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Guide to Schematron Rules and Patterns

RR-SM Schematron Guide

Version 2

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Chapter 1 - Introduction

1.1 - Purpose

(U) The following documentation is informative. The actual Schematron files are the normative record. This documentation is generated from the Schematron files via XSLT it may be missing some file or pieces of a file but whatever is here other than titles came from the original file.

(U) It is envisioned that this will be a useful resource to search and read but for questions and debates the source files should be consulted.

(U) Rules identifiers are all of the format RR-SM-ID-XXXXX, with rule files named RR-SM_ID_XXXXX.sch. Any other heading indicates a supporting file that may strongly influence a rule but is not actually a numbered rule.

Chapter 2 - Rules

All of the numbered Rules for RR-SM are listed in this section. These rules may depend strongly on patterns defined in the Abstract Patterns section or on variables defined in the Schematron Schema section.

2.1 - `./Rules/GeneralConstraints/RR-SM_ID_00001.sch`

Rule Description: RR-SM-ID-00001 [RR-SM-ID-00001][Error] The @ism:DESVersion is less than the minimum version allowed: 9. Human Readable: The ism version imported by RR-SM must be greater than or equal to 9.

Code Description: For all elements that contain @ism:DESVersion, we verify that the version is greater than or equal to the minimum allowed version: 9.

Schematron Code:

```
<?ICEA pattern?><!-- Notices - Distribution Notice:
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    available for use without restriction.
    -->
<sch:pattern id="RR-SM-ID-00001">

    <sch:rule context="*[@ism:DESVersion]">
        <sch:assert test="number(@ism:DESVersion) >= 9"
flag="error">
    [RR-SM-ID-00001][Error] The @ism:DESVersion is less than the
minimum version
    allowed: 9.

        Human Readable: The ism version imported by RR-SM must be greater
than or equal to 9.
    </sch:assert>
    </sch:rule>
</sch:pattern>
```

2.2 - ../Rules/GeneralConstraints/RR-SM_ID_00002.sch

Rule Description: RR-SM-ID-00002 [RR-SM-ID-00002][Error] The @arh:DESVersion is less than the minimum version allowed: 1. Human Readable: The arh version imported by RR-SM must be greater than or equal to 1.

Code Description: For all elements that contain @arh:DESVersion, we verify that the version is greater than or equal to the minimum allowed version: 1.

Schematron Code:

```
<?ICEA pattern?><!-- Notices - Distribution Notice:
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    available for use without restriction.
-->
<sch:pattern id="RR-SM-ID-00002">

    <sch:rule context="*[@arh:DESVersion]">
        <sch:assert test="number(@arh:DESVersion) >= 1"
flag="error">
    [RR-SM-ID-00002][Error] The @arh:DESVersion is less than the
minimum version
    allowed: 1.

        Human Readable: The arh version imported by RR-SM must be greater
than or equal to 1.
    </sch:assert>
    </sch:rule>
</sch:pattern>
```

Chapter 3 - Abstract Patterns

All of the Abstract Patterns for RR-SM are listed in this section. These patterns may depend strongly on variables defined in the Schematron Schema section.

Chapter 4 - Schematron Schema

The top level Schematron file for RR-SM is in this section. This file imports all of the others and also defines many global variables they are all dependent on.

4.1 - ./RR-SM_XML.sch

Rule Description:

Code Description:

Schematron Code:

```

<?ICEA master?><!-- UNCLASSIFIED --><!-- Notices - Distribution Notice:
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    to Federal, State, Local, Tribal, and Foreign Partners and
associated contractors. Approval for
    any further distribution must be coordinated via the Intelligence
Community Chief Information
    Officer, Mission Engagement Division at standardssupport@dni.gov--
><!-- WARNING:
    Once compiled into an XSLT the result will
    be the aggregate classification of all the CVES
    and included .sch files
-->
<sch:schema xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
queryBinding="xslt2">
    <sch:ns uri="http://www.w3.org/1999/xlink" prefix="xlink"/>
    <sch:ns uri="http://www.w3.org/2001/XMLSchema" prefix="xs"/>
    <sch:ns uri="urn:us:gov:ic:ism" prefix="ism"/>
    <sch:ns uri="urn:us:gov:ic:arh" prefix="arh"/>

    <!-- ***** -->
<!-- (U) RR-SM ID Rules -->
<!-- ***** -->

<!-- (U) GeneralConstraints-->
    <sch:include href="./Rules/GeneralConstraints/RR-SM_ID_00001.sch"/>
    <sch:include href="./Rules/GeneralConstraints/RR-
SM_ID_00002.sch"/>
</sch:schema>

```

Chapter 5 - Removed Rules

All of the numbered Rules for RR-SM that have been removed are listed in this section. This section is just a reference for what rule numbers have been dropped. In many but not all cases there will be a reason listed. In all cases the version that the rule was dropped in is listed.