This is a Non-Standards Track Work Product. The patent provisions of the OASIS IPR Policy do not apply.

DITA and the DITA Open Toolkit
Version 1.0

Working Draft 01
29 October 2016

Specification URIs

This version:
http://docs.oasis-open.org/dita/dita-and-dita-ot/v1.0/cn01/dita-and-dita-ot-v1.0-cn01.html (Authoritative)
http://docs.oasis-open.org/dita/dita-and-dita-ot/v1.0/cn01/dita-and-dita-ot-v1.0-cn01.pdf

Previous version:
Not applicable.

Latest version:

Technical Committee:
OASIS Darwin Information Typing Architecture (DITA) TC

Chair:
Kristen James Eberlein (kris@eberleinconsulting.com), Eberlein Consulting LLC

Editors:
Robert D. Anderson (robander@us.ibm.com), IBM
Kristen James Eberlein (kris@eberleinconsulting.com), Eberlein Consulting LLC

Additional artifacts:
This document is part of a work product that also includes:


Related work:
This document is related to:

• Darwin Information Typing Architecture (DITA) Part 1: Base Edition. http://docs.oasis-open.org/dita/dita/v1.3/dita-v1.3-part1-base.html. This edition contains topic and map; it is designed for implementers and users who need only the most fundamental pieces of the DITA framework.


Abstract:
Abstract needed

Status:
This document was last revised or approved by the OASIS Darwin Information Typing Architecture (DITA) TC on the above date. The level of approval is also listed above. Check the “Latest version” location noted above for possible later revisions of this document.

TC members should send comments on this document to the TC’s email list. Others should send comments to the TC’s public comment list, after subscribing to it by following the instructions at the “Send A Comment” button on the TC’s web page at https://www.oasis-open.org/committees/comments/index.php?wg_abbrev=dita.

Citation format:
When referencing this note, the following citation format should be used:

[dita-and-dita-ot]

Notices
Copyright © OASIS Open 2016. All Rights Reserved.

All capitalized terms in the following text have the meanings assigned to them in the OASIS Intellectual Property Rights Policy (the "OASIS IPR Policy"). The full Policy may be found at the OASIS website.

This document and translations of it may be copied and furnished to others, and derivative works that comment on or otherwise explain it or assist in its implementation may be prepared, copied, published, and distributed, in whole or in part, without restriction of any kind, provided that the above copyright notice and this section are included on all such copies and derivative works. However, this document itself may not be modified in any way, including by removing the copyright notice or references to OASIS, except as needed for the purpose of developing any document or deliverable produced by an OASIS Technical Committee (in which case the rules...
This is a Non-Standards Track Work Product.
The patent provisions of the OASIS IPR Policy do not apply.

The limited permissions granted above are perpetual and will not be revoked by OASIS or its successors or assigns.

This document and the information contained herein is provided on an "AS IS" basis and OASIS DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY THAT THE USE OF THE INFORMATION HEREIN WILL NOT INFRINGE ANY OWNERSHIP RIGHTS OR ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.
# Table of contents

1 Introduction.................................................................................................................................. 5  
   1.1 References (non-normative).................................................................................................5  
   1.2 Terminology.......................................................................................................................... 5  
2 Problem........................................................................................................................................ 6  
3 DITA...............................................................................................................................................7  
   3.1 What is DITA?....................................................................................................................... 7  
   3.2 Who governs the DITA standard?........................................................................................ 7  
   3.3 What is the goal of the DITA Technical Committee?........................................................... 8  
   3.4 How does the DITA Technical Committee operate?.............................................................8  
4 DITA Open Toolkit.......................................................................................................................10  
   4.1 What is the DITA Open Toolkit?.........................................................................................10  
   4.2 Who governs the DITA Open Toolkit?................................................................................10  
   4.3 What is the goal of the DITA Open Toolkit project?.......................................................... 11  
   4.4 How does the DITA Open Toolkit project operate?........................................................... 11  
5 Get involved................................................................................................................................... 12  
   5.1 DITA Technical Committee................................................................................................. 12  
   5.2 DITA Open Toolkit............................................................................................................... 13  
Appendix A Acknowledgments......................................................................................................14  
Appendix B Revision history..........................................................................................................15
1 Introduction

