

IHO S-100 Working Group

# S-100 Exchange Catalogue Editor

Presented by KHOA (Sewoong OH)



# Background

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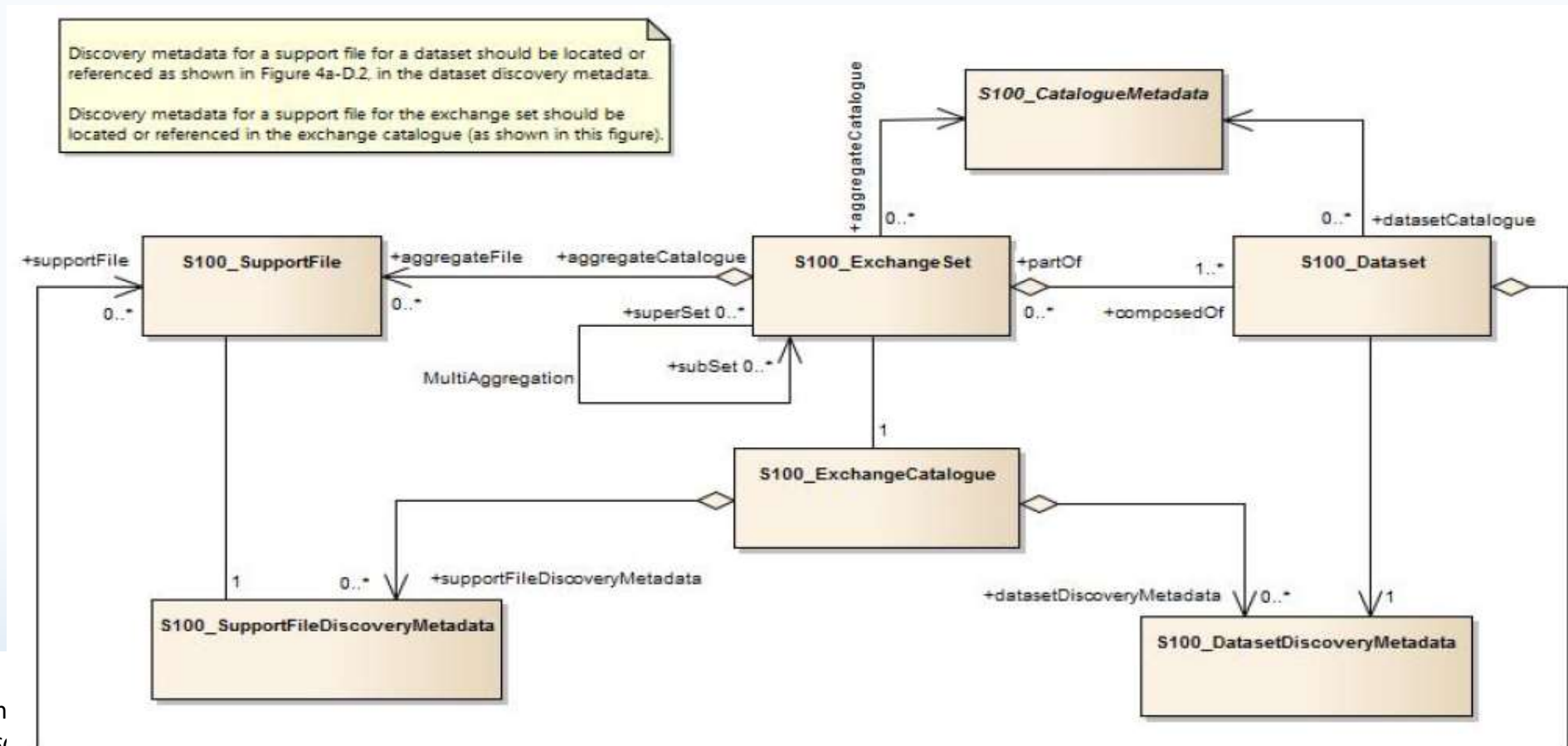
- **Technical cooperation project between KHOA and NOAA**
  - Support the S-100 test bed
  - The task was to develop Exchange Catalogue Editor which satisfies Exchange Catalogue data model included in S-100 3.0
  - To use it for S-100 test bed



