

<b>General Information (Origin of Request)</b>		
<input checked="" type="checkbox"/> User Requirements (URD) <input checked="" type="checkbox"/> Other User Functional or Technical Documentation (SYS)		
<b>Request raised by:</b> 4CB	<b>Institute:</b> 4CB	<b>Date raised:</b> 01/10/2014
<b>Request title:</b> Securities quantity's decimals should be consistent with the number of decimals defined by the settlement unit multiple		<b>Request ref. no:</b> T2S 0475 URD
<b>Request type:</b> Common		<b>Urgency:</b> Normal
<b>1. Legal/business importance parameter:</b> Medium	<b>2. Market implementation efforts parameter:</b> Low	
<b>3. Operational/Technical risk parameter:</b> Low	<b>4. Financial impact parameter:</b> Medium	
<b>Requestor Category:</b> 4CB	<b>Status:</b> Authorised at Steering Level	

#### Reason for change and expected benefits/business motivation:

The T2S Settlement module has been designed on the assumption that securities quantity in an instruction cannot have more number of decimals than the decimals defined in the settlement unit multiple (SUM) for the security in T2S Static Data.

A validation in the T2S lifecycle management and matching (LCMM) module currently checks that the securities quantity of an incoming instruction complies with the SUM and therefore, with the number of decimals. There are two exceptions where this validation does not apply: (i) instructions on corporate Actions (CA); and (ii) instructions with securities which have a deviating settlement unit (DSU) defined. In these two exceptions, the number of decimals of a security in an instruction may be higher than the number of decimals used by settlement. If the number of decimals were higher, then T2S would not be able settle such settlement instruction.

In order to avoid this situation, on 24 September 2014, the Change Review Group (CRG) agreed that the Eurosystem should raise a Change Request based on the 4CB's proposal in order to use the SUM to define the number of decimals allowed for any instruction (i.e. CA related and non-CA related instructions) on a given security.

In this respect, when defining the number of decimals of the SUM, the CSD will have to define the maximum number of decimals that they could need in the security lifecycle upfront taking into account the characteristic of the security and foreseen corporate actions.

In addition, the CRG agreed to add the following rules to the Change Request in order to ensure a fully-fledged solution for the handling of number of digits for securities quantities expressed in units:

- limit the number of decimals of the SUM of any security expressed in 'units' to 9; and
- truncate the securities position in all U2A screens, A2A queries and A2A reports when this position has more than 18 significant digits (or 15 significant digits during the coexistence period i.e. in line with the SWIFT definition);
- return an information about oversizing (<sup>1</sup>\*) if the integer part is equal or greater than 10<sup>18</sup> (or 10<sup>15</sup> during the coexistence period).

#### Description of requested change:

This Change Request requires the following four changes:

1. The securities quantity of any settlement instruction and intra-position movement, including corporate actions-related instructions and instructions of a security with a deviating settlement unit, should not have more number of decimals than the number of decimals defined by the settlement unit multiple (SUM) of that security.
2. The format check of SUM should be changed in order to allow a maximum number of 9 decimal positions for securities expressed in 'units'. Therefore, the number of decimals of a securities quantity expressed in 'units' will be limited to 9.
3. The securities positions should be truncated when shown in all relevant U2A screens, or reported in all relevant A2A queries or A2A reports in order to comply with the maximum of 18 characters. During the coexistence period, the truncation will be 15 digits instead of 18.
4. T2S should return an information about oversizing when generating a A2A message or displaying a U2A screen if the integer part of a communicated securities quantity of a security expressed in 'units' is equal or greater

<sup>1</sup> \*information about oversizing will be provided with the display of "999.999" as being described in this change request with this value meaning throughout this document 15 times "9" during the coexistence period and 18 times "9" after.

than  $10^{18}$  (or –for U2A- greater than the number of possible digits to be displayed on the screen). During the coexistence period, the limit will be  $10^{15}$  instead of  $10^{18}$ .

Moreover, the T2S user shall be allowed to request from the T2S Operator the actual value in case of oversizing. A separate change request will be issued for the later version of T2S in order to display such oversizing value directly on the screens.

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**Submitted annexes / related documents:**

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**Proposed wording for the Change request in the URD:**

The proposed changes will be included in URD v5.04

**Multiple or deviating settlement unit check**

<b>Reference ID</b>	T2S.05.100
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T2S shall check against the multiple or deviating settlement unit or nominal. T2S shall not perform this check on some instructions related to corporate actions. Nevertheless, T2S shall always check that the number of decimals in the settlement quantity of an instruction is not higher than the number of decimals defined in the multiple settlement unit.

**Proposed wording for the Change request in the UDFS**

The following sections of the UDFS shall be updated:

**Section 3.3.4.2 – CollateralValueReportV01 (colr.002.001.01)**

The T2S specific schema (Reference/Links) the “T2S-use” field for CollValRpt/RptOrErr/BizRpt/CollValRpt/CollVal/Scies/ValtnPric/FinInstrmQty/Unit should be updated as follows:

‘Provision of “99999...99” in case oversizing in the integer part occurs.’

