



7th Meeting of the Tides, Water Level and Currents Working Group

DQWG Report on the Review of S-104 and S-111 Feature Catalogues

Agenda Item (taken under Agenda Item 4.3)

VTC, 28-Feb-2023 ~ 02-Mar-2023

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Introduction

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According to action DQWG 17/09, the subWG comprised of Chair and Expert Contributor of SevenCs has implemented the Cross check of feature catalogues of the following product specifications:

- S-101 Ed 1.1.0
- S-102 Ed 2.1.0
- S-104 1.0.0
- S-111 1.0.0
- S-129 1.0.0



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DISCUSSION

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(1) The aims of the Cross check of S-1xx Feature Catalogues

- Confirm that the Feature Catalogue contents are consistent with the corresponding DCEG document.
- Identify any areas where the S-101 Feature Catalogue is inconsistent with other S-1xx product specifications
- Confirm that the items present in the feature catalogue are consistent with the GI registry contents.
- Confirm that the Feature Catalogue structure and content conforms to the S-100 standard.



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DISCUSSION

(2) Only the published S-1xxs in Route Monitoring Mode were reviewed.

(3) Tool developed by NOAA to convert XML to XLSX format enables inconsistencies within the S-101 Feature Catalogue, as well as inconsistencies with other S-1xx Feature Catalogues to be identified.



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RESULTS OF THE CROSS CHECK OF FEATURE CATALOGUES

1.The Cross check of S-1xx FCs and its DCEG

No inconsistency is found in S-104 and S-111.



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RESULTS OF THE CROSS CHECK OF FEATURE CATALOGUES

2.The Cross check of S-1XX and S-101 FCs

No.	Publications	S-1xx Clause No.	S-101 Clause No.	Contents in S-1XX Feature Catalogue	Contents in S-101 Feature Catalogue
1	S-111	3.2	4.27 (29.27)	surfaceCurrentSpeed	Speed

Number	Name	Value type
3.2	Surface current speed	Real

Number	Complex attribute		Number	Attribute	Type
4.27	Speed	→	3.181	speedMaximum	S
			3.182	speedMinimum	S

1. Surface Current Speed (*surfaceCurrentSpeed*)

Surface Current Speed: IHO Definition: SPEED. Rate of motion. The terms speed and VELOCITY are often used interchangeably, but speed is a scalar, having magnitude only, while VELOCITY is a vector quantity, having both magnitude and direction.

Unit: knot (kn)

Minimum Resolution: 0.01 kn

Format: xxx.xx

Example: 2.54

Remarks:

- Valid speed always non-negative
- Negative number denotes land mask or missing value
- 0.01 kn equals 0.5144 cm/s

29.27 speed

Speed: IHO Definition: Rate of motion. The terms speed and velocity are often used interchangeably, but speed is a scalar, having magnitude only, while velocity is a vector quantity, having both magnitude and direction. (Adapted from IHO Dictionary, S-32).

Indication: The complex attribute encodes the range of the speed at a location.

Sub-attributes: speed maximum see clause 27.158
speed minimum see clause 27.159

Remarks:

- No remarks.



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RESULTS OF THE CROSS CHECK OF FEATURE CATALOGUES

2.The Cross check of S-1XX and S-101 FCs

No.	Publications	S-1xx Clause No.	S-101 Clause No.	Contents in S-1XX Feature Catalogue	Contents in S-101 Feature Catalogue
2	S-111	3.1	3.149 (27.134)	surfaceCurrentDirection	Orientation Value

Number	Name	Value type
3.1	Surface current direction	Real

Number	Name	Value type
3.149	Orientation Value	real

2. Surface Current Direction (*surfaceCurrentDirection*)

Surface Current Direction: IHO Definition: DIRECTION OF CURRENT. The direction toward which a CURRENT is flowing, called the SET of the CURRENT. Also called current direction.

Unit: arc-degree (°)

Minimum Resolution: 0.1 °

Format: xxx.x

Example: 298.3

Remarks:

- Direction clockwise from true north
- Valid direction always non-negative
- Negative number denotes land mask or missing value

27.134 orientation value (ORIENT)

Orientation: IHO Definition: The angular distance measured from true north to the major axis of the feature. (Defence Geospatial Information Working Group; Feature Data Dictionary Register, 2010).

Attribute Type: Real

Unit: Degree (°)

Resolution: 0.01°

Format: xxx.xx

Minimum value: 0

Maximum value: 360

Example: 246.7 for an orientation of 246.7 degrees



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RESULTS OF THE CROSS CHECK OF FEATURE CATALOGUES

3.The Cross Check of S-1xx FCs and GI registry

No inconsistency is found in S-104 and S-111.

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RESULTS OF THE CROSS CHECK OF FEATURE CATALOGUES

4.The Cross Check of S-1xx FCs and S-100

No inconsistency is found in S-104 and S-111.



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ACTION

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The TWCWG is requested to:

- a. **Note** the information provided;
- b. **Take** any actions as appropriate.
- c. **Nominate** a DQ focal point in TWCWG who is invited to participate in the activities of DQWG.