



EUROPEAN CENTRAL BANK

EUROSYSTEM

General Information (Origin of Request)		
<input type="checkbox"/> User Requirements (URD) <input type="checkbox"/> Other User Functional or Technical Documentation (SYS)		
Request raised by: 4CB	Institute: 4CB	Date raised: 20/03/2019
Request title: Alignment of T2S Messages with ISO Maintenance Release 2018 – 2019 and migration to ISO registered versions		Request ref. no: T2S-0713-SYS
Request type: Common		Urgency: Normal
1. Legal/business importance parameter: High	2. Market implementation efforts parameter: High	
3. Operational/Technical risk parameter: High	4. Financial impact parameter: very high	
Requestor Category: 4CB	Status: Allocated to a release	

Reason for change and expected benefits/business motivation:

As part of the overall plan for updates of the ISO messages versions in use in T2S, the implementation of ISO Maintenance Release 2018 – 2019 is required.

Currently, the T2S messages are based on ISO Standards Release 2016/2017. The upgrade to ISO MR 2018-2019 will enable the implementation of some pending T2S change requests (T2S-0544-URD, T2S-0623-SYS) and will also ensure that T2S uses the same message versions as other TARGET services currently under development.

All impacted messages will be migrated, irrespective of the type of change that applies. This also includes the messages that had been excluded from T2S CR-612 to reduce implementation effort, based on the fact that these messages would only have had editorial changes on the datatype names.

Besides the annual maintenance release the 4CB have started with the official ISO registration of the Administration and Reference Data - Party messages used in T2S. Those messages were newly developed by the 4CB for T2S. Besides these messages there were also some T2S messages developed by SWIFT that now have been ISO registered, too.

To ensure the ISO 20022 compatibility it is necessary to migrate the T2S messages to the newly ISO registered message versions. The impacted messages are:

admi.005, admi.006, admi.007, camt.003, camt.004, camt.005, camt.006, camt.009, camt.010, camt.011, camt.012, camt.018, camt.019, camt.024, camt.025, camt.050, camt.051, camt.069, camt.070, camt.071, reda.014, reda.015, reda.016, reda.017, reda.022, reda.031, reda.041, reda.042, reda.043

Besides the changes on the T2S ISO messages there is also the need to update the other ISO-like formats and tools in T2S as the Flat files, DMT files and Securities Valuation flat files. When implementing CR-612 these ISO-like formats in T2S have not been considered and an additional CR-0669 was issued for this alignment.

In order to avoid deviations from the like-for-like approach applicable for Flat files, DMT files and Securities Valuation flat files and to ensure compliance of these formats with ISO Maintenance Releases from 2013 to 2019, these ISO-like formats shall be aligned accordingly.

Description of requested change:

The alignment of the T2S messages with ISO Maintenance Releases 2018 – 2019 and the migration of the T2S messages to the official ISO registered versions lead to several changes on the messages. These high level-changes can be found on the ISO 20022 website. However, not every high-level change on the ISO base message will finally require a change in the T2S customized message. Therefore the detailed description of the updates can be found within the tracking table to be attached to this CR.

As agreed in the CRG meeting in Copenhagen on the 21. May 2019 the following improvements will be considered for this CR:

- Inclusion of clarifications of the different types of changes
- Enhanced readability of the CR attachment
- Consistency in datatype names
- Less revisions of the CR and its attachment
- Changes between non-binding and binding XSDs will be explicitly communicated
- The 4CB will make clear references between the different kind of changes in the main document L2 part of the CR and the annex
- The main document L2 part will not only contain a link to all ISO CRs but will list all relevant ISO CRs for the T2S messages

The full list of changes which were part of the ISO MRs 2018 - 2019 ("ISO CRs") can be found here: http://www.iso20022.org/catalogue_of_change_requests.page

The ISO change requests impacting the T2S customized messages are:

- ISO CR-0744
- ISO CR-0745
- ISO CR-0751
- ISO CR-0691
- ISO CR-0692
- MT CR-001295
- MT-CR-001447
- MT CR-001321
- MT CR-001432

ISO CR-0751 updates the BIC pattern of all BIC datatypes in several base messages. The T2S messages will be migrated to the new BIC datatype but following T2S community agreement the pattern will be customized according to the old pattern definition. Rationale for that decision is that not all ISO registered messages have been migrated to the new BIC yet. The migration to the new BIC pattern will be taken into account with the next T2S ISO maintenance release CR.

