

S-124 Correspondence Group Report

Submitted by Chair, S-124 Correspondence Group

SUMMARY

Executive Summary: The development of S-124 continues with improvements to the data model through reviews and testing. E-Navigation testbeds continue to provide valuable input and the work on the product specification document has started.

Action to be taken: 4

Related documents: [HSSC9-07.1B](#), [HSSC10-07.1B Rev1](#), [NIPWG5-22.2](#), [S-100WG3-3.9](#), [S-100WG3-4.2.6](#)

1. Correspondence Group composition and membership update since WWNWS9.

- 1.1. Chairmanship passed from Yves Le Franc (SHOM) to Eivind Mong (CCG).
- 1.2. Furuno has joined, and New Zealand has withdrawn.
- 1.3. The members are Australia, Brazil, Canada, China, Denmark, France, Greece, Japan, Norway, Republic of Korea, Sweden, Turkey, United Kingdom, United States, CIRM, Furuno, INMARSAT, Iridium, KRISO, Transas.

2. Activities since August 2017

2.1. Data Modelling

Data model was revised following the 2016 review and questionnaire. The revision was considered stable enough to go for another review which was subsequently sent out in March 2018, with the received comments incorporated. Input from the e-Navigation projects - STM Validation and SMART Navigation - have also helped improve the data model.

The STM Validation project generated a GML schema using the S-124 data model as a starting point which then enabled them to create test data. This work highlighted some issues that had since been corrected.

The SMART Navigation project started developing a feature catalogue which highlighted more issues that have since led to further improvements. And finally, the drafting of the product specification has also highlighted both some new issues and potential improvements.

2.2. Product Specification

The product specification is the main document which ties all the various components of S-124 together. The document includes information about the data

model, how to use it and how to create conforming dataset, as well as how to package and maintain these datasets.

Yves Le Franc and Eivind Mong have started drafting the product specification and hope to have a first draft ready for review later this year.

The work has gone well, but some issues remain to be resolved, such as:

- how to maintain Navigational Warning datasets in an ECDIS environment;
- defining the dataset¹;
- establishing exchange set² metadata.

2.3. Test case development

KRISO leads the work with developing the test cases and also developed a draft set of tests and scenarios. These test cases include testing that S-124 data can be translated into the existing GMDSS approved systems (NAVTEX and SafetyNET).

For a draft version of test cases, please see Annex A. The WWNWS-SC is invited to comment on the test cases and their composition.

2.4. MSP Service Description

The STM Validation project is drafting a Technical Service description for an S-124 service using the IALA technical service template. This will serve as guidance for implementers ensuring a standard access method for S-124 data.

2.5. E-Navigation Projects

The STM Validation and SMART Navigation projects continue to assist in the development and testing of S-124. Several online meetings have been held between representatives and the Chair, resulting in good progress on the overall development.

A one day workshop was hosted by the SMART Navigation project team which focused on developing the feature and portrayal catalogues. Moreover, the workshop found several areas where the data model needed improvement to in order aid in the development of the feature and portrayal catalogues.





An important outcome from this workshop was a set of symbols to be used in the project tests.

The WWNWS-SC is invited to comment on these symbols:

¹ Dataset - identifiable collection of data [ISO 19115]

NOTE A dataset may be a smaller grouping of data which, though limited by some constraint such as spatial extent or feature type, is located physically within a larger dataset. Theoretically, a dataset may be as small as a single feature or feature attribute contained within a larger dataset. A hardcopy map or chart may be considered a dataset.

² Exchange set - datasets may be grouped into exchange sets. Each exchange set consists of one or more datasets with an associated XML metadata file and a single Exchange Catalogue XML file containing metadata. It may also include one or more support files.

	<p>Symbol for a navigational warning with a topic relating to aids to navigation.</p> <p>The symbol is a combination of the acronym NW and a pillar buoy.</p>
	<p>Symbol for a navigational warning with a topic relating to a wreck.</p> <p>The symbol is a combination of the acronym NW and a stranded wreck.</p> <p>This was chosen because it was more visually recognizable than a dangerous wreck symbol in magenta colour.</p>
	<p>Symbol for a navigational warning with a topic relating to navigational hazards other than wreck.</p> <p>The symbol is a combination of the acronym NW and a hazard symbol/ danger line.</p>
	<p>Symbol for a navigational warning with a topic relating to scientific equipment.</p> <p>The symbol is a combination of the acronym NW and a mooring buoy.</p>

It should be noted that the placement of the category symbol part is deliberate so that, should several categories be used, the symbols can be combined in a simple operation.

