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## **Requirements Specification(SINS samples)**

## **Table of Contents**

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## Introduction

The purpose of this document is to define the requirements.

### SIC-2042 Implementation of QA DIS comments in ICD 3.0 version

#### attribute

Attribute	Value
Artifact type	Requirement
Comments	Documentation requirements from CS.SIS. SINS does not apply
Priority	-
Analyst	Alex Parincu
Identifier	417
Request status	unenforceable

#### Artifact Content

##### Description:

=====

The ICD 3.0 version has been delivered and has passed the DIS verification process.

All comments with the status "will be implemented" agreed in the meetings with HPS, Commission and UIS must be implemented in ICD 3.0.

Action(s) to follow:

=====

To implement all the comments with status "will be implemented" from the attached DIS sheet.

Action(s) followed:

=====

All comments have been implemented.

##### Description:

=====

The working version ICD 3.0 candidate has been delivered and passed the DIS process.

All comments with status "to be implemented" according to review meeting with HPS, Commission and UIS should be implemented in ICD 3.0.

Action(s) To Be Taken:

=====

Implement all comments "to be implemented" in the attached DIS sheet.

Action(s) taken:

=====

All comments have been implemented.

## **SIC-2006 Hash-Examples in <Data Consistency Additional Notes> are not correct**

### **attribute**

Attribute	Value
Artifact type	Requirement
Comments	The Romanian national authorities are provided with documents of hash code calculation examples in the context of SINS implementation.
Priority	-
Analyst	Andrei Popovich
Identifier	418
Request status	unenforceable

### **Artifact Content**

#### Description:

=====

The hash examples in <Data Consistency Additional Notes> are not correct because AlertDataType must not contain \_NULL\_ values, as XML is not valid then. Additionally, the person alert example is not well-defined XML.

#### Actions to be taken:

=====

All elements with \_NULL\_ values in the XML for the hash examples must be removed. The person alert example must be changed.

#### Actions taken:

=====

The additional <Data Consistency Additional Notes> document has been modified:

\* Section 3.2.4.2.1 XML FILE EXTRACT has been modified:

-> In the XML example all elements with the value \_NULL\_ have been removed.

\* Section 3.2.4.3.1 XML FILE EXTRACT has been modified:

-> In the XML example all elements with the value \_NULL\_ have been removed.

-> Sample XML has been redone to make it well defined.

#### Description:

=====

Hash-Examples in the <Data Consistency Additional Notes> are not correct, because the AlertDataType must not contain the \_NULL\_ Values, because the XML is not valid then. In addition, the person alert example is not well-defined XML.

#### Action(s) To Be Taken:

=====

All elements with \_NULL\_ Values in the XML for the hash-examples have to be removed. The personal alert example has to be changed.

Action(s) Taken:

=====

The document <Data Consistency Additional Notes> has been changed:

- \* The section 3.2.4.2.1 XML FILE EXTRACT has been modified:  
--> In the XML example all elements with Value \_NULL\_ have been removed.
- \* The section 3.2.4.3.1 XML FILE EXTRACT has been modified:  
--> In the XML example all elements with Value \_NULL\_ have been removed.  
--> The XML example has been reworked to make it well defined.

**SIC-2001 The term "recursive browsing" is still used in DataConsistency\_AdditionalNotes**

**attribute**

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Analyst	Andrei Popovich
Identifier	419
Request status	unenforceable

**Artifact Content**

Description:

=====

The term "recursive navigation" is still used in the labels for figure 4 and 5 in <Data Consistency Additional Notes>.

Actions to be taken:

=====

Figure descriptions should be modified.

Actions taken:

=====

The <Data Consistency Additional Notes> document has been changed:

-> The descriptions in figures 4 and 5 have been changed.

Description:

=====

The term "recursive browsing" is still used in the labels for Figure 4 and 5 in <Data Consistency Additional Notes>.

Action(s) To Be Taken:

=====

The figure descriptions have to be modified.

Action(s) Taken:

=====

The document <Data Consistency Additional Notes> has been changed:

--> The description of figures 4 and 5 have been changed.

### **SIC-1980 Adding an example in <Data Consistency Additional Note> in NOTE 3: ORDERS ENTITY ID**

#### **attribute**

Attribute	Value
Artifact type	Requirement
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Priority	-
Analyst	Andrei Popovich
Identifier	420
Request status	unenforceable

#### **Artifact Content**

Description:

=====

In <Data Consistency Additional Notes> an example ordering (ORDERING) would be helpful in the <NOTE 3: ENTITY ID ORDERING.> section.

Actions to be taken:

=====

In <Data Consistency Additional Notes> an example ordering (ORDERING) would be helpful in the <NOTE 3: ENTITY ID ORDERING.> section.

Actions taken:

=====

The <Data Consistency Additional Notes> document has been changed:

\*Section <NOTE 3: ENTITY ID ORDERING.> has been modified:

-> An example to order Links in an NSPerfomSnapshot message has been added.

Description:

=====

In the <Data Consistency Additional Notes> an example of the ordering would be helpful in the section <NOTE 3: ENTITY ID ORDERING.>

Action(s) To Be Taken:

=====

In the <Data Consistency Additional Notes> an example of the ordering would be helpful in the section <NOTE 3: ENTITY ID ORDERING.>

Action(s) Taken:

=====

The document <Data Consistency Additional Notes> has been changed:

\* The section <NOTE 3: ENTITY ID ORDERING.> has been amended:

--> An example for ordering the Links in a NSPerfomSnapshot message has been added.

**SIC-1978 Some formal parts in the document <Splitting of Reports> are missing**

**attribute**

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	Documentation requirements from CS.SIS. SINS does not apply
Analyst	Andrei Popovich
Identifier	421
Request status	unenforceable

**Artifact Content**

Description:

=====

<SISII - Message Specification Extensibility Cookbook>: Figures 4 and 5 are obsolete.

Actions to be taken:

=====

Figures 4 and 5 must be updated.

Actions taken:

=====

The document <SISII - Message Specification Extensibility Cookbook> has been modified:

-> Figures 4 and 5 have been updated.

Description:

=====

The document <Splitting of Reports> lacks some formal parts like abbreviations, a glossary and referenced documents.

Action(s) To Be Taken:

=====

The parts abbreviations, glossary and referenced documents shall be added.

Action(s) Taken:

=====

The document <Splitting of Reports> has been changed:

\* The following parts have been amended or added:

--> 1.3.1 APPLICABLE DOCUMENTS

--> 1.3.2 REFERENCE DOCUMENTS

--> 1.4.1 ABBREVIATIONS AND ACRONYMS LIST

--> 1.4.2 GLOSSARY

**SIC-1976 <SISII - Message Specification Extensibility Cookbook>: Figure 4 and 5 are obsolete**

**attribute**

Attribute	Value
Artifact type	Requirement
Priority	-
Analyst	Andrei Popovich
Identifier	422
Request status	unenforceable

**Artifact Content**

Description:

=====

<SISII - Message Specification Extensibility Cookbook>: Figure 4 and 5 are outdated.

Action(s) To Be Taken:

=====

Figures 4 and 5 have to be updated.

Action(s) Taken:

=====

The document <SISII - Message Specification Extensibility Cookbook> has been changed:

--> Figures 4 and 5 have been updated.

Description:

=====

<SISII - Message Specification Extensibility Cookbook>: Figure 4 and 5 are outdated.

Action(s) To Be Taken:

=====

Figures 4 and 5 have to be updated.

Action(s) Taken:

=====

The document <SISII - Message Specification Extensibility Cookbook> has been changed:

--> Figures 4 and 5 have been updated.



**NOTE 2: CONSISTENT READING in the Additional Consistency <Data Consistency Additional Notes> does not fit into this document**

**attribute**

Attribute	Value
Artifact type	Requirement
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Priority	-
Analyst	Andrei Popovich
Identifier	423
Request status	unenforceable

**Artifact Content**

Description:

=====

NOTE 2: CONSISTENT READING in <Data Consistency Additional Notes> is not part of this document. It will be removed.

Actions to be taken:

=====

NOTE 2: CONSISTENT READING in <Data Consistency Additional Notes> must be deleted.

Actions taken:

=====

The <Data Consistency Additional Notes> document has been modified:

-> NOTE 2: CONSISTENT READING has been deleted.

-> Subsequent notes have been renumbered.

Description:

=====

The NOTE 2: CONSISTENT READING in <Data Consistency Additional Notes> does not fit in this document. It shall be deleted.

Action(s) To Be Taken:

=====

The NOTE 2: CONSISTENT READING in <Data Consistency Additional Notes> has to be deleted.

Action(s) Taken:

=====

The document <Data Consistency Additional Notes> has been changed:

--> The NOTE 2: CONSISTENT READING has been deleted.

--> The subsequent notes have been renumbered.

**SIC-1971 The predetermined encoding for the hash calculation is not mentioned in the data consistency notes**

**attribute**

Attribute	Value
Artifact type	Requirement
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Priority	-
Analyst	Caesar Ivana
Identifier	424
Request status	unenforceable

**Artifact Content**

Description:

=====

It is predetermined that UTF-8 encoding must be used in the hash calculation, but this is not mentioned in the document <Data Consistency Additional Notes>

Action to follow:

=====

A clause about the default coding is added in the <Data Consistency Additional Notes> document.

Action followed:

=====

The <Data Consistency Additional Notes> document has the following change:

\* Section 3.2.CONCATENATION OF FIELDS BEFORE HASH CALCULATIONS has been modified:

--> The first paragraph of <Important Notes> has been expanded with information about the default encoding.

Description:

=====

It is predetermined that during hash calculation the UTF-8 encoding has to be used, but this is not

mentioned in the document <Data Consistency Additional Notes>.

Action(s) To Be Taken:

=====

Add a clause about the predetermined encoding in the document <Data Consistency Additional Notes>.

Action(s) Taken:

=====

The document <Data Consistency Additional Notes> has been amended:

\* The section 3.2. CONCATENATION OF FIELDS BEFORE HASH CALCULATIONS has been modified:

--> The first bullet of the <Important remarks> has been expanded with information about the predetermined encoding.

### **SIC-1970 Document <SISII Broadcast Details> needs a rework due to parallel broadcasting**

**attribute**

Attribute	Value
Artifact type	Requirement
Comments	Documentation requirements from CS.SIS. SINS does not apply
Priority	-
Analyst	Caesar Ivana
Identifier	425
Request status	unenforceable

#### **Artifact Content**

Description:

=====

The <SISII Broadcast Details> document requires this redo due to the parallel broadcast.

Action to follow:

=====

The <SISII Broadcast Details> document requires this redo due to the parallel broadcast.

Action followed:

=====

The <SISII Broadcast Details> document has been redone.

Description:

=====

The document <SISII Broadcast Details> needs a rework due to parallel broadcasting.

Action(s) To Be Taken:

=====

The document <SISII Broadcast Details> needs a rework due to parallel broadcasting.

Action(s) Taken:

=====

The <SISII Broadcast Details> document has been reworked.

**SIC-1968 The examples in <Data Consistency Additional Notes> are no longer valid.**

**attribute**

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Analyst	Caesar Ivana
Identifier	426
Request status	unenforceable

**Artifact Content**

Description:

=====

The examples in <Data Consistency Additional Notes> are no longer valid.

Action to follow:

=====

The examples in <Data Consistency Additional Notes> must be changed.

Action followed:

=====

The <Data Consistency Additional Notes> document has been changed:

\* All samples in 3.2.4 Samples have been changed.

Description:

=====

The examples in the <Data Consistency Additional Notes> are not valid anymore.

Action(s) To Be Taken:

=====

The examples in the <Data Consistency Additional Notes> have to be exchanged.

Action(s) Taken:

=====

The document <Data Consistency Additional Notes> has been changed:

\* All examples in section 3.2.4 Samples have been exchanged.

