

BUSINESS JUSTIFICATION

FOR THE DEVELOPMENT OF NEW UNIFI (ISO 20022) FINANCIAL REPOSITORY ITEMS

A. Name of the request:

Securities Settlement & Reconciliation (S&R)

B. Submitting organization(s):

S.W.I.F.T. SCRL ("SWIFT"),

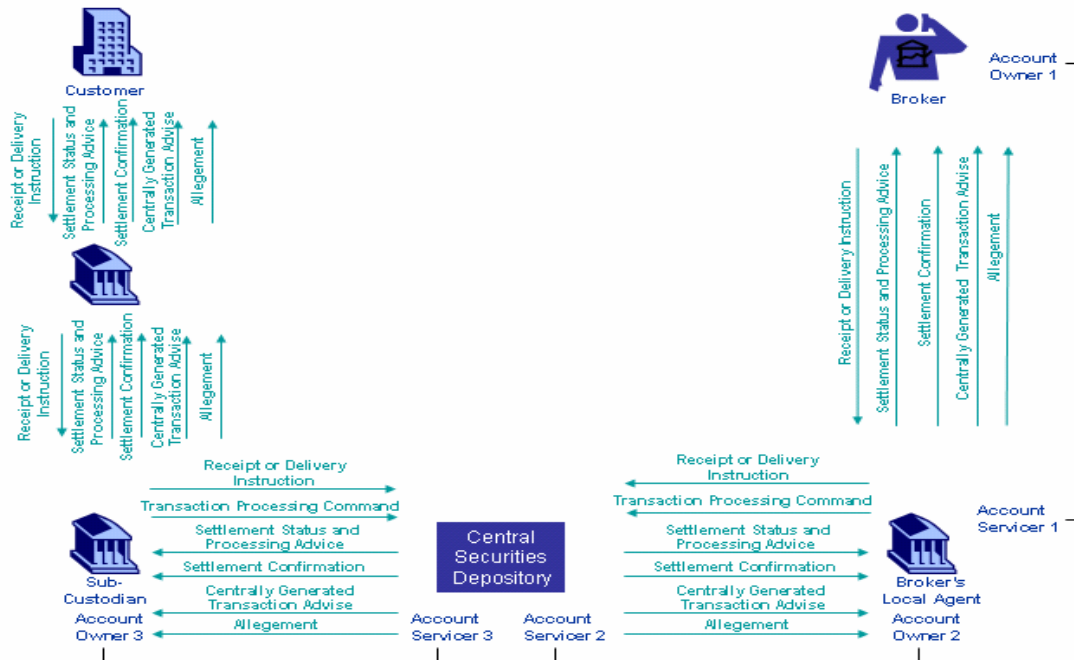
Avenue Adèle 1,

B-1310 La Hulpe,

Belgium

C. Scope of the new development¹:

The scope of this business justification is the reverse engineering² of ISO 15022 Settlement & Reconciliation messages (MT 508, 524, 530, 535-8, 540-9, 578, 586³) in order to develop equivalent ISO 20022 compliant Business Transactions and Message Sets.



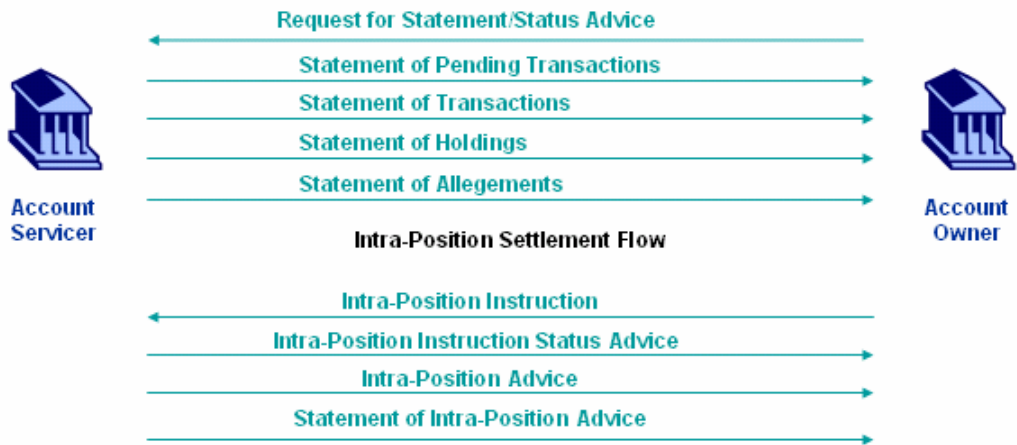
¹ Terminology used throughout the document is based on the current ISO 15022 standards. It must be noted that it may evolve during the ISO 20022 reverse engineering and business modeling process.