2.6. Coordination with HSSC, S-100WG and NIPWG

Reports were submitted to HSSC 9 ([HSSC9-07.1B](#)) and 10 ([HSSC10-07.1B Rev1](#)).

The Chair attended both NIPWG5 ([NIPWG5-22.2](#)) and S-100WG3 ([S-100WG3-3.9](#)), giving reports of the S-124CG and highlighted S-124 developments. Good synergies were obtained from the attendance at these meetings as S-100 developments, such as interoperability specification and metadata development, could be leveraged in improving the S-124 development.

The Chair, jointly with the NIPWG Chair, submitted a paper ([S-100WG3-4.2.6](#)) requesting changes to S-100 metadata in order to accommodate S-124 and nautical publication product specifications, which have different metadata needs than what S-100 Ed 3.0.0 required. The proposal was accepted and will be

incorporated into S-100 Edition 4.0.0. Contacts were established with KHOA who will assist the Chair with the latest version of the tools needed to develop the product specifications.

3. Challenges

3.1. Limited input from NAVAREA coordinators

The highly technical nature of the product specification development makes it difficult for NAVAREA Coordinators to contribute unless they have a significant degree of familiarity with S-100. This may contribute to the low involvement of NAVAREA coordinators and members in the past reviews.

It is hoped that once the development gets to the stage of defining a Data Classification and Encoding Guide, the operational expertise of the NAVAREA coordinators can be better utilized to ensure data creation rules are well established and based on practical experience. Similarly, the definitions of maintenance scenarios should involve the operational expertise of NAVAREA coordinators. A first draft should soon be ready for review.

3.2. Temporary and Preliminary Notices

Noting WWNWS9 report, § 3.4.2, some of the S-124CG members have taken note that T&P NtMs are very similar to NWs, and that there should be harmonization between these two products of maritime safety information . It should also be noted that T&P NtM status is a next state for many Navigational Warnings. However, as ENC updates do not cover all T&P NtMs, there is a need to establish a format in which this information can be transmitted for use in a navigation system.

The WWNWS-SC is therefore requested to review the decision at WWNWS9, and consider if T&P should be in scope of S-124.

3.3. Maintenance of S-124 Navigational Warnings and Notice Information (T&P)

A proposal for different types of datasets (one navigational warning per dataset) and how these are managed has been added to the product specification draft. But these must be validated to ensure they cover all the different maintenance scenarios, which still have yet to be clearly defined. This is an immediate task for the CG.

The different datasets that are proposed are;

3.3.1. New dataset – a dataset with a new navigational warning or notice information that is valid until another dataset comprised of cancellation information is issued. This dataset will contain one preamble, at least one feature instance³, and may contain one or more reference information type instances.

3.3.2. New dataset self-cancelling – A dataset with new navigational warning or notice information that is valid until the cancellation date in the preamble. This dataset will contain one preamble, at least one

³ Instance - entity to which a set of operations can be applied and which has a state that stores the effects of the operations [ISO 19103]

feature instance, and may contain one or more reference information type instances.

- 3.3.3. New dataset with cancellation – Dataset that can contain updated information to a previously issued dataset, and will contain cancellation information for at least one previous dataset. Dataset will contain one preamble, one or more reference information type instances and may contain at least one feature instance.
- 3.3.4. New dataset with cancellation self-cancelling - Dataset that can contain updated information to a previously issued dataset, and will contain cancellation information for at least one previous dataset. Dataset is valid till the cancellation date in the preamble. Dataset will contain one preamble, at least one reference information type instance and may contain at least one feature instance.
- 3.3.5. In force-bulletin – Dataset that reference all navigational warnings or notices that are valid at the time of issue. In force-bulletin always cancel the previous in force-bulletin. Dataset will contain one preamble; one or more reference information type instances and shall not contain any feature instance.