**SIC-1954 The example in "Data Consistency Additional Notes" in section 3.2.2.1 causes confusion.**

**attribute**

Attribute	Value
Artifact type	Requirement
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Priority	-
Analyst	Caesar Ivana
Identifier	427
Request status	unenforceable

#### **Artifact Content**

Description:

=====

The example from the "Data Consistency Additional Notes" document in section 3.2.2.1 is confusing, one can confuse example 023.23 with a value code from the table.

Action to follow:

=====

A different example was chosen here.

Action followed:

=====

The choice of example 023.23 was exchanged with 723.23.

Description:

=====

The example in the document "Data Consistency Additional Notes" in section 3.2.2.1 is misleading, one can confuse the example 023.23 with a code table Value.

Action(s) To Be Taken:

=====

A different example has to be chosen here.

Action(s) Taken:

=====

The chosen example 023.23 has been interchanged with 723.23.

## SIC-1953 Add a reference section to the <Data Consistency Additional Notes> document

### attribute

Attribute	Value
Artifact type	Requirement
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Priority	-
Analyst	Caesar Ivana
Identifier	428
Request status	unenforceable

### Artifact Content

#### Description:

=====

A reference section is missing in the <Data Consistency Additional Notes> document.

Action to follow:

=====

A reference section to the document <Data Consistency Additional Notes> must be added.

Action followed:

=====

A reference section to the <Data Consistency Additional Notes> document has been added: 2.

#### REFERENCES

Section 3.2.2.3 has been modified:

--> The reference to the ICD has been modified in accordance with the new reference section.

#### Description:

=====

There is a missing reference section in the document <Data Consistency Additional Notes>.

Action(s) To Be Taken:

=====

A reference section to the document <Data Consistency Additional Notes> has to be added.

Action(s) Taken:

=====

A reference section to the document <Data Consistency Additional Notes> has been added: 2.

## REFERENCES

The section 3.2.2.3 has been changed:

--> The reference to the ICD has been modified according to the new reference section.

## SIC-1952 Implementation for all UIS comments on ICD 2.8

### attribute

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	Documentation requirements from CS.SIS. SINS does not apply
Analyst	Caesar Ivana
Identifier	429
Request status	unenforceable

### Artifact Content

#### Description:

=====

The working version of ICD 2.7 was delivered and handed over to the processed DIS.

All comments "to be implemented" established at the meeting with HPS, Commission and UIS must be implemented in ICD 2.8.

Action to follow:

=====

Implementation of all "to be implemented" comments in the DIS sheet attachment.

Action followed:

=====

All comments have been implemented.

#### Description:

=====

The working version ICD 2.7 has been delivered and passed the DIS process.

All comments "to be implemented" according to meeting result held with HPS, Commission and UIS should be implemented in ICD 2.8.

Action(s) To Be Taken:

=====

Implement all comments "to be implemented" in the attached DIS sheet.

Action(s) taken:

=====

All comments have been implemented.

**SIC-1942 Put a reference to section 3.2.3, in section 3.2.2.2, in the document <Data Consistency Additional Notes>**

**attribute**

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Analyst	Caesar Ivana
Identifier	430
Request status	unenforceable

**Artifact Content**

Description:

=====

In section 3.2.2.2 in the examples, the concatenated values are separated by a semicolon. To make this aspect clearer, a reference to section 3.2.3 FIELD SEPARATOR is necessary.

Action to follow:

=====

Add reference as described above.

Action followed:

=====

The <Data Consistency Additional Notes> document has been modified:

--> Added a footnote in 3.2.2.2 that refers to section 3.2.3.

Description:

=====

In section 3.2.2.2 in the examples the concatenated Values are separated by a semicolon. To make this more clear a reference to the section 3.2.3 FIELD SEPARATOR is helpful.

Action(s) To Be Taken:

=====

Add the reference according to the description above.

Action(s) Taken:

=====

The document <Data Consistency Additional Notes> has been changed:



--> Added a footnote in 3.2.2.2 which refers to section 3.2.3.

## **SIC-1940 Wrong expression in the description table for LicensePlate in the document SISII-ExplanatoryNote-HashValue**

### **attribute**

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	The Romanian national authorities are provided with documents of hash code calculation examples in the context of SINS implementation.
Analyst	Caesar Ivana
Identifier	431
Request status	unenforceable

### **Artifact Content**

#### Description:

=====

In the document SISII-ExplanatoryNote-Hash Value table 11 has a wrong description: LicenceUpdate instead of LicencePlate.

#### Action to follow:

=====

The description of the table must be changed.

#### Action followed:

=====

The SISII-ExplanatoryNote-HashValue.doc document has been changed:

\* Section 3.10. LICENSEPLATE has been modified.

--> The description of table 11 has been changed to <LicencePlate>.

#### Description:

=====

In the document SISII-ExplanatoryNote-HashValue the table 11 has a wrong description: LicenceUpdate instead of LicencePlate.

#### Action(s) To Be Taken:

=====

The table description has to be changed.

#### Action(s) Taken:

=====

The document SISII-ExplanatoryNote-HashValoare.doc has been changed:

\* The section 3.10. LICENSEPLATE has been modified.

--> The table description of table 11 has been changed to <LicencePlate>.

### **SIC-1931 What does "recursive content" and "recursive navigation of an XSD schema" mean in calculating the hash value?**

#### **attribute**

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Analyst	Caesar Ivana
Identifier	432
Request status	unenforceable

#### **Artifact Content**

##### Description:

=====

In the document "SISII-ICD\_DataConsistency\_AdditionalNotes-v2.27.doc", the terms "recursive content" and "recursive browsing of XSD" are currently used (for example:

- "The hash value is calculated by concatenating the recursive content of all the fields and attributes present in (...)",
- "(...) the XSD structure must be accessed recursively down to the leaf level to build a unique string").

What exactly does "recursive content" and "browsing recursively" mean?

Action to follow:

=====

Recursion is one of the \*techniques\* used for tree / graph traversal but it is not inherently related to the described algorithm. The algorithm used to traverse the XML structure should be mentioned.

Action followed:

=====

The "Data Consistency Additional Notes" document has been changed:

\*Section 3.2.1.1 XSD STRUCTURE BROWSING has been modified:

--> Added some text passages about depth-first-traversal through the XML structure and added a diagram for clarification.

\* Section 3.2.2.2 NULL VALUES has been modified:

--> Some examples have been redone.

Description:

=====

In "SISII-ICD\_DataConsistency\_AdditionalNotes-v2.27.doc" document, terms "recursive content" and "recursive browsing of XSD" are commonly used (for example:

- "The hash Value is calculated on the concatenation of the recursive content of all the fields and Attributes present in (...)",
- "(...) the XSD structure must be browsed recursively down to the leaves in order to build a unique string").

What does "recursive content" and "browsing recursively" mean exactly?

Action(s) To Be Taken:

=====

Recursion is one of the \*techniques\* used for tree / graph traversal but is not inherently related to the described algorithm. The used algorithm for traversing the XML structure should be mentioned here.

Action(s) Taken:

=====

The document "Data Consistency Additional Notes" has been changed:

\* The section 3.2.1.1 XSD STRUCTURE BROWSING has been modified:

--> Added some text passages about the depth-first-traversal through the XML structure and added a figure to make this more clear.

\* The section 3.2.2.2 NULL VALUES has been modified:

--> Some sentences have been reworked.

**SIC-1930 Remove the reference to FlagBroadcastDataType from the document SISII-ICD\_DataConsistency\_AdditionalNotes**

**attribute**

Attribute	Value
Artifact type	Requirement
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Priority	-
Analyst	Caesar Ivana
Identifier	433
Request status	unenforceable

**Artifact Content**

Description:

=====

Considering the elimination of FlagBroadcastDataType (see SIC-1648), all references to this type of data must be removed from the <SISII-ICD\_DataConsistency\_AdditionalNotes> document.

Action to follow:

=====

Removes the references to FlagBroadcastDataType from the <SISII-ICD\_DataConsistency\_AdditionalNotes> document.

Action followed:

=====

The document <SISII-ICD\_DataConsistency\_AdditionalNotes> has been changed:

\* Section 3.2.1.1 XSD STRUCTURE BROWSING has been modified:

--> Reference to FlagBroadcastDataType has been removed.

Description:

=====

Due to the deletion of the FlagBroadcastDataType (see SIC-1648) all references to that type have to be removed from the <SISII-ICD\_DataConsistency\_AdditionalNotes> document.

Action(s) To Be Taken:

=====

Remove the reference to the FlagBroadcastDataType from the <SISII-ICD\_DataConsistency\_AdditionalNotes> document.

Action(s) Taken:

=====

The document <SISII-ICD\_DataConsistency\_AdditionalNotes> has been changed:

\* The section 3.2.1.1 XSD STRUCTURE BROWSING has been modified:

--> The reference to FlagBroadcastDataType has been removed.

**SIC-1908 QA: (ICD2.7, SIC-1775) Loops / iterations are still mentioned in the DataConsistency\_AdditionalNotes document**

**attribute**

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Analyst	Caesar Ivana
Identifier	434
Request status	unenforceable

## Artifact Content

### Description

=====

Section '3. NOTES 1: RESTORATION RULES AT NS LEVEL' of DataConsistency\_AdditionalNotes document still mentions loops: it ends with 'Rejected orders will be part (included) in the next iterative cycle.'

Action to follow

=====

- remove the content mentioned above from the document.

Action followed

=====

1. Annex SISII\_DataConsistency\_AdditionalNotes.doc:

-- Note 2 : RESTORATION RULES AT NS LEVEL

removed content: 'The rejected orders will be part of the next iterative cycle.'

### Description

=====

Section '3. NOTE 1: RESTORATION RULES AT NS LEVEL' of DataConsistency\_AdditionalNotes document still mentions loops: it ends with "The rejected orders will be part of the next iterative cycle."

Action(s) to be taken

=====

- remove the above-mentioned sentence from the document.

Action(s) taken

=====

1. Annex SISII\_DataConsistency\_AdditionalNotes.doc:

-- Note2 : RESTORATION RULES AT NS LEVEL

removed sentence 'The rejected orders will be part of the next iterative cycle.'

## **SIC-1907 QA: (ICD2.7) Various comments on section '9. NOTES 7: KEEPING TRACK OF DELETED ENTITIES ON NS' of the DataConsistency\_AdditionalNotes document**

### attribute

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking

	and restoring consistent data.
Analyst	Caesar Ivana
Identifier	435
Request status	unenforceable

## Artifact Content

### Description

=====

This section is full of contradictions:

- a) "The National System must follow these eliminated entities at least during the Data Consistency Check campaign"
- b) "However, it is recommended to track removed entities continuously to facilitate others such as Broadcast reversed cases"
- c) "This data should not be stored for the entire lifetime of the system"
- d) "Actually, they should be kept only for a short period of time, namely as long as it is necessary to solve the reversed cases with Broadcasts"
- e) "One week is enough to use all reversed cases between Broadcasts and any type of Data Consistency campaign"

Therefore, do we recommend keeping "logical deletions" forever (b), is this prohibited (c), or do we recommend keeping them for a short period of time (d)?

Action to follow

=====

- updating this text for clarification.

Action followed

=====

1. Annex SISII\_ICD\_DataConsistency\_AdditionalNotes.doc

-- reformulate paragraphs 2 and 3 to:

"The National Systems must track these removed entities at least during the Data Consistency Check campaign. However, it is recommended to track the removed entities continuously to facilitate others such as the reversed Broadcast cases (in case the SN processes its own Broadcasts in parallel ).

