



Standards Editor

For ISO 20022 message development

Getting Started

This document provides instructions to get started with the Standards Editor, and explains the main features.

19 July 2016

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1. Introduction

1.1 Glossary

Abbreviations

Abbreviation	Definition
RA	Registration Authority
BAH	Business Application Header
CR	Change Request

1.2 Document Scope and Objectives

The Standards Editor (Editor in short in this document) is a tool provided by SWIFT to facilitate the development and maintenance of ISO 20022 messages.

The Editor allows defining new candidate ISO 20022 Message Definitions only. All other ISO 20022 development deliverables (use cases, activity diagrams, business actors and roles, sequence diagrams) must be created using another tool(s), at the discretion of the submitter, and submitted to the ISO 20022 Registration Authority (RA) using the 'ISO 20022 Message Definition Report – Part 1' template available from the RA.

This document is to help the first-time user of the Editor. The pre-requisite is a thorough knowledge of ISO 20022 Message Definitions and development methodology.

This document is not an ISO 20022 methodology training, nor a full training or user guide for using the Editor.

1.3 References

Document	Source
Development of ISO 20022 messages	http://www.iso20022.org/development.page
Maintenance of ISO 20022 messages	http://www.iso20022.org/maintenance.page
ISO 20022 Repository	http://www.iso20022.org/financial_repository.page
Master List of Modelling Rules and Addendum	http://www.iso20022.org/documents/general/ISO20022_MasterRules.ZIP
Use of Supplementary Data component	http://www.iso20022.org/supplementary_data.page
Business Application Header schema and documentation	http://www.iso20022.org/bah.page
List of ISO 20022 Business Areas codes	http://www.iso20022.org/documents/general/ISO20022_BusinessAreas.pdf

2. Installation

2.1 Obtaining the Editor

The Editor is provided to an organisation that has been authorized to develop new ISO 20022 Message Definitions or is in charge of the maintenance of existing ISO 20022 Message Definitions. The RA provides a link to download the Editor. The organisation must accept the Editor Licence terms and conditions. The Editor is provided free of charge.

To work with the Editor, a repository is required. The repository contains the ISO 20022 Dictionary and Message Definitions. The current repository is provided by the RA.

2.2 Technical Pre-requisites

The Editor runs under Windows XP and Windows 7.

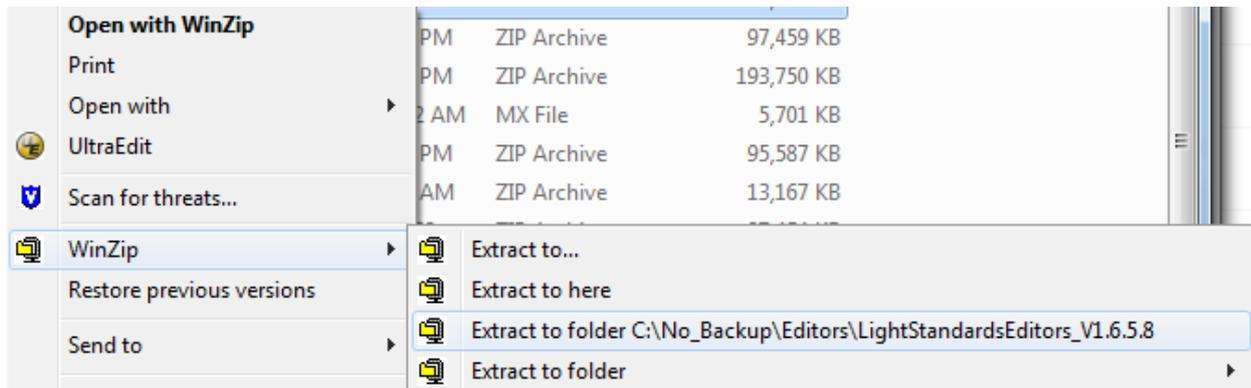
A screen resolution higher than 1024x768 is highly recommended.

Feature	Minimum	Recommended
Operating system	Windows XP	Windows 7
CPU	1.5 GHz	Dual Core
Physical memory	1 GB + 1GB (WinXP)	1GB + 2GB (Win7)
Screen resolution	1024x768	1280 x 1024
Disk space	200 MB	200 MB

2.3 Installation

The Editor is provided as a ZIP file.

Unzip to a new, empty directory. This directory should not be moved after installation.



The Editor’s directory contains everything that is needed, technically, including Java software. It also contains a dictionary of abbreviations for XML tags.