With different ISO CRs three new securities transaction type codes have been added (REBL, SWIF, SWIT) and BIYI has changed to BYIY¹. Following the current approach for these codes they will not be removed from the messages and therefore can be used in instruction messages and will also be reported. But without a dedicated T2S CR these codes will not impact the processing of any instructions, i.e. REBL can be used but has no impact until the implementation of T2S CR-623.

For those messages that will be migrated to the ISO registered version one change that applies to all of them is a change in the namespace, as the message name will change. Besides this there are some further changes necessary on the T2S customized messages. These changes will be listed in the annex to this CR.

Furthermore the schema generation of MyStandards will be changed from ISO 20022:2004 to ISO 20022:2013. This change impacts all T2S messages without having impact on the instances or definitions of the schemas.

¹ The CR does not foresee that T2S would internally update the code BIYI to BYIY in instructions received before the deployment week-end. As a result, the T2S behaviour would be as follows:

- 1) After the deployment of R4.2, the instruction that entered T2S prior to migration with the old code BIYI would continue to be processed normally within T2S (it could match and settle, in particular)
- 2) T2S would send sese.024 status updates / sese.025 settlement confirmation containing the (old) BIYI code.
- 3) T2S would report these instructions with the (old) code BIYI in the semt.017 and semt.018 statements.

The messages described in 2) and 3) may be rejected on recipient end, due to failed XML validation (as BIYI would no longer be a valid code according to the message schemas). This can be avoided by cancelling the BIYI instructions and re-instructing with the new code BYIY.

Besides the incorporation of the ISO Maintenance Release and the migration to ISO registered version, the 4CB detected the need to perform some further changes to the T2S messages:

- Removal of Usage Guideline Parameter: As a consequence of the removal of the generator parameter with CR-612 now the usage guideline parameter are to be removed, too. The UG parameter is manipulating the datatype name of those datatypes that are defined with a fixed value within the XSD schema. This change is only relevant for the datatype name, the datatype itself remains unchanged. The new datatype name will have a new suffix indicating that a fixed value has been defined, i.e. *MatchingStatus1Code_fixed* instead of *MatchingStatus1Code*.

Furthermore the fixed values will be defined as a restriction of the datatype instead of a fixed attribute. This is an alignment with the ISO 20022 customization principles as it prevents the usage of empty values.

- OMG-PBR-0019: According to a CRG written procedure on OMG-PBR-0019 it is requested to prevent the usage of leading and trailing slashes as well as double slashes “//” in all Party-Name elements in the sese.023 as this is not compatible with existing ISO15022 Network validation rules. The new pattern will be defined during the technical migration of the sese.023.

- Removal of an obsolete definition in the <Signature> element, i.e. <XML Signature> is to be removed from the T2S customized schema as it does not comply with the ISO definition of the head.001. This change will only have editorial impact on the schema but not on the way the head.001 is to be used.

- During the migration of the head.002 to MyStandards there was the code deleted from the schema that indicates that the exchanged payload within T2S belongs to the ISO 20022 standard family. To ensure that no other value will be used the code “ISO20022” will be added to the element */Xchg/PyldDesc/PyldTpDtIs/Tp*.

The upgrade of messages to ISO MR 2018-2019 is a prerequisite for the implementation of the following T2S-CRs. For these CRs the 4CB has raised dedicated ISO-CRs:

- T2S-0544-URD (ISO-CR-745)
- T2S-0623-SYS (ISO-CR-744)
- T2S-0638-SYS (ISO-CR-658)

According to the CRG decision on 03.09.2019 the removed *SecuritiesSubBalanceType* in the sese.023 will be replaced by both *DeliveringSecuritiesSubBalanceType* and *ReceivingSecuritiesSubBalanceType*. The detailed changes are described in the annex of the CR. In this respect also two new business rules will be implemented to ensure the correct usage of movement type and *SubBalanceType* parameter.

It was also accepted by the CRG that in semt.002 and semt.018 three new elements are required by ECMS. To ensure that ECMS only need to support one schema for each message the following elements will be unpruned:

- Document/SctiesBalCtdyRpt/BalForAcct/AcctBaseCcyAmts/ElgblCollVal/Amt
- /Document/SctiesBalCtdyRpt/BalForAcct/AcctBaseCcyAmts/ElgblCollVal/Sgn
- /Document/SctiesTxPdgRpt/Txs/StsAndRsn/InstrPrcgSts/AckdAccptd/Rsn/Cd/Cd

The alignment of the T2S messages with the ISO Maintenance Releases 2018 - 2019 may lead to changes on the Flat files, DMT files and Securities Valuation flat files.

In order to ensure the like-for-like approach, the updates to be performed in the respective T2S messages shall be implemented for Flat files, DMT files and Securities Valuation flat files.

