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# Change History

|  |  |  |
| --- | --- | --- |
| *Version* | *Revision Date* | *Description* |
| 1.1 | 8 June 2021 | Update to SSRTR code to remove validation rules relating to SuperannuationRollover.UnclaimedSuperannuationMoney.Date as it is a USM related field only. |
| 1.0 | 11 June 2020 | Initial Release for Rollover MIG v3 |

# Introduction

The purpose of this document is to describe the ATO Schematron files available for the SuperStream Rollovers: Initiate Rollover and Rollover Transaction (henceforth referred to as SSIRR and SSRTR) interactions.

This document also explains how a developer may utilise the provided Schematron files to assist in their own development.

Support for the ATO Schematron files will only be provided during the build phase for SuperStream Rollovers v3. Note that this is intended only for B2B rollovers and does not cater for ATO managed services that also use the SuperStream Standard, such as Unclaimed Super Money (USM) rollovers and Release Authority.

# Schematron Download Content

This section briefly describes the content available in the ATO Schematron downloads.

## Naming Standards

The following naming standards have been used for the Schematron files.

* All Schematron rule files end with a “.sch” file extension.
* The primary rule files (i.e. those that are built into XSL files) use the following naming standard:

<Operation>ValidationRules.sch

* <Operation> will be Lodge.

**Eg.**

The primary filename for a SSIRR – Lodge would be:

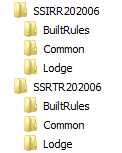
LodgeValidationRules.sch

The .sch files are compiled into XSL files through a series of steps using the standard ISO Schematron process. The XSL files are referred to as the Built rules.

The built Schematron rule files are placed in the same folder as the primary rule files. These files will have the same name as the primary Schematron rule file, except with “.xsl” extension.

## Schematron Rules Folder Structure

The Schematron rules have been broken down as follows:



The contents of each folder are described in the sections below.

### Built Rules Folder

The Built Rules folder contains the built rules (.xsl files) for each of the forms.

### Common

This folder contains rules that are used for the SSIRR and SSRTR Lodge interactions only.

|  |  |
| --- | --- |
| **File Name** | **Description** |
| Content.sch | Contains cross field rules. |
| Context.sch | Contains common rules that apply to XBRL contexts. |
| Mandatories.sch | Contains mandatory checks. |
| Variables.sch | Contains variables used across the rules. |

### Lodge

This folder contains the primary rules files that are used for the SSIRR and SSRTR Lodge interactions. These files contain the necessary references to the SBR taxonomy namespaces and supporting Schematron files listed above based on the particular interaction.

# Further Information on the ATO provided Schematron

This section briefly describes important differences between ATO provided Schematron files and what may be used for SuperStream gateways and consumers.

## Functionality not included in the Schematron files

The Schematron has been built to align to the minimum requirements of the SuperStream Data and Payment Standards - Rollover Message Implementation Guide v3.0-0.84 and Error Code Management v2.1-0.3. Any custom validation rules will not be supported by the ATO Schematron files; it is the responsibility of the consumer to maintain and update custom rules.

## Additional functionality in the Schematron files

Additional functionality has been included in the Schematron files to include the rule identifier (VR number) associated with any error that is produced. This effectively allows consumers to easily find what rules are firing for difference scenarios.

# How ATO provided Schematron rules can be utilised

The ATO makes no assumptions on how the provided Schematron downloads could be used by consumers. Essentially the files are provided to developers to use as they see fit. The following recommendations provide assistance to developers in gaining an understanding of how the Schematron files could be used.

## Unit Testing

The Schematron rules can be used for unit testing of software products. This allows developers to check their products during the development cycle and resolve issues early in the process.

|  |  |
| --- | --- |
| **Relevant Artefacts** | **Usage** |
| Built XSL files for each operation. | Use to validate the xbrl instance. |

## Rebuilding Schematron rules

One change that has been made to the Schematron is that a different formatter is used. Internally the ATO uses its own format for business event messages – thus the ATO uses a different Schematron formatter file. Consumers could choose to do something similar if required.

|  |  |
| --- | --- |
| **Relevant Artefacts** | **Usage** |
| EBMS\_RulesInSBR2Format.xsl | Consumers could choose to modify or replace the EBMS\_RulesInSBR2Format.xsl to produce different output. |
| SCH Rule Files | These files would need to be rebuilt where required. |

## Run time usage

Potentially the Schematron files could be used by consumers to validate messages before they are sent externally at run time. This could be used to avoid round trip delays when errors are detected.

