

## Paper for Consideration by TSM4

## Update to S-100 FCB

<b>Submitted by:</b>	Republic of Korea (KHOA)
<b>Executive Summary:</b>	This paper outlines the progress of updating S-100 Feature Catalogue Builder(FCB)
<b>Related Documents:</b>	S-100, S-100 Test Framework
<b>Related Projects:</b>	IHO S-100/S-101 Test Bed Project

## Introduction / Background

KHOA has developed the S-100 FCB (Feature Catalogue Builder) to support the S-100/S-10X Testbed and drafted the baseline of S-101 FC (Feature Catalogue). KHOA updated the S-100 FCB on topics, which was the discussion results of S-100WG1 and several errors identified in the review process of S-100 FCB.

## Analysis/Discussion

## Progress of updating the S-100 FCB

Since the S-100WG1 held in Tokyo 2016, KHOA has updated the S-100 FCB like below:

- FC Schema was changed in accordance with the discussion result on the feature catalogue model in S-100WG1. The change of FC schema was applied.
- The operation process of local FCD register DB was considered.
- Detailed functions were improved and errors was solved.
- The concept of super type and sub type proposed by Jeppesen was applied.
- If S-10X PS developers propose a feature type or attribute type to the S-100 Registry, the types is in proposed status. In order to draft the S-10X FC, it's required to use the proposed items in S-100 FCB. For this requirement, this function will be applied to S-100 FCB.

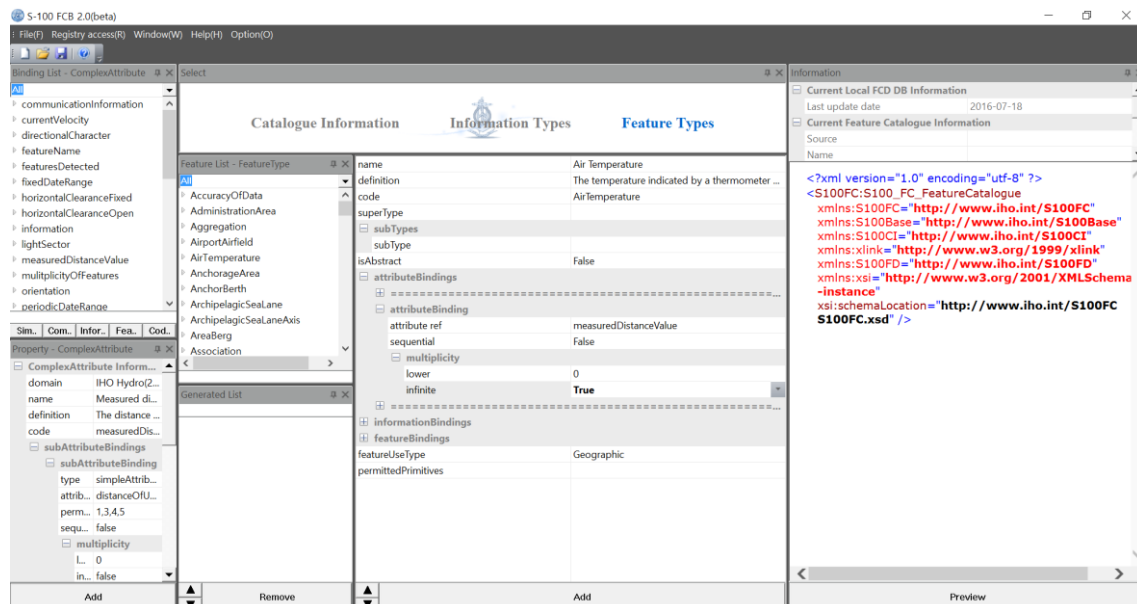


Figure 1. Result of updating the S-100 FCB

## Discussion topics

Below discussion topics were identified in the process of updating the S-100 FCB.

- Background 1: In accordance with the decision that the concept of super type and sub type can be used in the S-100 FCB, relevant function was applied. When a feature type is bound with attribute type, super type and sub type can be assigned and user can select whether the feature type is abstract or

not. In this connection, abstract feature type need to be proposed in advance in the S-100 Registry in order to use abstract typed feature. It's invited to discuss any considerations on proposing abstract feature types to S-100 Registry.

- Topic 1: If abstract feature type is proposed in S-100 Registry, Is there any considerations in terms of the operation of S-100 Registry.
- Background 2: FCD Register includes Feature types, Information types, Simple attributes, Complex attributes and Codelist. S-100 FCB use those for producing S-10X feature catalogues. Complex attribute includes several simple attributes and the multiplicity of the simple attribute can be modified for each S-10X PS.
- Topic 2: A clear guideline is required to customize the multiplicity of simple attribute belonging to complex attribute in S-100 FCB. (KHOA proposal: The multiplicity of Simple attribute belonging to complex attribute can be modified in S-100 FCB. If the data type of simple attribute is enumeration, permitted value can be applied)

#### Future plan

It's assumed that S-100 FCB almost reach in stable status for the process of testbed. It's needed to test the S-100 FCB in conjunction with S-100 registry. KHOA will investigate how to test in the future. Continuous review and error modification will be followed.

#### **Action Required of TSM4**

The TSM4 is invited to:

- a. note the progress reported in this paper.
- b. discuss the issues raised in the discussion topics