With this committee note, the OASIS DITA Technical Committee hopes to address a frequent point of misconception in the DITA community by clarifying differences between two similarly named entities that make up part of most DITA solutions. Specifically, the similarly named OASIS DITA standard and DITA Open Toolkit are often confused, to the extent that owners of each are regularly asked for changes to the other.

By clarifying differences and ownership roles, we hope to help the DITA community better understand who is responsible for each, and in so doing help our community get better and faster answers to any questions it may have.

1.1 References (non-normative)

The following are references to external documents or resources that readers of this document might find useful.

[OpenDoc-1.2]

1.2 Terminology

This section provides information about terminology and how it is used in this committee note.

open standard
Definition needed

open source
Definition needed
2 Problem

In the DITA community at large, there is a misconception about who owns the parts that make up a single DITA solution. In particular, this confusion often shows up between the similarly named OASIS DITA (an open standard) and DITA Open Toolkit (DITA-OT, an open source implementation of that standard). While confusion is understandable and (to some extent) unavoidable, we regularly see it result in frustration when members of the community are unsure who to talk to, or feel that questions are ignored by one group or the other.

With a complex system, it can be difficult to identify which component is responsible for which action. This is true for hardware, software, and other systems that are unrelated to computers.

However, the confusion between DITA and DITA Open Toolkit is exacerbated by several factors:

- Both DITA and DITA-OT originated at IBM.
- DITA 1.0 and DITA-OT 1.0 were released at the same time.
- DITA is an open standard and DITA-OT is open source, terms which are easily confused.
- Most commercial products bundle both DITA and DITA-OT.
- Many individuals who develop the DITA standard also are involved with the DITA-OT project or develop products that ship DITA-OT.
- Both DITA and DITA-OT offer extensibility as a core design point, although the mechanisms differ.

The confusion between DITA and DITA Open Toolkit often leads directly into confusion over whom to turn to with questions, problems, or requests for changes. When such questions, problems, or requests go to the wrong venue, resolution (if it comes) takes much longer – and frustration ensues.

The goal of this committee note is to clarify the roles of OASIS DITA and DITA-OT for the DITA community.

- OASIS DITA is the open standard. DITA comprises the XML architecture (elements and attributes), processing features such as content reference (@conref) and key reference (@keyref), and rules for extension that ensure compatibility between DITA implementations.
- DITA Open Toolkit is an implementation of DITA, intended to resolve standard processing features and render DITA into output formats. It is not a reference implementation, though it is often described as such.

An easy way of thinking about this division might be to compare DITA and DITA-OT to HTML and your favorite browser. Like DITA, HTML (the standard) is controlled by a standards organization that determines what is valid in the file itself. Like DITA-OT, the browser (an implementation of HTML) is responsible for deciding how to present that file to a reader.
3 DITA

DITA is an open standard developed and maintained by the Organization for the Advancement of Structured Information Standards (OASIS). OASIS is a not-for-profit consortium that is dedicated to driving the development, convergence, and adoption of open standards.

3.1 What is DITA?

DITA is an XML standard for encoding content. The standard defines a core set of elements and attributes that are valid in a DITA document; it also sets out rules for how tools should interpret or process DITA documents.

The rules set out by the DITA specification are designed to ensure interoperability. A valid DITA document should generate the same output regardless of what DITA processor is used.

**Semantic meaning**

The standard defines what an element means when used in a DITA document. For example, the `<note>` element should mean the same thing in every DITA document, regardless of how it is rendered or the content of the note.