² Technique (described in ISO 20022-5) to 're-capture' the functionality of existing non UNIFI compliant message standards and feed it into the UNIFI models, thereby facilitating interoperability, co-existence and migration from existing messages to their UNIFI compliant equivalent.

³ The description of ISO 15022 messages in scope is in Annex A.

Settlement & Reconciliation Additional flows

Reporting Flow



Financial Instruments	All instruments covered by the Classification of Financial Instrument [CFI] standard (ISO 10962).
Business area	Securities Settlement Securities Management
Business Processes	<p>Intra-Position Advice</p> <p>Intra-Position Instruction</p> <p><u>Intra-Position Instruction Status Advice</u></p> <p>Transaction Processing Command</p> <p>Statement of Holdings</p> <p>Statement of Transactions</p> <p>Statement of Pending Transactions</p> <p>Statement of Intra-Position Advices</p> <p>Receive Free</p> <p>Receive Against Payment</p> <p>Deliver Free</p> <p>Deliver Against Payment</p> <p>Receive Free Confirmation</p> <p>Receive Against Payment Confirmation</p> <p>Deliver Free Confirmation</p> <p>Deliver Against Payment Confirmation</p> <p><u>Centrally Generated Transaction Advice</u></p> <p>Settlement Status and Processing Advice</p> <p>Request for Statement/Status Advice</p> <p>Settlement Allegement</p> <p>Statement of Settlement Allegements</p> <p>Cancellations and/or reversals for the above.</p>

In view of the scope, we recommend that the Securities SEG be assigned the evaluation of the candidate UNIFI models and messages.

D. Purpose of the new development:

With harmonisation industry initiatives such as Giovannini, there is an increasing pressure on the securities industry to go from proprietary to ISO standards. Two ISO standards co-exist in this area, ISO 15022 and ISO 20022.

On one hand, ISO 'newcomers' are reluctant to invest in ISO 15022 knowing that the future is ISO 20022. ISO 15022 entails huge implementation cost as it is based on a specific syntax requiring specific expertise and programming skills. In addition, more and more current ISO 15022 users are requesting ISO 20022 XML equivalent messages because their communication interface is already XML based.

On the other hand, there is legitimate resistance of other current ISO 15022 users to move to ISO 20022 due to recent investments in ISO 15022.

To find a solution to all these challenges, SWIFT, with the support of its community, proposes to develop ISO 20022 messages equivalent to ISO 15022 to allow 'newcomers' to directly adopt UNIFI. To limit the impact on existing ISO 15022 users, the ISO 20022 messages will be directly reverse engineered from ISO 15022 messages. SWIFT will ensure to:

- design the ISO 20022 messages with mapping to ISO 15022 in mind to ensure the same levels of STP as today,
- limit the ISO 20022 functionality to the functionality available in ISO 15022 during the coexistence period, ie, it would not be possible to do something with an ISO 20022 message that cannot be done in its equivalent ISO 15022 messages and vice versa,
- synchronise the maintenance between the 2 standards in terms of timing, review process and content,
- provide coexistence support, eg, the necessary mapping/translation documentation.

In addition to the above, SWIFT will ensure that the right balance is kept between the need for close reverse engineering from ISO 15022 and the need for leveraging the benefits and principles of ISO 20022 by the undertaking of~~SWIFT would also undertake~~ the following tasks:

- ensure that global market practices defined by the Securities Market Practice Group (SMPG) are adhered to~~taken into consideration~~ during the process,
- attempt to solve ISO 15022 standards issues that were identified by the ISO 15022 Registration Authority and the SMPG and that have been postponed awaiting ISO 20022 equivalent messages, eg, the use of message IDs and references,
- ensure that additional requirements identified by harmonisation initiatives such as Giovannini are included, in both ISO 15022 and ISO 20022,
- design the financial instruments identification and attributes based upon the ISO 19312 Securities Data Model as defined by ISO TC 68 SC 4 WG 11.

