

**Paper for Consideration by S-100WG6****Concept Register and Hydro Dictionary database**

<b>Submitted by:</b>	Republic of Korea (KHOA)
<b>Executive Summary:</b>	Report of the result of interface development for the provision of Hydrographic Dictionary (S-32) of IHO S-100 Registry information.
<b>Related Documents:</b>	S-100, S-99, S-100 Registry, Concept Register, S-32
<b>Related Projects:</b>	S-100 Registry, HD System

**Introduction / Background**

1. The IHO GI Registry provides features and attributes for the development of S-100 products and operates concept registers to ensure consistent use of real-world objects in various domains. The Hydrographic Dictionary has required the interface between the Hydrographic Dictionary and the GI Registry to obtain the terms and definitions in the concept register.
2. The Hydrographic Dictionary System (HD) and the IHO Geospatial Information (GI) Registry Workshop was held in a virtual format (VTC) on 3 February 2022. This workshop discussed the workflow of the IHO Hydrographic Dictionary system and requirements for the interface between the Hydrographic Dictionary System and the IHO GI Registry. This document reports the result of HD/GI Registry's discussion and implementation.

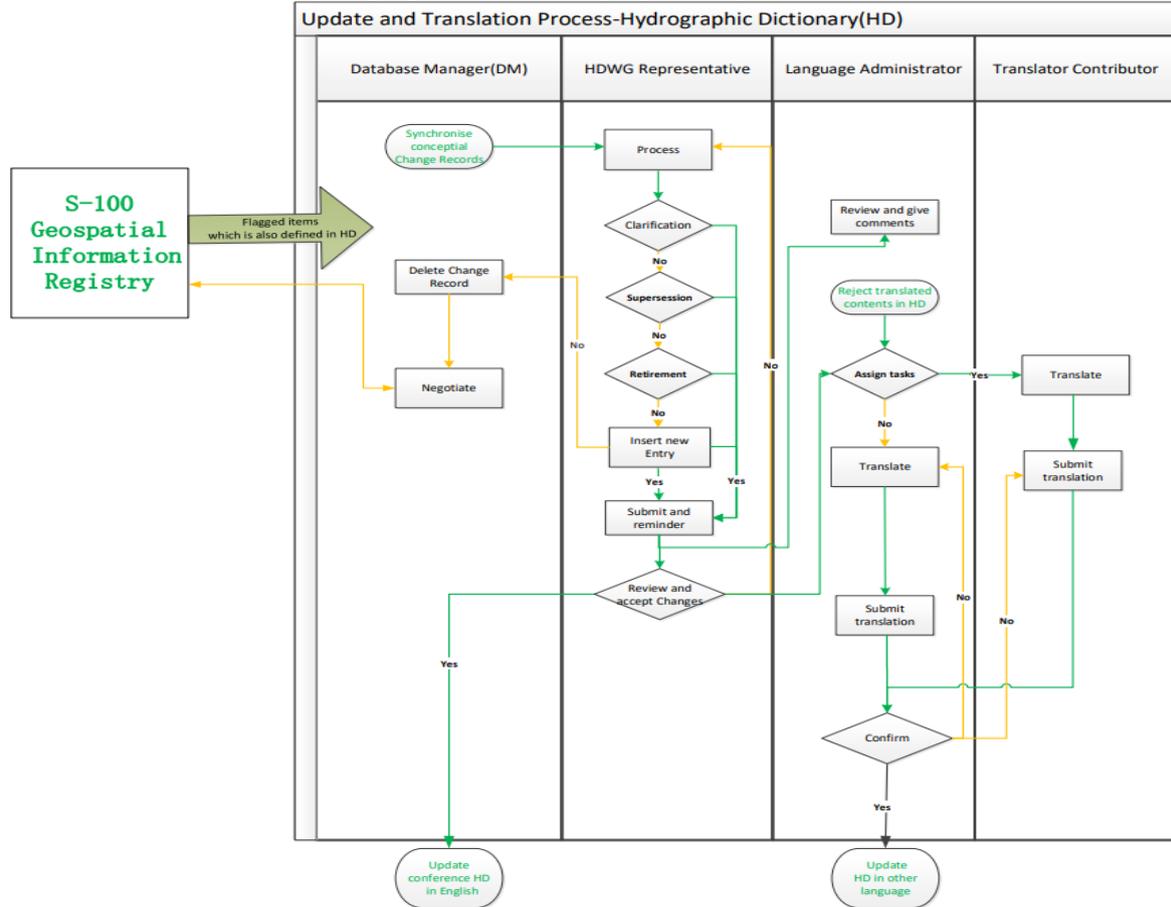
**Analysis/Discussion**Outline of S-100 Registry/Concept Register

3. The S-100 Geospatial Information Registry contains several registers that include items of information that are relevant to those communities developing S-100 based products and services. The registers may be used to describe geographic, hydrographic and metadata information.
4. A Concept Register was introduced as version 3.0 to define real-world objects and accurate terms in various fields.

