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# Mapping of YANG to DSDL

## draft-ietf-netmod-dsdl-map-06

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# Status of the draft

- 12 July – WG co-chairs requested to consider the draft as a Proposed Standard
- 21 July – AD Evaluation

# Main changes between -05 and -06

Changes based on WGLC and an external review by Jirka Kosek:

- Improvements of the text: list of terms defined elsewhere (YANG, XML infoset), reordered sections.
- Terminology cleanup: *(schema of) the conceptual tree* is gone, *hybrid schema* used instead.
- Simplifications in the mapping procedure.

Fixes of several bugs exposed mainly by testing data models consisting of multiple YANG modules:

- “Chameleon” feature of YANG groupings – nodes adopt the namespace of each YANG module in which a grouping is used: solved by encapsulating every mapped module in a separate RELAX NG grammar.
- Similarly, unprefixed nodes in XPath expressions appearing in groupings have a variable namespace: solved by using Schematron abstract patterns with namespace prefix as a parameter.

`foo/bar` → `$pref:foo/$pref:bar`

- If a grouping is used both in an RPC method and elsewhere, the order of nodes is fixed in the first case and arbitrary in the second case: such a grouping is mapped to two RELAX NG named pattern definitions.

Few missing feature were added:

- Implementation of 'if-feature' – new annotation @nma:if-feature.  
Problem: How to pass available features to software?
- Values of *identityref* type are constrained in the RELAX NG schema exactly according to the YANG datatype specification.

# Implementation status

The implementation in **pyang** corresponds exactly to the -06 draft.

An XSLT-based Schematron validator by Rick Jelliffe is included in the distribution. A shell script performing the full validation of instance documents (as described in Sec. 7) is provided.

```
$ yang2dsdl -v psamp-config-06.xml ipfix-psamp-06.yang
== Generating RELAX NG schema './ietf-ipfix-psamp-dstore.rng'
Done.
== Generating Schematron schema './ietf-ipfix-psamp-dstore.sch'
Done.
== Generating DSRL schema './ietf-ipfix-psamp-dstore.dsrl'
Done.
== Validating grammar and datatypes ...
psamp-config-06.xml validates
== Adding default values... done.
== Validating semantic constraints ...
No errors found.
```

## New documentation:

- Unix manual pages
- Tutorial on DSDL mapping and validation:

<http://www.yang-central.org/twiki/bin/view/Main/DSDLMappingTutorial>