ISO 15022 / 20022 Reverse Engineering - Settlement And Reconciliation

Work Plan

Confidentiality	Public
Status	Final
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Path	NA

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1 Introduction

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 coexist in this area, ISO 15022 and ISO 20022 (UNIFI).

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.

1.1 Business Goals and Project Objectives

To find a solution to the challenges described above, 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 ISO 15022 and vice versa,
- synchronise the maintenance between the 2 standards in terms of timing, review process and content,
- provide coexistence support, eg, the necessary message mapping/translation documentation.

1.2 Project Scope

The scope of this project is the reverse engineering of ISO 15022 Settlement & Reconciliation messages (MT 508, 524, 530, 535-8, 540-9, 578, 586) in order to develop equivalent ISO 20022 compliant Business Transactions and Message Sets.

1.3 References

[1] ISO 20022 Business Justification – Securities settlement and reconciliation, September 19, 2007 - http://www.iso20022.org/index.cfm?item_id=42936

[2] ISO 20022 – Part 5: ISO 20022 reverse engineering, ISO/TS 20022-5:2004(E), First edition 2004-12-15

[3] ER 1019: MT-MX Migration calendar 2008-2010, Gottfried Leibbrandt / Johan Kestens, 18 May 2007.

[4] BP828 R3 – Standards process attachement – June 2007

2 Delivery approach

2.1 Description of Deliverables

The following external deliverables will be produced in the frame of the Standards development project. The intended various audiences for the deliverables are indicated besides each of them in the following table:

#	Deliverable Name and type	Intended audiences
ED1	S&R ISO 15022-20022 Reverse Engineering - Business and high level requirements analysis This document will be the main support document during the requirement collection phase. It will specify the high level business requirements to be taken into account for the core S&R message solution. It will therefore be used during industry consultations with various industry groups. The document will then be reviewed, validated and approved by the business validation group (BVG). -	Securities industry entities involved in the requirement collection and BVG
ED2	S&R ISO 15022-20022 Reverse Engineering – Messages detailed design This document will contain a detailed specification of the core S&R messages. This document will also include the list of change requests for the ISO15022 SR 2010 together with the implementation solution for ISO20022.	BVG
ED3	S&R ISO 15022-20022 Reverse Engineering – Draft documentation and schemas This deliverable includes the draft XML schemas, sample messages, and a PDF and HTML document with message scopes and a detailed description and specification of the messages. Those documents will be the main inputs for the ISO 20022 approval process and preliminary approval.	Candidates test Pilot users, BVG, and sec. core MT / MX users community
ED4	S&R ISO 15022-20022 Reverse Engineering – ISO Draft documentation and schemas Same as above but with the ISO layout and model snapshot in HTML	ISO 20022 SEG
ED5	S&R ISO 15022-20022 Reverse Engineering - draft translation rules: This includes human readable and machine processable MT to MX and MX to MT translation rules.	Candidates test Pilot users, BVG, and sec. core MT / MX users

		community
ED6	S&R ISO 15022-20022 Reverse Engineering - pilot testing change requests This document will include all change requests requested by the pilot users during the testing phase as well as the change requests from the ISO20022 evaluation group.	Candidates test Pilot users, BVG, ISO 20022 SEG and sec. core MT / MX users community
ED7	S&R ISO 15022-20022 Reverse Engineering - Full documentation and final schemas This includes the final XML schemas, samples and a PDF and HTML document with a full description of the messages flow, scope, and detailed specification of the messages. Those documents will be submitted also to ISO 20022 for a final approval.	swift.com publication
ED8	S&R ISO 15022-20022 Reverse Engineering – ISO Full documentation and final schemas Some as above but with the ISO layout	ISO 20022 publication
ED9	S&R ISO 15022-20022 Reverse Engineering - Final translation rules: This includes human readable and machine processable MT to MX and MX to MT translation rules.	swift.com publication

2.2 Development Approach

The Reverse Engineering development approach of the ISO/TS 20022-5 standards (see ref. [2]) will be used as a basis for this project. The approach to be followed corresponds to the second reverse engineering scenario in the ISO/TS 20022-5 Standards which assumes that no ISO 20022 compliant business transactions and message sets exist and that one or more industry message sets exist.