Plan of HD System Update

5. The International Hydrographic Dictionary (S-32) is a multi-language dictionary that is an authoritative reference for hydrographic related terms and definitions used in IHO standards, specifications and other informative publications.
6. The HDWG was encouraged to update the terminology through the Concept Register by harmonizing the S-32 IHO Hydrographic Dictionary database with the IHO GI Registry.
7. The HD System defines the update procedure using GI Registry information as follows:

## Hydrographic Dictionary Update System

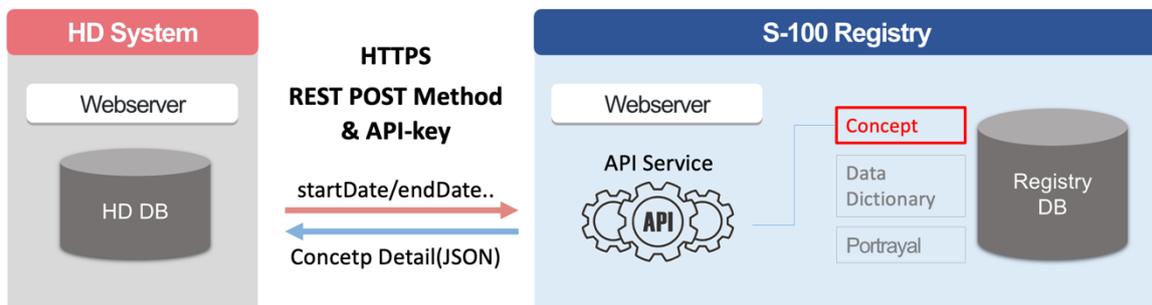


8. The concept information of the GI Registry required by the HD System is as follows:

Data Type Name	Description			
conceptDetails	Conceptual structure returned			
Attribute	Type	Description	Corresponding Attribute in Concept Register	Remarks
conceptID		Unique ID of the concept in the concept register	id	
term		Term name	name	
alias		Alias	alias	
camelCase		CamelCase	camelCase	
definition		Definition	definition	
reference		Reference	reference	
definitionSource	Char[128]	Reference source	referenceSource	The return value is the description not the list number.
similarSource		Similarity to source	sourceName	
proposalType		Proposal type	proposalType	
submittingOrganization	Char[64]	Submitting organization.	organization	The return value is the description not the list number.
justification		Justification	justification	
dateAccepted		Date accepted	dateAccepted	
remark		Remarks	remarks	

Result of GI Registry API Development

9. The GI Registry API configuration provided to the HD System is defined as follows:



10. API configuration is defined as follows:

Service info	Service name	Concept details API			
	Service description	A service that inquires [Concept Details] data based on the Accepted date			
	Service certification	Service Key			
Service security	Message level encryption	N/A			
	Transport level encryption	HTTPS TLS1.2 SHA-256(RSA)			
Applied skill level	Interface	REST (POST)			
	Exchange data	JSON			
Service URL	Develop	hppt://localhost:8080/beta/api/conceptDetails.json			
	Operation	hppts://registry.iho.int/api/conceptDetails.json			
Message exchange type		Request-Response			
Message logging level		Success	Header	Error	Header, Body

11. API details are defined as follows:

Ⓐ Request message info

Parameter name	type	Sample data	description
serviceKey	1	Authentication key	Authentication key issued by public data portal
startDate	0	20200101	Search scope start accept date
endDate	0	20201231	Search scope end accept date
numOfRows	0	15	Number of results per page
startNumOfRows	0	15	

Ⓑ Response message info

Name	Type	Sample data	Description
resultCode	1	0	Result code
resultMsg	1	Success	Result message
count	1	7295	Number of search results
conceptID	1	6	Concept detail's index
Term	1	Horizontal...	Concept name
Alias	0	POSACC	Concept alias
camelCase	1	horizontal...	Marked as camelCase
Definition	1	The best...	Concept definition
Reference	0	Chapter 2...	Concept reference
definitionSource	0	Extreme Event	Name of definition name
SimilarSource	0	Identical	Name of similar source
proposalType	1	1	1: new 2: clarification 3: supersession
SubmittingOrganization	1	IHO Secretariat	Proposer's Organization
Justification	1	Initial...	Justification
dateAccepted	1	2020.3.18	Date accepted
remark	0	The expected...	remark

#### Next Plan

12. An API Guideline will be delivered to the HD System to conduct a test on the test server.
13. The API service will be opened after final review by the person in charge of the Registry of the IHO Secretariat.

#### **Action Required of S-100WG**

The S-100WG is invited to:

- a. note this report.
- b. share the progress on the Registry with the HDWG.