

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

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NIPWG VTC 2022 (March 22, 2022)

Presented by Bridget Gagné, Canadian Coast Guard  
(S-123 Task Lead)

# Introduction of the S-123 Task Group

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- The S-123 task group was formed in November 2021 with Bridget Gagné from the Canadian Coast Guard as the task lead.
  - This completes 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)

# S-123 Task Group Mandate and Goals

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- The mandate of the task group is to work through all S-123 feedback received to produce a list of changes.
- The goal is to present the list of changes at NIPWG9 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.
  - Keep in mind that the “S-100 Timeline for the Prioritized IHO Product Specifications” indicated that:
    1. the initial implementation of S-123 is 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 S-123 PS 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.

# S-123 Task Group Progress Made to Date

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- The task group has been meeting once a month since December 2021.
- Approximately 20% of the feedback received has been reviewed so far (8 out of 40 pages).
- The S-123 NIPWG Wiki was created to assist with this work.
- Meeting minutes and the latest comments regarding the S-123 feedback are posted on both the S-123 NIPWG Wiki and the NIPWG Product Specifications web page.

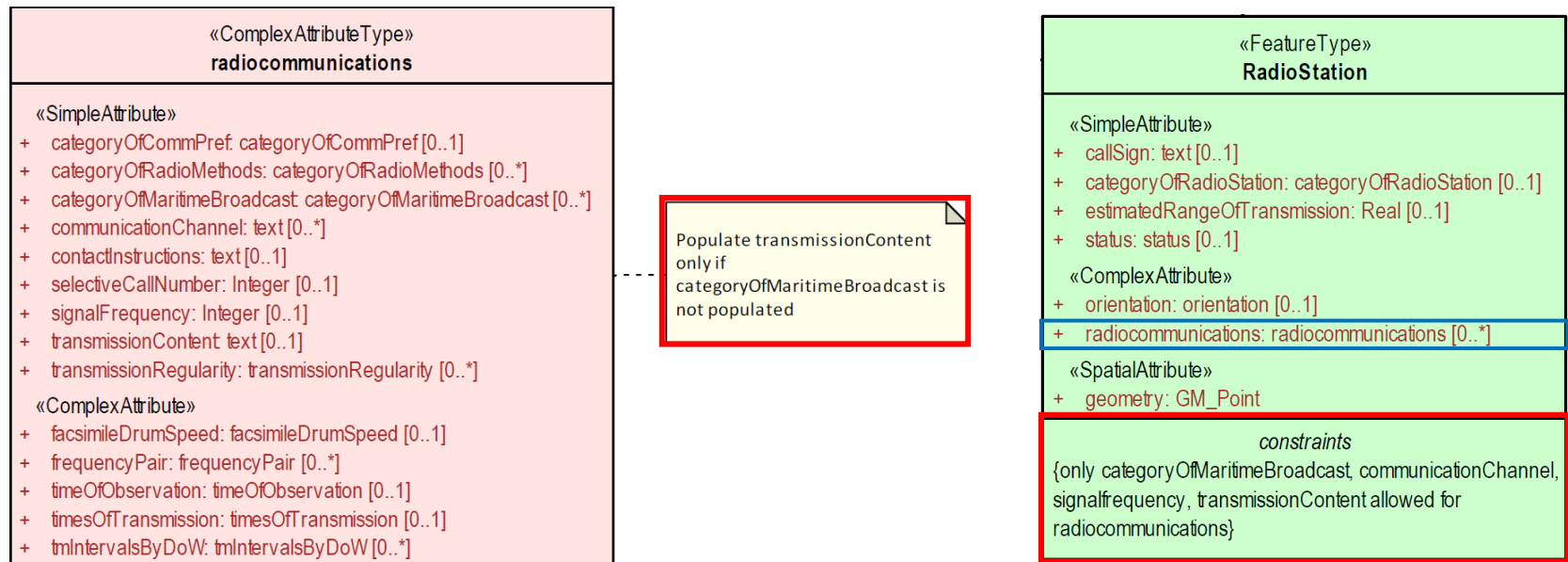
# Conclusions Made So Far

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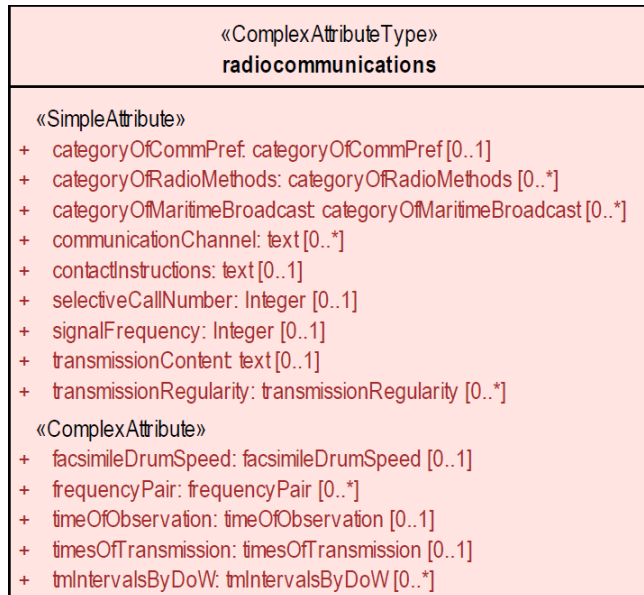
- Removal of the **orientation** attribute from **RadioStation** in S-123 as **RadioStation** in S-101 does not have this attribute.
  - The task group suggests that if it is necessary to create a sector, then to use **RadioServiceArea** instead.
- Removal of the **Landmark** feature from S-123 as these 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** attribute.