During the detailed assessment it will be analyzed if there are also changes on the GUI required to ensure the alignment of U2A and A2A.

Submitted annexes / related documents:

See file entitled T2S_0713_SYS_attachment, which includes all the changes to the T2S messages.

The annex shows only the relevant changes for T2S, i.e. all changes that are not applied to the T2S messages are not included as they represent new functionalities for which dedicated CRs are needed.

Furthermore an xls-list including all required changes on the ISO-like formats for which the like-for-like approach to the applicable T2S messages needs to be ensured will be provided if needed.

Statement of Holdings Flat file report	T2S message semt.002
Statement of Transactions Flat file report	T2S message semt.017
Statement of Pending instructions Flat file report	T2S message semt.018
Statement of Pending Intra-Position Movements Flat file report	T2S message semt.034
Statement of Settled Intra-Position Movements Flat file report	T2S message semt.016
DMT specifications for FOP and pending instructions	T2S message sese.023

Proposed wording for the Change request:

A detailed overview of the impacts on the T2S message schema files will be provided in the annex to this Change Request for the start of the detailed assessment.

The annex will list all changes on the T2S messages, i.e.

- New message versions
- All changes in the XSD schemas
- New datatype names
- UDFS updates
- Changes in the ISO-like formats

UDFS:

3.3.8.4 SecuritiesSettlementTransactionInstructionV07 (sese.023.001.07)

Business rules applicable to the schema

MESSAGE ITEM	DATA TYPE/ CODE	BUSINESS RULES
..		
Code Document/SciesSttlmTxInstr/Sttl mTpAndAddtlParams/SciesMvm ntTp	ReceiveDelivery1Code	<u>IIMP149</u> <u>IIMP150</u> IMP081 IIMP082 IIMP128

		IIMP129 MVCP010 MVCV237 MVCV243 MVCV248 MVCV253 MVCV271 MVCV272 MVCV279 MVCV280 MVCV281 MVCV282 MVCV287 MVCV288 MVCV298 MVCV299 MVIC315 MVIC317 MVIC318 MVRR929 MVRR941 MVRR942
..		
Identification Document/SciesSttlmTxInstr/ SttlmParams/DlvrgSciesSubBaT p/Id	Exact4AlphaNumericText	MVRR929 MVRR937 MVRR942 MVRR948 MVRR959 MVRR960 MVRR961 MVRR963 MVRR964 MVRR984 MVRR986 MVRR987
Identification Document/SciesSttlmTxInstr/ SttlmParams/DlvrgSciesSubBaT p	GenericIdentification30	<u>IIMP150</u>
Identification Document/SciesSttlmTxInstr/ SttlmParams/RcvgSciesSubBaT p/Id	<u>Exact4AlphaNumericText</u>	<u>MVRR929</u> <u>MVRR937</u> <u>MVRR948</u> <u>MVRR959</u> <u>MVRR960</u> <u>MVRR961</u> <u>MVRR963</u> <u>MVRR964</u> <u>MVRR984</u> <u>MVRR986</u> <u>MVRR987</u>
Identification Document/SciesSttlmTxInstr/ SttlmParams/RcvgSciesSubBaT p	GenericIdentification30	IIMP149
..		

4.1 Index of Business Rules and Error Codes

Add the new business rules

BR NAME	DESCRIPTION	INBOUND MESSAGE	REPLY MESSAGE	CODE USE	REASON CODE	ERROR TEXT
...
<u>IIMP149</u>	A settlement instruction message stating Movement Type "DELI" can only inform the DeliveringSecuritiesSubBalance Type.	<u>sese.023</u>	<u>sese.024</u>	<Rjctd>	<u>OTHR</u>	A settlement instruction message stating Movement Type "DELI" cannot inform the ReceivingSecuritiesSubBalanceType.
<u>IIMP150</u>	A settlement instruction message stating Movement Type "RECE" can only inform the ReceivingSecuritiesSubBalance Type.	<u>sese.023</u>	<u>sese.024</u>	<Rjctd>	<u>OTHR</u>	A settlement instruction message stating Movement Type "RECE" cannot inform the DeliveringSecuritiesSubBalanceType.

High level description of Impact:

The T2S messages are impacted by the ISO Maintenance Releases 2018 – 2019 and by the ISO registration. The relevant message updates will be reflected in the corresponding UDFS version and in the respective deliveries for message specifications on MyStandards as well as in the ISO-like formats.