**XML markup**

DITA defines a core set of elements, with restrictions about what they can contain and the attributes that they can specify. While the standard has rules about specializing or constraining these elements, those rules all operate off of the original core set of elements, attributes, and content models. These rules are described in the specification and laid out programatically using RelaxNG, DTD, and XML Schema rule sets.

**Processing rules**

DITA contains a core set of processing features, each of which needs clear rules so that it will be evaluated the same way by every DITA implementation. For example:

- When `@conref` is used on an element to reuse content, the specification defines how attributes on the referenced and referencing elements must be merged.
- When scoped keys are used, the specification defines how scope names and key names are combined to reference keys across scopes.
- When metadata is specified in a DITA map, the specification defines how that metadata applies to the referenced topics and to other structures within the map.

All conforming DITA implementations (including DITA Open Toolkit) must follow the markup rules and processing rules that are defined by the DITA standard.

3.2 Who governs the DITA standard?

DITA is governed by the OASIS DITA Technical Committee (DITA TC).

Membership in the DITA TC is open to all members of OASIS. People acquire OASIS membership either as a result of employment with a company that is an OASIS member or by purchasing
membership directly from OASIS. In order to be eligible for individual membership, people must retain the rights to their own intellectual property.

OASIS defines the framework within which the DITA TC operates. OASIS has a well-defined Technical Committee Process that stresses transparency; all artifacts and work products that are created by the DITA TC – e-mail, meeting agendas, documents, meeting minutes, specification drafts, committee note drafts, and more – are publicly viewable.

Related information
OASIS membership
OASIS technical committee process

3.3 What is the goal of the DITA Technical Committee?

The DITA TC works to define and maintain the DITA standard.

The specific tasks that the TC performs include the following:

- Maintaining the most-recently release version of the DITA standard. This includes tracking bugs and publishing errata.
- Designing and developing new versions of the DITA standard. The TC is currently designing Lightweight DITA as well as the next release of the full standard (DITA 2.0).

As a volunteer-staffed project, the DITA TC cannot perform development work in the manner that is usually performed by a business. There is no product owner who can dictate which development items are prioritized. The willingness of voting members to perform work often determines which new features become part of the DITA standard.

The DITA TC also works in conjunction with the OASIS DITA Adoption Committee to promote increased usage of DITA.

Related information
Charter for the OASIS DITA TC
OASIS DITA Adoption TC

3.4 How does the DITA Technical Committee operate?

The DITA TC relies on the efforts of its leadership and committed members, as well as the disciplined use of e-mail and conference calls. There are no in-person meetings.

The DITA TC is chaired by Kristen James Eberlein, Eberlein Consulting. There are two secretaries: Tom Magliery (JustSystems Canada, Inc.) and Nancy Harrison (individual member). The DITA TC also has subcommittees that function as work groups. Currently, there is a DITA for Technical Communication subcommittee and a Lightweight DITA subcommittee; each subcommittee meets twice a month.

The DITA TC meets Tuesdays at 11 AM ET for a 60-minute conference call. It is attended by a core team of voting members (people who count for quorum and who are eligible to vote on motions), as well as a smaller group of DITA TC members who attend irregularly or have opted for persistent non-voting membership. As of fall 2016, there are 19 voting members: Seven individual members and representatives from the following companies:
• Comtech Services, Inc.
• Eberlein Consulting LLC
• Healthwise
• IBM
• Jana
• IXIASOFT
• JustSystems Canada, Inc.
• Oberon Technologies
• SAP
• The Boeing Company

All OASIS technical committees are governed by Robert’s Rules of Order Newly Revised. However, most of the decisions made by the DITA TC are made by consensus.

In addition to the infrastructure tools provided by OASIS, the DITA TC also uses software generously made available by vendors, such as Congility and Antenna House.

An e-mail list (dita-comment) provides an avenue for non-DITA TC members to communicate with the DITA TC.