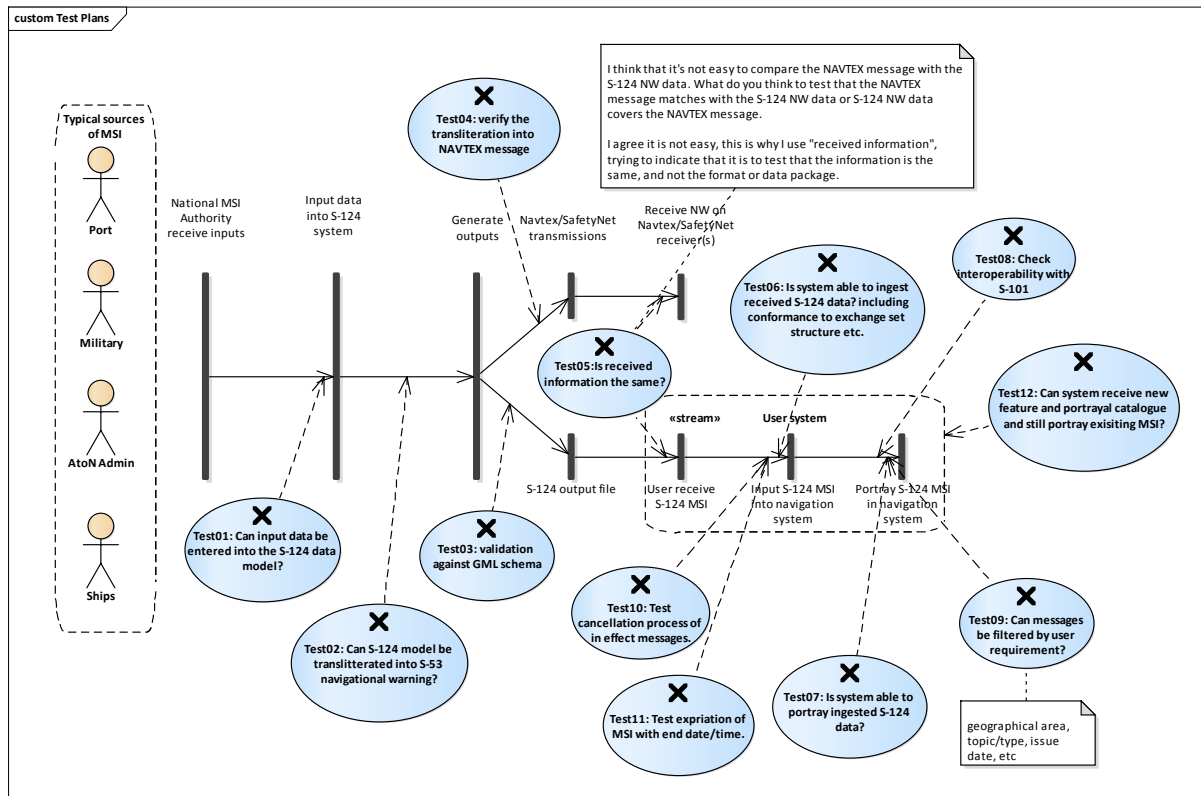
4. Action Required of the WWNWS-SC

4.1. The WWNWS-SC is invited to:

- a. **note** the report;
- b. **comment** on the test cases and their composition;
- c. **comment** on the symbols detailed above;
- d. **review** the decision at WWNWS9, and **consider** if T&P should be in scope of S-124;
- e. **validate** the different datasets proposed to ensure they cover all the different maintenance scenarios;
- f. **consider** revising S-53 to ensure the procedural aspects of navigational warnings are fully articulated to support S-124 development;
- g. **encourage** greater engagement between NAVAREA Coordinators and the S-124CG to progress the development of the S-124 PS; and
- h. **advise** S-124CG as appropriate.