# Schematron Overview

It is not the intent of this document to describe Schematron and how it works. Please reference the [www.schematron.com](http://www.schematron.com) web site for more information on Schematron itself.

This section has been copied from internal documentation for ATO Service Validation and is provided for those consumers who are unfamiliar with Schematron.

## Conceptual Model

This section describes how a rules engine can operate at a conceptual level.  The concepts described here lend themselves to different implementations including XBRL formulas and Schematron.

### Building Rules

The first step in the process is building the rules.  With a technology such as XBRL Formulas this would be done directly in the taxonomy, for other technologies the intent would be to generate the rules from the taxonomy or other meta-data where rules are not defined within the taxonomy.

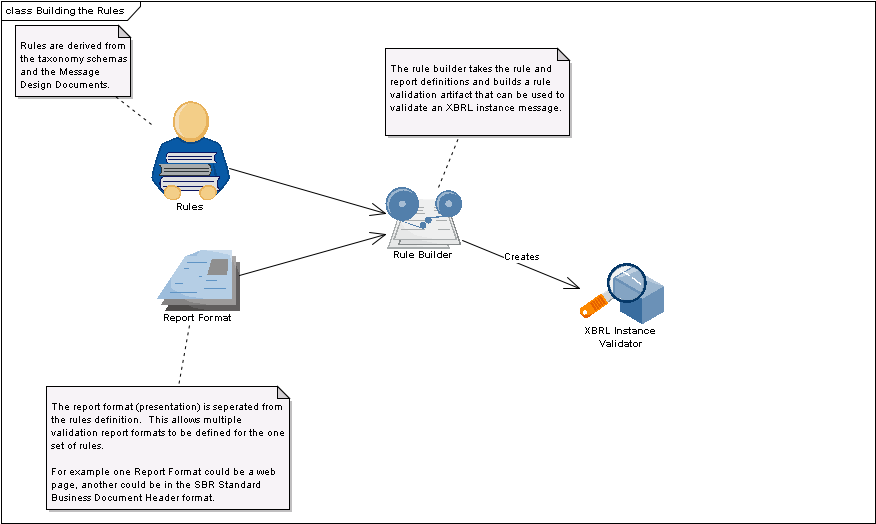


Figure: Building the Rules

### Validating Messages

Having built the rules into an XBRL Instance Validator - XBRL messages can now be validated.

Messages are passed into the Instance Validator and results are output based upon those validations.

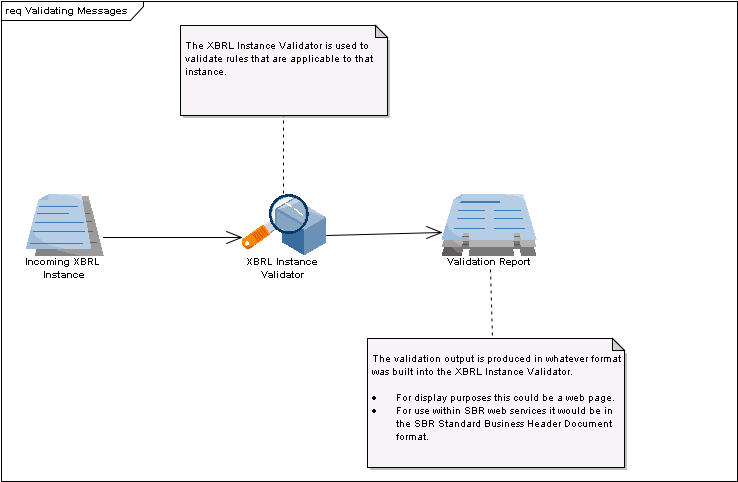


Figure: Validating Messages

## Implementation Model

This section describes the Schematron implementation of the conceptual model.

### Building Rules

Rules are built into a Schematron rules file.  The rules and the report content are transformed by an XSLT processor into a Rules file.

The Rules file itself is a XSLT transformation file that is able to validate an XBRL instance document.

