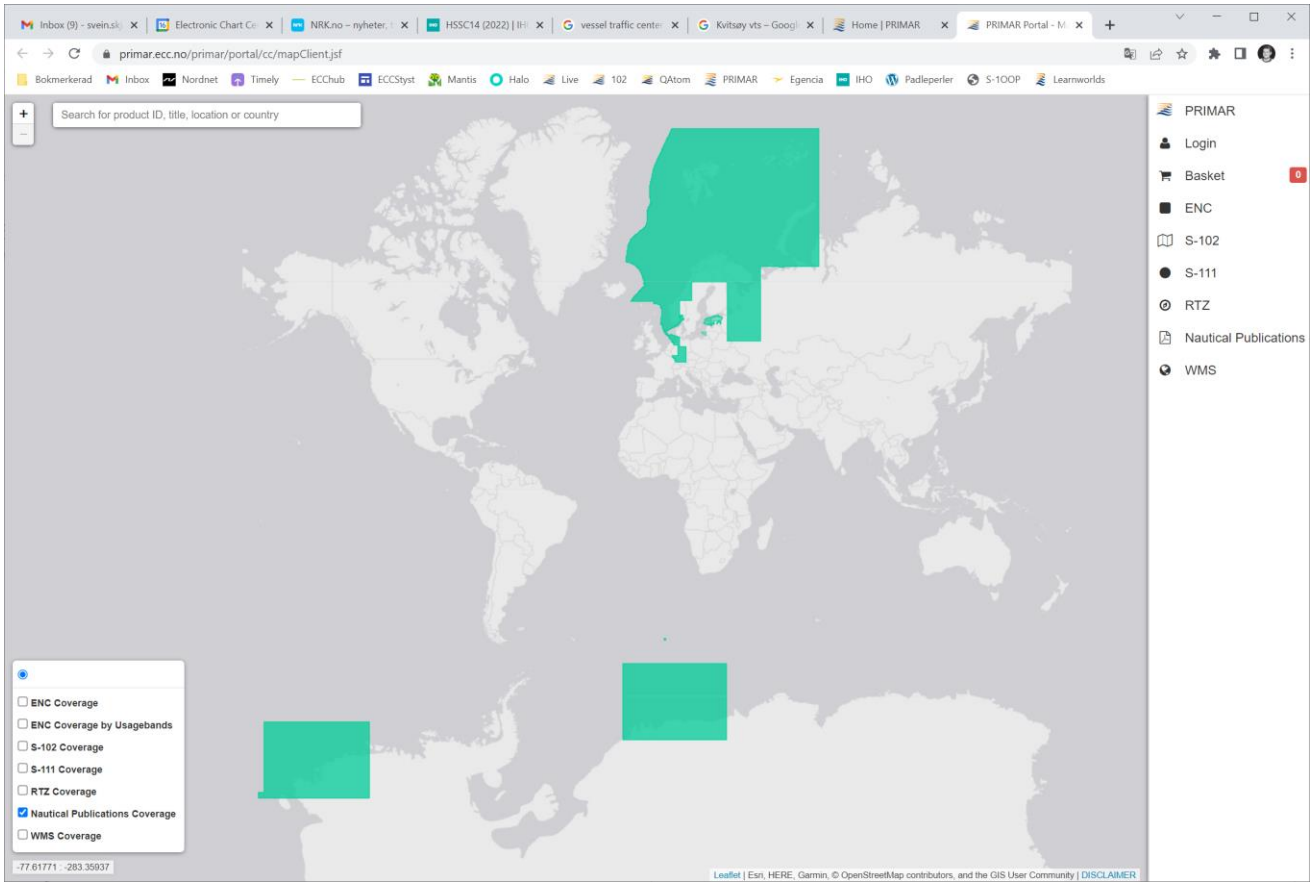
e-Navigation service = 9
others = 10

S-128 PRIMAR Service

PRIMAR®

Nautical Publications

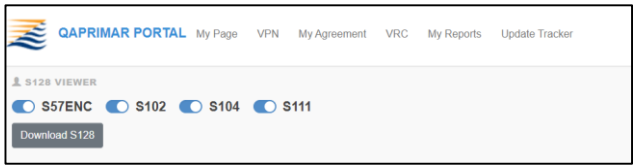


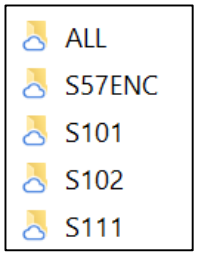
«enumeration»
productType

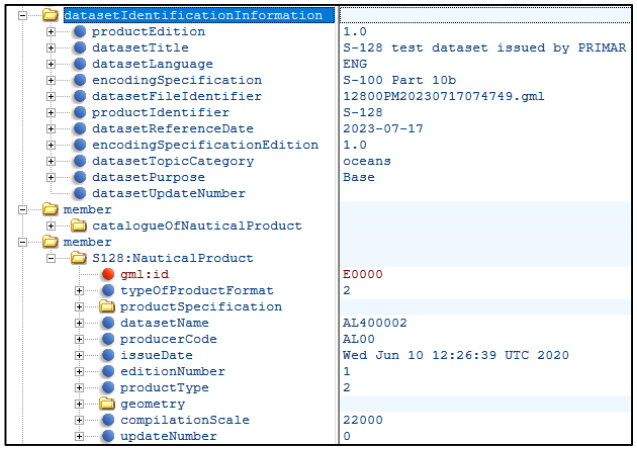
paper nautical chart = 1
ENC = 2
raster nautical chart = 3
INT Chart = 4
nautical publication = 5
S-100 compliant product = 6
electronic application for safety navigation = 7
special purpose charts = 8
e-Navigation service = 9
others = 10

B: Extract complete S-128 dataset

1. Create S-128 for complete portfolio:
   a. One dataset containing S-57, S-101, S-102, S-111.
2. Create product specific S-128:
   a. Separate datasets containing S-57, S-101, S-102, S-111.
3. Create exchange catalogue:
   a. S-128 products to be packaged in exchange set structure.
4. API solutions
   a. Solutions for accessing and acquire an updated S-128 dataset on request.
5. User interface for S-128 generation
   a. Consider if the PRIMAR Chart Catalogue should be expanded to contain such an interface
6. Enable data protection