**Related information**

*Public page for the OASIS DITA TC*

*The dita-comment list*
4 DITA Open Toolkit

DITA Open Toolkit is an open source implementation of DITA. It is developed and maintained by the DITA-OT project.

The toolkit is not technically a reference implementation for DITA. In general, a reference implementation is an implementation by which all others may be judged - it can be used as a reference to determine whether any portion of the standard is implemented properly. While this may often be done in practice, the OASIS DITA TC has not explicitly evaluated the toolkit as an implementation, and has not designated it to have correctly implemented any individual DITA feature.

At the same time, does have some things in common with a reference implementation. The toolkit is often (though not always) the first to implement proposed new features for future versions of DITA, helping to ensure that the feature is complete and implementable. This development work generally (though not always) takes place concurrently with development of the standard at OASIS. It is a core component of many DITA implementations, treated as the default way to process DITA. Finally, although OASIS does not evaluate DITA-OT to verify whether DITA features are properly implemented, the toolkit is often used to clarify or evaluate the meaning of the actual DITA specification.

4.1 What is the DITA Open Toolkit?

The DITA Open Toolkit is an open source set of software designed to convert DITA XML documents into other formats, such as PDF or HTML5. The primary purpose from DITA-OT 1.0 has always been to render DITA XML content into other formats.

The DITA specification (owned by OASIS) defines a core set of semantic markup and a series of processing features. The toolkit’s goal is to resolve DITA features based on rules laid out in the specification. It does implement other features or extensions, but the focus is to implement DITA features as described in the specification.

Once the standard features are resolved, the toolkit typically (but not always) renders the DITA markup as some other commonly displayed format. At the same time, the toolkit is designed for extensibility, meaning that existing output formats can be heavily customized, new output formats can be created, or the feature-resolved DITA can be taken and used for other purposes.

4.2 Who governs the DITA Open Toolkit?

DITA-OT is an open source project. Anybody can participate in the project; those who participate more actively have more of a say in the direction of the project.

As of October 2016, the project has only three project members with commit authority to the main code. Only one of the three also participates in the OASIS DITA Technical Committee. Many others participate in the project at github.com by submitting or commenting on issues and pull requests; most of those participants are not members of the OASIS DITA TC. Release planning and other design discussion is typically handled at monthly contributor calls.
4.3 What is the goal of the DITA Open Toolkit project?

4.4 How does the DITA Open Toolkit project operate?

Most project operations are discussed openly atgithub, on the team Slack channel, or at monthly contributor calls. Each of these venues is open to anybody who wishes to participate, although the Slack channel and contributor calls require an invite.

As of 2016, code for DITA-OT is hosted at [github](https://github). Anybody with an account at github can download the code, make a change, and submit a "pull request" - this makes the suggested change available for others to evaluate. Those interested in the project can then comment on the request, suggest changes, or vote whether to accept it. If the change is accepted, a project member with commit authority will merge the suggested change into the main project.

Major releases of the toolkit typically come out twice a year, and include any new features that have been accepted to the project. Patches to existing releases come out more often (usually only for the most recent major release).
5 Get involved

The future of both OASIS DITA and DITA-OT depends on the participation of the DITA community. Without contributions from critical DITA users – companies who use DITA, vendors who sell products that rely on DITA or DITA-OT, and consultants who provide DITA-related services – DITA and DITA-OT cannot survive.

5.1 DITA Technical Committee

Consider getting involved with the DITA Technical Committee. Your involvement can take several forms.

If you are employed by a company that is an OASIS member, join the DITA TC. Lobby your company to dedicate time from an employee for DITA TC work.

If the company that you are employed by is not an OASIS member, encourage it to join. OASIS membership enables companies to formally influence standards development and be recognized for their contributions.

If you meet the OASIS requirements for individual membership, join OASIS as an individual member. The annual cost of an individual membership is low, currently $335 annually.

There also are ways to support and influence the work of the DITA TC that do not require OASIS membership.