Outcome/Decisions:

- *CRG on the 26 April 2019: The CRG has agreed to recommend CR-713 for authorisation by the T2S Steering Level.
- * AMI-SeCo on 6 May 2019: The AMI-SeCo has agreed to the recommendation of the CRG to authorise this Change Request.
- * CSG on 7 May 2019: The CSG has agreed to authorise this Change Request via a written consultation.
- * NECSG on 7 May 2019: The NECSG has agreed to authorise this Change Request via a written consultation.
- * MIB on 17 May 2019: The MIB has authorised this Change Request via a written consultation.
- * PMG on 21 June 2019: The PMG proposed to include this CR in the baseline scope of R4.2
- * OMG 10 September 2019: The OMG identified no operational impact on CR-713.
- * CRG on 23 September 2019: The CRG recommends to the PMG the implementation in T2S R4.2 of the CR
- * OMG on 27 September 2019: The OMG confirmed that there was no operational impact on CR-713.
- * PMG on 27 September 2019: The PMG recommended the inclusion of this CR in R4.2 for approval by the T2S Steering Level
- * NECSG on 7 October 2019: the NECSG approves the allocation of the CR to the scope of R.4.2.
- * CSG on 7 October 2019: the CSG approves the allocation of the CR to the scope of R.4.2
- * MIB on 8 November 2019: The MIB approved of the inclusion of the CR in R4.2.
- * CRG on 30 March 2020: The CRG agreed to the updated documentation of CR-713.
- * CSG on 3 April 2020: The CSG approved the updated CR-713 documentation.
- * NECSG on 3 April 2020: The NECSG approved the updated CR-713 documentation.
- * The CRG agreed to update CR-713 and its attached tracking table, in particular to remove restrictions on various fields of the messages camt.025, head.001, head.002, semt.013 and sese.023.

EUROSYSTEM ANALYSIS – GENERAL INFORMATION

Impact On T2S	Static data management		Interface		
	x	Party data management		Communication	
		Securities data management	x	Outbound processing	
	x	T2S Dedicated Cash account data management	x	Inbound processing	
		Securities account data management			
	x	Rules and parameters data management			
		Settlement		Liquidity management	
	x	Standardisation and preparation to settlement		Outbound Information Management	
		Night-time Settlement		NCB Business Procedures	
		Daytime Recycling and optimisation		Liquidity Operations	
	x	Daytime Validation, provisioning & booking	LCMM		
	x	Auto-collateralisation	x	Instructions validation	
				Status management	
		Operational services		Instruction matching	
		Data Migration		Instructions maintenance	
	x	Scheduling	Statistics, queries reports and archive		
		Billing	x	Report management	
		Operational monitoring		Query management	
			x	Statistical information	
			x	Legal archiving	
		All modules (Infrastructure request)			
		No modules (infrastructure request)			
		Business operational activities			
		Technical operational activities			

Impact on major documentation		
Document	Chapter	Change
Impacted GFS chapter		
Impacted UDFS chapter	Chapter 3.3	Changes outlined in the annex to be considered in the UDFS.
	Chapter 4.1 Index of Business Rules and Error Codes	Add the new business rules
	Chapter 1.3.3 – Access Rights	Inclusion of privileges in table 36 – Settlement Instruction Management: “Use ISO Transaction Code BYIY” “Use ISO Transaction Code SWIT” “Use ISO Transaction Code SWIF” “Use ISO Transaction Code REBL”
	Chapter 1.3.4.2 – Message Subscription Parameter Types	Changes outlined in the Annex to be applied to Table 84 (Mapping between applicable parameter types and message fields)
	Chapter 3 – Catalogue of messages Chapter 4.2 – Index of Status Values and codes	Changes outlined in the Annex to be considered in UDFS.
	3.3.8.4 SecuritiesSettlementTransactionInstructionV07 (sese.023.001.07)	Add new business rules regarding delivering receiving securities sub balance type to business rules table.
	Chapter 2 - Dialogue between T2S and T2S Actors	Update the version of the messages
	Chapter 3 - Catalogue Messages	Changes outlined in the Annex to be considered in UDFS.
Chapter 4: Section 4.1 Index of Business Rules and Error Codes	Amendment of Business Rules using “Use ISO Transaction Code BIYI” into “Use ISO Transaction Code BYIY” Create two new BR for the validation of the privileges for using the new two ISO transaction codes SWIT, SWIF,	
Section 4.2.1 ISO 20022 Codes	Update the code “BIYI” and the description of the code “RVPO” in the following datatypes: SecuritiesTransactionType7Code SecuritiesTransactionType8Code SecuritiesTransactionType9Code SecuritiesTransactionType10Code	
Additional deliveries for	admi.005 admi.006	Update of messages to SR 2019 (see Annex)