S-57 ENCs example

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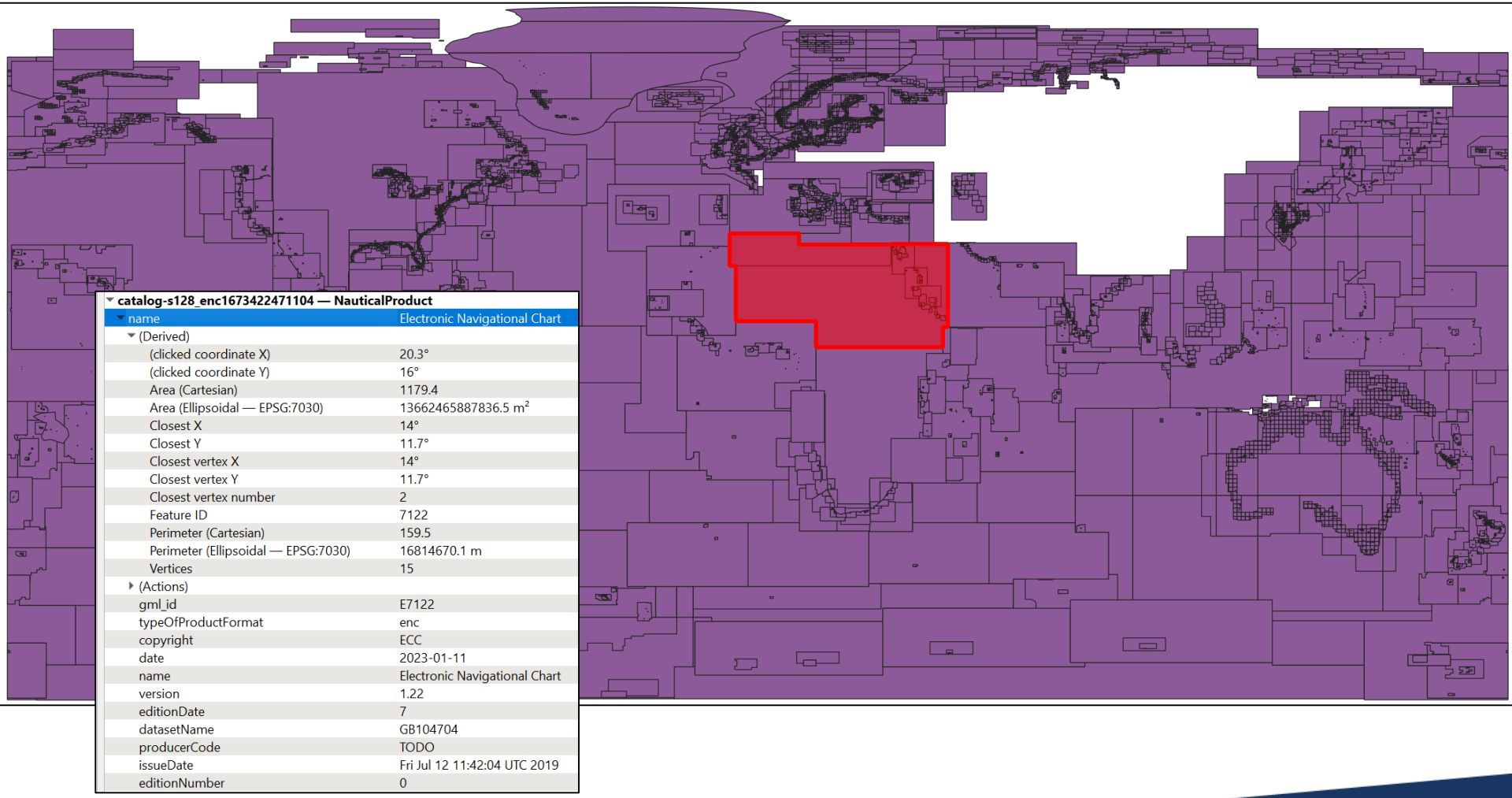
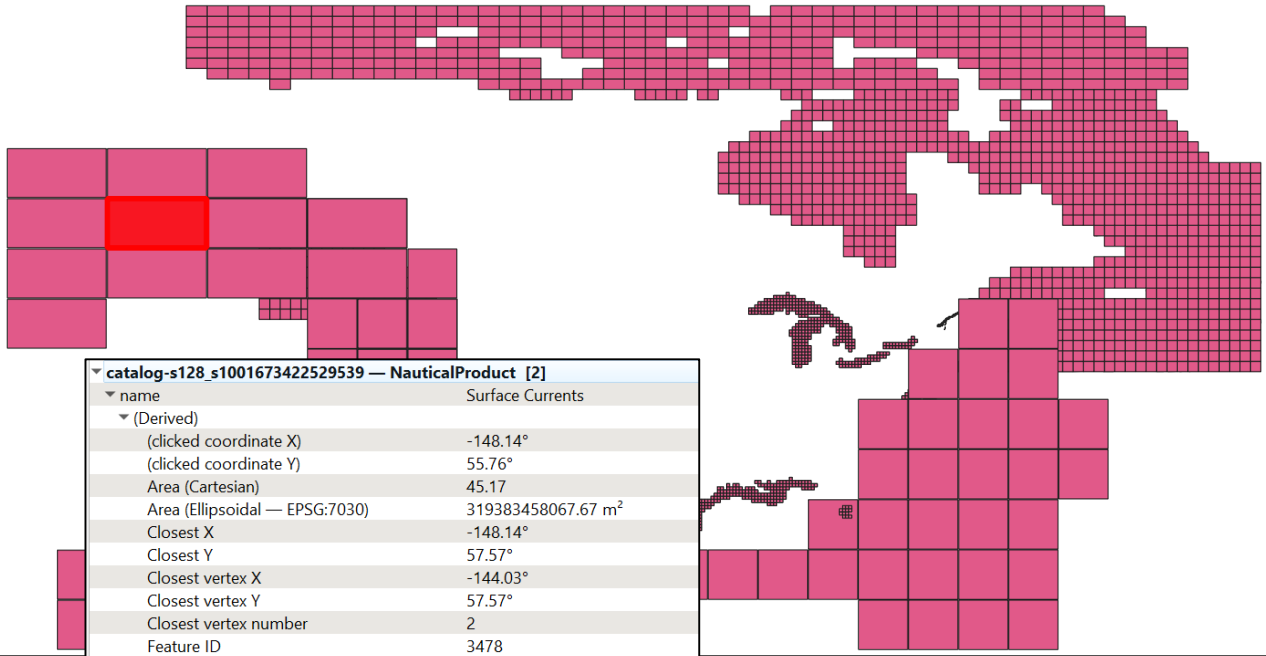


catalog-s128_enc1673422471104 — NauticalProduct	
name	Electronic Navigational Chart
(Derived)	
(clicked coordinate X)	20.3°
(clicked coordinate Y)	16°
Area (Cartesian)	1179.4
Area (Ellipsoidal — EPSG:7030)	13662465887836.5 m²
Closest X	14°
Closest Y	11.7°
Closest vertex X	14°
Closest vertex Y	11.7°
Closest vertex number	2
Feature ID	7122
Perimeter (Cartesian)	159.5
Perimeter (Ellipsoidal — EPSG:7030)	16814670.1 m
Vertices	15
(Actions)	
gml_id	E7122
typeOfProductFormat	enc
copyright	ECC
date	2023-01-11
name	Electronic Navigational Chart
version	1.22
editionDate	7
datasetName	GB104704
producerCode	TODO
issueDate	Fri Jul 12 11:42:04 UTC 2019
editionNumber	0