# Overview of S-100 Exchange set

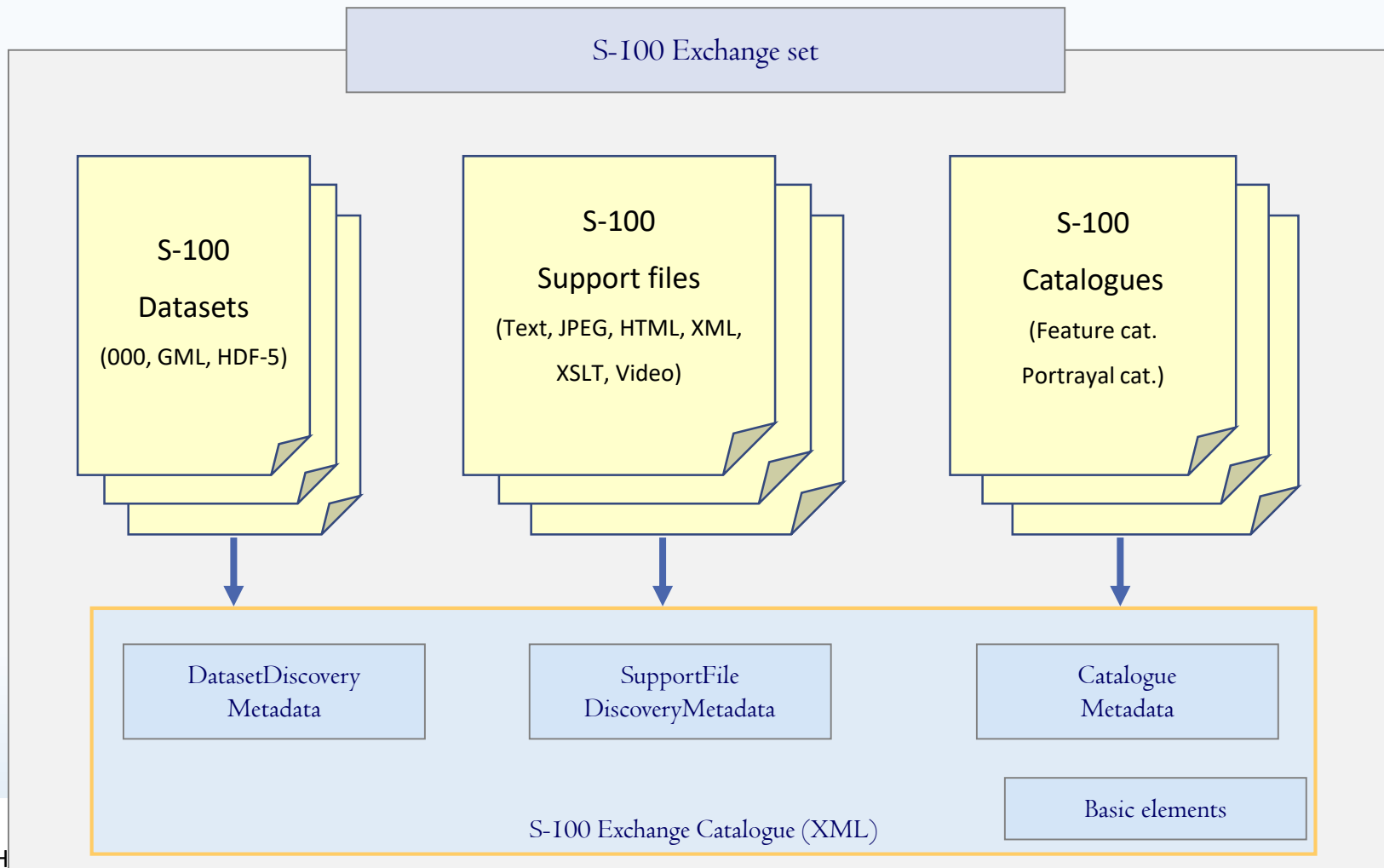
- **Structure of Exchange set**

- a container that combines all the elements needed for the exchange of S-100 data