3. Getting Started

Double Click on the file StandardsEditor.exe

Accept the Role “Standards Submitter”.



The Editor starts.

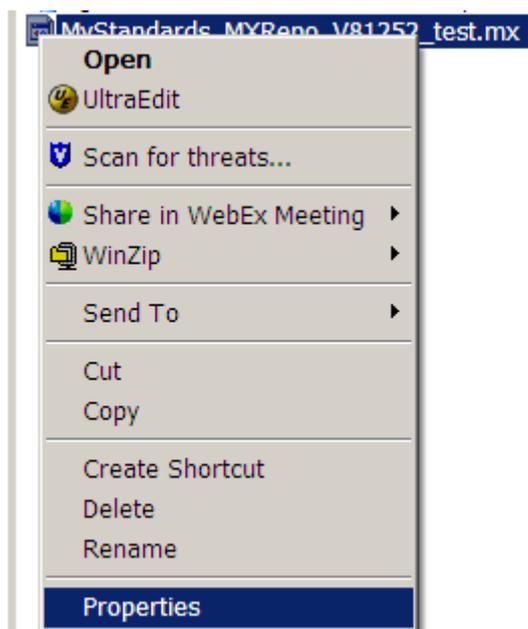
You need to have a repository with ISO 20022 Message Definitions.

Select File->Open and select the repository.



It is recommended to keep a read-only version of the repository and to work with a copy, read-write enabled.

To change the attributes read-only/read-write, use the Windows properties, available by right-clicking on the file.



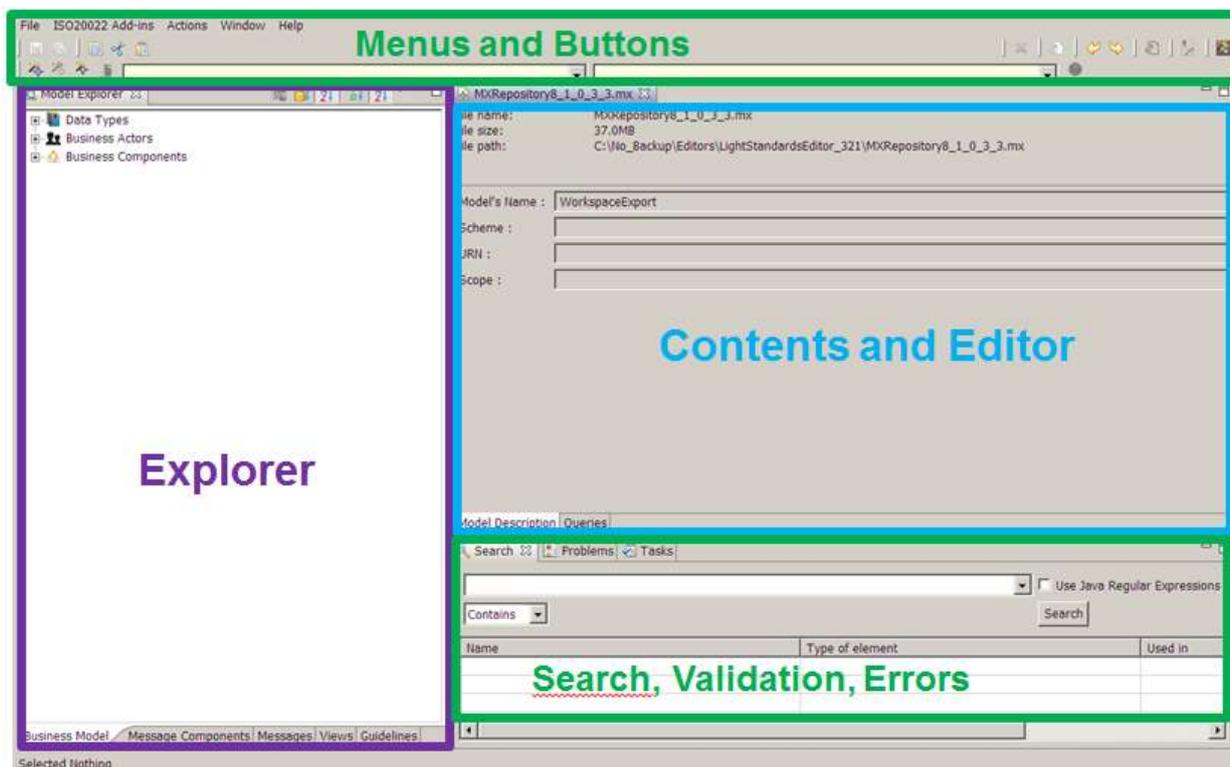
3.1 Graphical User Interface

On the left hand, there is an “Explorer”, allowing you to browse the items. The items are organized under different “tabs”, at the bottom.

