**Paper for Consideration by NIPWG XML Workshop**

**NtM Chart correction conventions, list of potential XML tags**

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| *Submitted by:* | BSH |
| *Executive Summary:* | A summary of issues detected based on HOs Chart corrections |
| *Related Documents:* | NIPWG 5-43.1, HSSC 10-05.3A |
| *Related Projects:* | Best practice on XML based chart production |

**Introduction / Background**
Based on paper NIPWG 5-43.1, NIPWG approached HSSC9 to seek approval on conducting an XML workshop to progress the development of a common XML structure for chart related Notices to Mariners. This intention was appreciated by HSSC9. HOs highlighted that a harmonised provision of NtM chart corrections impacts positively the data exchange between neighbouring countries and between other interested HOs.

**References**
NIPWG 5-43. XML Structure of NtM

**Analysis/Discussion**
HOs have either started the XML based provision of NtM chart corrections or they are intending to replace their current NtM production ways by XML based provision of NtM chart corrections.

The challenge in the development of a common XML structure is the different provision of chart corrections. Some HOs provide a correction which is related to a particular chart and which will be repeated for each chart affected. Other HOs provide a correction of the issue and list all charts affected. Both versions have pro and cons. A harmonised provision of chart correction is not the workshop objective. Rather, it is intended to define a universal XML structure which can be used to produce individual output layouts.

For efficiency sake the workshop should be prepared as best as possible in advance. BSH has done research on the NtM XML versions which have been submitted recently and collected a set of xml tags which might be useful, see Annex A. The different provision of both chart and issue related correction based on one single XML is also presented in Annex A.
Furthermore, a list of generic conventions and points which could be resolved beforehand has been collected, see Annex B.

**Action Requested of NIPWG-XML workshop**
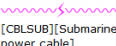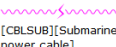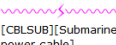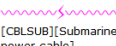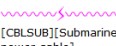The NIPWG-XML workshop is invited to:
- a. Note this paper.
- b. Provide comments and additions to the list if deemed necessary.

Annex A List of possible XML tags

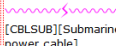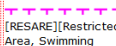| XML-Tag | Full term | Description |
|---|---|---|
| HeaderData | | |
| PublishedBy | | |
| Issue | | |
| InstructionRow | | |
| InstructionId | | |
| Crs | | List of reference systems |
| t_or_p | | |
| Region | | To be provided as a predefined list |
| Subregion | | To be provided as a predefined list based on selected "Region" |
| Vicinity | | Free text |
| Instruction | | insert/delete/replace/add/relocate |
| Symbol1 | | |
| Symbol1PortrayalGph | Symbol 1 Portrayal Graphic | |
| Symbol1PortraylTxt | Symbol 1 Portrayal Text | |
| SymbolLabel1 | Additional text to symbol | |
| Text1 | | |
| Symbol2PortrayalGph | Symbol 2 Portrayal Graphic | |
| Symbol2PortraylTxt | Symbol 2 Portrayal Text | |
| SymbolLabel2 | | |
| Text2 | | |
| GeometryType | | Point/Polyline/Polygon |
| Locations | | |
| Location | | |
| Latitude | | |
| Degrees | | |
| Minutes | | |
| Decimals | | |
| Hemisphere | | N/S |
| Longitude | | |
| Degrees | | |
| Minutes | | |
| Decimals | | |
| Hemisphere | | E/W |
| ChartsAffected | | |
| ChartData | | |
| Prefix | | |
| Infix | | |
| Suffix | | |
| IntNumber | | |
| Last correction | | |
| SourceIndication | | |
| | | |
| notice_status | | Published/??? |
| prod_last_corre | | |
| Last correction type | | |
| Last correction number | | |
| Last correction year | | |
| sea_area | | |
| sea_area_name | | |
| name_fi | | |
| name_en | | |
| name_sv | | |

| update_structure | | |
|---|---|---|
| panel | | |
| datum | | |
| verb | | |
| object | | "the accompanied block. …." |

## Chart related provision of corrections

| #4 DE1210 | North Sea.German Bight.Elbe Approach Reede | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| INT Last Ntm: 45/2017 | Insert | [CBLSUB][Submarine power cable] | | | | | 54°04,89'N | 7°44,95'E | |
| | | | | | | | | WSA Cuxhaven 107/17 | |

| #4 DE1210 | North Sea.German Bight.Elbe Approach Reede | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| INT Last Ntm: 45/2017 | Insert | [CBLSUB][Submarine power cable] | | | | | 54°04,88'N | 7°45,06'E | |
| | | | | | | | | WSA Cuxhaven 107/17 | |

| #4 DE1250 | North Sea.German Bight.Elbe Approach Reede | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| INT Last Ntm: 45/2017 | Insert | [CBLSUB][Submarine power cable] | | | | | 54°04,89'N | 7°44,95'E | |
| | | | | | | | | WSA Cuxhaven 107/17 | |

| #4 DE1250 | North Sea.German Bight.Elbe Approach Reede | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| INT Last Ntm: 45/2017 | Insert | [CBLSUB][Submarine power cable] | | | | | 54°04,88'N | 7°45,06'E | |
| | | | | | | | | WSA Cuxhaven 107/17 | |

| #4 DE1250 | North Sea.German Bight.Elbe Approach Reede | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| INT Last Ntm: 45/2017 | Insert | [CBLSUB][Submarine power cable] | | | | | 54°04,75'N | 7°45,40'E | |
| | | | | | | | | WSA Cuxhaven 107/17 | |

## Issue related provision of corrections

| #4 | North Sea.German Bight.Elbe Approach Reede | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Insert | [CBLSUB][Submarine power cable] | | | | | 54°04,89'N  7°44,95'E  \| DE1210  \| DE1250<br>54°04,88'N  7°45,06'E  \| DE1210  \| DE1250<br>54°04,75'N  7°45,40'E  \| DE1250 | |
| | | | | | | | WSA Cuxhaven 107/17 | |

| #5 | Baltic Sea.Waters around Ruegen.Strelasund | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| (P) | Insert | [RESARE][Restricted Area, Swimming Area] | | | | | 54°19,20'N  13°05,40'E  \| DE1622<br>54°20,28'N  13°06,36'E  \| DE1622<br>54°20,34'N  13°05,22'E  \| DE1622<br>54°20,55'N  13°05,45'E  \| DE1622<br>54°19,20'N  13°05,40'E  \| DE1622 | |
| | | | | | | | WSA Stalsund 288/17 | |

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Annex B

Discussion item(s) which might be resolved beforehand

- XML or GML, the latter will have benefits if the production of NtM should be based on Hydrographic Production Systems, it also simplifies and standardises the provision of positions/locations

List of generic conventions

- No style information inside XML
- Enable Multilingualism
- Use of external files/databases
    - for metadata (Interface to catalogue (xlink, xpointer) to avoid redundant data)
    - for information which is usually listed (e.g. regions, correction instructions, hemisphere)
- INT1 based symbol catalogue
- Provision of an INT1/textual description of INT1 symbols lookup table