This data should not be stored for the entire lifetime of the system. Since it is only necessary to solve the reversed cases with Broadcasts, they should be stored for the specified period. one week should be enough for using all reverse cases between Broadcasts and any type of Data Consistency campaign"

### Description

=====

This section is full of contradictions:

- a) "A National System has to keep track of these deleted entities at least for the duration of the Data Consistency Check campaign"
- b) "However, it is strongly advised to keep track of the deleted entities continuously to facilitate other processes like some Broadcast inversion cases"
- c) "This data should not be stored for the entire lifetime of the system"
- d) "Actually, it should only be kept for a short period of time since it is necessary to solve inversion cases with Broadcasts"
- e) "One week is enough to handle all inversion cases between broadcasts and any type of Data Consistency campaign"

So do we recommend keeping "logical deletes" forever (b), do we forbid that (c), or do we recommend keeping them only for a short time (d)?

Action(s) to be taken

=====

- update this text to make it clearer.

Action(s) taken

=====

1. Annex SISII\_ICD\_DataConsistency\_AdditionalNotes.doc

-- rephrased 2nd and 3rd paragraph to :

"A National System has to keep track of these deleted entities at least during the execution of a Data Consistency Check campaign. It is strongly advised to keep track of the deleted entities continuously to facilitate other processes like some Broadcast inversion cases (in case the National System is processing its Broadcasts in parallel).

This data should not be stored for the entire lifetime of the system. Since it is only necessary to solve inversion cases with Broadcasts, it should only be stored for a short period of time. One week should be long enough to handle all inversion cases between broadcasts and any type of Data Consistency campaign. "

**SIC-1906 QA: (ICD2.7) Various comments on section "8. NOTES 6: SELF-CONSISTENCY MECHANISM FOR NS' of the DataConsistency\_AdditionalNotes document**

**attribute**

Attribute	Value
Artifact type	Requirement
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Priority	-
Analyst	Caesar Ivana
Identifier	436
Request status	unenforceable

**Artifact Content**

Description

=====

1) "The National Systems (NS) must ensure the compliance of the alerts with their stored hash values." This is not important. \*Data integrity\* is important and hashing is one of the methods to verify this integrity. The idea is that by recalculating the hash and comparing it with one that was previously

calculated, SN can detect most cases of accidental data corruption on its side.

2) "This internal Hash recalculation process will effectively detect some cases of corruption within the National Copy, for example tracking an intrusion into the National Copy"

Incorrect example: Hash verification will have a very high detection rate of accidental data corruption but it is *\*not\** a good solution for intrusion detection: both inputs (data entity and previously recalculated hash) are stored locally so that both can be modified in agreement with by the intruder.

Action to follow

=====

- updates SISII\_DataConsistency\_AdditionalNotes.doc

Action followed

=====

1. ICD annex: SISII\_DataConsistency\_AdditionalNotes.doc

-- replace 'National Systems must ensure the compliance of alerts with their stored hash values..' with 'National Systems must ensure the integrity of alerts with their stored hash values.'

-- replaces 'This internal Hash recalculation process will effectively detect some cases of corruption within the National Copy, for example tracking an intrusion into the National Copy.' with 'This internal Hash recalculation process will effectively detect most cases of accidental data corruption and some cases of intentional corruption.'

#### Description

=====

1) "The National Systems have to regularly ensure the compliance of the alerts with their stored hash Values."

This is not the point. *\*Data integrity\** is the point and hash calculation is one of the methods to check this integrity. The point is that by recomputing the hash and comparing it to the one that had been computed before the NS can detect most of the cases of accidental data corruption on their side.

2) "This internal Hash recalculation process would efficiently detect some cases of corruption in the National Copy, for instance following an intrusion into the National Copy."

Bad example. Hash check will have very high successful detection rate of accidental data corruption but it *\*is not\** a good solution for intrusion detection: after all, both inputs (entity data and previously computed hash) are stored locally so both can be modified accordingly by the intruder

Action(s) to be taken

=====

- update SISII\_DataConsistency\_AdditionalNotes.doc

Action(s) taken

=====

1. ICD annex: SISII\_DataConsistency\_AdditionalNotes.doc

-- replaced 'The National Systems have to regularly ensure the conformance of the alerts with their stored hash Valoares.' with 'The National Systems have to regularly ensure the integrity of the alerts with their stored hash Valoares.'

-- replaced 'This internal Hash recalculation process would efficiently detect some cases of corruption in the National Copy, for instance following an intrusion into the National Copy.' with 'This internal Hash recalculation process would efficiently detect most cases of accidental data corruption and some cases of intentional corruption. '



**SIC-1905 QA: (ICD2.7) Various comments on section '6. NOTES 4: BROADCAST SUBSCRIPTIONS / DATA ACCESS RIGHTS' of the DataConsistency\_AdditionalNotes document**

**attribute**

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Analyst	Caesar Ivana
Identifier	437
Request status	unenforceable

**Artifact Content**

Description

=====

1) "Instead, the flow will stop after STEP 3 of the DCC (Data Consistency Check) flow and a CSNotification is sent as its last message (DCC). This CSNotification will contain the SummaryReport (presenting statistics of the entire hash comparison) and the error code "6207.01" "Too many discrepancies in snapshot comparison (please request a DataDump)".

It was intentionally not mentioned what the value of the CSNotification field will be.

DataConsistency.Operation ? If so, it should be clearly stated (such as "the value of ... is not defined in this case"), otherwise it should be specified (such as Field "CSNotification.DataConsistency.Operation" will be set to 'XXXX' in this case").

2) "Additionally, the list of discrepancies identified during the previous hash comparison is stored centrally"

I think this is about hash comparison that takes place within the \*same\* campaign. The word "previously" should be removed.

3) "As soon as the investigation is finished, a simplified restoration is possible, only for discrepancies. It is not necessary to restore the entire data set, including the corrected entities."

For clarification, it should be mentioned how this "simplified restoration, only for discrepancies" can be achieved. (such as "by using operation XYZ with an ABCD modifier set to ZYX")

Action to follow

=====

- modify SISII\_DataConsistency\_AdditionalNotes.doc

Action followed

=====

1. SISII\_DataConsistency\_AdditionalNotes.doc:

-- sentence added "(The DataConsistency.Operation in this case will be set to 'Aborted')." "

-- replaced the sentence "Additionally, the list of discrepancies identified during the previous hash comparison is stored centrally under the TrackingID identifier." with "Additionally, the list of discrepancies identified during the current hash comparison is stored centrally under the TrackingID identifier."

-- added sentence "This can be accomplished by using the Data Dump service with the 'StoredTrackingID' modifier set to the 'TrackingID' of the current DataConsistency Check campaign."

Description

=====

1) What is the purpose of this chapter? The title mentions "broadcast subscriptions" and "data access rights" but the content can be summarized to:

'while processing Data Dump, National System may continue processing broadcasts at the same time or it can buffer them until Data Dump is finished.'

2) "When a Member State changes its Broadcast subscriptions" - is it still possible for a MS to change BC subscriptions?

3) "Moreover, one more option is available to them in this scheme, regarding the Broadcast buffering:

"Online" solution: Member States keep receiving Broadcasts; they are in charge of storing them until broadcast processing can be resumed." This sentence does not add anything that has not been specified before and in particular does not describe "one more option". The fact that MS can buffer BC until Data Dump is finished is already mentioned above.

Action(s) to be taken

=====

- update this Note / chapter to be in line with current ICD.

Action(s) taken

=====

1. Annex - SISII\_ICD\_DataConsistency\_AdditionalNotes.doc:

-- updated whole chapter to

"When a Member State changes its Broadcast subscriptions (by changing its National Copy configuration) or when its data access rights change, no Broadcast message is sent to it to update its National Copy; it should request a Data Dump. The Data Dump messages will be conveyed using the asynchronous unordered channel, as shown on the Operation vs. Channel matrix in the ICD document, section 6.1.4.

Member States have to process the broadcasts in parallel. To process the Broadcasts in parallel have the following advantages and drawbacks:

Advantages:

- o Broadcast processing can go on and no buffering is needed.
- o National Copies are updated as quickly as possible.

Disadvantages:

- o Broadcasts that contain updates or deletes for entities that are missing from the National Copy (but that will be created by the Data Dump) will fail and will need to be restored by a mandatory Consistency Check. This may introduce an unpredictable interval in time during which the National Copy is in an inconsistent state, even though the Data Dump has been correctly applied."

**SIC-1895 QA: (ICD2.7, SIC-1809) Various observations regarding the "OVER-LIMIT SITUATION" in the DataConsistency chapter, AdditionalNotes document**

**attribute**

Attribute	Value
Artifact type	Requirement
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Priority	-
Analyst	Caesar Ivana
Identifier	438
Request status	unenforceable

**Artifact Content**

Description

=====

1) "Instead, the flow will stop after STEP 3 of the DCC (Data Consistency Check) flow and a CSNotification is sent as its last message (DCC). This CSNotification will contain the SummaryReport (presenting statistics of the entire hash comparison) and the error code "6207.01" "Too many discrepancies in snapshot comparison (please request a DataDump)".

It was intentionally not mentioned what the value of the CSNotification field will be.

DataConsistency.Operation ? If so, it should be clearly stated (such as "the value of ... is not defined in this case"), otherwise it should be specified (such as Field "CSNotification.DataConsistency.Operation" will be set to 'XXXX' in this case").

2) "Additionally, the list of discrepancies identified during the previous hash comparison is stored centrally"

I think this is about hash comparison that takes place within the \*same\* campaign. The word "previously" should be removed.

3) "As soon as the investigation is finished, a simplified restoration is possible, only for discrepancies. It is not necessary to restore the entire data set, including the corrected entities."

For clarification, it should be mentioned how this "simplified restoration, only for discrepancies" can be achieved. (such as "by using operation XYZ with an ABCD modifier set to ZYX")

Action to follow

=====

- modify SISII\_DataConsistency\_AdditionalNotes.doc

Action followed

=====

1. SISII\_DataConsistency\_AdditionalNotes.doc:

-- sentence added "(The DataConsistency.Operation in this case will be set to 'Aborted')." "

-- replaced the sentence "Additionally, the list of discrepancies identified during the previous hash comparison is stored centrally under the TrackingID identifier." with "Additionally, the list of discrepancies identified during the current hash comparison is stored centrally under the TrackingID identifier."

-- added sentence "This can be accomplished by using the Data Dump service with the 'StoredTrackingID' modifier set to the 'TrackingID' of the current DataConsistency Check campaign."

Description

=====

1) "Instead the flow will stop after STEP 3 of the DCC flow and sending the CSNotification as his last message. This CSNotification will contain the SummaryReport (presenting statistics of the whole hash comparison) and the error code "6207.01" "Too many discrepancies in snapshot comparison (please request a DataDump)".

Is it purposefully not specified what will be the Value of CSNotification.DataConsistency.Operation field? If so, it should be clearly stated (like "Value of ... is not defined in this case"), otherwise it should be specified (like "CSNotification.DataConsistency.Operation" field will be set to 'XXXX' in this case ").

2) "Additionally, the list of discrepancies identified during previous hash comparison is stored centrally" I think that hash comparison that occurred within \*the same\* campaign is meant here. Word "Previous" should be removed.

3) "As soon as the investigation is finished an easy restoration is possible of only the discrepancies. No need to restore the complete data set including the correct entities."

For clarity it should be mentioned how this "easy restoration of discrepancies only" can be achieved. (like "by using XYZ operation with a modifier ABCD set to ZYX")

Action(s) to be taken

=====

- fine SISII\_DataConsistency\_AdditionalNotes.doc

Action(s) taken

=====

1. SISII\_DataConsistency\_AdditionalNotes.doc:

-- added sentence "(The DataConsistency.Operation will in this case be set to 'Aborted')." "

-- replaced sentence "Additionally, the list of discrepancies identified during previous hash comparison is stored centrally under the TrackingID identifier." with "Additionally, the list of discrepancies identified during the hash comparison of current campaign is stored centrally under the TrackingID identifier."