E. Community of users:

Without being exhaustive, the community of impacted users is the following: investment managers, global custodians, sub-custodians, National and International Central Securities Depository, brokers, clearing brokers, etc.

The short and medium term targeted community consists of the securities players that have not implemented ISO 15022 Settlement and Reconciliation messages due to the ISO 15022 syntax, their lack of knowledge of the ISO standards or their size. Many of these players, with the launching of ISO 20022 and the XML syntax, have expressed their desire for moving straight away to ISO 20022 in the S&R area.

Benefits to users?

- Securities players that have not implemented ISO 15022 will be able to save a huge cost by moving immediately to ISO 20022 without need for implementing ISO 15022 (specific syntax requiring specific expertise and programming skills).
- The strict reverse engineering approach (with mapping to ISO 15022), with an extensive coexistence support, will enable:
 - current ISO 15022 users to limit the cost of migration to ISO 20022 while ensuring that, in the meantime, their ISO 15022 communication can easily be translated for use by ISO 20022 users
 - new ISO 20022 users to easily communicate with not yet migrated ISO 15022 users.

Such initial equivalence between ISO 15022 and ISO 20022 will indeed help the whole community of securities players to get familiar with ISO 20022 implementation in a stable and mature business.

SWIFT having received the support of its community, extensive usage of these messages is guaranteed. Current ISO 15022 Settlement & Reconciliation messages usage represents millions of messages a day (see annex A for some statistics).

F. Timing and development:

The availability of ISO 20022 XML settlement & reconciliation messages will be critical for the success of harmonisation projects such as Giovannini Barrier 1 removal. In order to be Giovannini compliant by 31 March 2011, all participants involved in European cross-border transactions must be able to exchange either ISO 15022 or ISO 20022 standards.

In order to give a chance to new ISO users to implement directly ISO 20022, messages before the Giovannini deadline, messages (documentation and schemas) would need to be available at the latest by Q4 2009 to enable proper impact analysis and testing before live implementation.

Though the exact plan for development is currently being discussed, the objective is to have the ISO 20022 Settlement & Reconciliation messages submitted to RA for validation by the SEG during Q2 2009.

Although the reverse engineering approach should limit the need for extensive market consultation, SWIFT will involve the following in the development process:

- SWIFT's ISO 15022 S&R Maintenance Working Group, which includes securities experts from the US, GB, DE, LU, BE, JP, FR, NL, IT, CH, the two ICSDs (Euroclear and Clearstream) as well as ISITC.
- Securities Market Practice Group (SMPG) S&R WG, which includes securities experts from an additional 25 countries, representing investment managers, broker, custodians and central securities depositories.
- ISITC North America, which represents a large community of US and international players including infrastructure (DTCC, OMGEO), most global custodians, large investment managers and brokers.

G. Commitments of the submitting organization:

SWIFT confirms that it will:

- Undertake the development of the candidate UNIFI UML models that it will submit to the RA for compliance review and evaluation. The submission will include Business Process Diagram (activity diagram), Message Flow Diagram (sequence diagram), Message Definition Diagram (class diagram), and an example of valid XML instance of each candidate message.
- Address any queries related to the description of the models and messages as published by the RA on the UNIFI website.

SWIFT is planning to organise a 'pilot testing' once the related documentation has been published by the RA, and will implement the messages.

SWIFT is also committed to initiate and participate in the future message maintenance.

SWIFT confirms its knowledge and acceptance of the UNIFI Intellectual Property Rights policy for contributing organizations, as follows.

“Organizations that contribute information to be incorporated into the ISO 20022 Repository shall keep any Intellectual Property Rights (IPR) they have on this information. A contributing organization warrants that it has sufficient rights on the contributed information to have it published in the ISO 20022 Repository through the ISO 20022 Registration Authority in accordance with the rules set in ISO 20022. To ascertain a widespread, public and uniform use of the ISO 20022 Repository information, the contributing organization grants third parties a non-exclusive, royalty-free licence to use the published information”.