Message Specification	admi.007 camt.003 camt.004 camt.005 camt.006 camt.024 camt.025 camt.050 camt.051 camt.052 camt.053 camt.054 camt.069 camt.070 camt.071 camt.009 camt.010 camt.011 camt.012 camt.018 camt.019 head.001 head.002 reda.014 reda.015 reda.016 reda.017 reda.022 reda.026 reda.031 reda.041 reda.042 reda.043 semt.016 semt.018 semt.022 semt.026 semt.027 semt.028 semt.029 semt.034 semt.002 semt.014 semt.015 semt.017 semt.019 semt.031 sese.021 sese.022 sese.023 sese.030 sese.032 sese.020 sese.024 sese.025 sese.028 sese.031	
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UHB	2.2.2.17 Settlement Instruction – Search/List Screen 2.2.2.18 Settlement Instruction - Details Screen 2.2.2.19 Settlement Instruction - New Screen 3.15.1 Creation of a New Settlement Instruction 6.3.3.172 Settlement Instruction - New Screen 6.4.2.175 Settlement Instruction - New Screen	Update the ISO Transaction Code “BYIY” instead of “BIYI”.
Other documentations	Business Rule Mapping Table DMT File format specification: Chapter 3.1.3.3 Pending Instruction:	Business Rule Mapping Table must be updated and the two new business rules must be added Update the code “BIYI” and the description of the code “RVPO”
Links with other requests		
Links	Reference	Title
OVERVIEW OF THE IMPACT OF THE REQUEST ON THE T2S SYSTEM AND ON THE PROJECT		
Summary of functional, development, infrastructure and migration impacts		
<p>Messages: Update of usage guidelines, schemas and UDFS message chapters resulting from changes introduced by the ISO Standards Release 2018-2019 described in the annex have to be implemented along with the update of message examples. ISO transaction code BIYI to change to BYIY, plus new codes SWIT, SWIF and REBL to be included; internal codes and Privilege name to be aligned. Two new business rules regarding the sese.023 delivering/receiving securities sub balance type must be implemented.</p> <p>Main cost drivers:</p> <ul style="list-style-type: none"> - Analysis and update of the message usage guidelines and schemas with the changes introduced by SR 2018-2019 - Listing the changes in detail in the tracking table attached to the CR - Updating the message examples to be compliant with the SR 2019 version of the messages. - Testing the correct message handling and usages and checking the overall compliance with T2S functions. - Testing the overall inbound and outbound communication of A2A and U2A - Non-regression test of all updated messages to be performed 		
Planning for the non-binding and binding schema files:		
Milestone	From - To	Schemas
Delivery of non-binding schemas	30.03. - 25.05.2020	
Batch #1	30.03.2020	sese.023, 024, 025, 032 camt.019 head.001, 002
Batch #2	06.04.2020	, 014, 015 sese.020, 030, 031 reda. 014, 016, 022
Batch #3	13.04.2020	sese.028 semt.002 camt.004, 050, 053

Batch #4	25.05.2020	All remaining messages
Delivery of binding schemas	07.07.2020	
<p>Note: The comparison of all old and new datatypes (names) in the tracking table can only be provided after the message customization has been finalized, which is part of the CR implementation. Before that point in time the comparison would not provide reliable results. The final comparison will be provided mid December 2019.</p> <p>The CSLD and ECMS projects are impacted by this CR. ECMS is directly impacted for messages exchanged between ECMS and T2S (cf. CR-0702) and indirectly for any other messages used by ECMS and its customers (to be managed via message customisation). CSLD impact will be detailed with the DA of the Business Interface CRs for T2S stemming from the CSLD project. The pertinent common schemas have to be defined and approved in the context of these DAs for the T2S CR-705/-706/-0707 which are foreseen for T2S R6.0.</p>		
Summary of project risk		
None		
Security analysis		
No adverse effect identified in security assessment.		



23 August 2019

Cost assessment on Change Requests

T2S-713-SYS – Alignment of T2S Messages with ISO Standards Release 2018 – 2019 and migration to ISO registered versions			
One-off	Assessment costs*		
	- Preliminary	2,000.00	Euro
	- Detailed	10,000.00	Euro
One-off	Development costs	854,015.50	Euro
Annual	Operational costs		
	- Maintenance costs	74,595.88	Euro
	- Running costs	0.00	Euro

*The relevant assessment costs will be charged regardless of whether the CR is implemented (Cf. T2S Framework Agreement, Schedule 7, par. 5.2.3).