On top, the menu bar and buttons.

Top right, the contents. This is where the details of an item are displayed when it opens, for example when you double-click on it in the Explorer. The contents is also organised in different tabs. This is also where the contents can be edited or created.

Bottom right, an area for tools and reporting: searching, validation, errors, etc.



4. Main Functions

4.1 Browsing

Using the Explorer, you can browse the contents of the ISO 20022 repository.

The contents is organised in different tabs. Here are the details of each tab:

Business model:

- Data Types; they are grouped by representation: Code sets, Indicator, Text, etc. As an exception, Identifiers are mixed with Text
- Business Components and Elements. It is a non-graphical representation of the business info model, equivalent to the Business Model Definitions published on the iso20022.org web site, as spreadsheets (see http://www.iso20022.org/business_model.page).

Message Components: contains one category: Message Components.

Messages (*Message Definitions* to be correct according to ISO 20022):

- Business Areas: Message Definitions grouped according to ISO 20022 Business Areas: acmt, admi, camt, etc.
- Message Sets: Message Definitions grouped according to ISO 20022 Message Sets
- Message Definitions: full list of Message Definitions in the scope of the repository
- PS: if a SWIFT Solutions category appears, it must be ignored.

Views: is empty. Views can be created in Edit mode. Not needed.

Guidelines: not in the scope of the Editor. It is empty and to be ignored.

4.2 Sorting

A series of buttons at the top of the explorer pane allows sorting the contents:

From left to right:



sorts the Message Components according to the Business Component they trace to



groups items according to their development status. Items provided in the repository are “Approved”. New items created by a submitter will have the status “Development”



sorts items alphabetically. This applies to Message Components and Data Types, as opposed to a grouping by development status

The last two buttons apply to Message Definitions (tab Messages)



sorts Message Definitions according to their message ID (which is for example pain.001.001.02)



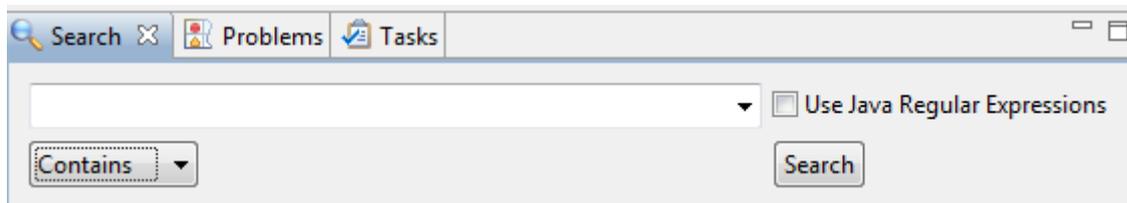
sorts Message Definitions alphabetically according to their names (which is for example CustomerCreditTransferInitiationV02, corresponding to pain.001.001.02)

4.3 Searching

The Search function is located in the bottom right part.

The search

- Acts on the whole repository, it is not possible to restrict the scope of the search
- The search string is not case-sensitive
- The four options are: the item “contains”, “starts with”, “end with”, “is exactly” the search string. “Contains” is selected by default
- It is possible to use Java regular expressions for searches. A brief explanation is displayed if the cursor hovers over the words “Java regular expressions”
- Name of Elements, Components, Rules, Message Definitions are searched. Definitions of Elements, Components, etc. are not searched.