In this project, the MT's ISO 15022 compliant messages in category 5 will be considered as the sole source of existing industry messages.

In addition to the principles laid out in the ISO 20022 reverse engineering approach, SWIFT also undertakes to follow the following supplementary principles for the development and design of the messages:

- design the ISO 20022 messages with mapping to ISO 15022 in mind to ensure the same levels of STP as today as well as to make translation as easy as possible,
- 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 ISO 15022 and vice versa,
- 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,
- 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.

The development approach will also take the following principles into account:

- ensure that additional requirements identified via harmonisation initiatives such as Giovannini are included, in both ISO 15022 and ISO 20022,
- ensure that global market practices defined by the Securities Market Practice Group (SMPG) are taken into consideration during the process,
- synchronise the maintenance between the ISO 20022 and ISO 15022 standards in terms of timing, review process and content so as to ensure that the functional mapping consistency is safeguarded.

2.3 Supporting Tools

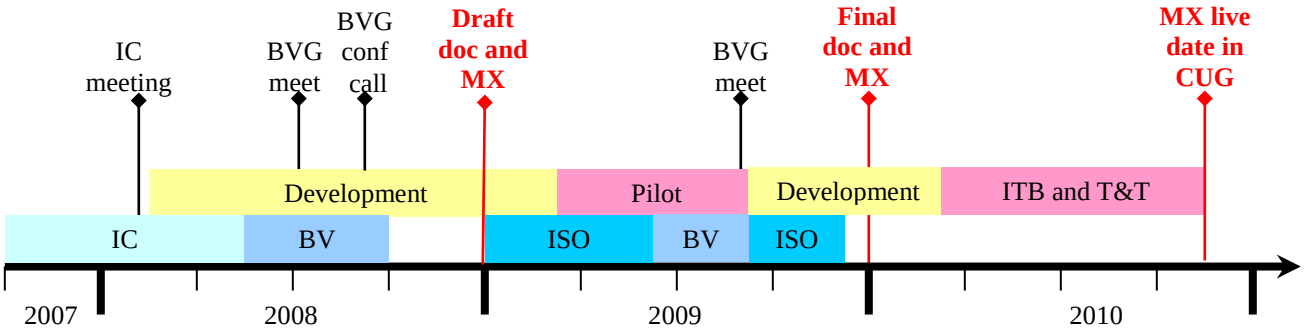
The following tools will be required for the project.

Development Tools	**Usage**
Standards Workstation 6.0	Schemas and documentation generation tool
Rational Rose Modeller	UML Modelling tool
Rational Clearcase	Project Source file version control SW and repository
Live link	Project document repository
ISO 20022 Dictionary and catalogue of messages Web Query Tool	Advanced searches on ISO20022 dictionary and messages catalogue
CM Build request web tool	Intranet web tool to request IT builds for schemas delivery
Documentation production	
XML Parser tool (XML Spy)	For producing messages business samples
Arbortext Epic 5.2	For editing overview, messages scopes and outlines, message flows documentation
Project management tool	
Microsoft Word	For project documents deliverables others than message detailed specifications
MS Project	To produce a detailed schedule (Gantt chart) for the project and track project progress

2.4 High-level Project Plan

2.4.1 Overall Project timeline

The following picture illustrates the overall project timeline and milestones between 2007 and 2010 with a granularity of quarters.