H. Contact persons:

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I. Comments from RMG members and disposition of comments:

Euroclear comments:

Euroclear welcomes and fully supports this Business Justification.

We would like to offer our comments as below.

At a general level, we would request the following:

- 1 A note that the terminology used, especially in the scoping section, is based upon current ISO 15022 implementation, and may well change during the Business Modeling process of ISO 20022.
- 2 A clarification regarding the balance to be employed when a conflict arises between:-
 - a) ensuring that an ISO 20022 message covers the equivalent ISO 15022 functionality, and
 - b) achieving the stated improvements in line with ISO 20022 expectations (e.g.: granular messages; compliance with Giovannini, SMPG or ECSDA etc; ISO 15022-gaps etc)

Examples: The MT 548 Settlement Status and Processing Advice message has multiple uses today including reporting the status of an instruction, the status of a cancellation request, the status of a request for statements etc.

Also, further conflicts could arise at data/field level between:-

- a) the results of ISO 20022 Business & Message Modeling, and
- b) the Mappings required to achieve ISO 15022 functional coverage

At a more detailed level, we would like to make the following comments/requests.

- 3 A slight re-wording near the bottom of Page 3, as shown below in bold/underline would give better clarification of meaning: “limit the ISO 20022 functionality to the functionality available in ISO 15022 during the coexistence period, i.e., it would not be possible to do something with an ISO 20022 message that cannot be done in **its equivalent** ISO 15022 **message** and vice versa”
- 4 Settlement Status Update messages are listed in the Business Processes table, but do not appear in the flow diagram. These should be present on the diagram for completeness.
- 5 We request that the scope should include an Intra-Position Instruction Status Advice. This is a recently recognized gap in the existing ISO15022 functionality, and has been requested for resolution in ISO15022 through the Change Request process.

- 6 We request that the scope include a Centrally Generated Transaction Advice message, which is able to carry all details of the generated transaction. This single requirement can currently be achieved only through the use of two separate ISO 15022 messages.
- 7 We would comment that timing and co-ordination is needed in respect of MT 508 which is used not only in S&R but in Corporate Actions as well.

Although this message-type is not scoped in the equivalent Corporate Actions reverse-engineering BJ, our response to that document does include a cross-reference to this one.
- 8 Finally, we would also suggest that ECSDA Working Group 6 (Communications) is a suitable body with which to validate candidate messages and models resulting from this BJ.

Disposition of Euroclear comments:

SWIFT welcomes the support of Euroclear and provides the below feedback to their valuable comments:

- 1 Comment accepted. A note has been added in the document.
- 2 SWIFT acknowledges the need for a good balancing between the close reverse engineering from ISO 15022 and achieving the stated improvements in line with ISO 20022 expectations. As stated in chapter D. Purpose of the new development, SWIFT will:
 - ensure that global market practices defined by the Securities Market Practice Group (SMPG) are adhered to during the process,
 - attempt to solve ISO 15022 standards issues that were identified by the ISO 15022 Registration Authority and the SMPG and that have been postponed awaiting ISO 20022 equivalent messages, eg, the use of message IDs and references,
 - ensure that additional requirements identified by harmonisation initiatives such as Giovannini are included, in both ISO 15022 and ISO 20022,
 - design the financial instruments identification and attributes based upon the ISO 19312 Securities Data Model as defined by ISO TC 68 SC 4 WG 11.

We believe that with the involvement of the industry bodies and players stated in chapter F. Timing in development, the right balance will be found:

- SWIFT's ISO 15022 S&R Maintenance Working Group, which includes securities experts from the US, GB, DE, LU, BE, JP, FR, NL, IT, CH, the two ICSDs (Euroclear and Clearstream) as well as ISITC.
 - Securities Market Practice Group (SMPG) S&R WG, which includes securities experts from an additional 25 countries, representing investment managers, broker, custodians and central securities depositories.
 - ISITC North America, which represents a large community of US and international players including infrastructure (DTCC, OMGEO), most global custodians, large investment managers and brokers.
- 3 Comment accepted. See changes in document.