-- added sentence "This can be achieved by using the Data Dump service with the 'StoredTrackingID' modifier set to the 'TrackingID' of the current DataConsistency Check campaign."

**SIC-1854 The exact error code is not mentioned in 5. NOTES 3: ENTITY ID ORDERING (SISII-ICD\_DataConsistency\_AdditionalNotes.doc)**

**attribute**

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Analyst	Andrei Popovich
Identifier	439
Request status	unenforceable

**Artifact Content**

Description:

=====

The exact error code is not mentioned in section 5. NOTE 3: ENTITY ID ORDERING of the document SISII-ICD\_DataConsistency\_AdditionalNotes.doc.

Actions to be taken:

=====

Add the error code, which is thrown if the ordering report is not correct.

Actions taken:

=====

The document SISII-ICD\_DataConsistency\_AdditionalNotes.doc has been changed.

\* Point 5. NOTE 3: ENTITY ID ORDERING has been modified:

-> Added error code 6210.01.

Description:

=====

The exact error code is not mentioned in section 5. NOTE 3: ENTITY ID ORDERING of the document SISII-ICD\_DataConsistency\_AdditionalNotes.doc.

Action(s) To Be Taken:

=====

Add the error code which is thrown if the report ordering is not correct.

Action(s) Taken:

=====

The document SISII-ICD\_DataConsistency\_AdditionalNotes.doc has been changed.

\* The section 5. NOTE 3: ENTITY ID ORDERING has been modified:

--> Added the error code 6210.01.

### **SIC-1853 Addition of a rule regarding the processing of character string in hash calculation.**

#### **attribute**

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Analyst	Andrei Popovich
Identifier	440
Request status	unenforceable

#### **Artifact Content**

##### Description:

=====

The handling of character strings during the hash calculation can be described more clearly in the document SISII-ICD\_DataConsistency\_AdditionalNotes.doc.

##### Actions to be taken:

=====

The handling of strings during hashing needs to be described more clearly.

##### Actions taken:

=====

The document SISII-ICD\_DataConsistency\_AdditionalNotes.doc has been modified:

\* Section 2.2.2 FIELD FORMATTING BEFORE HASH CALCULATIONS has been modified:

-> Added a sentence about strings.

##### Description:

=====

The treatment of strings during hash calculation can be described more clearly in the document SISII-ICD\_DataConsistency\_AdditionalNotes.doc.

##### Action(s) To Be Taken:

=====

The treatment of strings during hash calculation has to be described more clearly.

Action(s) Taken:

=====

The document SISII-ICD\_DataConsistency\_AdditionalNotes.doc has been changed:

\* Section 2.2.2 FIELD FORMATTING BEFORE HASH CALCULATIONS has been modified:

--> Added a sentence about strings.

### **SIC-1852 Adds a reference to ICD regarding binary encoding**

**attribute**

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Analyst	Andrei Popovich
Identifier	441
Request status	unenforceable

### **Artifact Content**

Description:

=====

In the document SISII-ICD\_DataConsistency\_AdditionalNotes.doc there is a reference to the ICD, which is a bit vague (section 2.2.2.3).

Actions to be taken:

=====

Add a link to the document and the specific section.

Actions taken:

=====

The document SISII-ICD\_DataConsistency\_AdditionalNotes.doc has been modified:

\* Section 2.2.2.3 has been modified:

-> Added the following clause: "(see section" 5.6.3 Binary Data "in the document SISII-ICD.doc)".

Description:

=====

In the document SISII-ICD\_DataConsistency\_AdditionalNotes.doc there is a reference to the ICD which

is a little bit vague (section 2.2.2.3).

Action(s) To Be Taken:

=====

Add a reference to the concrete document and section.

Action(s) Taken:

=====

The document SISII-ICD\_DataConsistency\_AdditionalNotes.doc has been changed:

\* Section 2.2.2.3 has been modified:

--> Added the following clause: "(see section "5.6.3 Binary Data" in the document SISII-ICD.doc)".

### **SIC-1851 Clarification of recursive navigation through the XSD scheme.**

#### **attribute**

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Analyst	Andrei Popovich
Identifier	442
Request status	unenforceable

#### **Artifact Content**

Description:

=====

In the document SISII-ICD\_DataConsistency\_AdditionalNotes.doc figure 3 should be described more clearly (page 14).

Actions to be taken:

=====

"In the example in Figure 3, the subtree under element 1 can be empty. However, the XSD structure must be traversed"

In the previous chapter, something different was said: "- optional collections with no member: In this case, there is no link to a child record in the database. As a result, the string " \_NULL\_ "has the value that is associated with the tag of this collection. All sub-nodes are ignored."

It should be clearly defined what "empty" element means.

Actions taken:

=====

The document SISII-ICD\_DataConsistency\_AdditionalNotes.doc has been modified:



\* Section 2.2.2.2 NULL VALUES has been modified:

-> Added the following clause: "(as mentioned above, this does not count for optional collections)".

-> An example has been added.

Description:

=====

In the document SISII-ICD\_DataConsistency\_AdditionalNotes.doc figure 3 has to be described more clearly (page 14).

Action(s) To Be Taken:

=====

"In the example of Figure 3, the sub tree under element 1 may be empty. Nevertheless, the XSD structure must be browsed"

In the previous chapter something different was said: "- Optional collections having no member: In this case, there is no link to a child record in the database. As a result, the "\_NULL\_" string is the Value that is associated with this collection tag. All the sub nodes are not taken into account."

It should be clearly defined what "empty" element means.

Action(s) Taken:

=====

The document SISII-ICD\_DataConsistency\_AdditionalNotes.doc has been changed:

\* Section 2.2.2.2 NULL VALUES has been changed

--> Added the following clause: "(as noted above this does not count for optional collections)".

--> Added an example.

## SIC-1850 Clarification of string usage for hash calculation

**attribute**

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Analyst	Andrei Popovich
Identifier	443
Request status	unenforceable

**Artifact Content**

Description:

=====

In the document SISII-ICD\_DataConsistency\_AdditionalNotes.doc the passage "the string used to calculate the hash sum shall be the simple string as stored in a database and not as the result in XML messages. For example, the strings "One 'Big T' Two" will be transformed into "One 'Big T' Two" or "<![CDATA[One 'Big T' Two]]>", to ensure the validity of the XML message. However, the value "One 'Big T' Two" will be used to calculate the hash sum. "must to be clarified (page 9).

Actions to be taken:

=====

Rephrase the sentence to make it clearer.

Actions taken:

=====

The sentence has been changed to "The string used to calculate the hash sum shall be a simple string as stored in a database and not as output in XML messages. For example, if a CUD message contains the string "One 'Big T' Two" normally, it will be converted to "One 'Big T' Two" or "<![CDATA[One 'Big T' Two]]>" for the XML message to ensure the validity of this message. During future processing of such a message the central system only stores the character string "One 'Big T' Two" in the database. For the hash calculation the 'clean' string "One 'Big T' Two" will be used and not the string "One 'Big T' Two" or "<![CDATA[One '

Description:

=====

In the document SISII-ICD\_DataConsistency\_AdditionalNotes.doc the passage "The string used for calculating the hash sum shall be plain strings as stored in a database and not escaped as in the XML messages. For example, the strings "One 'Big T' Two" shall be transformed into "One 'Big T' Two" or "<![CDATA[One 'Big T' Two]]>" in order to ensure the validity of the XML message. However, the Value "One 'Big T' Two" shall be used for the calculation of the hash sum." has to be clarified (page 9).

Action(s) To Be Taken:

=====

Rephrase the sentence to make it more clear.

Action(s) Taken:

=====

The sentence has been amended to "The string used for calculating the hash sum shall be plain strings as stored in a database and not escaped as in the XML messages. For example, if a CUD message contains the string "One 'Big T' Two " it normally will be transformed into "One 'Big T' Two" or "<![CDATA[One 'Big T' Two]]>" for the XML message in order to ensure the validity of this message. During the further processing of such a message the central system stores just the string "One 'Big T' Two" in the database. For hash calculation the pure string "One 'Big T' Two" will be used and not the string "One 'Big T' Two" or "<![CDATA[One 'Big T' Two]]>" from the XML message."

## **SIC-1848 Generation of new XML files from code tables**

### **attribute**

Attribute	Value
Artifact type	Requirement
Comments	At the SINS level, the delivery of the updated nomenclature is done through EXCEL files.

Priority	-
Analyst	Andrei Popovich
Identifier	444
Request status	unenforceable

#### Artifact Content

##### Description:

=====

Due to various changes in the code tables, the XML files for each code table should be generated again.

Actions to be taken:

=====

Regenerate all the XML files for the code tables.

Actions taken:

=====

All XML files in the code table appendix have been updated.

##### Description:

=====

Due to various changes in the code tables, the XML files for each code table should be generated again.

Action(s) To Be Taken:

=====

Generate all XML files for the code tables again.

Action(s) Taken:

=====

All XML-Files in the code table annex have been updated.

#### **SIC-1787 Integrate the calculation of network statistics as an appendix in the DCC article**

##### attribute

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Analyst	Andrei Popovich
Identifier	445

Request status	unenforceable
----------------	---------------

#### Artifact Content

##### Description:

=====

COM asked us to make network calculations related in particular to datadumps and dataconsistency in order to assess whether the current network capacities from and to CS <-> MS are sufficiently dimensioned especially in the "100 Mio" framework - signaling requirement . In order to provide this document, which was created by Bruno Grenson, it is proposed to append this to the Data Consistency documentation.

##### Actions to be taken:

=====

- To integrate networkLoadestimation to the Data Consistency documentation.

##### Actions taken:

=====

1. SISII\_NetworkSizeEstimation.xls was added to the ICD annexes.
2. SISII\_NetworkSizeEstimation.xls has been added to the applicable chapter of the ICD document

##### Description:

=====

COM asked us to make network calculations related especially to datadumps and dataconsistency in order to assess whether the current network capacity from and to the CS <-> MS is sufficiently sized especially within the "100 Mio" - alerts requirement. In order to give this document, which was created by Bruno Grenson, some "official" context, it was proposed to annex this to the white paper on Data consistency.

##### Action(s) To Be Taken:

=====

- integrated network Load estimation to the Data Consistency Whitepaper.

##### Action(s) Taken:

=====

1. SISII\_NetworkSizeEstimation.xls added to the annexes of the ICD
2. SISII\_NetworkSizeEstimation.xls added to the applicable document chapter of the ICD

#### SIC-1770 A naming convention for business rules

##### attribute

Attribute	Value
Artifact type	Requirement
Comments	Documentation requirements from CS.SIS. SINS does not apply
Priority	-
Analyst	Andrei Popovich
Identifier	446
Request status	unenforceable

## Artifact Content

### Description:

=====

Today, requirements and business rules have the following SIS-Rxxxx format in common. The proposal is to separate them clearly and distinguish them by name. In this sense, we will agree on the following naming convention:

Leaving the following format for requirements only: SIS-Rxxxx.

Putting a B in front of all business rules, in all specification documents.

Example = A business rule like this SIS-Rxxxx will become B-SIS-Rxxxx.

A business rule like this SIS-Axxxx will become B-SIS-Axxxx.

All requirements will have the obligation of "R" at the beginning, therefore

SIS-Rxxx will become R-SIS-Rxxxx

SIS-Ixxxx will become R-SIS-Ixxxx

This solves the problem of duplicating the requirements with the business rules, without affecting anything other than the documentation (see the attached document)

Actions to be taken:

=====

Apply this change to all specification documents that contain business rules and/or requirements.

Actions taken:

=====

The SISII-ICD\_BusinessRulesMapping.xls document has been modified:

-> Each business rule in this document has been expanded with the prefix <B-> .

The SISII-ICD-View-Business\_Rules.xls document has been modified:

-> Each business rule in this document has been expanded with the prefix <B-> .