Brief description of the project phases and deliverables

- The Industry Consultation (IC) phase takes place until the end of April 2008, during which time selected industry groups and securities experts are consulted on the business and high-level requirements. A physical meeting is planned for the end of January. The outcome will be presented to industry groups such as SMPG, ECSDA, ISITC... for final feedback as well as to the Business Validation Group (BVG).
- The Business Validation (BV) phase effectively starts after the IC closes. The BVG, composed of industry and country representatives (through the Securities Maintenance Working Group), reviews and validates the outcome of the IC, that is, the business and high-level requirements. The group also validates the high level and detailed design as proposed by SWIFT Standards.
- The ISO phase consists of the submission of business models and messages to the UNIFI (ISO 20022) Standards Evaluation Group (SEG) for approval.
- Development is an ongoing task performed by SWIFT Standards that consists of business and logical modelling, generation of the XML schemas and documentation, and development of the supporting tools (such as translation rules). The two main deliverables for this project are:
  - the draft standard documentation and XML schemas before the pilot, and
  - the final standard documentation and XML schemas by end of 2009.
- The Pilot consists of two parts. An Integration Test Bed (ITB) phase that allows vendors to prepare for the second phase, which is Test & Training (T&T) for business pilots. The outcome of this pilot (change requests) will be handled by the BVG and the ISO SEG for inclusion in the final documentation and schemas.

- The ITB and T&T phase in 2010 is the normal testing phase that SWIFT offers for MX implementation on SWIFTNet.
- The planned date for the implementation (in a CUG) of the UNIFI (ISO 20022) messages on SWIFTNet is November 2010.

2.4.2 Project milestones / deliverables

2.4.2.1 Message design, schemas and documentation

Types of milestone: M = meeting D= deliverable

Date	Type	Milestone
17-Dec-07	D	Send out of Business and high level requirements (BHLR) V1 - proposal for industry consultation
30/31-Jan-08	M	Industry consultation consolidation meeting
4-Feb-08	D	Meeting minutes with comments on BHLR V1
28-Feb-08	D	Send out to SMPG and IC participants of BHLR V2 and Message high level design (MHLD) V1
17-Mar-08	M	ECSDA WG6 meeting
30-Mar-08 / 2-Apr-2008	M	ISITC meeting
28-Mar-08		SMPG Conference Call
30-Apr-08	M	SMPG meeting
30-May-08	D	Send out to BVG for BHLR V3 and MHLD V2 and message detailed design (MDD) V1
27-Jun-08	M	BVG 1 meeting
1-Aug-08	D	Send out to BVG for MDD V3 + final MHLD + final BHLR
31-Aug-08	M	BVG 2 conference call for potential issues (any CRs will be fed to ISO SEG for pilot phase)
31-Dec-08	D	Draft Core documentation send out to Pilot test users
1-Jun-09		Send out to BVG any maintenance MT 2009 CRs
31-Jul-09		Pilot users & ISO SEG CRs submission deadline
5-Aug-09	D	Consolidated pilot CRs document send out to BVG
19-Aug-09	M	BVG 3 meeting - SR 2009 CRs, pilot and ISO SEG CRs and Translation rules review and final approval
31-Aug-09	D	BVG approved CRs submitted to ISO SEG
31-Dec-09	D	Full documentation release to users
15-Nov-10	D	Live solution on SWIFTNet

2.4.2.2 Translation rules production

Date	Type	Milestone
30-May-09	D	Draft translation rules send out to pilot test users
19-Aug-09	M	BVG 3 meeting - Translation rules final approval
30-Apr-10	D	Final translation rules send out to users

2.4.2.3 ISO approval process

Date	Type	Milestone
31-Jan-09	D	ISO documentation send out to ISO20022 SEG
Mid-May-09		ISO 20022 SEG preliminary approval and ISO CR's delivery
31-Aug-09		ISO SEG starts BVG approved pilot testing ad MT Maintenance CR's review
1-Dec-09		ISO SEG final approval
31-Dec-09		ISO Final Documentation publication on iso20022 website

2.4.2.4 Testing phase

Date	Type	Milestone
1-Mar-09		Open ITB for draft schemas Pilot vendors testing
1-May-09		Open T&T for draft schema Pilot user testing
30-Oct-09		Close ITB and T&T testing service
1-Mar-10		Open ITB for final schemas vendors testing
1-Jun-10		Open T&T for final schema user testing
15-Nov-10		Close ITB and T&T testing service

3 Project Organisation

3.1 Project Structure

3.1.1 Industry consultation experts

3.1.1.1 Role

The following activities may be part of the industry experts role.