S-100 products example

2. All S-100 products (S-101, S-102, S-111)



catalog-s128_s1001673422529539 — NauticalProduct [2]	
name	Surface Currents
(Derived)	
(clicked coordinate X)	-148.14°
(clicked coordinate Y)	55.76°
Area (Cartesian)	45.17
Area (Ellipsoidal — EPSG:7030)	319383458067.67 m²
Closest X	-148.14°
Closest Y	57.57°
Closest vertex X	-144.03°
Closest vertex Y	57.57°
Closest vertex number	2
Feature ID	3478
Perimeter (Cartesian)	28.55
Perimeter (Ellipsoidal — EPSG:7030)	2267211.28 m
Vertices	5
(Actions)	
gml_id	E3478
typeOfProductFormat	NULL
copyright	ECC
date	2023-01-11
name	Surface Currents
version	-9223372036784268577
editionDate	41
datasetName	111US00_WCOFS_US2PACYS
producerCode	TODO
editionNumber	0
issueDate	20230111

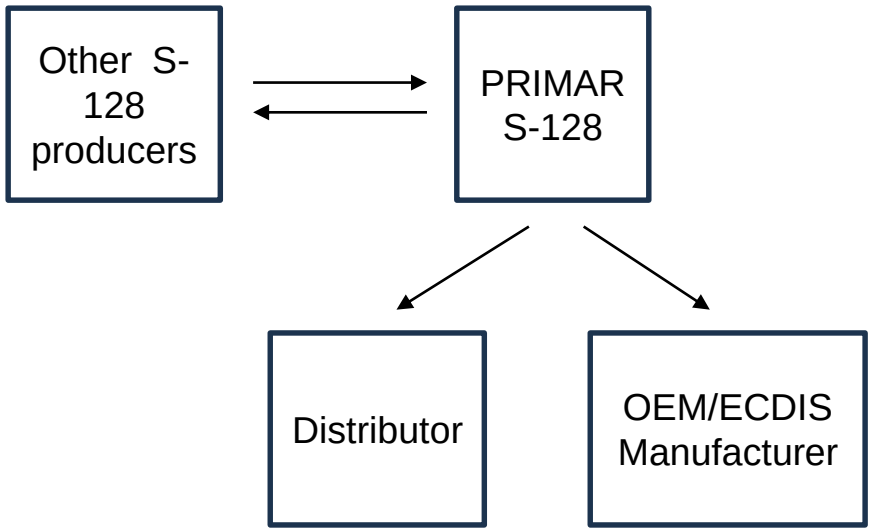
catalog-s128_s1001673422529539 — NauticalProduct [5]	
name	Bathymetric Surface
(Derived)	
(clicked coordinate X)	16.3°
(clicked coordinate Y)	68.31°
Area (Cartesian)	3.71e-03
Area (Ellipsoidal — EPSG:7030)	16892315.81 m²
Closest X	16.43°
Closest Y	68.54°
Closest vertex X	16.43°
Closest vertex Y	68.53°
Closest vertex number	11
Feature ID	1350
Part number	1
Parts	2
Perimeter (Cartesian)	0.73
Perimeter (Ellipsoidal — EPSG:7030)	39252.24 m
Vertices	62
(Actions)	
gml_id	E1350
typeOfProductFormat	NULL
copyright	ECC
date	2023-01-11
name	Bathymetric Surface
version	-9223372036784271099
editionDate	1
datasetName	102NO00TJELDS02M
producerCode	TODO
editionNumber	0
issueDate	NULL

C: Identify and engage external partners

Identify possible cooperation partner(s) for phase 2.

- To test the product outside PRIMAR.
- To understand the role of distributors.
- To demonstrate usage within end user system(s).

1. Distributors
2. OEMs
3. Other S-128 producers



Svein S. Skjaeveland
Manager International Standardization
Phone +47 92662697
svein.skjaeveland@ecc.no
https://www.primar.org/

D: Phase 2 preparations

1. Prepare scope for phase 2 of the project.
   a. Expected data flow structure
   b. Involved participants (Data producer, Service provider, Distributor, End user and End user system).
   c. How to test the use of S-128 in an end user system.
   d. Identifying partner(s) where our S-128 datasets can be tested.
2. Weekly exchange sets and S-128 generation
   a) Consider how to provide S-128 with the PRIMAR CD service
3. S-128 GML Update datasets
   a. Investigate policy and solution for providing S-128 as incremental/cumulative updates.
4. S-128 Service component

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