### Description:

=====

Today, requirements and business rules share the following naming/numbering format SIS-Rxxxx. The proposal is to clearly separate and distinguish them by names. In that sense we shall agree on the following naming convention:

Leaving the following format only for requirements: SIS-Rxxxx.

Putting a B in front of all business rules in all documents of the specification.

Example = A business rule as such SIS-Rxxxx will become B-SIS-Rxxxx.

A business rule as such SIS-Axxxx will become B-SIS-Axxxx.

All the requirements will therefore have 'R' at the beginning

SIS-Rxxx will become R-SIS-Rxxxx

SIS-Ixxxx will become R-SIS-Ixxxx

This fixes the problem of duplicate requirements numbers with business rules without impacting anything else than documentations (See attached document)

Action(s) To Be Taken:

=====

Apply this change in all documents of the specifications, containing business rules or/and requirements.

Action(s) Taken:

=====

The document SISII-ICD\_BusinessRulesMapping.xls has been changed:

--> every business rule in this document has been extended with the prefix <B->.  
The document SISII-ICD-View-Business\_Rules.xls has been changed:  
--> every business rule in this document has been extended with the prefix <B->.

## **SIC-1760 Problem UK-Change in ST014-Vehicle Related Remark**

### **attribute**

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	In SINS, the nomenclature being translated into Romanian - the name is implemented accordingly.
Analyst	Andrei Popovich
Identifier	447
Request status	unenforceable

### **Artifact Content**

#### Description:

=====

During the meeting of the Change Management Council (CMB) of 28.04.2010, Great Britain introduced a change request asking for the code table ST014\_VehicleRelatedRemark to be defined from "Stolen or false matriculation" - to -"Stolen or False Registration"-  
CMB agreed.

#### Actions to be taken:

=====

In ST014\_VehicleRelatedRemark, change the definition from -Stolen or false matriculation- to -Stolen or False Registration-

#### Actions taken:

=====

The SISII-ICD\_CodeTables.xls document has been modified:

-> On the ST014\_VEHICLERELATEDREMARK sheet, label 0005.01 was changed to <Stolen or false registration>.

The ST014\_VEHICLERELATEDREMARK\_v1.xml document has been modified:

-> Rename the tag in entry 0005.01.

#### Description:

=====

During Change Management Board meeting of 28.04.2010 UK has introduced a change request asking for code table ST014\_VehicleRelatedRemark definition from Stolen or false matriculation- to -Stolen or False Registration-  
CMB agreed.

Action(s) To Be Taken:

=====

In ST014\_VehicleRelatedRemark, change the definition from -Stolen or false matriculation- to -Stolen or False Registration-

Action(s) Taken:

=====

The document SISII-ICD\_CodeTables.xls has been changed:

--> On the sheet ST014\_VEHICLERELATEDREMARK the label of 0005.01 has been changed to <Stolen or false registration>.

The document ST014\_VEHICLERELATEDREMARK\_v1.xml has been changed:

--> Rename the label in the entry 0005.01.

**SIC-1749 Error message received: "User role does not have access to this service" - which role should be used?**

**attribute**

Attribute	Value
Artifact type	Requirement
Comments	The National Copy maintains the relationship with CS.SIS regarding the user role that receives the Broadcasts. To SINS, these messages are only forwarded by the SIB to update certain attributes in the SINS DB and for auditing.
Priority	-
Analyst	Andrei Popovich
Identifier	448
Request status	unenforceable

**Artifact Content**

Description:

=====

When SK(Slovakia) sends NSBroadcast message to CS (when confirming another user's broadcast), we get error "0107.1 = UserRole does not have access to this service.". What role should we use to be able to communicate correctly with CS? Is it specified somewhere?

SK found that using the Siren Officer role instead of Police Officer solves this problem. This is not defined in DTS as there is no special category of roles and permissions for Broadcast operations. If it is assumed that the permissions for Alert Maintenance are also valid for Broadcast, it is believed that this operation should be also allowed for police officer. Otherwise, there is a bug in DTS 1.30. (DTS 1.31 has not been released, even though it is the current one.)

Actions to be taken:

=====

It should be documented that Sirene should be the administrative role until a suitable one is created.

Actions taken:

=====

Modification of \* section 6.1.8.4.1.3 Description of XSDs

-> Added a sub-article under the <Header> article for the <NSBroadcastResponse> message that describes the only valid value for the "UserRole" attribute.

Description:

=====

When SK sends NSBroadcast message to CS (when we acknowledge broadcast by other user), we receive error "0107.1 = The UserRole has no access to this service.". What user role should we use to be able to communicate with CS correctly? Is it specified somewhere?

SK has found that using the Siren officer role instead of Police officer solves this problem. This is not defined in DTS as there is no special category of roles and permissions for Broadcast operations. If they assume that permissions for Alert maintenance are valid also for Broadcast, they believe, that this operation should be allowed also for Police officers. Otherwise there is a bug in DTS 1.30. (DTS 1.31 was not released, even if it is the current one.)

Action(s) To Be Taken:

=====

Should be documented that Sirene should be the administrative role until we create a proper one.

Action(s) Taken:

=====

\* Modification of Section 6.1.8.4.1.3 XSD's description

--> a subitem under the item <Header> for the message <NSBroadcastResponse> has been added which describes the only valid Value for the Attribute "UserRole".

## SIC-1743 WP message restructuring

### attribute

Attribute	Value
Artifact type	Requirement
Comments	The management of messages in relation to CS.SIS is maintained by SIB-STERIA. SINS is not affected by this requirement/change.
Priority	-
Analyst	Andrei Popovich
Identifier	449
Request status	unenforceable

### Artifact Content

Description:

=====

Messages on different flags could be processed in parallel. CS can pre-process messages faster if there is



no need to parse XML, because the necessary information can be found in the JMS protocol header.

Actions to be taken:

=====

The SchengenID must be moved to the protocol header (JMS).

Actions taken:

=====

The SISII-ICD.doc document has been modified:

- > Section 5.2.4.1 MESSAGE TRANSPORT PROTOCOL HEADER was split into 5.2.4.1.1 and 5.2.4.1.2 and modified
- > Section 5.2.4.1.1 SOAP HEADER PROTOCOL TRANSPORT has been added.
- > Section 5.2.4.1.2 JMS HEADER PROTOCOL TRANSPORT has been added.

The SISII-ICD\_CodeTables.xls document has been modified:

- > The entry <0215.01 / SchengenID in JMSHeader differs from SchengenID in business data> was added to the code table ST204\_ERRORCODE.

The ST204\_ERRORCODE\_v1.xml document has been modified:

- > Entry 0215.01 was added in the code table ST204\_ERRORCODE

The SISII-ICD\_BusinessRulesMapping.xls document has been modified:

- > Added code table entry ST204\_ERRORCODE 0215.01 to <AlertMaintenance> sheet for CreateAlert , UpdateAlert , ChangeExpiryDateAlert , DeleteAlert , ExtendAlert , and DeleteBinaryData operations.
- > Added code table entry ST204\_ERRORCODE 0215.01 to <Flagging> sheet for CreateFlag , UpdateFlag and DeleteFlag operations.
- > Added code table entry ST204\_ERRORCODE 0215.01 to <Notification Sheet Management> for AttachDeletionNote and DeleteDeletionNote operations.

Description:

=====

Messages concerning different alerts could be processed in parallel. The CS can pre-process the messages faster if there is no need to parse XML because the information needed can be found in the JMS protocol header.

Action(s) To Be Taken:

=====

The SchengenID has to be moved in the protocol (JMS) header.

Action(s) Taken:

=====

The document SISII-ICD.doc has been changed:

- > Section 5.2.4.1 MESSAGE TRANSPORT PROTOCOL HEADER has been divided into 5.2.4.1.1 and 5.2.4.1.2 and changed
- > Section 5.2.4.1.1 TRANSPORT PROTOCOL HEADER SOAP has been added.
- > Section 5.2.4.1.2 JMS HEADER PROTOCOL TRANSPORT has been added.

The document SISII-ICD\_CodeTables.xls has been changed:

- > Added the code table entry <0215.01 / SchengenID in the JMSHeader differs from the SchengenID in the business data> to the code table ST204\_ERRORCODE.

The document ST204\_ERRORCODE\_v1.xml has been changed:

- > Added the code table entry ST204\_ERRORCODE 0215.01.

The document SISII-ICD\_BusinessRulesMapping.xls has been changed:

--> Added the code table entry ST204\_ERRORCODE 0215.01 to the Sheet <AlertMaintenance> for the operations CreateAlert, UpdateAlert, ChangeExpiryDateAlert, DeleteAlert, ExtendAlert and DeleteBinaryData.

--> Added the code table entry ST204\_ERRORCODE 0215.01 to the Sheet <Flagging> for the operations CreateFlag, UpdateFlag and DeleteFlag.

--> Added the code table entry ST204\_ERRORCODE 0215.01 to the Sheet <Notification Management> for the operations AttachDeletionNote and DeleteDeletionNote.

### **SIC-1741 Central System does not check Logical Session ID (LSID)**

#### **attribute**

Attribute	Value
Artifact type	Requirement
Comments	In relation to the SINS Central System, it generates unique LSIDs.
Priority	-
Analyst	Andrei Popovich
Identifier	450
Request status	unenforceable

#### **Artifact Content**

##### Description

=====

According to the ICD, the creation of the LSID is under the responsibility of the system issuing the first exchange message. The CS certifies that the first messages that start a communication flow will have a unique LSID, but this is not the case for messages received from the NS.

One of the possible functions of the CS could be to verify the uniqueness of the LSID in messages initiated by a national system. From a technical point of view, in principle this check will not be a problem, but it will lead to poor performance, because this check is very time consuming. So we propose to check this at the central part.

Note: If the CS should verify the uniqueness of the LSID, the LSID generation rule must be modified, so that it respects a sequential scheme (diagram).

Actions to be taken:

=====

Add in the document SISII-ICD.doc the following statement to the section "4.3 Logical Session" to the sentence "The determination and uniqueness of the logical session ID, LSID, is the responsibility of the system that issues the first message of the exchange. It is sufficient that this ID is unique only for the appellant."

"The central system will not verify the uniqueness of the logical session ID in messages sent by a national system".

Actions taken:

=====

The SISII-ICD.doc document has been modified:

\* Section 4.3 has been modified:

-> Added the sentence "the central system will not check the required uniqueness of the logical session ID (LSID) in messages sent by a national system."

#### Description

=====

According to the ICD, creation of LSID is under the responsibility of the system that issues the first message of the exchange. The CS is certifying that the first messages starting a communication flow will have a unique LSID, but it's not the case for the NS incoming messages.

One possible function of the CS could be to check the uniqueness of the logical session ID in messages initiated by a national system. From a technical point of view basically this check will be no problem, but it will lead to a poor performance because this check is very time-consuming. So we propose not to check this at the central side.

Remark: If the CS should check the LSID uniqueness, the generation rule of the LSID must be modified, so that it follows a sequential scheme.

Action(s) To Be Taken:

=====

Add the following statement in section "4.3 Logical Session" to the sentence "The determination and the uniqueness of the logical session ID is under the responsibility of the system that issues the first message of the exchange. It is sufficient that this ID is unique for the caller only." in the document SISII-ICD.doc: "The central system will not check the required uniqueness of the logical session ID in messages sent by a national system

Action(s) taken:

=====

The document SISII-ICD.doc has been changed:

\* Section 4.3 has been modified:

--> Added the sentence "The central system will not check the required uniqueness of the logical session ID in messages sent by a national system."