Annex A – Test cases

S-124 NW and T&P NM Data Model - Test & Test Cases



	Item	Description	
1	Test ID	Test01	
2	Description	Title	Can input data be entered into the S-124 data model?
		Objective	This shall test the data model versatility
		Method	Test input examples from various sources and ensure these can be entered into the S-124 data model
3	Pre-conditions	The S-124 data production system is ready to input the S-124 NW and/or NM	
4	Configuration of the test system	Input interface of NW and/or NM events	
5	Participants (if any)	NW and NM editor	
6	Test Cases	Test01-01, Test01-02, Test01-03, Test01-04, Test01-05, Test01-06	
7	Data gathering	N/A	

	Item	Description
1	Test case ID	Test01-01
2	Brief description	Input a NW without NW Feature Part
3	Conditions	S-124 NW without NW Feature Parts is saved
4	Participants (if any)	NW and NM editor
5	Data	N/A

	Item	Description
1	Test case ID	Test01-02
2	Brief description	Input a NW with NW Feature Part
3	Conditions	S-124 NW with NW Feature Parts is saved
4	Participants (if any)	NW and NM editor
5	Data	N/A

	Item	Description
1	Test case ID	Test01-03
2	Brief description	Input a NW with References as cancellation
3	Conditions	S-124 NW with References as cancellation is saved
4	Participants (if any)	NW and NM editor
5	Data	N/A

	Item	Description
1	Test case ID	Test01-04
2	Brief description	Input a NM without NM Feature Part
3	Conditions	S-124 NM without NM Feature Parts is saved
4	Participants (if any)	NW and NM editor
5	Data	N/A

	Item	Description
1	Test case ID	Test01-05
2	Brief description	Input a NM with NM Feature Part
3	Conditions	S-124 NM with NM Feature Parts is saved
4	Participants (if any)	NW and NM editor
5	Data	N/A

	Item	Description
1	Test case ID	Test01-06
2	Brief description	Input a NM with References as cancellation
3	Conditions	S-124 NM with References as cancellation is saved
4	Participants (if any)	NW and NM editor
5	Data	N/A

	Item		Description
1	Test ID		Test02
2	Description	Title	Can S-124 model be transliterated into a S-53 navigational warning?
		Objective	This shall test that significant S-53 (legacy) items are supported in the data model so that S-124 data can be converted and broadcast in legacy issues.
		Method	Test that S-124 data can be transliterated into S-53 navigational warnings to ensure backward compatibility and that system can support legacy outputs.
3	Pre-conditions		S-124 NW and NM data (New data and Cancellation data)
4	Configuration of the test system		Load S-124 NW and NM from database and express those in the S-53 message template
5	Participants (if any)		NW and NM Manager
6	Test Cases		Tes02-01, Tes02-02
7	Data gathering		N/A

	Item		Description
1	Test case ID		Test02-01
2	Brief description		Express the Test01-01, Test01-02, Test01-03 data to S-53 message template
3	Conditions		S-124 NW data are expressed in the message style of S-53
4	Participants (if any)		S-124 NW and NM Manager
5	Data		N/A

	Item		Description
1	Test case ID		Test02-02
2	Brief description		Express the Test01-04, Test01-05, Test01-06 data to S-53 message template
3	Conditions		S-124 NM data are expressed in the message style of S-53
4	Participants (if any)		S-124 NW and NM Manager
5	Data		N/A

	Item		Description
1	Test ID		Test03
2	Description	Title	Validation against GML schema
		Objective	This shall test how well the data matches the GML standard.
		Method	Validate test data against the GML schema to ensure data corresponds to the GML structure and load data in COTS GML viewer.
3	Pre-conditions		S-124 NW and NM data as GML datasets
4	Configuration of the test system		Prepare the GML validation tools like XML Spy and XML Lint. Validate the S-124 NW and NM against GML schema
5	Participants (if any)		S-124 NW and NM Manager
6	Test Cases		Test03-01, Test03-02, Test03-03, Test03-04
7	Data gathering		N/A

	Item		Description
1	Test case ID		Test03-01
2	Brief description		Validate a normal S-124 GML against GML Schema
3	Conditions		The validation result is true
4	Participants (if any)		S-124 NW and NM Manager
5	Data		Validation reports

	Item		Description
1	Test case ID		Test03-02
2	Brief description		Validate a S-124 GML with missing mandatory attributes against GML Schema
3	Conditions		The validation result is false
4	Participants (if any)		S-124 NW and T&P NM Manager
5	Data		Validation reports