Search results

- Are displayed in three columns

Name	Type of element	Used in
Mandate	MXBusinessComponent	Dictionary;
MandateStatus	MXBusinessComponent	Dictionary;
MandateHolder	MXBusinessComponent	Dictionary;
CashAccountMandate	MXBusinessComponent	Dictionary;
MandateIssuer	MXBusinessComponent	Dictionary;
DirectDebitMandate	MXBusinessComponent	Dictionary;
MandatePartyRole	MXBusinessComponent	Dictionary;
CashAccountMandate [0,*] : CashAccountMandate	MXBusinessElement	CashAccountService;
RelatedMandate [0,1] : DirectDebitMandate	MXBusinessElement	PaymentProcessing;
Mandate [0,*] : Mandate	MXBusinessElement	MandatePartyRole;
Mandate [0,1] : Mandate	MXBusinessElement	MandateStatus;
MandateStatus [0,*] : MandateStatus	MXBusinessElement	Mandate;
DirectDebitMandate [1,1] : DirectDebitMandate	MXBusinessElement	DirectDebit;
OriginalMandate [1,1] : Mandate	MXBusinessElement	Mandate;
MandatePaymentType [1,1] : PaymentProcessing	MXBusinessElement	DirectDebitMandate;
MandatePartyRole [0,*] : MandatePartyRole	MXBusinessElement	Mandate;
Mandate [0,1] : Mandate	MXBusinessElement	SignatureCondition;
ExternalMandateReason1Code	MXCodeSet	Dictionary;
MandateReasonCode	MXCodeSet	Dictionary;
MandateCancellationReason1Code	MXCodeSet	Dictionary;
MandateAmendmentReason1Code	MXCodeSet	Dictionary;
Missing Mandatory Information In Mandate [MD02]	MXCodeValue	TransactionRejectReason4Code;
Missing Mandatory Information In Mandate [MD02]	MXCodeValue	TransactionRejectReason2Code;
No Mandate [MD01]	MXCodeValue	TransactionReasonCode;
Missing Mandatory Information In Mandate [MD02]	MXCodeValue	TransactionRejectReason6Code;

First column shows the name of the item where the search string was found.

Second column the type of item, the search results are sorted according to this column.

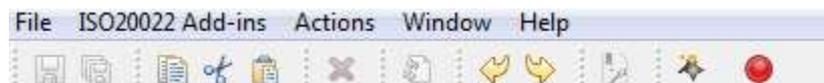
Third column shows the container in which the item is used.

The search results can be sorted according to another column by clicking on top of it. To switch between alphabetical order and reverse alphabetical order, click once more.

4.4 Recording Mode

In order to create new content, it is necessary to enter “recording mode”.

You do this by pushing the red button. It will turn green.



When in recording mode, you can create new content.

You exit recording mode by pushing the green button, it will turn red.

4.5 Creation of New Content

Using the Editor, you can create

- New Message Definitions
- New Data Types
- New Message Components

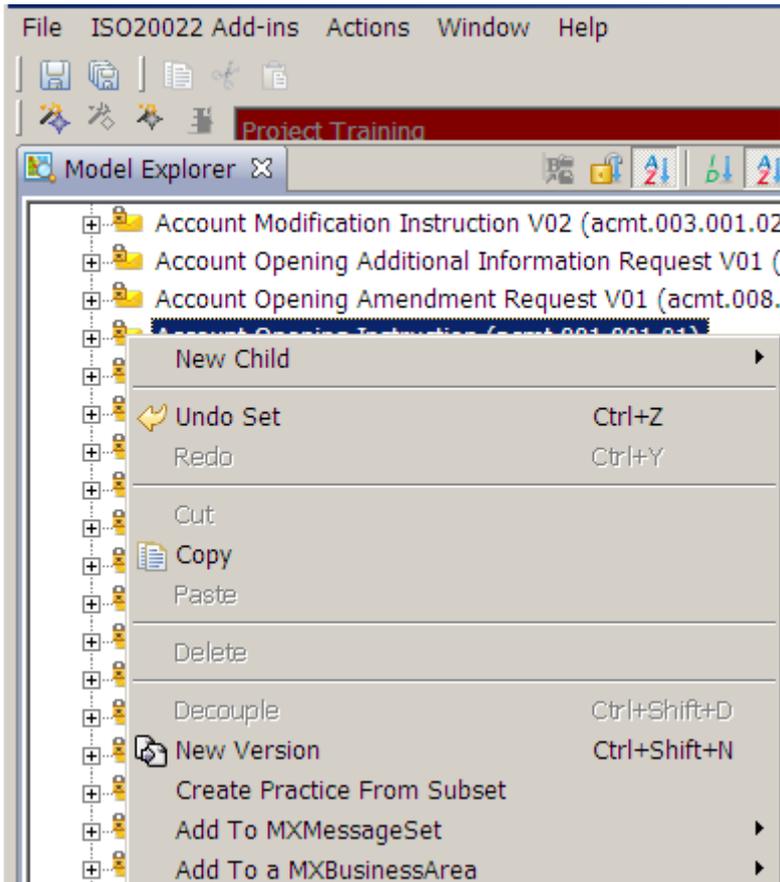
It is not possible to create new Business Components/Elements or Business Actors/Roles.

