

RNG DITA Constraint Workflow

Radu Coravu
radu_coravu@oxygenxml.com
@radu_coravu



What are we going to learn today?

- Create DITA OT specialization (constraint) plugin.
- Creating DITA 1.3 RNG Constraint.
- Convert DITA RNG to DTD.

Initial Problem

DITA `<section>` content model is too relaxed:

- Prohibit inserting text content directly inside `<section>` elements.
- Make title required first element in the `<section>` elements.
- Do not allow titles to be added several times inside `<section>` elements.
- Do not allow inline elements in `<section>` elements.

Start with a small example

- A simple DTD-based DITA 1.2 topic
- A section with multiple titles, text and elements before titles.
- Change its public ID.
- If all goes well, all these problems will be marked as errors at the end of the presentation.

Prerequisites

- Download and extract latest DITA OT 2.1.1 from:
<http://www.dita-ot.org/download>
- Download DITA 1.3 schemas plugin from:
https://github.com/dita-ot/dita-ot/tree/develop/src/main/plugins/org.oasis-open.dita.v1_3
- Integrate DITA 1.3 schemas.
`ant -f integrator.xml`

The RNG constraint plugin (1)

- Create also a RNG based DITA 1.3 topic with the same `<section>` problems.
- Use Show Definition to find the RNG where the `<section>` element is defined.
- Module which will need to be redefined:
<doctypes/rng/base/rng/topicMod.rng>

The RNG constraint plugin (2)

Create my new restriction DITA OT plugin.

- Plugin folder “com.oxygenxml.section.fixes”
- Plugin configuration file “plugin.xml”
- XML catalog “catalog.xml”

The RNG constraint plugin (3)

- Create constraint module “syncroTopicMod.rng” based on “rng/machineryTaskbodyConstraintMod.rng”
- Create constraint shell “syncroTopic.rng” based on “rng/technicalContent/rng/topic.rng”

The RNG constraint plugin (4)

- Integrate plugin.
- Test validating the sample RNG-base DITA topic.

Converting RNG to DTD (1)

- Link to Eliot Kimber's presentation last year:

https://www.oxygenxml.com/events/2014/Slides_DITA_OT_Day_2014/rng-to-dtd-and-xsd-using-ot.pdf

- DITA RELAX NG conversion tools:

<https://github.com/dita-community/dita-rng-converter>

- Download and install latest Saxon libraries.

Converting RNG to DTD (2)

- Setup generation output folders.
- Run “generate-dtd” target to produce DTDs.
- Run “generate-catalogs” target to produce catalog mappings.

Test the end result

Validating the initial DTD-based DITA topic should produce the expected errors.

Conclusions

- RNG constraints are easier to accomplish than DTDs so part of that process can also be easier automated.
- Most of the presented steps (running the integrator, producing the DTDs and catalogs) can be automated as well.

Thank You!

Questions?

Radu Coravu
radu_coravu@oxygenxml.com
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