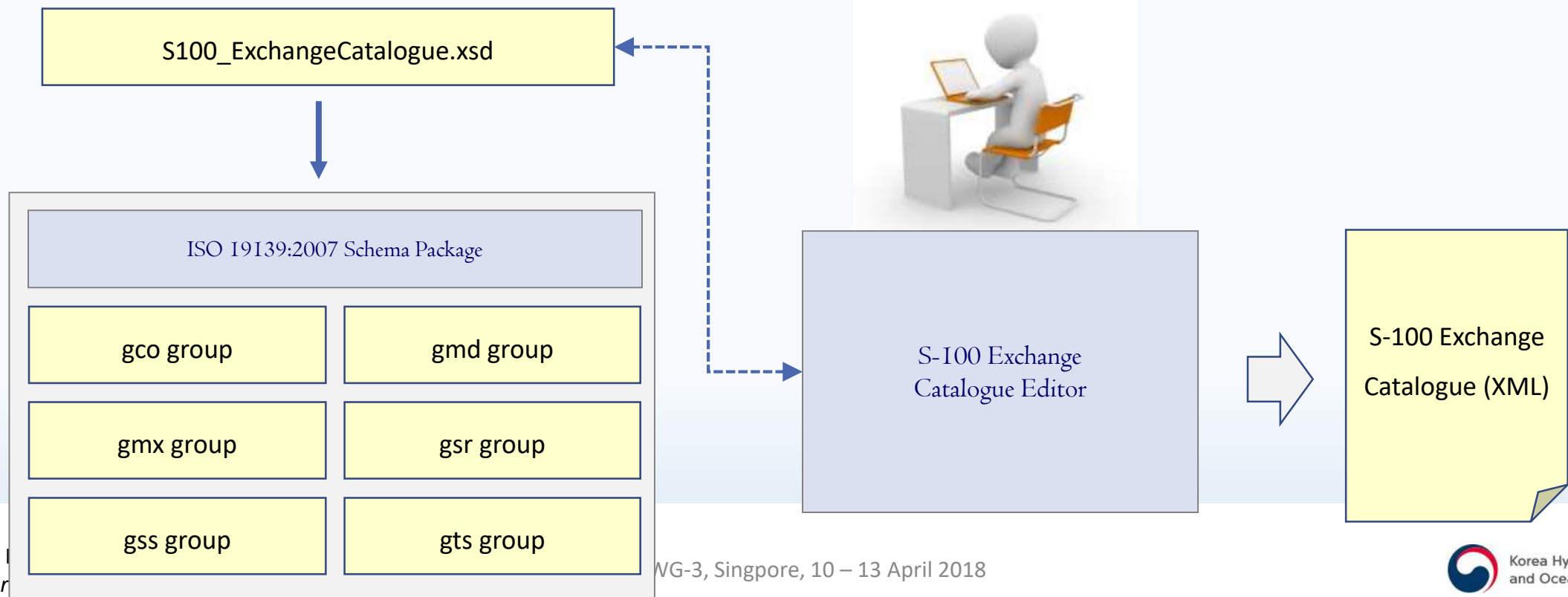
# Overview of S-100 Exchange set

- Structure of Exchange set



# Considerations for S-100 Exchange Set Editor

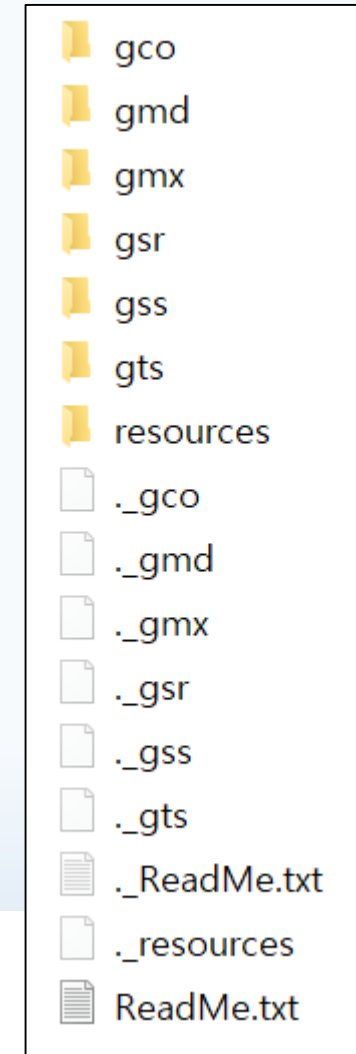
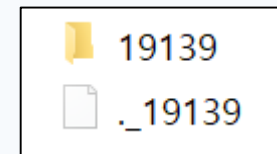
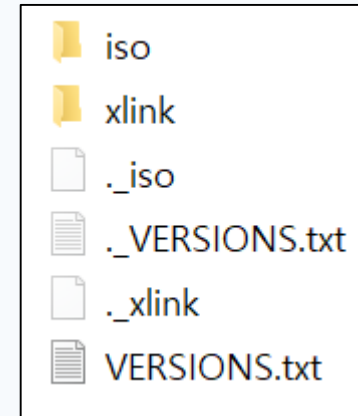