	Item		Description
1	Test case ID		Test03-03
2	Brief description		Validate a S-124 GML with new listed values against GML Schema
3	Conditions		The validation result is false
4	Participants (if any)		S-124 NW and T&P NM Manager
5	Data		Validation reports

	Item		Description
1	Test case ID		Test03-04
2	Brief description		Validate a S-124 GML with un-defined feature and information type against GML Schema
3	Conditions		The validation result is false
4	Participants (if any)		S-124 NW and T&P NM Manager
5	Data		Validation reports

	Item		Description
1	Test ID		Test04
2	Description	Title	Verify the transliteration into NAVTEX message
		Objective	This shall test that NAVTEX output is supported by the data model so that S-124 data can be converted and broadcast in legacy issues.
		Method	Test that S-124 data can be transliterated into NAVTEX to ensure backward compatibility and that system can support legacy outputs.
3	Pre-conditions		Internal database containing S-124 NW and NM
4	Configuration of the test system		Style sheet for S-53 message template
5	Participants (if any)		S-124 NW and NM Manager
6	Test Cases		Tes04-01, Tes04-02
7	Data gathering		N/A

	Item		Description
1	Test case ID		Test04-01
2	Brief description		Write the Test01-01, Test01-02, Test01-03 data in the NAVTEX message template
3	Conditions		The S-124 data are expressed in the message style of NAVTEX
4	Participants (if any)		S-124 NW and NM Manager
5	Data		N/A

	Item		Description
1	Test case ID		Test04-02
2	Brief description		Write the Test01-04, Test01-05, Test01-06 data in the NAVTEX message template
3	Conditions		The S-124 data are expressed in the message style of NAVTEX
4	Participants (if any)		S-124 NW and NM Manager
5	Data		N/A

	Item		Description
1	Test ID		Test05
2	Description	Title	Is received information the same between the NAVTEX message and S-124 data?
		Objective	This is to validate the conversion to ensure that there is no significant information is lost between the various paths. This ensures that formatting of the MSI does not impact the information contained in the MSI.
		Method	Check that the information which follows the new S-124 path is the same as the information that goes via the established S-53 (SafetyNet and NAVTEX) paths.
3	Pre-conditions		The system can issue NAVTEX message and S-124 GML data
4	Configuration of the test system		NAVTEX Message and S-124 NW and NM data
5	Participants (if any)		S-124 NW and NM Manager
6	Test Cases		Test05-01, Test05-02
7	Data gathering		N/A

	Item		Description
1	Test case ID		Test05-01
2	Brief description		Compare between the NAVTEX message and S-124 GML data for the Test01-01, Test01-02, Test01-03
3	Conditions		Visual comparison between NAVTEX and S-124 GML
4	Participants (if any)		S-124 NW and NM Manager
5	Data		N/A

	Item		Description
1	Test case ID		Test05-02
2	Brief description		Compare between the NAVTEX message and S-124 GML data for the Test01-04, Test01-05, Test01-06
3	Conditions		Visual comparison between NAVTEX and S-124 GML
4	Participants (if any)		S-124 NW and NM Manager
5	Data		N/A

	Item		Description
1	Test ID		Test06
2	Description	Title	Is system able to ingest received S-124 data including conformance to exchange set structure etc.?
		Objective	This shall verify that the data is formatted as system expect
		Method	Test that systems can ingest received S-124 data (including exchange set structure).
3	Pre-conditions		Creation of exchange set for S-124 NW and NM
4	Configuration of the test system		S-100 Viewer and Shore based ECDIS
5	Participants (if any)		S-124 NW and NM Manager
6	Test Cases		Test06-01, Test06-02, Test06-03
7	Data gathering		N/A

	Item		Description
1	Test case ID		Test06-01
2	Brief description		Ingest the S-124 GML for the Test01-01, Test01-02, Test01-03 to S-100 Viewer, with appropriate exchange set structure
3	Conditions		The S-100 Viewer can process the S-124 NW GML
4	Participants (if any)		S-124 NW and NM Manager
5	Data		N/A