- You can submit suggestions to the DITA TC through the dita-comment e-mail list.
- You can track the work of the DITA TC by monitoring its work. All artifacts and work products that are created by the DITA TC – e-mail, meeting agendas, documents, meeting minutes, specification drafts, committee note drafts, grammar files, and more – are publicly viewable.
- You can attend or organize a DITA Listening Session in your locality. DITA Listening Sessions are events that are sponsored by either or both the DITA TC or the OASIS DITA Adoption Technical Committee; they are designed to solicit information from DITA users in various geographic localities.
- You can participate in the OASIS Open Repositories that support the work of the DITA TC. An OASIS Open Repository is a public GitHub repository. The DITA TC currently has two OASIS Open Repositories, one for Lightweight DITA and another for tools designed to generate DITA-conforming DTD- and XSD-format versions of RELAX NG DITA grammars: document-type shells, vocabulary modules, and constraint modules.

Related information

List of companies and institutions that are OASIS members
OASIS corporate membership
OASIS individual membership
dita-comment e-mail list
OASIS Open Repository: DITA RNG Converter
OASIS Open Repository: Lightweight DITA
5.2 DITA Open Toolkit

As an open source project, participation in DITA-OT is open to anybody at no cost. There are a variety of ways to participate in the DITA-OT project. Most require only an account at github.com.

- The toolkit project maintains two email lists (one for developers, one for users); these can be used to ask or answer general questions about DITA-OT.
- The project page at github.com can be used to open issues for problems or request new features.
- With an account at github, it is also possible to fork the project, make changes, and suggest those changes to the main project as a pull request.
- With an invitation from the project leaders, you can participate in discussions at the team Slack channel or monthly contributor calls.
- By participating frequently, you will become a recognized member of the DITA-OT community and have more say in the project.
- Becoming a project committer requires regular participation and a history of well received pull requests.
Appendix A Acknowledgments

The following individuals participated in the creation of this document and are gratefully acknowledged.

- Robert Anderson, IBM
- Kristen James Eberlein, Eberlein Consulting LLC
- Tom Magliery, JustSystems Canada, Inc.
- Keith Schengili-Roberts, IXIASOFT
- Bob Thomas, individual member

The DITA Technical Committee also wants to acknowledge the following companies who donated software that was used to develop and publish this committee note:

- Antenna House
- Congility
## Appendix B Revision history

The following table contains information about revisions to this document.

<table>
<thead>
<tr>
<th>Revision</th>
<th>Date</th>
<th>Editor</th>
<th>Description of changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>04 July 2015</td>
<td>Kristen James Eberlein</td>
<td>Created stub files for working draft.</td>
</tr>
<tr>
<td>02</td>
<td>06 October 2016</td>
<td>Robert D. Anderson</td>
<td>Checked in first draft.</td>
</tr>
<tr>
<td>03</td>
<td>11 October 2016</td>
<td>Robert D. Anderson</td>
<td>Correct typo in acknowledgments topic.</td>
</tr>
<tr>
<td>04</td>
<td>26 October 2016</td>
<td>Kristen James Eberlein</td>
<td>Added content to section 3, &quot;DITA&quot;.</td>
</tr>
<tr>
<td>05</td>
<td>27 October 2016</td>
<td>Kristen James Eberlein</td>
<td>General editing; added new topics to both section 3, &quot;DITA&quot; and section 4, &quot;DITA-OT&quot;; fleshe</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>out content for section 5, &quot;Get involved&quot;.</td>
</tr>
<tr>
<td>06</td>
<td>28 October 2016</td>
<td>Kristen James Eberlein</td>
<td>Edited list of editors to reflect current contributors; general editing.</td>
</tr>
<tr>
<td>07</td>
<td>29 October 2016</td>
<td>Kristen James Eberlein</td>
<td>Generated working draft 01 for upload to Kavi.</td>
</tr>
</tbody>
</table>