New items can be created

- From scratch
- Using the “new version” function

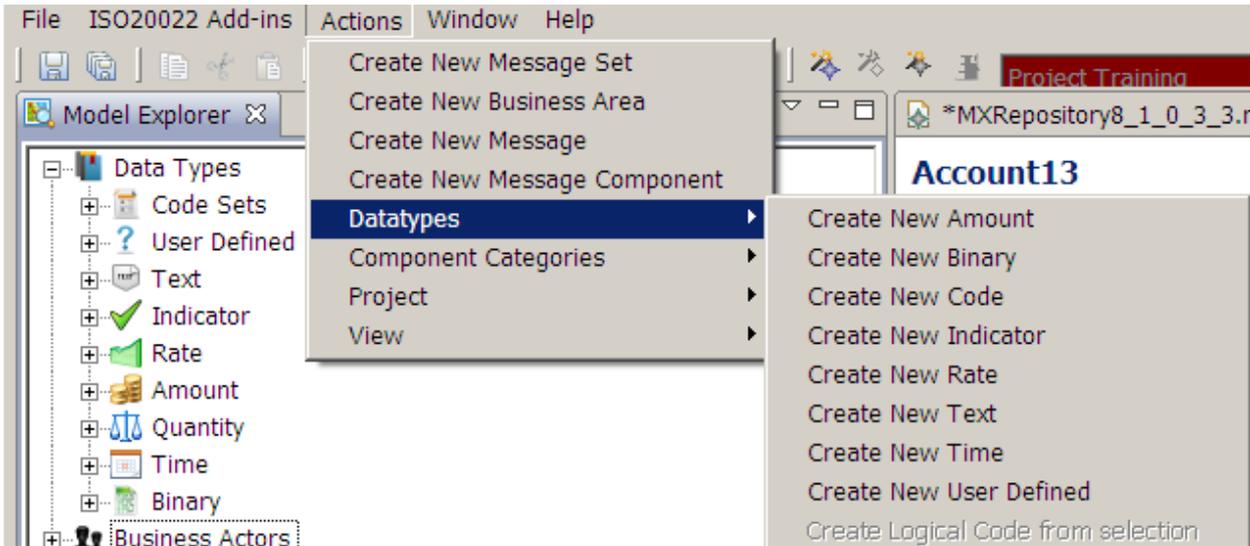
To create from an existing Message Component/Data Type/Message Definition, right-click on the item in explorer and select “new version”

Example



To create from scratch, select the operation in the Actions menu

Example:



If you create a Message Component, you must

- define the name of the Component and input a definition,

- create Elements (at least one). Each Element must have a name, a type, multiplicity and definition,
- (optionally) create Rule or Guideline

The first tab of a Message Component contains the name, definition and whether it is a Choice Component and/or technical component.

 **Account13**

▼ General Information

This section describes general information about this object

Development Status DEVELOPMENT ▼

This component is derived from : .

Name Account13 Assign Fresh Name

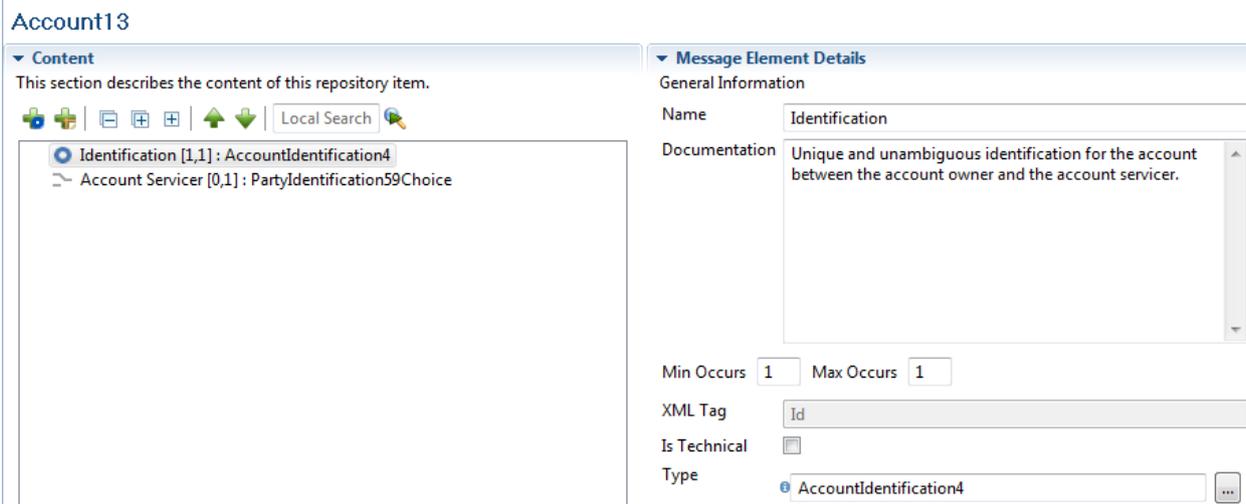
Documentation Business relationship between two entities; one entity is the account owner, the other entity is the account servicer.