Truncation of decimals in case of oversizing in the decimal part occurs

**Section 3.3.7.1 SecuritiesBalanceCustodyReportV05 (semt.002.001.05)**

The T2S specific schema (Reference/Links) the “T2S-use” field for Quantity fields should be updated as follows:

‘Provision of “99999...99” (–) in case oversizing in the integer part occurs’.

Truncation of decimals in case of oversizing in the decimal part occurs

**Section 3.3.7.21 SecuritiesAccountPositionResponseV01 (semt.040.001.01)**

The T2S specific schema (Reference/Links) the “T2S-use” field for Quantity fields should be updated as follows:

‘Provision of “99999...99” in case oversizing in the integer part occurs’.

Truncation of decimals in case of oversizing in the decimal part occurs

### Section 3.3.6.2 - SecurityMaintenanceRequestV01 (reda.007.001.01)

In the table of the business rules applicable to the schema on page 1103, the Data Type / Code value related to the tag *Document/SctyMntncReq/UpdTp/UpdTp/Modfy/FinInstrmAttrbts/SttlmInf/MinMltpQty* shall be changed from *FinancialInstrumentQuantity1Choice* into a new Data Type / Code customized in a way to limit the maximum number of decimal positions to 9.

### Section 1.2.2.2 Concept of securities in T2S

This section shall be amended by adding the following footnote:

- Settlement-related data, i.e. its settlement type (specifying whether trades for this security specify quantities in units or nominal), minimum settlement unit, settlement unit multiple<sup>40</sup> and possible deviating settlement units; <sup>40</sup>The number of decimals of the settlement unit multiple should define the maximum number of decimals that may be needed in the security lifecycle (e.g. for corporate actions), as it is used to determine the number of decimals accepted in the settlement quantity of a settlement instruction or settlement restriction (see §.1.6.1.1.3 for the related business validations). The maximum number of decimals allowed by T2S is 9.

### Section 1.6.1.1.3 Validation process

The following paragraphs shall be amended to include a new check within the Settlement Quantity Validation:

The Settlement Quantity of a Settlement Instruction with a settlement quantity greater than zero or of a Settlement Restriction on securities, if not related to a "Corporate Action" (i.e. Settlement Instructions with ISO Transaction code "CORP" or Settlement Restrictions with the field "Corp Action Event ID" filled), is a multiple unit of the Settlement Unit Multiple or a Deviating Settlement Unit for the corresponding ISIN Code. This check ensures that non-related Corporate Action Instructions containing a multiple settlement quantity have the correct number of decimals.

In order to achieve the same result for all instructions, Settlement Instructions and Settlement Restrictions either containing a deviating settlement unit or related to Corporate Actions, are also checked against the decimals of the Settlement Unit Multiple.

### Section 4.1 Index of Business Rules and Error Codes

This section shall be amended to include the new Business Rules (BR) related to the abovementioned new check:

- a- BR to check the number of decimals
  - The number of decimals of the Settlement Quantity of a Settlement Instruction with exchange of Securities must be equal or lower than the number of decimals expressed in the Settlement Multiple of the related Security.
  - The number of decimals of the Settlement Quantity of a Settlement Restriction on Securities must be equal or lower than the number of decimals expressed in the Settlement Multiple of the related Security.

### Proposed wording for the Change request in the UHB:

The following sections of the User Hand Book shall be updated:

#### Section 2.5.2.7 – Security New/Edit screen

The field description of the field Decimal (as Unit) shall be amended as follows: "Enter the settlement unit multiple of the security as unit. Required format is: max. 18 digits incl. decimal point (thereof max 947 decimal places and decimal point).

The number of decimals of the SUM should define the maximum number of decimals that may be needed in the security lifecycle (e.g. for corporate actions)."

#### Section 2.4.1.9 Available Report – Statement of Holdings – Details Screen

#### Section 2.2.2.15 - Securities Positions - Search/List screen

**Section 2.2.2.16 - Securities Position Details – screen****Section 2.3.1.4 - Collateral Value of a Security Search/List screen****Section 2.3.1.5 - Collateral Value per T2S Dedicated Cash Account and Security Search/List screen**

The field descriptions for all applicable quantity fields within the corresponding screens must be updated to describe case of truncation and the value "999...999" displayed in the case of an oversizing error.

Moreover, the T2S user shall be allowed to request from the T2S Operator the corresponding value- checked directly in the data base-for any value that is displayed as "999...999" to indicate an oversizing error.

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**High level description of Impact:**

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**Outcome/Decisions:**

- \* CRG meeting of 24 October 2014: The CRG agreed to launch the detailed assessment on the Change Request.
- \* Advisory Group's advice on 26 November 2014: The AG was in favour of launching the detailed assessment on the Change Request.
- \* CSG resolution on 28 November 2014: Following a written procedure from 25 September to 2 October 2014, the CSG was in favour of launching the detailed assessment on the Change Request.
- \* CRG Telco of 2 December 2014: The CRG recommended the approval of the Change Request.
- \* Advisory Group's advice on 10 December 2014: The AG was in favour of the Change Request via written procedure.
- \* CSG meeting on 11-12 December 2014: The CSG adopted the resolution to approve the Change Request.