- 4 Comment accepted. See updated [diagram](#).
- 5 Comment accepted. See addition in the [business process table](#) and diagram. Note that the need for such a message will only be confirmed following the complete reverse engineering and modelling process.
- 6 Comment accepted. See addition in the [business process table](#) and diagram. Note that the need for such a message will only be confirmed following the complete reverse engineering and modelling process.
- 7 SWIFT agrees with the comment and will make sure there is coordination between the Corporate Action and Settlement & Reconciliation work, not only for the intra-position advice but also for any messages for which there is clear overlap like the statement of transactions, statement of pending transactions, balances used in the statement of positions, etc.
- 8 ECSDA WG 6 has established a tight collaboration with the SMPG as well as with SWIFT as far as Giovanni Barrier 1 is concerned. Though not explicitly stated in the Business Justification, SWIFT plans to involve ECSDA WG 6 but also other CSDs association either directly or via existing industry groups.

UK Comments

Specific comments received regarding S&R.

- a. Statement of holdings (MT 535) should already be covered in ISO 20022 by CustodyStatementOfHoldings.
- b. The ISO20022 StatmentOfInvestmentFundTransactions message should be considered for the statement of transactions (MT 536). Does it offer the required functionality? If it doesn't the deficiency should be addressed by maintenance of the existing MX message rather than the addition of a separate message.
- c. Note that the associated cancellation messages also exist, although request messages are not provided currently, and will still be missing after the 2007 release

The following represents the combined view of the UK & IE NMPG for S& R and CA.

1. The BJ encompasses most of the our key concerns on developing the ISO20022 suite of S & R and Corporate Action messages whilst limiting the impact on current ISO15022 users.
2. As a market practice group our main concerns are that we achieve the same levels of STP, do not have differences of functionality between the two ISO standards and both messages are maintained to meet the needs of the securities industry. The paper covers these concerns.
3. Having been through the experience of the ISO7775/15022 transition and a period of coexistence, the group recommends that no changes are applied to the new ISO20022 messages in the latter stages of ISO15022/20022 coexistence in order to limit the amount of development work in this period of changeover.
4. We would like to see emphasis of the point referring to SMPG enhanced so that, rather than SMPG market practices being 'considered' it reads, - ensure that the global market practices defined by the Securities Market Practice Group (SMPG) are adhered to during the process. The thinking behind this is that a considerable effort has been put into these definitions over the years and such wording shows a stronger intent to apply these.

5. An institution feels that the Giovannini harmonisation initiative is not a valid justification for the reverse engineering of ISO 15022 and the development of ISO 20022 as the current targets for Barrier 1 can still be achieved by using ISO 15022. However, this is not the view of the Market Infrastructure who have already raised Business Justifications to the ISO 20022 Registration Management Group for Market Claims and Automatic Transformation, and Issuers' Agents communication for Corporate Actions where ISO 15022 is not considered 'fit for purpose'.

6. An institution expressed concerns at the cost of Market infrastructures adopting both ISO 15022 (temporarily) and ISO 20022, the cost of migration for current users of ISO 15022 (ROI) and the cost of coexistence.

Disposition of UK comments:

SWIFT would like to thank the UK market for its support and comments.

About the specific comments received regarding S&R:

- a) We indeed anticipate that we will be able to reuse the CustodyStatementOfHoldings but also the AccountingStatementOfHoldings. There will however probably be a need of maintenance of these statements as they have not evolved in parallel of the ISO 15022 MT 535. These potential gaps will be highlighted during the reverse engineering exercise.
- b) The ISO 20022 StatementOfInvestmentFundTransactions message will indeed be considered. The reverse engineering exercise will conclude on the feasibility or impracticality of reusing this statement and on the maintenance needed to the statement, if the conclusion regarding reusability is positive.
- c) The same consideration will be given to existing associated cancellation messages and request messages.