This component is a choice

This component is technical

Summary
Content
Semantic Traces
Impact Analysis
Versions/Subsets

The “Content” tab allows to add Message Elements, their type, definition and multiplicity



New Elements are created using the button (first from the left)



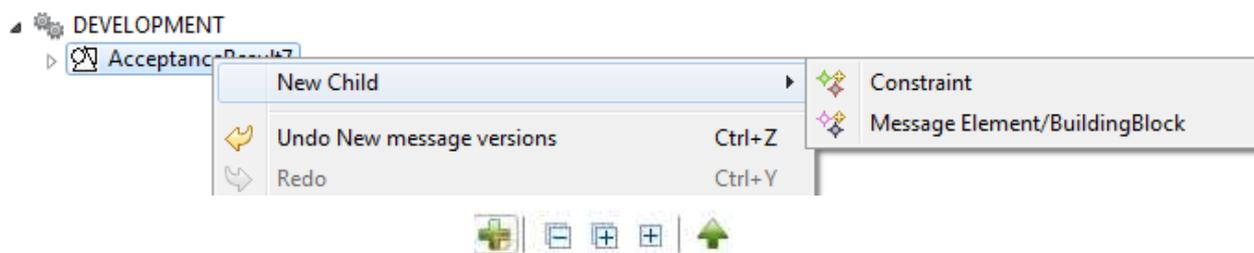
Add new element

To select a type, you can

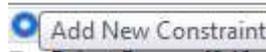
- Type the full name of the type in the field
- Type the beginning of the name (case sensitive!) and press CTL-space to see all types with name starting with the character string
- Click on (...) button and see all types defined and select one

Elements can be re-ordered using the Up and Down buttons.

Rules and Guidelines (Constraints) may be added to a Message Component.



Or using the button (second from left):



A Constraint must only have a name and definition

Rules for creating Message Components and their Elements

- Message Elements are derived from Business Elements from a single Business Component or more than one.
- Message Elements should use the vocabulary used in Business Elements.
- Message Element names may not repeat the name of the Message Component
- Message Component name should be as generic as possible, and certainly not contain a project name, so that re-use is easy
- Message Component name ends with a digit
- A Message Component should contain at least a mandatory Element

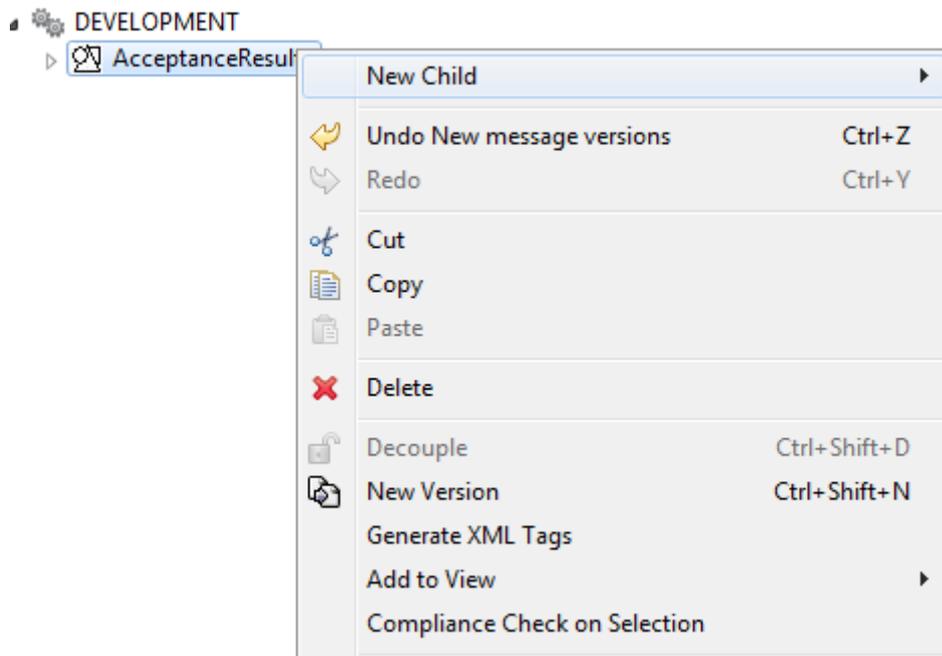
- Technical elements should be marked as such

The full set of modelling rules is available from the iso20022.org web site as well as other useful document such as the Addendum to Modelling rules (contains guidelines for definitions, for example).