Industry experts:

- May be consulted during any part of the process
- May provide input to validate the business rationale (and work plan)
- Provide input to produce the business and logical model
- Review the proposed scope and identify the business requirements, before they are submitted to the business validation group for approval
- May participate as “facilitator” in the business validation group meeting
- May act as pilot testers of the new standards solution

3.1.1.2 Profile

The industry consultation will be done both at Industry group level and individual expert’s level. The industry group consulted must be recognised securities industry groups with experience in market practices, ISO 15022 and/or ISO 20022 standards.

The individual experts will:

- either complement the industry groups in areas where SWIFT believes a specific expertise is needed, eg, CCP.

- or have expressed a commercial or standards interest in the development of ISO 20022 messages for settlement & reconciliation.

They must have knowledge in ISO 15022 and/or in ISO 20022 standards. They must be knowledgeable in the securities settlement and reconciliation processes with a specific expertise in the flows their institution is covering.

Feedback from other securities players or groups will be accepted but dealt with on best effort basis. We will strongly advise them to go though one of the industry groups listed below to ease the consultation process.

3.1.1.3 Composition

Industry groups directly consulted will be:

- Securities Market Practice Group (SMPG)
- ISITC North America
- European Central Securities Association (ECSDA WG6)

The table below presents the "core" industry consultation participants. Additional consultations are already or to be scheduled with additional experts or industry/market groups to ensure the best possible coverage when defining the business requirements. SWIFT will ensure that the requirements collected are discussed with the "core" industry consultation and the Business Validation Group. To date, the following additional consultations are planned:

- French NMPG, 16 January 2008
- UK & IE NMPG, 7 February 2008-01-09
- DESSUG, date to be confirmed
- KDPW (Polish CSD), date to be confirmed

Name, firstname	Institution	Insutry Groups Membership	Justification for selection
Representatives of the above industry groups			
Charles Boniver	Ineum Consulting	SMPG	Co-chair of S&R SMPG WG, consultancy, message implementation
Gerard Van Zwam	KASBank	SMPG	Co-chair of S&R SMPG WG, local and global custodian
Jason Brasile	State Street	ISITC, SMPG	ISITC Settlement WG co-chair, Global Custodian
Yvan Djurkin	Barclays Global	ISITC, SMPG	ISITC Reconcilation WG co-chair, Investment Manager.
Marcel Vandijk	Euroclear NL	ECSDA WG 6	ECSDA WG 6 representation, CSD
Kaius Ruokonen	NCSD	ECSDA WG 6	ECSDA WG 6 representation, CSD
Individual experts			

Concetta Cerafogli	ECB		Target 2 for Securities
Christoph Heid	3CB+		Target 2 for Securities, National Central Bank, CCBM2
Kevin Wooldridge	Euroclear	ECSDA WG6, SMPG, HWGSS	CSD, ISO 20022 standard setter, ISO 15022 expertise, SMPG Regional Director, HWGSS member
Michelle Jahnel	DTCC	ISITC, ACSDA	CSD, ISO 15022 and XML expertise
Shunichiro Unno	JASDEC	ISITC (JP)	CSD and clearing house, ISO 15022 expertise
Franck Giraud	LCH Clearnet		Clearing house and Central Counterparty experience
Keith Berrett	Morgan Stanley	HWGSS	Broker, ISO 15022 and XML expertise, HWGSS member
Stephen Lindsay	SWIFT		Vendor expertise, message implementation