### SIC-1719 Renaming of the ICD Business Rules document

#### attribute

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	Documentation requirements from CS.SIS. SINS does not apply
Analyst	Dana Istratescu
Identifier	451
Request status	unenforceable

#### Artifact Content

Description:

-----

During the CMB on February 25, 2010, it was found that the business rules document in the ICD is actually just a view of the business rules that are in the DTS.  
This view is held from an operative point of view while in DTS it is from a contractual point of view.  
To avoid confusion it was suggested to rename the business rule document to ICD;

Action to be taken:

-----  
Rename the business rule document in the ICD from  
SISII-Business\_Rules.doc  
to:  
sisii-ICD-View-Business\_Rules.doc  
Actions taken:

Description:

-----  
During the CMB of 25 February 2010 it was noted that the business rule document in the ICD is actually only a view of the structural business rules which are in the DTS.  
This view is apprehended from an operational point of view while in the DTS it is from a contractual point of view.  
To avoid confusion it was suggested to rename the business rule document in the ICD;

Action(s) To Be Taken:

-----  
Rename the business rule document in the ICD from  
SISII-Business\_Rules.doc  
to:  
sisii-ICD-View-Business\_Rules.doc  
Action(s) Taken:

## **SIC-1708 Differences between DTS and ICD**

**attribute**

Attribute	Value
Artifact type	Requirement
Comments	Documentation requirements from CS.SIS. SINS does not apply
Priority	-
Analyst	Dana Istratescu
Identifier	452
Request status	unenforceable

**Artifact Content**

Description:

=====

After cross-checking the documents from DTS and ICD, differences were found.  
This is the reason why this task was created.  
Differences must be analyzed by the analysis team.  
This SIC is only a cumulative task for several others dealing with the same subject - see sub-tasks.  
Actions to be taken:

=====

When differences are found:  
\* Create a sub-task to this task  
\* Parse sub-task:  
- Add a comment to the subtask  
- If the DTS needs to be modified, create a SAN  
- If the ICD must be modified, create a SIC  
- If the implementation needs to be modified, create a TCS (to be checked with Olivier and Noel)  
- If nothing needs to be changed, close the sub-activity  
Action taken:

=====

The tasks described in "Actions to be taken" have been carried out accordingly.

Description:

=====

During the cross-check of documents from DTS and ICD, differences are found.  
This is the reason why this task has been created.  
Each difference must be analyzed by the Analysis Team.  
This SIC is just an accumulative task for a few others which deal with the same topic - see Sub-Tasks.  
Action(s) To Be Taken:

=====

When a difference is found:  
\* Create a sub-task to this task  
\* Analyze the sub-task:  
- Add a comment to the sub-task  
- If DTS must be amended, create a SAN  
- If ICD must be amended, create a SIC  
- If implementation must be amended, create a TCS (to be checked with Olivier and Noel)  
- If nothing must be changed, close the sub-task  
Action(s) Taken:

=====

The tasks described under "Action(s) To Be Taken" have been done accordingly.

**SIC-1703 Search criteria in DC**

**attribute**

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	The document presents examples and scenarios of

	data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Analyst	Dana Istratescu
Identifier	453
Request status	unenforceable

### Artifact Content

#### Description:

=====

The MS needed a clarification in the ICD regarding the DC criteria and the entities considered in the campaign.

In BTSIS-659 a clarification was delivered in Excel format.

The Ministry of Health expressed its desire to have this clarification in order to add ICD-2055 to BTSIS.

During the CMB the following additional simplifications regarding entities and TypesOfRecord were agreed upon.

#### Action to be taken:

=====

SISII-ICD\_DataConsistency\_AdditionalNotes.doc must be modified with the attached file.

#### Action taken:

=====

The document SISII-ICD\_DataConsistency\_AdditionalNotes.doc has been modified:

-> Added chapter 7. Note 5: EXPLANATION OF DC QUALIFIER MODIFIERS

#### Description:

=====

MS needed a clarification in the ICD about DC criteria and entities to take into account in the campaign.

In BTSIS-659 a clarification has been provided in an excel format.

MS expressed the will to have this clarification added to the ICD in BTSIS-2055.

During CMB the following further simplification with respect to Entities and TypesOfRecord was agreed upon.

#### Action(s) To Be Taken:

=====

SISII-ICD\_DataConsistency\_AdditionalNotes.doc must be amended with the attached file.

#### Action(s) Taken:

=====

The document SISII-ICD\_DataConsistency\_AdditionalNotes.doc has been modified:

--> Added the chapter 7. NOTE 5: EXPLANATION OF DC QUALIFIER MODIFIERS

**SIC-1693 DIS: CB-S-so29-QC-018\_1.00\_DIS\_SISII\_ICD\_DC\_AdditionalNotes2.21.xls**

**attribute**

Attribute	Value
Artifact type	Requirement
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Priority	-
Analyst	Dana Istratescu
Identifier	454
Request status	unenforceable

**Artifact Content**

Description:

=====

DIS regarding SISII-ICD\_DataConsistency\_AdditionalNotes.doc  
CB-S-so29-QC-018\_1.00\_DIS\_SISII\_ICD\_DC\_AdditionalNotes2.21.xls

Action to be taken:

=====

DIS, CB-S-so29-QC-018\_1.00\_DIS\_SISII\_ICD\_DC\_AdditionalNotes2.21.xls should be considered in SISII-ICD\_DataConsistency\_AdditionalNotes.doc.

Action taken:

=====

Applied comments.

Description:

=====

DIS on SISII-ICD\_DataConsistency\_AdditionalNotes.doc  
CB-S-so29-QC-018\_1.00\_DIS\_SISII\_ICD\_DC\_AdditionalNotes2.21.xls

Action(s) To Be Taken:

=====

DIS, CB-S-so29-QC-018\_1.00\_DIS\_SISII\_ICD\_DC\_AdditionalNotes2.21.xls must be taken into account in the SISII-ICD\_DataConsistency\_AdditionalNotes.doc.

Action(s) Taken:

=====

Comments applied.

## SIC-1677 Reporting of POC changes in code tables

### attribute

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	In the case of SINS, it does not apply. SINS processes all Broadcasts provided through the SIB - Copia Nationala request
Analyst	Andrei Popovich
Identifier	455
Request status	unenforceable

### Artifact Content

#### Description:

=====

The scope of the POC Improvement requested a change relative to the way Broadcasts are handled in order to increase the overall performance of the Schengen system. This improvement is achieved by fully parallelizing the message flows. This new parallel processing of Broadcasts is no longer based on blocks, but contains the signaling in its entirety (Textual Broadcast).

In fact, a broadcast will therefore fully contain the text data of the signal, together with its flag, metadata, the potential BinaryID, the hash code for each binary and references to potentially affected links.

The binaries are transmitted separately.

Broadcast must be acknowledged (positive, negative or deprecated). If the broadcast is broadcast with "negative" it will be rejected and re-sent by the central system within a maximum number of retries. Once this maximum has been reached, the broadcast will be permanently rejected, with the appropriate error and alarm.

#### Actions to be taken:

=====

In SISII-ICD\_CodeTables.xls

Error code 6605 must be added, for Broadcast Respins (Broadcast Rejected)

Warning code 6601 must be added for Broadcast Discarded.

#### Actions taken:

=====

Updated SISII-ICD\_CodeTables.xls

In the ST204\_ErrorCode code table, the following entry has been added:

6605 / 01 / Broadcast Rejected because the database is not in a consistent state. (Provided by the National System) / 20060101 / 0004.01 / 0001.01

In the ST205\_WarningCode code table, the following entry has been added:

6601 / 01 / Broadcast deprecated due to outdated message / 20060101



Description:

=====

The scope of POC Improvement requests a change in the way broadcasts are handled in order to increase the overall performance of the Schengen system. This improvement is achieved through full parallelization of the message flow. This new parallel processing of broadcasts is no more block based but contains the full alert (textual broadcast).

In fact, a broadcast will therefore contain the full textual data of the alert along with its flag, MetaData, potentially BinaryID the hash of each binary and the references to potentially affected links.

The binaries are broadcast separately.

The broadcast must be acknowledged (positively, negatively or discarded). If the broadcast is broadcast negatively it will be rejected and resend by the central system up to a maximum retry. Once that maximum reached it will be rejected for good with the adequate error and alarm.

Action(s) To Be Taken:

=====

In SISII-ICD\_CodeTables.xls

Error code 6605 must be added, for Broadcast Rejected

Warning code 6601 must be added, for Broadcast Discarded

Action(s) Taken:

=====

SISII-ICD\_CodeTables.xls updated

In the code table ST204\_ErrorCode, the following entry has been added:

6605 / 01 / Broadcast Rejected because the database is not in a consistent state. (Provided by the National System) / 20060101 / 0004.01 / 0001.01

In the code table ST205\_WarningCode, the following entry has been added:

6601 / 01 / Broadcast Discarded because message outdated. / 20060101

**SIC-1672 Creation of a Broadcast retransmission mechanism after a negative Broadcast (new error and warning codes)**

**attribute**

Attribute	Value
Artifact type	Requirement
Comments	The broadcast is transmitted to SINS by SIB-STERIA. The requirement does not impact SINS.
Priority	-
Analyst	Andrei Popovich
Identifier	456
Request status	unenforceable

**Artifact Content**

Description:

=====

The scope of the broadcast improvement request is a change in the way broadcasts are handled in order to increase the overall performance of the Schengen system. This improvement is achieved by fully parallelizing the message flow. This new parallel processing of broadcasts is no longer per block, but contains the complete signaling, together with the broadcast associated with it (textual broadcast). Correlated binaries are broadcast separately with their own UBNs (different from UBN text broadcasts) after positive confirmation of the text broadcast.

The positive confirmation consists of two parts, applied broadcast or deprecated broadcast, meaning that it is exceeded.

A broadcast can also be recognized negatively. This means that it is rejected due to the inconsistent state of the National Copy and the Central System is waiting to send that broadcast again later.

Actions to be taken:

=====

SISII-ICD\_BusinessRulesMapping.xls must be updated

SISII-ICD.doc must be updated

SISII-ICD\_Communication\_Use\_Cases.xls must be updated

Actions taken:

=====

Updated SISII-ICD\_BusinessRulesMapping.xls

-----

Broadcast\_Notification sheet

Add bug: BROADCAST\_REJECTED 6605.01

Add warning: BROADCAST\_DISCARDED 6601.01

SISII-ICD.doc updated

-----

5.2.8-Broadcast communication - Use case

-----

Redo by section with the intention of describing the different possibilities for an NS to respond to a broadcast (confirmation, rejection and decommissioning).

Figure 34 - NS processes a broadcast and edits its national copy

Updated diagram: Add Apply, Deprecate or Reject as alternatives.

Figure 37 - CS processes a broadcast response.

Updated diagram: Resend rejected broadcast.

5.3.5.1-When is the technical protocol used?

-----

Reduce the section to essential, modify some statements and move them 6.1.8.4.1. for a detailed explanation of the different possibilities for an NS to respond to a broadcast (Acknowledge, Reject and Deprecate).

6.1.8.4.1 <<OPERATION>> BROADCAST

-----

Some changes have taken place in this chapter regarding the Confirmation, Rejection or Decommissioning of broadcasts on the NS side and the mechanism of retrying to send a broadcast repeatedly.

6.1.6.3 Time-outs

-----

The following sentence has been modified from

"In case of a broadcast response timeout, NS may then consider a partial Data Consistency process." to

"In case of a broadcast response timeout, CS issues an alarm to administrators, logs an error to Broadcast, and NS can then consider a partial Data Consistency process."