4.6 Validation

A Message Component or Message Definition can be checked for compliance, using the “MX Compliance Check on Selection” function.

Select the Component or Message Definition.

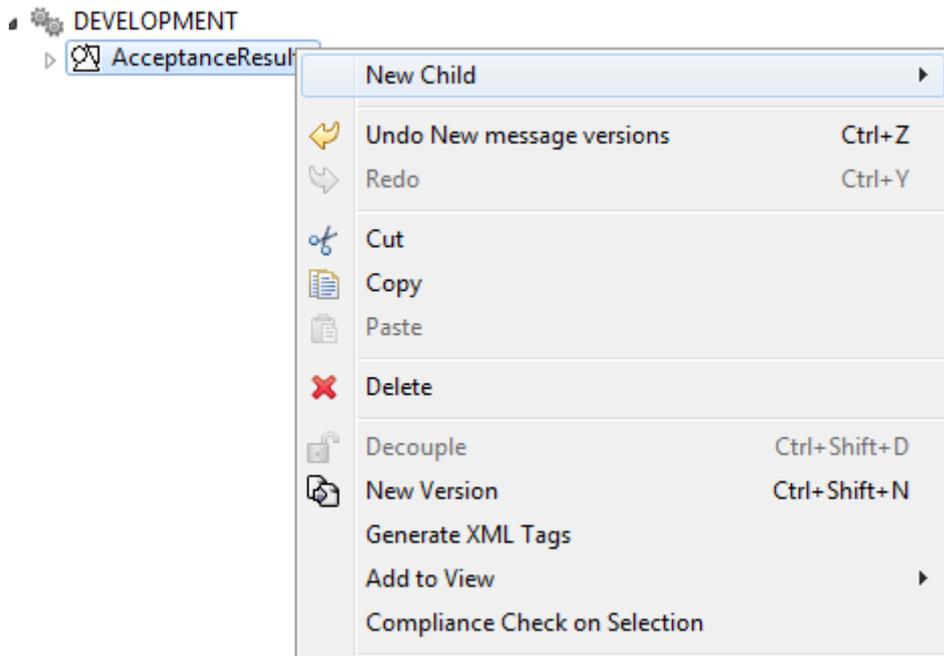


4.7 Generation of XML tags

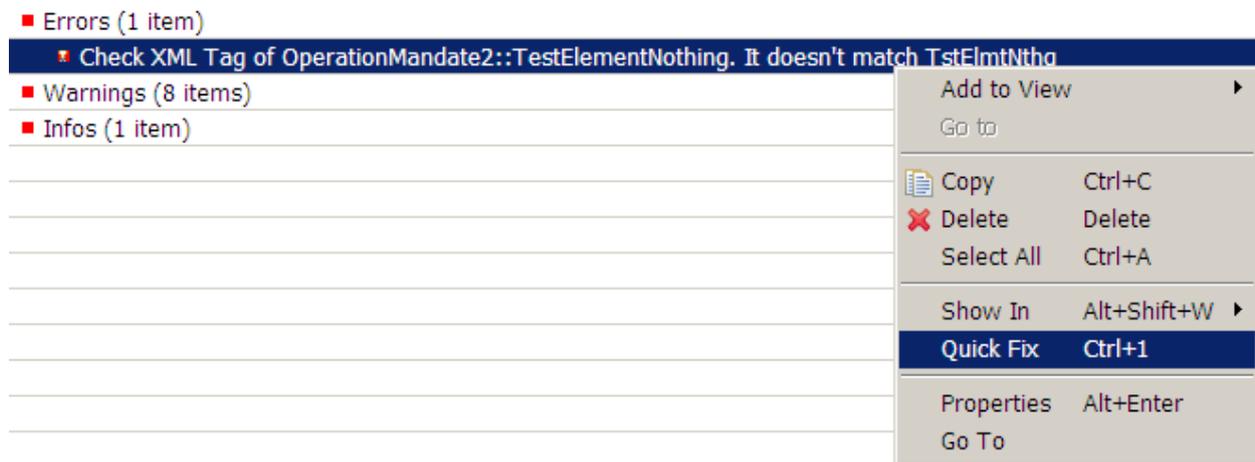
XML tags must be generated for all Message Definitions and elements.

