

A Comparative Study of Schema Languages for XML Documents

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A small example

Just parsing such a file.

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DTD \Leftarrow SGML.

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Simplified form. OK, but. . .

Drawbacks

Two syntaxes: XML and EBNF.

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No support for namespaces.

But also. . .

Elements: only arbitrary repetitions are allowed.

Keys \Leftarrow ID/IDREF(S) attributes.

Schemas' common points

XML texts themselves.

Namespace-aware.

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XInclude

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Nilable elements.

XML Schema's types

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Building new types, by extension or restriction.

Uniqueness

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`xsd:unique` \Leftarrow fields may be optional.

`xsd:key` \Leftarrow all the fields are required.

`xsd:keyref` \Leftarrow values related to an element

`xsd:unique` or `xsd:key`.

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One way for definitions of elements, attributes, groups, contents.

Relax NG (con'd)

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Less verbose, actually? In fact, that depends on
the number of your *definitions*.

Schematron

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Testing a structure with optional subparts \Leftarrow punishment.

Schematron (con'd)

Often used in conjunction with another schema language \Leftarrow embedded Schematron subschemas.

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Usually compiled into XSLT stylesheets.

DTD's fall

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Other schema languages?

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Other schema languages? Why not?

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Other schema languages? Why not? But lack of tools.

Ending

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If you do not need uniqueness property, you can use Relax NG.

For big-sized examples, the most suitable is probably XML Schema \Leftarrow importing schemas, possibly with redefinitions.