# radioCommunications

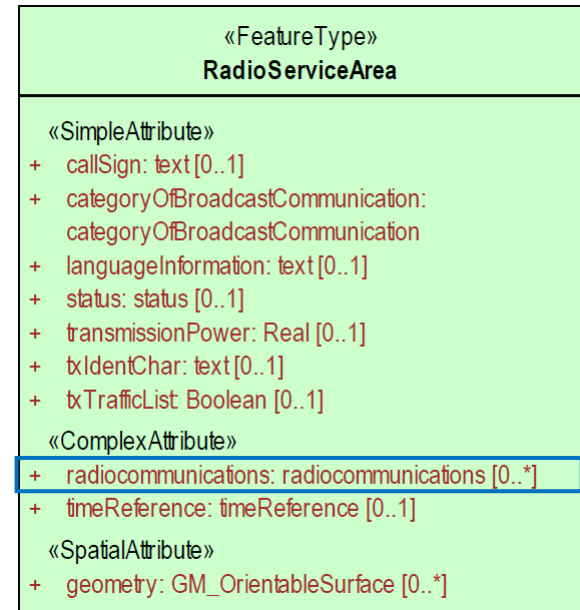
- This complex attribute is available on **RadioStation**, **RadioServiceArea** feature types and the **ContactDetails** information type.
  - Appears to be encoded to catch all kinds of radiocommunication details
  - Seems too general as **RadioStation** and **ContactDetails** indicate restrictions as to which sub-attributes can be populated



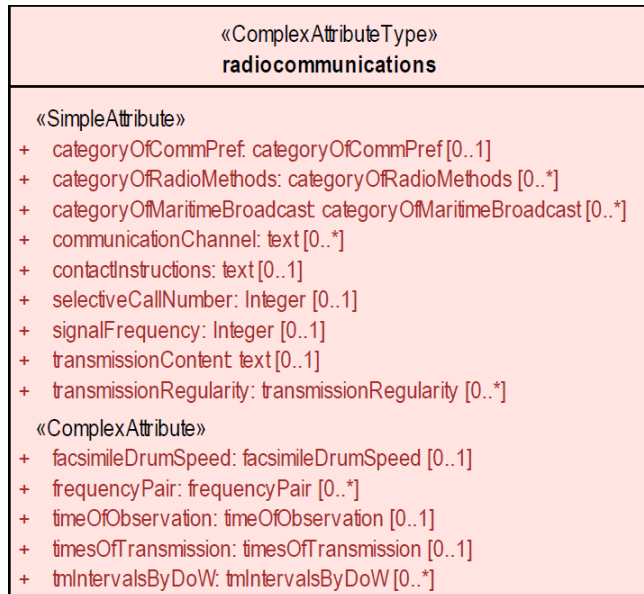
# radioCommunications & RadioService Area



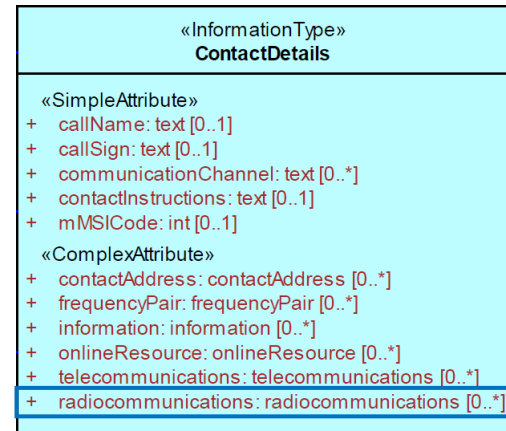
Populate transmissionContent  
only if  
categoryOfMaritimeBroadcast is  
not populated



# radioCommunications & ContactDetails

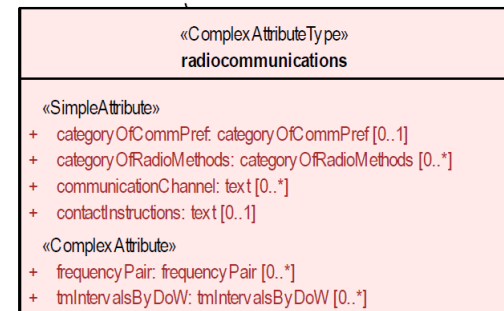


Populate transmissionContent only if categoryOfMaritimeBroadcast is not populated



If radiocommunications is populated communicationChannel and frequencyPair must not be populated

When bound to ContactDetails, only the sub-attributes shown in this figure are allowed.





# radioCommunications: Discussion

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- 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.
  - Would require custom implementation, user knowledge and awareness or custom QC checks to prevent or catch the unintended use
- The goal of the discussion is to explore whether the **radioCommunications** complex attribute can be remodelled to:
  - Better support the requirements of the information to be encoded
  - Prevent confusion in how this information is to be encoded
  - Improve the quality of the data overall
- The discussion regarding this complex attribute will be moved to the NIPWG Wiki.

# Shared Information Type vs Inline Attribute

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- 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 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.”

# Closing Remarks

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