**EUROSYSTEM ANALYSIS – GENERAL INFORMATION**

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

<b>Impact on major documentation</b>		
Impacted GFS chapter	LCMM.IVA.SMIV.3.4	This section should include the new check stated in the URD: The decimals of the Original Settlement Quantity are equal or lower than the Settlement Multiple {T2S.05.100}.
Impacted UDFS chapter	Section 1.6.1.1.3 Validation process	This section should be amended to include a description of the new validation check related to the decimals of the Settlement Quantity of an instruction.
	Section 4.1 Index of Business Rules and Error Codes	The BR section should be extended with two new business rules applying to both Settlement instructions and Intraposition movements.
	§.1.2.2.2 – Concept of securities in T2S §.3.3.6.2 – SecurityMaintenanceRequestV01	
	3.3.4.2 CollateralValueReportV01 (colr.002.001.01)	(Reference/Links) the “T2S-use” field for CollValRpt/RptOrErr/BizRpt/CollValRpt/CollVal/Scties/ValtnPric/FinIn strmqty/Unit (MyStandards link)
	3.3.7.1 SecuritiesBalanceCustodyReportV05 (semt.002.001.05)	Update the “T2S-use” field for the quantities expressed in the message semt.002 and semt.040
	3.3.7.21	

	<p>SecuritiesAccountPositionResponseV01 (semf.040.001.01)</p> <p>3.3.7.1 SecuritiesBalanceCustodyReportV05 (semf.002.001.05)</p> <p>3.3.7.21 SecuritiesAccountPositionResponseV01 (semf.040.001.01)</p>	
Additional deliveries for Message Specification	<p>SecurityCreationRequest V01 (reda.006.001.01)</p> <p>SecurityMaintenanceRequest V01 (reda.007.001.01)</p>	
UHB	<p>2.5.2.7 – Security New/Edit screen</p> <p>2.2.2.13 Intraposition Movement New Screen</p> <p>2.2.2.19 Settlement Instruction New Screen</p> <p>6.4.2.102 Intra- Position Movement – New Screen (References for Error Messages)</p> <p>6.4.2.175 Settlement Instruction – New Screen (References for Error Messages)</p> <p>FFR:                      Section 2.2.2.15 - Securities Position Search/List screen                      Section 2.2.2.16 - Securities Position Details screen                      Section 2.3.1.4 - Collateral Value of a Security Search/List screen                      Section 2.3.1.5 - Collateral Value per T2S Dedicated Cash Account and Security Search/List screen</p>	<p>The new business rules should be added to the screens of intraposition movement and settlement instruction new screens.</p> <p>FFR:                      The field descriptions for all applicable quantity fields within the corresponding screens must be updated to describe case of truncation and the value "99999999999999999999 (i.e. 17 times 9)" displayed in the case of an oversizing error.</p>
External training materials	<p>T2S_FA_WS                      2_Part2_SETT_BVAL_SRVP_RVAL_DIAPO_V00.09</p>	<p>Business Validation part should be amended to include the new check</p>
Other documents	<p>DMT File Specifications                      §3.1.2.6 – Securities - New</p>	
<b>Links with other requests</b>		
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>The functionality for creating and updating securities shall be amended (both in A2A and in U2A mode, plus the DMT channel for the creation functionality only) in order to limit the maximum number of decimals allowed for the settlement unit multiple to 9.</p> <p>New validation rules need to be included in order to prevent incorrect decimals in the Settlement Quantity of Instructions related to Corporate Actions or conveying a Deviating Settlement Unit/Nominal.</p> <p>If the integer part of the settlement quantity of a position exceeds the allowed format, then reports and queries will communicate "99999...99".</p> <p>Accordingly amendment of the "T2S-Use" will be performed for messages CollateralValueReportV01 (colr.002.001.01), SecuritiesBalanceCustodyReportV05 (semt.002.001.05), SecuritiesAccountPositionResponseV01 (semt.040.001.01)</p> <p>Additionally, positions that exceed the maximum number of digits for the settlement quantity (assuming that the format of the integer part is correct) will be truncated when reported back to the users.</p> <p>Documentation of impacted screens will be updated to reflect the case of truncation and the communication of oversizing error values.</p>
Summary of project risk
<p>The late delivery of the change could endanger the software stabilization.</p>
Security analysis
<p>No security impact (do not entail any additional costs related to the implementation of security controls).</p>

T2S PROGRAMME OFFICE

ECB-PUBLIC  
25 November 2014**COST ASSESSMENT ON CHANGE REQUESTS**

<b>T2S-0475-SYS Securities quantity's decimals should be consistent with the number of decimals defined by the settlement until multiple</b>		
Project phase costs (total)	149,127.27	in Euro
Running costs (annual average over cost recovery period)	14,540.31	in Euro