XML tags are used instead of full names, in the schemas and in message instances.

To generate, select the item and right-click



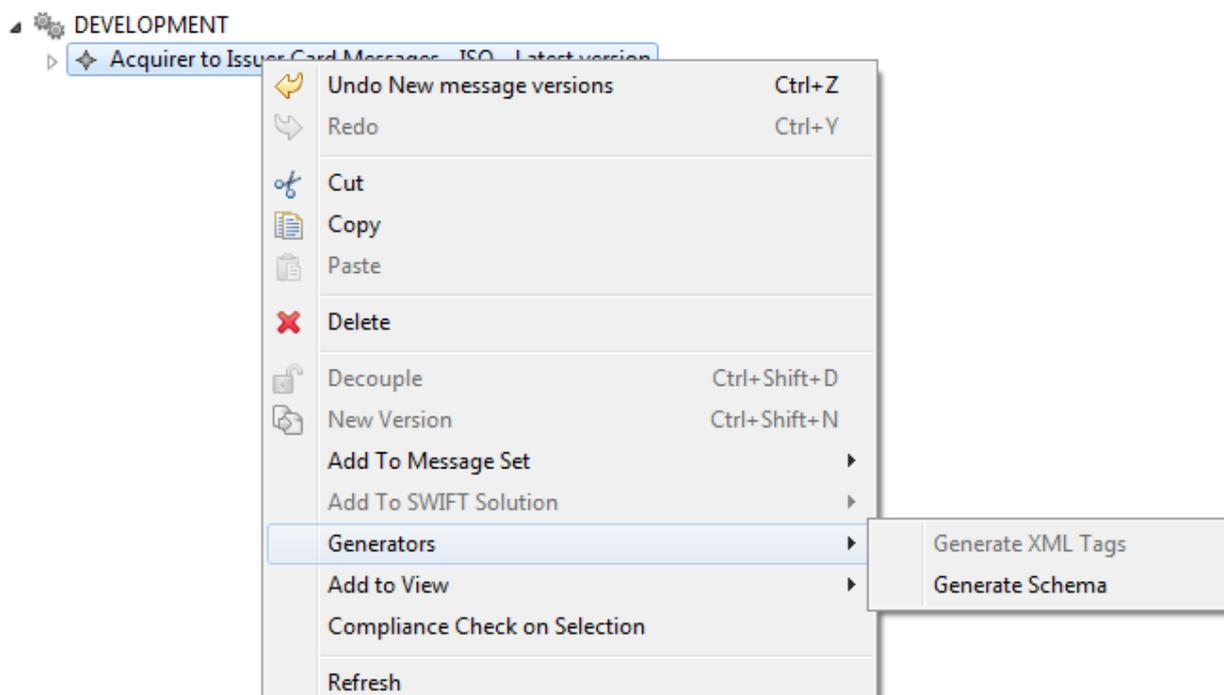
If an abbreviation does not exist in the abbreviation dictionary, an error message is displayed, and it is possible to create a new abbreviation with the function “Quick Fix”.



All new abbreviations created will be reviewed by the RA and may be changed by the RA.

4.8 Generation of XML Schema

The XML schema of a message definition can be generated. Select the item and right-click:



Then select a location on disk where the schema will be written.

4.9 Miscellaneous

You need to consider if your messages will include a Supplementary Data component (see http://www.iso20022.org/supplementary_data.page).

Depending on what you indicated in your Business Justification, you need to consider (or not) using the Business Application Header (BAH) with your messages (see <http://www.iso20022.org/bah.page>).

5. Submission of Model to Registration Authority

- Simply send the model (the .mx file) by email to the Registration Authority with the Message Definition Report – Part 1 that you have drafted according to the Word template received from the RA
- Model will be reviewed by the Registration Authority and returned to you for modification until it meets all criteria.
- The Registration Authority will generate the official Schemas and Part 2 and 3 of the Message Definition Report
- For details about process, parties and responsibilities -> see http://www.iso20022.org/development_and_maintenance.page
- Email of RA: iso20022ra@iso20022.org