6.1.8.4.1.2 Sequence diagram

-----  
Updated diagram: Added confirm, reject or deprecate + resubmit mechanism.  
SISII-ICD\_Communication\_Use\_Cases.xls  
-----

BCAST-NSProcessing sheet

Addition of

The database is not in a consistent state: Broadcast Rejected / AF PROCESS / Set RCI value in response  
(Return Code = 6605) Flow continues / < Functional Error > / 1

Message is expired (UBN too small): Broadcast taken out of use / BF PROCESS / Fix RCI value in  
response (Warning Code = 6601) Flow ends / /

Description:

=====

The scope of broadcast improvement request is a change in the way broadcasts are handled in order to increase the overall performance of the Schengen system. This improvement is achieved through full parallelization of the message flow. This new parallel processing of broadcasts is no more block based but contains the full alert along with its associated broadcast (textual broadcast). Related binaries are broadcast separately with their own UBN (different from the textual broadcast UBN) after the positive acknowledgment of the textual broadcast.

Positive acknowledgment consistent of two, broadcast applied or broadcast discarded meaning that it is outdated.

A broadcast can also be acknowledged negatively. It means that it is rejected because of the inconsistent state of the National Copy and the Central System is expected to send that broadcast back later.

Action(s) To Be Taken:

=====

SISII-ICD\_BusinessRulesMapping.xls must be updated  
SISII-ICD.doc must be updated  
SISII-ICD\_Communication\_Use\_Cases.xls must be updated  
Action(s) Taken:

=====

SISII-ICD\_BusinessRulesMapping.xls updated  
-----

Sheet Broadcast\_Notification

Addition of error: BROADCAST\_REJECTED 6605.01

Addition of warning: BROADCAST\_DISCARDED 6601.01

SISII-ICD.doc updated  
-----

## 5.2.8-Broadcast Communication Use Cases

-----

Rework on the section with the intention to describe the different possibilities for a NS to respond to a broadcast (acknowledgement, rejection and discarding).

Figure 34 - NS processes a broadcast and edits its national copy

Diagram updated: Add Apply, Discard and Reject as alternatives.

Figure 37 - CS processes broadcast response

Diagram updated: Resend broadcast rejected.

5.3.5.1-When is the technical protocol used?  
-----

Reduce the section to the essential, change some statements and move them to 6.1.8.4.1. for a detailed explanation of the different possibilities for a NS to respond to a broadcast (acknowledgment, rejection and discarding).

#### 6.1.8.4.1 <<OPERATION>> BROADCAST

Some modifications have taken place at this chapter regarding the acknowledgment, rejection or discarding of broadcasts at NS-side and the retry mechanism of sending a broadcast repeatedly.

#### 6.1.6.3 Time-outs

The following sentence has been changed from

"In case of a time-out for the broadcast response, the NS may then consider a partial Data Consistency process."

That

"In case of a time-out for the Broadcast Response, the CS raises an alarm for the administrators, records an error for the Broadcast and the NS may then consider a partial Data Consistency process."

#### 6.1.8.4.1.2 Sequence diagram

Updated diagram: Adding of acknowledgment, rejection or discarding of broadcasts + re-sending mechanism

SISII-ICD\_Communication\_Use\_Cases.xls

Sheet BCAST-NSProcessing

Addition of

Database not in a consistent state: Broadcast Rejected / AF PROCESS / Set RCI in Response (Return Code = 6605) The flow continues / <Functional Error> / 1

Message is outdated (UBN too low): Broadcast Discarded / BF PROCESS / Set RCI in Response (Warning Code = 6601) The flow ends / /

**SIC-1664 No Broadcast will be sent to Member States without access rights to the Flag, if the CUD operation concerns only this Flag.**

attribute

Attribute	Value
Artifact type	Requirement
Comments	This business rule will not be applied in SINS. It is valid for the National Copy and is implemented by CS.SIS
Priority	-
Analyst	Andrei Popovich
Identifier	457
Request status	unenforceable

**Artifact Content**

Description:

=====

The scope of this improvement request is a change in the way broadcasts are handled in order to increase the overall performance of the Schengen system. This improvement is achieved by fully parallelizing the message flow. This involves broadcasting flags, along with their associated flags.

Therefore, no Broadcast will be sent to the MS with any access rights to this flag, if the CUD only refers to this flag.

Actions to be taken:

=====

Business rule SIS-R0617 must be modified: There will be no Broadcast to the MS, without the right to access the flag if the CUD only refers to this flag.

Actions taken:

=====

sisii-business\_rules.doc updated

Adding the following business rules:

-----

SIS-R0617 Broadcasting: broadcast recipients of a flag

Status: Int.Approved ..

Package: Broadcasting

The Broadcast beneficiaries of a Flag are the users who have the right to read access to the flag and who are Broadcast beneficiaries of the associated signals.

Broadcast signaling recipients without read access to the Flag will not receive a Broadcast for Flag-only operations.

Description:

=====

The scope of this improvement request is a change in the way broadcasts are handled in order to increase the overall performance of the Schengen system. This improvement is achieved through full parallelization of the message flow. This involves broadcasting alerts along with their related flags.

Therefore, no Broadcast will be sent to MS with no access right to this flag if the CUD concerns only this flag.

Action(s) To Be Taken:

=====

The business rule SIS-R0617 must be amended: No Broadcast to MS without access right to this flag if the CUD concerns only this flag.

Action(s) Taken:

=====

sisii-business\_rules.doc updated

Addition of the following Business Rule:

-----

SIS-R0617 Broadcasting: broadcast recipients of a flag

Status: Int.Approved..

Package: Broadcasting

The broadcast recipients of a flag are the Users who have read access to the flag and who are broadcast recipients of the associated alert.

Broadcast recipients of the alert without read access to the flag will not receive a broadcast for operations concerning only the flag.

## SIC-1659 Broadcast Parallelization for WP

### attribute

Attribute	Value
Artifact type	Requirement
Comments	Documentation requirements from CS.SIS. SINS does not apply
Priority	-
Analyst	Dana Istratescu
Identifier	458
Request status	unenforceable

### Artifact Content

## SIC-1649 Modification of the hash calculation (for Link, Broadcast with or without Flag)

### attribute

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	The Romanian national authorities are provided with documents of hash code calculation examples in the context of SINS implementation.
Analyst	Andrei Popovich
Identifier	459
Request status	unenforceable

### Artifact Content

#### Description:

=====

#### POC Broadcast

#### Actions to be taken:

=====

#### Update hash calculation documentation:

The SISII-ExplanatoryNote-HashValue.doc document and the hash samples must be updated.

#### Actions taken:

=====

SISII-ExplanatoryNote-HashValue.doc has been modified

- 1.2.1 APPLICABLE DOCUMENTS updated: [ICD] 3.0, [DC] 2.25
- Figure 2 and 3 updated with XSD 3.0
- For each alert type, "Fields", "Value", "HashValue" updated for XSD 3.0 (binary metadata with HashBinary and Signaling + Flags)

CSBroadcastAircraft.xml has been modified

- Binary metadata with HashBinary instead of binary data

CSBroadcastAircraft\_Binary.xml has been added

CSBroadcastPerson.xml has been modified

- Maximum alert broadcast (Tag "addition" removed)

CSBroadcastSecurity.xml has been modified

- Full alert broadcast (Tag "addition" removed)
  - Binary metadata with HashBinary instead of binary data
- CSBroadcastSecurity\_Binary.xml has been added

Description:

=====

POC Broadcast

Action(s) To Be Taken:

=====

Update the documentation on the hash calculation:

SISII-ExplanatoryNote-HashValue.doc and hash samples must be updated.

Action(s) Taken:

=====

SISII-ExplanatoryNote-HashValue.doc amended

- 1.2.1 APPLICABLE DOCUMENTS updated: [ICD] 3.0, [DC] 2.25
- Figures 2 and 3 updated with XSD 3.0
- For each type of alert, "Fields", "Values", "HashValue" updated for XSD 3.0 (Binary MetaData with HashBinary and Alert + Flags)

CSBroadcastAircraft.xml amended

- Binary MetaData with HashBinary instead of Binary data

CSBroadcastAircraft\_Binary.xml added

CSBroadcastPerson.xml amended

- Broadcast of full alert (Tag "add" removed)

CSBroadcastSecurity.xml amended

- Broadcast of full alert (Tag "add" removed)
  - Binary MetaData with HashBinary instead of Binary data
- CSBroadcastSecurity\_Binary.xml added

**SIC-1613 Unclear statement about how LinkIDs should be sorted in the DataConsistency document Additional notes.**

attribute

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	The document presents

	examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Analyst	Caesar Ivana
Identifier	460
Request status	unenforceable

### Artifact Content

#### Description:

=====

This specification can be found in DataConsistency additional notes:

The order of identifications is defined using the following rules:

- Links ordered by LinkID
- Signals ordered by SchengenID (compressed) in regularly ordered ASCII
- Flags ordered using the concatenation of SchengenID (compressed) and issuing country (xxxx.xx), in regularly ordered ASCII

in this current situation, it is unclear how the Links should be ordered. It seems that with the current implementation, the Links of related messages in DC (Data Consistency) are sorted in numerical order, but some MS-Member States may assume that the LinkIDs are sorted like the rest of the IDs (ASCII ordering)

Action to follow:

=====

Revising the sentence "Links ordered by LinkID" by adding the additional text as "in numerical order"

Action followed:

=====

SISII-ICD\_DataConsistency\_AdditionalNotes.doc modified:

In the section "6. NOTE 5: ENTITY ID ORDERING" the sentence

"Links ordered by LinkID" was changed to "Links ordered by LinkID, in numerical order".

#### Description:

=====

This statement can be found in DataConsistency additional notes:

The order on identifiers is defined using the following rules:

- Links ordered by LinkID
- Alerts ordered by (compressed) SchengenID in regular ASCII ordering
- Flags ordered by using the concatenation of the (compressed) SchengenID and the RequestingCountry (xxxx.xx), in regular ASCII ordering

at this current state it is unclear how the Links should be ordered. It seems that by the current implementation, Links in DC related messages are sorted like a number, but some MS may assume that LinkIDs are sorted like the rest of the IDs (ASCII ordering)



Action(s) To Be Taken:

=====

Revise the "Links ordered by LinkID" sentence by adding additional sentence like "in numerical ordering"

Action(s) Taken:

=====

SISII-ICD\_DataConsistency\_AdditionalNotes.doc updated:

In section "6. NOTE 5: ENTITY ID ORDERING" the sentence

"Links ordered by LinkID" has been changed to "Links ordered by LinkID, in numerical ordering".

**SIC-1598 Export in XML format of allowed characters**

**attribute**

Attribute	Value
Artifact type	Requirement
Comments	Documentation requirements from CS.SIS. SINS does not apply
Priority	-
Analyst	Caesar Ivana
Identifier	461
Request status	unenforceable

**Artifact Content**

Description:

=====

Export in XML format the list of allowed characters.

Action to follow:

=====

Export of the list of allowed characters in xml format.

Action followed:

=====

List of allowed characters exported in xml format.

listoffollowedcharacters.xml

Description:

=====

Export in XML format the list of allowed characters.

Action(s) To Be Taken:

=====

Export of the list of allowed characters in xml format.

Action(s) Taken:

=====

List of allowed characters exported in xml format.

listoffollowedcharacters.xml

## SIC-1589 Further clarification of the concatenated string construction used for hash calculation

### attribute

Attribute	Value
Artifact type	Requirement
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Priority	-
Analyst	Andrei Popovich
Identifier	462
Request status	unenforceable

### Artifact Content

#### Description:

=====

#### Clarification:

=> The string is built from the data from the local database and mapped onto the structure defined in XSD data types.

=> The data used to calculate the hash must be the same data as those received from CS. If the data is transformed in the database at the time of storage, the reverse of the transformation will be applied to the concatenation of the string. For example, if a null value in a number attribute was converted to 0 in the database. The value used for concatenation will be null and not 0.

#### Action to follow:

=====

Modified section 2.2 of appendix SISII-ICD\_DataConsistency\_AdditionalNotes.doc as follows:

<<

#### Important notes:

\* The string used to calculate the hash sum consists of the input data from the local or central database. In order to build an unambiguous string, the data structure is mapped to the structure defined in the XSD data types.