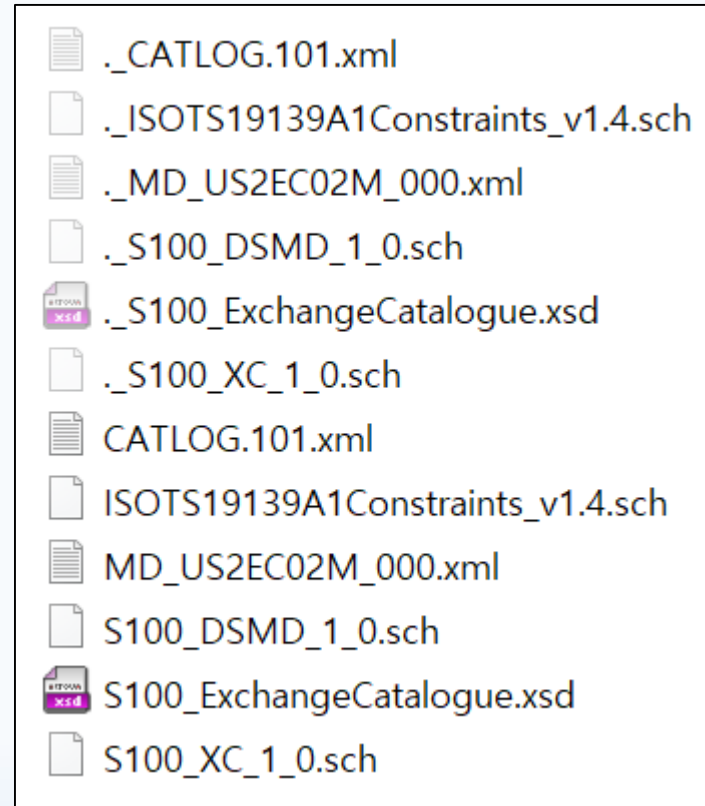
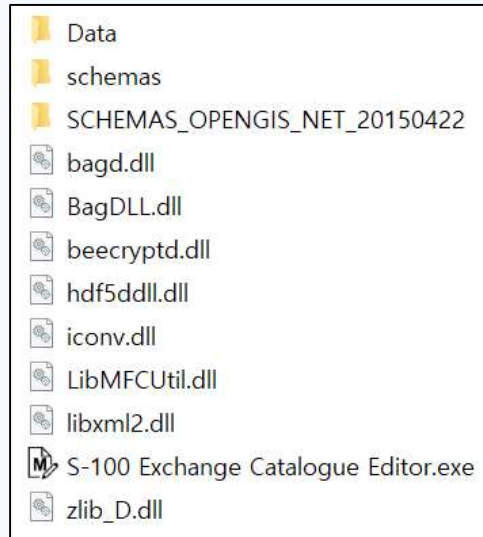
- S-100 Exchange Catalogue XML
  - defined in S100\_ExchangeCatalogue.xsd
  - making reference to ISO 19139:2007 Schema Package
  - The change of schema impact on S-100 Exchange Catalogue Editor



