**NIPWG xx-xx**

## Paper for Consideration by NIPWG VTC

## Presentation of the S-123 Task Group and Progress Made to Date

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| ***Submitted by:*** | Bridget Gagné (Canadian Coast Guard and S-123 Task Lead) |
| ***Executive Summary:*** | S-123 task group formed and on track to review all feedback submitted. Goal is to submit a list of changes to the S-123 Product Specifications for the next annual NIPWG meeting. |
| ***Related Documents:*** | S-123 |
| ***Related Projects:*** | S-123 Ed. 1.0.0 |

## Introduction / Background

This paper presents the S-123 task group, activities conducted, progress made to date and goals.

## Analysis/Discussion

The S-123 task group was formed in November 2021 with Bridget Gagné from the Canadian Coast Guard as the task lead, completing Action Item 06 from NIPWG VTC 2021.

Current members of the task group

* Bridget Gagné (CCG) – Task Lead
* Eivind Mong (CCG) – NIPWG Chair
* Philipp Schwedas (BSH)
* Hugh Astle (Teledyne Caris)
* Jonathan Pritchard (IIC Technologies)
* Shwu-Jing Chang (National Taiwan Ocean University)
* Raphael Malyankar (Portolan Sciences)

Keeping in mind the “S-100 Timeline for the Prioritized IHO Product Specifications” where

1. the initial implementation of S-123 continues until the end of 2022 and
2. the development of S-123 Edition 2.0.0 is to start at the beginning of 2023 and end sometime in Spring 2024,

the mandate of the task group is to work through all S‑123 feedback received and to produce a list of changes to be presented at NIWPG9 in September 2022 for approval in order to produce the next version of the S-123 Product Specifications. It is necessary to determine if the next version is referring to Edition 1.1.0 or if it means going directly to Edition 2.0.0.

The S-123 Product Specifications will also need to be updated based on S-100 Edition 5.0.0, whose development is slated to be completed in Spring 2022.

* HSSC13/16 action item indicated a priority for S-123, as well as several other product specifications, to be aligned with S-100 Edition 5.0.0 by 2023.

The task group has been meeting once a month since December 2021, and has reviewed approximately 20% of the feedback, which is 8 out of 40 pages, as of the submission of this paper. In addition, the S-123 NIPWG Wiki[[1]](#footnote-1) was created, as well as meeting minutes and the latest comments regarding the S-123 feedback being posted on the NIPWG product specifications web page[[2]](#footnote-2).

So far, the task group meetings have resulted in several conclusions such as:

* Removal of the **orientation** attribute from **RadioStation** in S-123 as **RadioStation** in S‑101 does not have this attribute.
  + The task group suggests that if it necessary to create a sector, then to use **RadioServiceArea** instead.
* Removal of the **Landmark** feature from S-123 as these features would be encoded in S‑101 and therefore no value would be added by keeping this in S-123.
* Discussion in the task group in regard to remodelling the **radioCommunications** complex attribute.
  + The **radioCommunications** complex attribute is available on **RadioStation**, **RadioServiceArea** feature types and the **ContactDetails** information type.
    - This complex attribute appears to be encoded to catch all kinds of radiocommunication details and therefore seems too general as there are restrictions as to which sub-attributes can be populated under **RadioStation** and **ContactDetails**, for example.
  + The S-100 FC does not provide a mechanism to restrict which sub-attributes of a complex attribute can be populated in relation to the object in question.
    - This would require custom implementation, user knowledge and awareness or custom QC checks to prevent or catch the unintended use.
  + In light of the points mentioned above, the goal of the discussion is to explore whether **radioCommunications** can be remodelled to better support the requirements of the information to be encoded, prevent confusion in how this information is to be encoded and thus improve the quality of the data overall.
    - This discussion regarding the **radioCommunications** complex attribute will be moved to the NIPWG Wiki.

As part of the discussion regarding the **radioCommunications** complex attribute, a point of principle was raised: *Should the same attribution be available via a relationship as well as inline with a geographic feature?*

* In S-101PT, this was debated and it was agreed that this is not considered double encoding. Their example is the INFORM replacement **NauticalInformation**.
  + S-101 geographic features allow encoding of “information” directly in geographic features and to be shared via the information type **Nauticalinformation**.
* Allowing this can radically simplify encoding and reduce the number of relationships between features and information types.
  + Encode the relationship to the information type containing the attributes only if they are to be shared between 2 or more geographic features.
  + If attributes are only ever going to be a single instance, then encode them inline with the geographic feature.
  + The attributes are the same. Their bindings to either a geographic feature or an information type characterises their use – these are different, hence it is not “double encoding.”

## Conclusions

The task group is on track to meet its mandate to review all feedback collected to date in order to provide a list of changes for approval at NIPWG9 in September 2022.

## Action Required of NIPWG

The NIPWG is invited to:

1. note this paper.
2. take any actions as appropriate.

1. S-123 NIPWG Wiki: <http://wp12183585.server-he.de/npubwiki/wiki/index.php/NIPWG_S-123_marine_radio_services> [↑](#footnote-ref-1)
2. NIPWG Product Specifications web page: <https://iho.int/en/nipwg-product-specifications> [↑](#footnote-ref-2)