

Paper for Consideration by TSM

PRIMAR Input to Catalogue Checking Process

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Executive Summary:	Issuing certificates for Catalogues is a non-standardized use of digital certificates. Another mechanism should be sought to identify a Catalogue as a "DRAFT" version during a checking process.
Related Documents:	S100WG8-25 PRIMAR viewpoint on Catalogue Distribution S100WG8_2023_50.1_-_EN_S100WG Catalogue Management_
Related Projects:	

Introduction / Background

At the S100WG8 meeting PRIMAR presented a document outlining skepticism towards the distribution of Catalogues (Feature, Portrayal and Interoperability Catalogues) in their service. It was argued that Catalogues containing machine readable code could potentially harm the end user system, and as such OEMs should probably be invited to test new/new versions of catalogues before being officially released.

As a follow up IIC Technologies also presented a paper at S100WG8 outlining how such a test structure, including OEM testing, could be organized.

This paper specifically comments on the proposed method of issuing certificates for Catalogues and how this is a non-standardized use of digital certificates.

Analysis/Discussion

1. The paper from IIC Technologies outlines the Catalogue check process (emphasis on OEMs) like this (reworded here by the author of this paper):

- Catalogues to be tested by OEMs are digitally signed by the IHO acting as a data producer.
 - A certificate is also issued for the Catalogue, labeled with a status (in the signature certificate) of "DRAFT".
 - Those certificates are valid for the review period only.
- Once approved by OEMs, catalogues are re-signed by the IHO, and given certificates with a long lifespan (e.g. 10 yrs), marked with a status of "LIVE".
 - These are the only catalogues which may be installed on ECDIS.

2. The purpose of digital certificates is to identify a member of the Security Scheme, containing their public key. The use case proposed in the IIC paper could be considered as non-standardized use of digital certificates.

Hence, the methodology described above would probably require an update to Part 15 regarding the use of certificates, as they are now issued and used for participants in the scheme, and not for specific components or for specific OEM behavior based on what information is encoded in a non-standardised way in specific digital certificate information fields.

3. The questions then would be how to indicate that a Catalogue has a "DRAFT" stamp, and how to move from "DRAFT" to the "LIVE" version of a Catalogue?

One solution could be to add a status attribute to the Catalogue Discovery Metadata, this could for example be a boolean attribute where true = Draft version.

Example:

S100_CatalogueDiscoveryMetadata					
Role Name	Name	Description	Mult	Type	Remarks
Class	S100_CatalogueDiscoveryMetadata	Class for S-100 Catalogue metadata	-	-	-
Attribute	status	To indicate DRAFT version of a Catalogue	1	Boolean	<i>True</i> indicates a DRAFT version of the Catalogue <i>False</i> indicates a LIVE version of the Catalogue

Another solution could be to always zip the Catalogues available from the IHO web/IHO Registry and include “DRAFT” in the zipped filename.

Example: **DRAFT_S-101_Portrayal-Catalogue-1.1.2.zip**.

4. And finally, when changing from “DRAFT” to the “LIVE” version of a Catalogue, the draft version should be removed from the IHO web/IHO Registry and a new live version should be published and signed by the IHO as a Data Server.

Conclusions

- The proposed use of certificates for Catalogues is a non-standardized use of digital certificates.
- Other mechanisms to indicate a “DRAFT” version of a Catalogue could be to:
 - add a status attribute to the Catalogue Discovery Metadata.
 - include “DRAFT” in the zipped filename.
- When changing from “DRAFT” to the “LIVE” version of a Catalogue, the draft version should be removed from the IHO web/IHO Registry, and a new live version should be published and signed by the IHO.

Action Required of TSM

The TSM is invited to:

- Note the paper and discuss the topics laid out in this document.
- Take any action appropriate.