	Item		Description
1	Test case ID		Test06-02
2	Brief description		Ingest the S-124 GML for the Test01-04, Test01-05, Test01-06 to S-100 Viewer with appropriate exchange set structure
3	Conditions		The S-100 Viewer can process the S-124 NM GML
4	Participants (if any)		S-124 NW and NM Manager
5	Data		N/A

	Item		Description
1	Test case ID		Test06-03
2	Brief description		Ingest a S-124 GML with wrong exchange set structure to S-100 Viewer
3	Conditions		The S-100 Viewer can't process the S-124 GML
4	Participants (if any)		S-124 NW and NM Manager
5	Data		N/A

	Item		Description
1	Test ID		Test07
2	Description	Title	Is system able to portray ingested S-124 data?
		Objective	This is to verify that the data can be viewed and portrays as expected in a system, including pick report.
		Method	Test that S-124 data can be portrayed.
3	Pre-conditions		S-100 Viewer can portray the S-124 according to the S-124 portrayal catalogue agreed.
4	Configuration of the test system		S-100 Viewer, Feature catalogue and Portrayal catalogue of S-124 NM and NM
5	Participants (if any)		S-124 NW and NM Manager
6	Test Cases		Test07-01, Test07-02
7	Data gathering		N/A

	Item		Description
1	Test case ID		Test07-01
2	Brief description		Portray the S-124 NW GML for Test01-02 in the S-100 Viewer
3	Conditions		The S-100 Viewer can portray according to the S-124 Portrayal catalogue
4	Participants (if any)		S-124 NW and NM Manager
5	Data		N/A

	Item		Description
1	Test case ID		Test07-02
2	Brief description		Portray the S-124 NM GML for Test01-05 in the S-100 Viewer
3	Conditions		The S-100 Viewer can portray according to the S-124 Portrayal catalogue
4	Participants (if any)		S-124 NW and NM Manager
5	Data		N/A

	Item		Description
1	Test ID		Test08
2	Description	Title	Check interoperability with S-101
		Objective	This is to verify that the data can be harmonized with the S-101 ENC and cause no conflict.
		Method	Test that S-124 data is interoperable with S-101 data.
3	Pre-conditions		S-100 Viewer can apply the S-100 interoperability catalogue
4	Configuration of the test system		S-100 Viewer, Portrayal catalogue, and the Interoperability catalogue
5	Participants (if any)		S-124 NW and NM Manager
6	Test Cases		Test08-01, Test08-02
7	Data gathering		N/A

	Item	Description
1	Test case ID	Test08-01
2	Brief description	Portray the S-124 GML for Test01-02 considering the S-100 interoperability catalogue in the S-100 Viewer
3	Conditions	The S-124 GML can be displayed with S-101 ENC in harmonized manner within S-100 Viewer.
4	Participants (if any)	S-124 NW and NM Manager
5	Data	N/A

	Item	Description
1	Test case ID	Test08-02
2	Brief description	Portray the S-124 GML for Test01-05 considering the S-100 interoperability catalogue in the S-100 Viewer
3	Conditions	The S-124 GML can be displayed with S-101 ENC in harmonized manner within S-100 Viewer.
4	Participants (if any)	S-124 NW and NM Manager
5	Data	N/A

	Item	Description	
1	Test ID	Test09	
2	Description	Title	Can messages be filtered by user requirement?
		Objective	This is to verify that the data can be filtered to allow users to reduce information clutter.
		Method	Test that data can be filtered by use criteria like geographical area, topic/type, issue date etc.
3	Pre-conditions	30 different S-124 GML data have to be prepared	
4	Configuration of the test system	S-100 Viewer	
5	Participants (if any)	S-124 NW and NM Manager	
6	Test Cases	Test09-01, Test09-02, Test09-03	
7	Data gathering	N/A	

	Item	Description
1	Test case ID	Test09-01
2	Brief description	Filter by geographical area among the S-124 datasets and check the results in the S-100 Viewer
3	Conditions	The S-124 datasets are filtered and show only relevant items.
4	Participants (if any)	S-124 NW and NM Manager
5	Data	N/A

	Item	Description
1	Test case ID	Test09-02
2	Brief description	Filter by topic/type among the S-124 datasets and check the results in the S-100 Viewer
3	Conditions	The S-124 datasets are filtered and show only relevant items.
4	Participants (if any)	S-124 NW and NM Manager
5	Data	N/A

