

DITA 1.3 proposed feature #13109

Contents

DITA 1.3 proposed feature #13109.....	3
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Proposal to include the Semiconductor Information Design Subcommittee work product for system-on-chip (SoC) component descriptions within the corpus of the DITA 1.3 specification.

Date and version information

- Source: Semiconductor Information Design Subcommittee, Bob Beims chair
- SIDSC charter, dated 25 July 2007, was presented to the DITA Technical Committee (see <http://wiki.oasis-open.org/dita/Semiconductor/Charter>).
- Phase 1 vaote: 10 April 2012

Original requirement

The Semiconductor Information Design Subcommittee (SIDSC) was created to form a community of interest within various semiconductor companies who believe that there is value in creating a DITA specialization for the industry. It was expected that industry-specific specializations would enable better utilization of the OASIS DITA Standard by semiconductor companies. The SIDSC created a set of specializations, and a number of semiconductor companies have begun using them. But it appears that adoption is hampered by the fact that they aren't 'official' DITA. Incorporating them into 1.3, as the Learning & Training specialization was incorporated into 1.2, seems appropriate.

Use cases

Describe how the feature will be used, if ideally implemented. Include any presentation or processing expectations.

Benefits

Who will benefit?

All content authors involved in the documentation of complex digital semiconductor devices. This population includes traditional information developers as well as design, application and verification engineers.

What is the expected benefit?

- Enhance the adoption of DITA by semiconductor industry companies
- Reduce in-house technical content development costs
- Facilitate much tighter integration between various functional teams within adopter organizations (information development, product design, marketing, manufacturing)
- Reduce the work of integrating 3rd-party technical content associated with cross-licensed intellectual property
- Provide end-customers with more consistent, accurate, usable content in various formats

How large is the user pool?

All content authors who are involved in the development on technical documentation of complex digital semiconductor devices would be in a position to use these specializations. This is a not-insignificant number of people, but the exact size of the audience has not been estimated by the subcommittee.

How significant is the expected benefit?

Member companies who have deployed the use of these specializations have accrued significant benefit from ... [enumerate benefits described in Bob's presentation at the 2011 Best Practices conference]

Costs

[Cost to the DITA community, particularly the TC, of adding these specializations ... not necessarily the cost of use by end users.]

[We should look at the *Learning & Training Content Specialization* as a model for how a large, fairly "autonomous" body of work is integrated with the main corpus of the DITA language modules.]

Some of the costs we should describe are

The impact of this addition on the DITA community will be:

- Maintainers of the DTDs and XSDs [the TC folks plus the SC ... this will have been described above?]
 - the cost of testing compatibility in processing [with this added to the spec, how much extra work is required to validate OT processing?]
 - the cost of providing a clear addition to the specification [we already have a spec, no need to write up new stuff ... although we're updating it, so that's a cost to the SC]
 - cost of updating language reference topics if they need it - are they compliant with DITA 1.3 ref. formats?
 - the cost of providing the DTDs and XSDs [we already have the DTDs in place, but they're not ready for integration with 1.3, so we'll have to do that work ... and we'll have to provide XSDs]
- Editors of the DITA specification:
 - see above, and reference the material in the register specification for exact numbers. Since this is a self-contained specialization, it shouldn't impact other parts of the DITA spec., but of course that will have to be tested.
- Vendors of tools: XML editors, component content management systems, processors, etc. ... [the same as integrating any specialization ... due to the modular nature of the specialization, the work can be segmented fairly easily ... we might want to state that vendors can choose one of perhaps three levels of 'conformance' from 'simple' to 'complete' ... we should speak (briefly) about the highly technical nature of the data model that is implemented in these specializations; in other words, if you're not fairly expert in semiconductor product design, the content being captured in the SIDSC model will be quite confusing]
- DITA community-at-large.
 - complexity: As long as the 'lightweight DITA' and 'chunking' work planned for DITA 1.3 is accomplished, this specialization should only be available to users who would want to see it. Because this is an entire self-contained specialization, rather than a feature of base DITA, it shouldn't affect the perceived simplicity or complexity of DITA.
 - For the users exposed to it, that is, members of the semiconductor industry, the element vocabulary it contains is familiar, so it should be pretty straightforward. It's already in use in the industry, so if there's been user feedback on some element names, now would be a good time to make changes.

Technical requirements



Important: This section must be complete in order for the proposal to be approved.

[BEST APPROACH: don't need to reproduce a bunch of stuff here, but provide an overview and a link to the details spec and the DTDs]

- Version history of the Register Description specializations
 - Component specializations v1.0 released 14 December 2007 (see http://www.oasis-open.org/apps/org/workgroup/dita-sidsc/document.php?document_id=26479)

- Component specializations v2.1 released 14 April 2008 (see http://www.oasis-open.org/apps/org/workgroup/dita-sidsc/document.php?document_id=27942)
- SIDSC Language Reference, Draft 4 released 12 May 2009 (see http://www.oasis-open.org/apps/org/workgroup/dita-sidsc/document.php?document_id=32513)
- Component specializations v2.4 released 20 November 2009 (see http://www.oasis-open.org/apps/org/workgroup/dita-sidsc/document.php?document_id=35281)
- SIDSC Architecture Specification v1.0 released 12 May 2010 (see http://www.oasis-open.org/apps/org/workgroup/dita-sidsc/document.php?document_id=37787)
- SIDSC Register Specialization Specification v0.1 released 18 November 2011 (see http://tools.oasis-open.org/version-control/browse/wsvn/dita/subcommittees/SIDSC/review_comments/sidsc-register-specialization-spec_draft_1_review.pdf)

Provide a detailed description of how the solution will work. Be sure to include the following details:

Topic or map specialization

Semiconductor Component

Domain

- Any topic shell may integrate this domain
- No other content models depend on this domain
- Several content models in this domain depend on the DataTableDomain

Element

- The SICSC component specializations add 66 elements
 - *Component*: 10 elements
 - *MemoryMap*: 6 elements
 - *AddressBlock*: 11 elements
 - *Register*: 19 elements
 - *bitField*: 20 elements
- Description of the element, including any processing requirements
- Description of where the element will be permissible
- Is the element translatable? If yes, is it a block or phrase (subflow) element?

Attributes

- The SICSC component specializations do not add any attributes

Overall usability

Discuss the impact to current DITA users.

Examples

Provide examples of the proposed feature. Include an example for each of the use cases. Be sure to include edge cases, if known.

Parking Lot (make sure to disposition and delete!)

- (not relevant, since we don't have previous proposals) http://tools.oasis-open.org/version-control/browse/wsvn/dita/subcommittees/SIDSC/review_comments/
- (not relevant, since there has been no email thread, yet) <http://www.oasis-open.org/apps/org/workgroup/dita-sidsc/messages.php>