\* The data used for the hash calculation will be the same as the data that is received from the CS. If the data is transformed in the database during storage, the reverse transformation is applied when the string is concatenated. For example, if a null value in a number attribute was converted to 0 in the database, the value used for concatenation will be null and not 0.

>>

Description:

=====

Clarify that:

=> The string is built from the data coming from the local database and mapped to the structure defined in the XSD data types.

=> The data used for calculating the hash shall be the same data as that received from the CS. If data are transformed in the database at the time of storage, the reverse transformation shall be applied when concatenating the string. For example, if a null Value in an attribute number was transformed into 0 in the database. The Value used for the concatenation shall be null and not 0.

Action(s) Taken:

=====

Updated section 2.2 of the appendix SISII-ICD\_DataConsistency\_AdditionalNotes.doc as follows:

<<

Important remarks:

\* The string used for calculating the hash sum is built from data coming from the central or local databases. In order to build an unambiguous string, the data structure is mapped to the structure defined in the XSD data types.

\* The data used for calculating the hash shall be the same data as that received from the CS. If data are transformed in the database at the time of storage, the reverse transformation shall be applied when concatenating the string. For example, if a null Value in an attribute number was transformed into 0 in the database. The Value used for the concatenation shall be null and not 0.

>>

**SIC-1579 [BTSIS-1569] ICD 2.5.3 conversion rules for AliasNumber cannot be used**

**attribute**

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Analyst	Caesar Ivana
Identifier	463
Request status	unenforceable

**Artifact Content**

Description:

=====

Additional data consistency notes define a rule for converting alias number (as number) to string as follows:

<<

Characters 21 to 24: content of SchengenID. nationalIDNumber.aliasNumber, aligned to the left, filling in blanks.

>>

However, in ICD 2.5.3, the alias pattern changed to "\d{4}". This means four digits, no blank spaces are allowed.

Action to follow:

=====

SISII-ICD\_DataConsistency\_AdditionalNotes.doc must be modified with new formatting rules corresponding to the new scheme.

Action followed:

=====

Modification of SISII-ICD\_DataConsistency\_AdditionalNotes.doc to section 2.1 as follows:

<<

Characters from 21 to 24: contain the SchengenID. nationalIDNumber.aliasNumber, four digits, no space.

>>

\* CommonDataType.xsd has been modified:

--> Documentation change for CompressedSchengenIDType

Description:

=====

The data consistency additional notes define a rule for converting alias number (as number) to string is

<<

Characters 21 to 24: content of SchengenID. nationalIDNumber.aliasNumber, left aligned, blanks completion.

>>

However in ICD 2.5.3, the pattern for alias changed to "\d{4}". That means four digits no blanks allowed.

Action(s) To Be Taken:

=====

SISII-ICD\_DataConsistency\_AdditionalNotes.doc should be updated with new formatting rules to match the new schema.

Action(s) Taken:

=====

Updated SISII-ICD\_DataConsistency\_AdditionalNotes.doc at section 2.1 as follows:

<<

Characters 21 to 24: content of SchengenID. nationalIDNumber.aliasNumber, four digits, no blank.

>>

\* CommonDataType.xsd has been changed:

--> Change the documentation of the CompressedSchengenIDType

**SIC-1567 SISII-ICD\_CodeTables.xls ST104\_REASONFORREQUEST: 'Discrete' misspelled in text of 2 labels**

attribute

Attribute	Value
-----------	-------

Artifact type	Requirement
Comments	This nomenclature can be found in SINS in Romanian. The spelling mistake is not found
Priority	-
Analyst	Caesar Ivana
Identifier	464
Request status	unenforceable

### Artifact Content

#### Description:

=====

In the table ST104\_REASONFORREQUEST the word 'Discrete' is written incorrectly as 'discreet' in the text of two labels, for codes 0010 and 0012

Action to follow:

=====

The ST104\_REASONFORREQUEST table must be corrected in the ICD Document CodeTables.xls by replacing the word 'discrete' with 'discrete'.

Action followed:

=====

In the SISII-ICD\_CodeTables.xls document regarding the ST104\_REASONFORREQUEST worksheet, the following records have been modified:

0006 / Person for discrete verification - Art 36 (2) SIS II Decision

0008 / Person for discrete verification for national security - Art 36 (3) SIS II Decision

0010 / Object (vehicle, boat, aircraft or container) for discrete verification - Art 36 (2) SIS II Decision

0012 / Object (vehicle, boat, aircraft or container) for discrete verification for national security - Art 36 (3) SIS II Decision

#### Description:

=====

In the Table ST104\_REASONFORREQUEST the word 'Discrete' misspelled as 'discreet' in the text of 2 labels, for codes 0010 and 0012

Action(s) To Be Taken:

=====

The Table ST104\_REASONFORREQUEST must be corrected in the ICD Document CodeTables.xls by replacing the word 'discreet' by 'discrete'.

Action(s) Taken:

=====

In the document SISII-ICD\_CodeTables.xls concerning the worksheet ST104\_REASONFORREQUEST, the following entries have been updated:

0006 / Person for discrete check - Art 36 (2) SIS II Decision

0008 / Person for discrete check for national security - Art 36 (3) SIS II Decision

0010 / Object (vehicle, boat, aircraft or container) for discrete check - Art 36 (2) SIS II Decision

0012 / Object (vehicle, boat, aircraft or container) for discrete check for national security - Art 36 (3) SIS

## II Decision

### **SIC-1564 Broadcast Converter: Code tables ST211\_TechnicalUser, ST208\_CONTRACT, ST209\_OPERATION need to be updated**

#### **attribute**

Attribute	Value
Artifact type	Requirement
Comments	This service is not used directly by SINS. All Broadcasts related to Romanian signals are received through the SIB-STERIA solution.
Priority	-
Analyst	Caesar Ivana
Identifier	465
Request status	unenforceable

#### **Artifact Content**

##### Description:

=====

For Broadcast Converter, a new TechnicalUser representing this converter must be added in CodeTable ST211TechnicalUser

Moreover, a new contract and a new operation must be added for this process.

##### Action to follow:

=====

In ST211\_TechnicalUser, the following record must be added:

CODE = 0999

VERSION = 02

LABEL = BroadcastConverter

VALID FROM = 20060602

In ST209\_Operation, the following record must be added:

CODE = 0045

VERSION = 01

LABEL = BroadcastConverter

VALID FROM = 20060101

In ST208\_Contract, the following record must be added:

CODE = 0010

VERSION = 01

LABEL = Broadcast Converter

VALID FROM = 20060101

##### Action followed:

=====

In the document SISII\_ICD\_CodeTables,

In the ST211\_TechnicalUser table, the following record was added:

CODE = 0999

VERSION = 02

LABEL = CONVERTER

VALID FROM = 20060602

In the ST209\_Operation table, the following record was added:

CODE = 0045

VERSION = 01

CONTRACT = 0010.01

LABEL = BroadcastConverter

VALID FROM = 20060101

In the ST208\_Contract table, the following record was added:

CODE = 0010

VERSION = 01

LABEL = Broadcast Converter

VALID FROM = 20060101

Description:

=====

For the Broadcast Converter, a new TechnicalUser representing this converter must be added in the CodeTable ST211TechnicalUser

Moreover, a new contract and a new operation must be added for this process.

Action(s) To Be Taken:

=====

In ST211\_TechnicalUser, the following entry must be added:

CODE = 0999

VERSION = 02

LABEL = BroadcastConverter

VALID FROM = 20060602

In ST209\_Operation, the following entry must be added:

CODE = 0045

VERSION = 01

LABEL = BroadcastConverter

VALID FROM = 20060101

In ST208\_Contract, the following entry must be added:

CODE = 0010

VERSION = 01

LABEL = Broadcast Converter

VALID FROM = 20060101

Action(s) Taken:

=====

In the Document SISII\_ICD\_CodeTables,

In the code table ST211\_TechnicalUser, the following entry has been added:

CODE = 0999

VERSION = 02

LABEL = CONVERTER

VALID FROM = 20060602

In the code table ST209\_Operation, the following entry has been added:

CODE = 0045

VERSION = 01

CONTRACT = 0010.01

LABEL = BroadcastConverter

VALID FROM = 20060101

In the code table ST208\_Contract, the following entry has been added:

CODE = 0010

VERSION = 01

LABEL = Broadcast Converter

VALID FROM = 20060101

### SIC-1562 Reserved XML characters used for hash calculation

#### attribute

Attribute	Value
Artifact type	Requirement
Priority	-
Comments	The document presents examples and scenarios of data consistent use. In the case of SINS, there is a document in this sense that will be updated depending on the changes made to the functionalities of checking and restoring consistent data.
Analyst	Caesar Ivana
Identifier	466
Request status	unenforceable

#### Artifact Content

##### Description:

=====

The XML specifications mention 5 characters that must be protected:

- & represents an ampersand (&)
- < represents the less than sign (<)
- > represents the greater than sign (>)
- " represents double quotes (")
- ' represents an apostrophe (')

To protect them, there are at least three ways the system can use:

- includes the entire value between these tags "<![CDATA[" and "]">"
- using the code with & (eg: >)

In the ICD it is not clearly defined which value we use (it refers to the XML content but I think it is the unprotected character string that will be used).

Example:



=====

Signaling with a value "One 'Big T' Two" CSBroadcast contains "One 'Big T' Two" (or <![CDATA[One 'Big T' Two]]>)

With which value should the hash be calculated: "One 'Big T' Two", "One 'Big T' Two" or "<![CDATA[One 'Big T' Two]]>"?

Action to follow:

=====

Adding a precision in the document SISII-ICD\_DataConsistency\_AdditionalNotes.doc at section <2.2: Important remarks> that the string used to calculate the hash sum will be made up of simple strings stored in the database.

Action followed:

=====

Adding the following comments formulated in section 2.2:

<<

The string used to calculate the hash sum will consist of simple strings stored in the database and are not omitted as in XML messages. For example, the strings "One 'Big T' Two" will be converted to "One 'Big T' Two" or "<![CDATA[One 'Big T' Two]]>" to ensure the validity of the XML message. However, the value "One 'Big T' Two" will be used to calculate the hash sum.

>>

Add the word <from> in the first important observation.

Description:

=====

XML specification is specifying 5 characters that need to be protected :

- & refers to an ampersand (&)
- < refers to a less-than symbol (<)
- > refers to a greater-than symbol (>)
- " refers to a double-quote mark (")
- ' refers to an apostrophe (')

To protect them, there are at least three ways that the system can use:

- include the whole Value between these tags "<![CDATA[" and "]]>"
- use the code with & (eg: >)

The ICD is not clearly defining which Value we have to use (it refers to XML content but I guess it is the string without protection that shall be used).

Example:

=====

Alert with a Value "One 'Big T' Two" the CSBroadcast contains "One 'Big T' Two" (or maybe <![CDATA[One 'Big T' Two]]>)

With which Value the hash has to be calculated : "One 'Big T' Two", "One 'Big T' Two" or "<![CDATA[One 'Big T' Two]]>"?

Action(s) To Be Taken:

=====

Add a precision in the document SISII-ICD\_DataConsistency\_AdditionalNotes.doc at section <2.2: Important remarks> that the string used for calculating the hash sum shall be plain strings as stored in the DB.

Action(s) Taken:

=====

Added the following to the remarks formulated at section 2.2:

<<

The string used for calculating the hash sum shall be plain strings as stored in a database and not escaped as in the XML messages. For example, the strings "One 'Big T' Two" shall be transformed into "One 'Big T' Two" or "<![CDATA[One 'Big T' Two]]>" in order to ensure the validity of the XML message. However, the value "One 'Big T' Two" shall be used for the calculation of the hash sum.

>>

Add the word <from> in the first important remark.