About the combined view of the UK & IE NMPG for S&R and CA:

- 1. & 2. Comments are noted and welcomed.
- 3. The need for and level of maintenance of ISO 15022 and ISO 20022 messages during coexistence will depend on market needs, not on SWIFT. We intend to minimize maintenance as much as possible, should any change be requested, but such a commitment can only be confirmed by the market, year after year, based on the current market situation.
- 4. Comment accepted. See change in [document](#).
- 5. On this individual institution feedback, we would like to refer back to the chapter [D. Purpose of the new development](#). Giovannini is not the reason for proposing the creation of ISO 20022 message but it is the context in which the need for an ISO 20022 solution for core messages has been identified.
- 6. Creating ISO 20022 equivalent messages and maintaining this equivalence of the two standards will limit the cost of Market Infrastructures, the cost of migration for current users of ISO 15022 and the cost of coexistence. Indeed, this will allow for easy translation from one standard to the other, thereby allowing users of one standard to communicate with users of the other standard without need to support the two standards.

Market Infrastructures will therefore be able to go directly to ISO 20022 without having to implement ISO 15022.

Current ISO 15022 users – including Market Infrastructures - will have the choice to support the two standards or to use translation tools to keep supporting one only until they decide to migrate. Market Infrastructures may also set their own rules with their community of users regarding the term and type of migration (eg, 'big bang' with no coexistence).

ISITC comments

ISITC fully supports this Business Justification.

As we have gained ISO 20022 experience in other business areas, notably the PAIN and CAMT messages, we look forward in participating in the development process of the new settlement and reconciliation messages. We are confident that our membership can add significant value to this process because of the vast expertise of our participating firms. We respectfully request that modeling discussions are held locally in the US to ensure maximum participation from our key members.

We agree that the synchronization of the maintenance for both standards on a yearly basis will help to minimize the cost and effort of supporting two syntaxes. This will guarantee that the standards are aligned until a point when ISO 15022 is retired.

We would also like to ensure that where possible and appropriate, existing Global Market Practices is taken into account during the modeling and design of the messages. We are committed to updating all other related market practice based on the new models.

ISITC and other market practice organizations are experiencing demand for syntax neutral business process documentation. We fully expect that the decision to expose that the 20022 UML models will improve the process of defining market practice in the future.

We also expect that the richness of schema level representation of business processes will allow a much more precise definition. Market practice could be validated at schema level in a way that currently is not possible with ISO 15022. We expect to exploit the variant framework of the ISO 20022 process to achieve this.

Disposition of ISITC comments:

SWIFT would like to thank ISITC for their support and offer for help.

As stated in the Business Justification, SWIFT will involve ISITC in this process and will try as much as possible to accommodate the request to hold meetings locally to the US.

SWIFT reiterate its will to ensure that global Market Practices will be taken into account during the modelling and design of the messages. The Securities Market Practice Group (SMPG) S&R WG is now working using a syntax neutral MP template. The activity and sequence diagram as well as the actors, roles and business data information published in these documents will actually be the base of the ISO 20022 models for S&R flows.

SWIFT welcomes ISITC's commitment to update their MP documentation to be in line with the new models.

As far as exploiting the variant framework offered by the ISO 20022 process for market practice optimisation of the messages, SWIFT will primarily focus on the delivery of the first version of "general" messages. It will enable easier coexistence with existing ISO 15022 messages and a timely delivery of ISO 20022 messages for compliance to Giovannini Barrier 1 protocol. SWIFT will look seriously at business cases for variants that would come following the delivery of the first version.

Comments informally received from BPSS (BNP Paribas Securities Services):