Or

# Outcome of the development

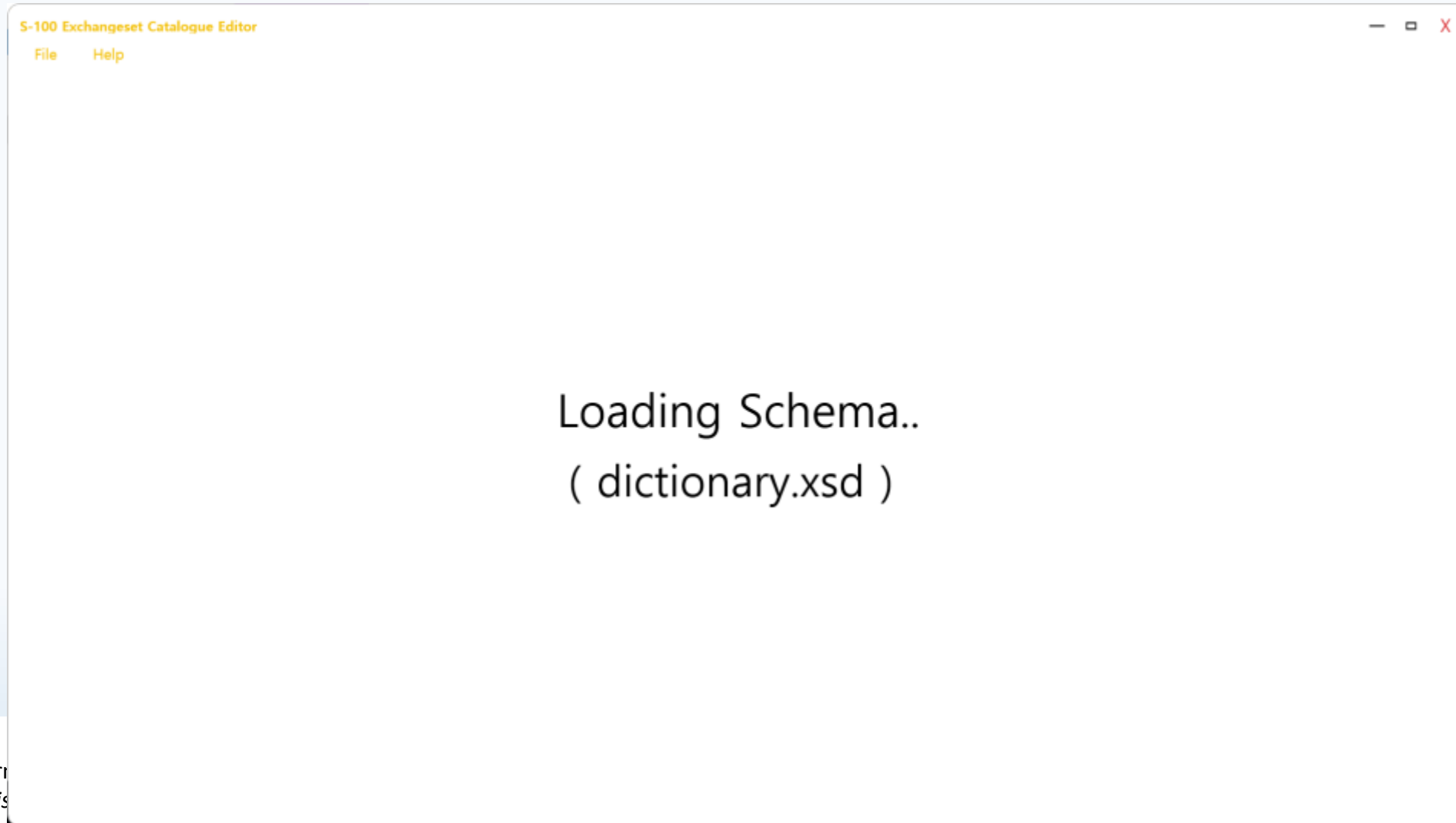
- S-100 Exchange Catalogue Editor



# Outcome of the development

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- S-100 Exchange Catalogue Editor