3.1.2 Business Validation Group (BVG)

3.1.2.1 Role

The following activities may be part of the BVG members role:

BVG members:

- May be consulted during any part of the process
- Approve the final project scope and requirements and any later revision of scope and/or requirements
- May provide input to validate the business rationale (and work plan)
- Approve the business and logical models
- May act as pilot testers of the new standards solution
- Review and resolve requests for standards changes, resulting from the pilot testing
- May be consulted to put together the implementation and roll-out plan

3.1.2.2 Profile

The BVG will be created based on the S&R Securities Maintenance Working Group to ensure the history of the ISO 15022 standards building is preserved. Additional experts will be included to ensure all securities industry players are involved

They must have knowledge in ISO 15022 and/or in ISO 20022 standards. They must be knowledgeable in the securities settlement and reconciliation processes with a specific expertise in the flows their institution is covering.

3.1.2.3 Composition

Name, firstname	Institution	Insutry Groups Membership	Justification for selection
Armin BORRIES	Clearstream Frankfurt	SMPG, ECSDA WG6	SMWG member (DE rep)
Axelle Wurmser	BNP Paribas	SMPG	SMWG member (FR rep)
Adriano CHIEFFO	SIS	SMPG	SMWG member (CH rep)
Kevin WOOLDRIDGE	Euroclear	SMPG, ECSDA WG6, HWGSS	SMWG member (ICSD expertise), ISO 20022 standards setters and implementation
Lorenza BIOLATTO	Intesa Sanpaolo	SMPG	SMWG member (IT rep)
Genevy DIMITRION	State Street	SMPG, ISITC	SMWG member (US rep), ISITC and ISO 20022 standards setter
Gérard VAN ZWAM	KASBank	SMPG	SMWG member (NL rep)
Jeff ROSEN	Banque de Luxembourg		SMWG member (LU rep)
Lynda MCKARTNEY Peter Chapman (alt)	JP Morgan Chase HSBC	SMPG	SMWG member (GB rep)
Christian DE JONGHE	ING	SMPG	SMWG member (BE rep)
Erwin PLUYS	Cleatsream Luxembourg	SMPG	SMWG member (ICSD expertise)
Taketoshi MORI	MUFG	ISITC (JP), SMPG	SMWG member (JP)
Dayle Scher	MFS	ISITC	Investment Manager, ISITC executive, ISO 20022 standards setter
Keith Berrett	Morgan Stanley	HWGSS	Broker, HWGSS

3.1.3 Project Team

Role	Responsibilities	Contact details
S&R and CA Project Management Officer	Jacques Littré	Jacques.littre@swift.com
S&R and CA Standards Program Manager	Alexandre Kech	Alexandre.kech@swift.com
S&R Standards Project Manager	Karine Taquet	Karine.taquet@swift.com
S&R Business Analyst	Karine Taquet	Karine.taquet@swift.com
Secretary Industry Consultation and BVG meetings	Aurelie Steeno	Aurelie.steeno@swift.com

3.2 External Communication

The following table lists the different topics and their related targeted audiences:

Targeted Audiences	Communication topics
MT cat. 5 - Settlement and Reconciliation User community	Inform about project main external milestones i.e deliverables, industry consultation and BVG meetings Inform about MT to MX reverse engineering approach, coexistence, migration roadmap.
Vendors and candidate pilot users	Inform about overall development project planning and specifically about pilot testing, ITB and VTB test phases and translation tools deliverables.

Special event opportunities for communicating key messages about the MT to MX Reverse Engineering project:

- Sibos (October period each year)
- Standards Forum (October period each year)
- Vendors events (SOFA, SOPA,...)
- SMPG meetings, domestic User Groups and Market Practice groups,

Revision record

Revision	Date	Author	Description	Sections affected
1.0	9 Jan. 2008	Jacques Littré Alexandre Kech	Final version	All

End of document