	Item	Description
1	Test case ID	Test09-03
2	Brief description	Filter by issue date among the S-124 datasets and check the results in the S-100 Viewer
3	Conditions	The S-124 datasets are filtered and show only relevant items.
4	Participants (if any)	S-124 NW and NM Manager
5	Data	N/A

	Item	Description	
1	Test ID	Test10	
2	Description	Title	Test cancellation process of in effect messages
		Objective	This is to verify that the cancellation process in S-124 works and that only the data that is to be cancelled is affected, leaving all other information un-affected.
		Method	Test cancellation process for in effect messages
3	Pre-conditions	The Test01-03 is cancellation data for the Test01-02. The Test01-06 is cancellation data for the Test01-04	
4	Configuration of the test system	S-100 Viewer	
5	Participants (if any)	S-124 NW and NM Manager	
6	Test Cases	Test10-01, Test10-02	
7	Data gathering	N/A	

	Item	Description
1	Test case ID	Test10-01
2	Brief description	Ingest the Test01-02 and Test01-03 and see if the data is cancelled.
3	Conditions	The S-100 viewer process the S-124 NW cancellation data and cancel the existing data
4	Participants (if any)	S-124 NW and NM Manager
5	Data	N/A

	Item	Description
1	Test case ID	Test10-02
2	Brief description	Ingest the Test01-04 and Test01-05 and see if the data is cancelled.
3	Conditions	The S-100 viewer process the S-124 NM cancellation data and cancel the existing data
4	Participants (if any)	S-124 NW and NM Manager
5	Data	N/A

	Item	Description	
1	Test ID	Test11	
2	Description	Title	Test expiration of MSI with end date/time
		Objective	This is to verify that S-124 data, that has an expiration date/time, will be terminated at the specified date.
		Method	Test expiration of MSI with end date/time.
3	Pre-conditions	Prepare S-124 NM and NM with end date/time	
4	Configuration of the test system	S-100 Viewer	
5	Participants (if any)	S-124 NW and NM Manager	
6	Test Cases	Test11-01, Test11-02	
7	Data gathering	N/A	

	Item	Description
1	Test case ID	Test11-01
2	Brief description	Adjust to exceed the date/time than the assigned date/time and test expiration of the S-124 NM in the S-100 Viewer
3	Conditions	S-100 Viewer do not display the S-124 NM expired.
4	Participants (if any)	S-124 NW and NM Manager
5	Data	N/A

	Item	Description
1	Test case ID	Test11-02
2	Brief description	Adjust to exceed the date/time than the assigned date/time and test expiration of the S-124 NM in the S-100 Viewer
3	Conditions	S-100 Viewer do not display the S-124 NM expired.
4	Participants (if any)	S-124 NW and NM Manager
5	Data	N/A

	Item		Description
1	Test ID		Test12
2	Description	Title	Can system receive new feature and portrayal catalogue and still portray existing MSI?
		Objective	This is to verify that the S-124 product specification can evolve and not negatively impact existing data.
		Method	Test that system can receive new feature and/or portrayal catalogue and still portray existing MSI.
3	Pre-conditions		Update of feature and portrayal catalogue
4	Configuration of the test system		S-100 Viewer, Different versions of Feature and Portrayal catalogues
5	Participants (if any)		S-124 NW and NM Manager
6	Test Cases		Test12-01, Test12-02
7	Data gathering		N/A

	Item		Description
1	Test case ID		Test12-01
2	Brief description		Prepare new version of FC/PC and ingest those to S-100 Viewer, test if the existing S-124 is portrayed correctly
3	Conditions		Regardless of new version of FC/PC, the existing S-124 is portrayed correctly
4	Participants (if any)		S-124 NW and NM Manager
5	Data		N/A

	Item		Description
1	Test case ID		Test12-02
2	Brief description		Prepare new version of FC/PC and S-124 GML created based on the new FC/PC, ingest those to S-100 Viewer, test if the new S-124 GML is portrayed correctly
3	Conditions		The new S-124 GML is portrayed correctly
4	Participants (if any)		S-124 NW and NM Manager
5	Data		N/A