# Outcome of the development

- S-100 Exchange Catalogue Editor

**S-100 Exchangeset Catalogue Editor**

File Help

**View**

- ▾ S100\_ExchangeCatalogue
  - S100XC:identifier
  - S100XC:contact
  - S100XC:productSpecification
  - S100XC:exchangeCatalogueName
  - S100XC:exchangeCatalogueDescription
  - S100XC:exchangeCatalogueComment
  - S100XC:sourceMedia
  - S100XC:replacedData
  - ▾ S100XC:S100\_DatasetDiscovery
    - S100XC:S100\_DatasetDiscovery
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**Additem**

S100XC:identifier  
 S100XC:contact  
 S100XC:productSpecification  
 S100XC:exchangeCatalogueName  
 S100XC:exchangeCatalogueDescription  
 S100XC:exchangeCatalogueComment  
 S100XC:compressionFlag

**DatasetDiscoveryMetadata**

AADLULBD01.000	0
AADLULBD02.000	0
AADLULBD03.000	0
AADLULBD04.000	0
AADLULBD05.000	0
AADLULBD06.000	0

**SupportFileDiscoveryMetadata**

**ItemList**

Name	Object	Type	Value
S100XC:fileName	*	xs:string	AADLULGD09.000
S100XC:filePath	*	xs:string	AADLULGD09
S100XC:description	*	xs:string	SUISUN BAY MIDDLE GROUND TO NEW YORK SLOUGH
S100XC:dataProtection		xs:boolean	false
S100XC:protectionScheme		xs:string	
S100XC:purpose	*	xs:string	New Dataset
S100XC:specificUsage	*	xs:string	Port Entry
S100XC:editionNumber	*	xs:string	1
S100XC:updateNumber	*	xs:string	0
S100XC:updateApplicationD		gco:DateType	2015-09-09
S100XC:issueDate	*	gco:DateType	2015-09-15
- S100XC:productSpecifica	*	S100ProductSpecification	
S100XC:name	*	xs:string	S-101
S100XC:version	*	xs:string	1.0
- S100XC:date	*	gco:DateType	2015-07-22
- S100XC:producingAgenc	* A	S100ResponsibleParty_Type	
- gmd:individualName		gco:CharacterStringProperty	
gco:CharacterString	*	xs:string	
- gmd:organisationName		gco:CharacterStringProperty	
gco:CharacterString	*	xs:string	NOAA Office of Coast Survey

**Message**

Name	Type	Min	Max
S100XC:excha	xs:string	0	1

**CatalogueMetadata**



# Outcome of the development

- S-100 Exchange Catalogue Editor

**S-100 Exchangeset Catalogue Editor**

File Help

View

- S100\_ExchangeCatalogue
  - S100XC:identifier
  - S100XC:contact
  - S100XC:productSpecification
  - S100XC:exchangeCatalogueName
  - S100XC:exchangeCatalogueDescription
  - S100XC:exchangeCatalogueComment
  - S100XC:compressionFlag
  - S100XC:sourceMedia
  - S100XC:replacedData
  - S100XC:S100\_DatasetDiscovery

AddItem

- S100XC:identifier
- S100XC:contact
- S100XC:productSpecification
- S100XC:exchangeCatalogueName
- S100XC:exchangeCatalogueDescription
- S100XC:exchangeCatalogueComment