- BPSS agrees for moving to the 20022 standard as it is consistent with Giovannini harmonisation initiative, and in particular, with the Barrier1 removal.
- However, the development envisaged is very challenging to all actors involved
 - timing is quite aggressive : have the ISO 20022 Settlement and Reconciliation messages submitted to RA for validation by the SEG during Q2 2009 for example_(and)_Messages (documentation and schemas) would need to be available at the latest by Q4 2009, to enable proper impact analysis and testing before live presentation,
 - issues are identified (by SWIFT itself).
- The issues identified are three folds:
 - (i) cost to MIs of adopting both ISO 15022 (temporarily) and ISO 20022
 - (ii) cost of migration for current users of ISO 15022 (ROI). Some users are not event finished with this migration.
 - (iii) cost of coexistence.
- As far as core activities are concerned - eg Corporate Actions and Settlement and Reconciliation - the SWIFT traffic level brings - per se - much more complexity than the one identified with the previous activities analyzed, eg, Funds and Proxy Voting (sample below is Q1 2007 - extracted from BJ)
 - MT564 - Corporate Action Notification - 16 500 000
 - MT566 - Corporate Action Confirmation - 6 700 000
 - MT548 - Settlement Status and Processing Advice - 162 000 000
 - MT535 - Statement of Holdings - 81 600 000
 - MT541 - Receive Against Payment - 57 000 000
 - MT543 - Deliver Against Payment - 53 600 000
 - ...
- BPSS consequently strongly supports any idea aiming at solving the identified issues :
 - SWIFT should strictly aim at building an actual one-to-one mapping in the reverse engineering process. This is still not very clear how this objective can be reached as some MTs (sample 548) are covering 'multiple' functions, and the 20022 standard makes it mandatory to respect the 'one function, one swift' rule.
 - The coexistence period shall be the shortest possible.
 - If there is no 15022 existing (for a requirement) it shall then be developed and proposed in the 20022 format.
- And some further clarification is required from SWIFT :

How will the current organisation of instances for market consultation be impacted to accompany these developments? What after the migration has been done? (See SWIFT's ISO 15022 S&R Maintenance WG, Securities Market Practice Group (SMPG) WG, ISITC North America, ...)

What does this migration plan mean for the next coming SWIFT releases (SR)?

Disposition of BPSS comments:

SWIFT would like to thank BPSS for their support and detailed comments.

On the timing issue, SWIFT confirms its plan to deliver all the documentation, models, translation rules and schemas needed for the implementation of the ISO 20022 messages in scope of this BJ by end of 2009 at the latest.

As far as one-to-one mapping is concerned, SWIFT would like to clarify the following:

- The inclusion of multiple functions in one message is an ISO 15022 weakness that has been acknowledged by the market during maintenance working group meetings and market practice discussions. SWIFT does not wish to replicate this weakness in ISO 20022. This has been confirmed by the feedback we have received from the market.
- One-to-one mapping will be performed at business function and business data level. With clear translation and mapping rules, we do not anticipate this should create an issue for users.
- The ISO 20022 granularity principle will be applied with care and business sense. The needed level of granularity will be defined during the modelling process in accordance with ISO 20022 principle and business flow logic. This will be discussed and validated by the market

As for message gaps identified during the reverse engineering and modelling exercise, they will be filled in when appropriate following validation by the market.

On the question about how the current organisation of market consultation will be impacted by these developments, we are currently preparing a detailed project plan. Part of this plan will concern the consultation process, the timing, etc. As soon as this is finalized, it will be proposed to the various groups we intend to work with for this development.

Finally, comments on SWIFT network specific questions such as coexistence period of the two standards on SWIFTNet, migration and standards releases are not relevant to this business justification. They may be addressed directly to SWIFT.

ANNEX A: List of ISO 15022 messages in scope for this Business Justification

Messages	SWIFT Traffic sample (Q1 2007)
MT 508 Intra-Position Advice	92 000
MT 524 Intra-Position Instruction	150
MT 530 Transaction Processing Command	NA (not available yet)
MT 535 Statement of Holdings	81 600 000
MT 536 Statement of Transactions	22 800 000
MT 537 Statement of Pending Transactions	21 600 000
MT 538 Statement of Intra-Position Advices	27 000
MT 540 Receive Free	14 900 000
MT 541 Receive Against Payment	57 000 000
MT 542 Deliver Free	17 600 000
MT 543 Deliver Against Payment	53 600 000
MT 544 Receive Free Confirmation	13 400 000
MT 545 Receive Against Payment Confirmation	51 700 000
MT 546 Deliver Free Confirmation	13 500 000
MT 547 Deliver Against Payment Confirmation	50 700 000
MT 548 Settlement Status and Processing Advice	162 000 000
MT 549 Request for Statement/Status Advice	600
MT 578 Settlement Allegement	8 900 000
MT 586 Statement of Settlement Allegements	1 200 000