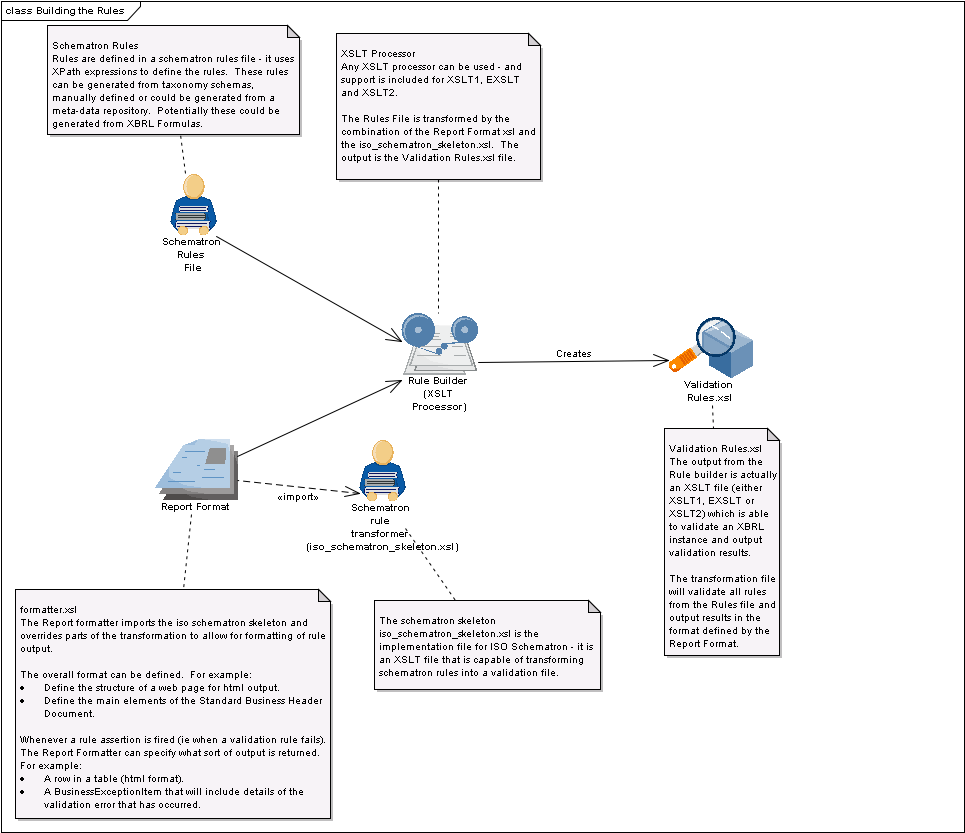


Figure: Building the Rules

### Validating Messages

Having built the rules into an XBRL Instance Validator (actually an XSLT file) - XBRL messages can now be validated.

Messages are passed into the Instance Validator and results are output based upon those validations.

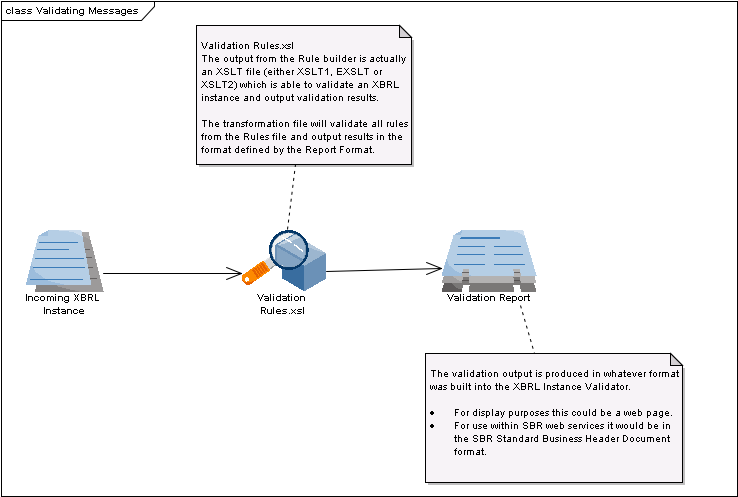


Figure: Validating Messages

## Schematron Home Page Reference

See the [http://www.schematron.com](http://www.schematron.com/) site for more information about Schematron.