DatasetDiscoveryMetadata

KRABCEFGH000.gml

SupportFileDiscoveryMetadata

CatalogueMetadata

Message

Name	Type	Min	Max
S100XC:fileNa	xs:string	1	1
S100XC:filePar	xs:string	1	1
S100XC:descri	xs:string	1	1

ItemList

S100XC:maximumDisplayScz	xs:integer	999
S100XC:minimumDisplaySca	xs:integer	999
S100XC:horizontalDatumRef	xs:string	EPSG
S100XC:horizontalDatumVal	xs:integer	4326
S100XC:verticalDatum	S100VerticalAndSoundingDi	
S100XC:S100VerticalA	Enumeration	
S100XC:soundingDatum	S100VerticalAndSoundingDi	
S100XC:S100VerticalA	Enumeration	
S100XC:dataType	S100DataFormat	
S100XC:S100DataForm	Enumeration	
S100XC:otherDataTypeDescr	xs:string	
S100XC:dataTypeVersion	xs:string	GML
S100XC:dataCoverage	S100DataCoverage	
S100XC:ID	xs:string	
S100XC:boundingBox	S100GeographicBoundingBc	
gmd:westBoundLor	gco:DecimalPropertyType	
gco:Decimal	xs:decimal	
gmd:eastBoundLor	gco:DecimalPropertyType	
gco:Decimal	xs:decimal	
gmd:southBoundLa	gco:DecimalPropertyType	



# Outcome of the development

- Examples of S-100 Exchange set

## S-101 ENC

- AADLULGD02
- AADLULGD03
- AADLULGD04
- AADLULGD05
- AADLULGD06
- AADLULGD07
- AADLULGD08
- AADLULGD09
- S101ed1.xml

- AADLULGD01.000
- MD\_AADLULGD01\_000.xml

## S-122 MPA

- USNPI122EX\_00001
- CATALOG.122.XML

- support
- MD\_USNPI122EX\_0001.XML
- USNPI122EX\_00001.gml

- USNPI122C224\_105.TXT
- USNPI122image001.jpg
- USNPI122image002.jpg
- USNPI122image003.jpg
- USNPI122NARW0001.TXT
- USNPI122NARWPCTN.TXT
- USNPI122NARWPRES.TXT
- USNPI122NARWREPT.TXT

## S-123 MRS

- JSNPI123EX\_A0001
- CATALOG.123.XML

- JSNPI123EX\_A0001.GML
- MD\_JSNPI123EX\_A001.XML

## S-201 AtoN

- KRABCDEFGH
- S201\_0\_0\_6\_CAT.XML

- support
- KRABCDEFGH\_000.gml
- MD\_KRABCDEFGH\_000.xml

- KR00100001.jpg
- KR00100002.jpg
- KR00100003.jpg
- KR00100004.jpg
- KR00100005.jpg
- KR00100006.jpg
- KR00100007.jpg
- KR00100008.jpg



# Outcome of the development

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- Review of the development
  - KHOA research team reviewed the outcome of developing S-100 Exchange Catalogue Editor using the cases from S-101 ENC, S-122 MPA, S-123 MRS, and S-201 AtoN Exchange set

Root ----- (contains the exchange catalogue named “exchange\_catalogue.xml”)

----- Datasets (contains dataset files like 000, GML and HDF-5)

----- Support files (contains support files like Text, JPEG, HTML, XML, XSLT, Video)

----- Catalogues (contains catalogues for feature and portrayal)



# Conclusions

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- **Technical cooperation project between KHOA and NOAA**
  - The task was to develop S-100 Exchange Catalogue Editor
  - stand-alone S/W which S100\_ExchangeCatalogue.xsd and ISO 19139:2007 Schema Package can be loaded and which can create exchange set to include Exchange Catalogue
  - It is planned to use the Editor for S-100 Test Bed



# Recommendations

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- It is recommended
  - to review the outcome and considerations from developing S-100 Exchange Catalogue Editor from KHOA and NOAA's joint project
  - Discuss the mandatory attributes for other product specification
  - Discuss the folder structure within S-100 exchange set
  - provide recommendations if any

