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Producing Customer Documentation in an Agile Environment

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Technical Publications Group

Cassidian Communications Inc.

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Who are we?

- Cassidian Communications solutions include

  – 9-1-1 call processing applications

  – P25 land mobile radio

  – Emergency notification solutions and managed services.

- Solutions are designed expressly to support next generation communication requirements.

- Clients range from emergency 9-1-1 centers to military bases to industries such as transportation, finance, healthcare, education, food & beverage, oil & chemical and utilities.

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Highlights

- Founded in 1968 as Plant Equipment, Inc.

- Acquired Canada-based CML Emergency Services, Inc. in 2006; became PlantCML

- Acquired emergency notification leader DCC (Dialogic Communications Corp.) as a wholly-owned subsidiary in 2006

- Acquired TCI (Tel-Control, Inc.) in 2007

- Acquired Sigma Communications, LLC in 2007, adding the patented REVERSE 911® emergency notification system to PlantCML's solutions portfolio

- Acquired by EADS North America, the world's largest aerospace and defense company, in 2008

- Integrated P25 land mobile radio into the portfolio in 2009

- Became Cassidian Communications, Inc. in March, 2011

- ISO 9001:2008 certified organization

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How do you produce customer documentation in an Agile environment?

What process do you use?

What tools do you use?

Do's and don'ts for getting started

- Do embrace change

- Do get the right tools

- Do provide training for tools and Agile process

- Do become part of a scrum and be co-located
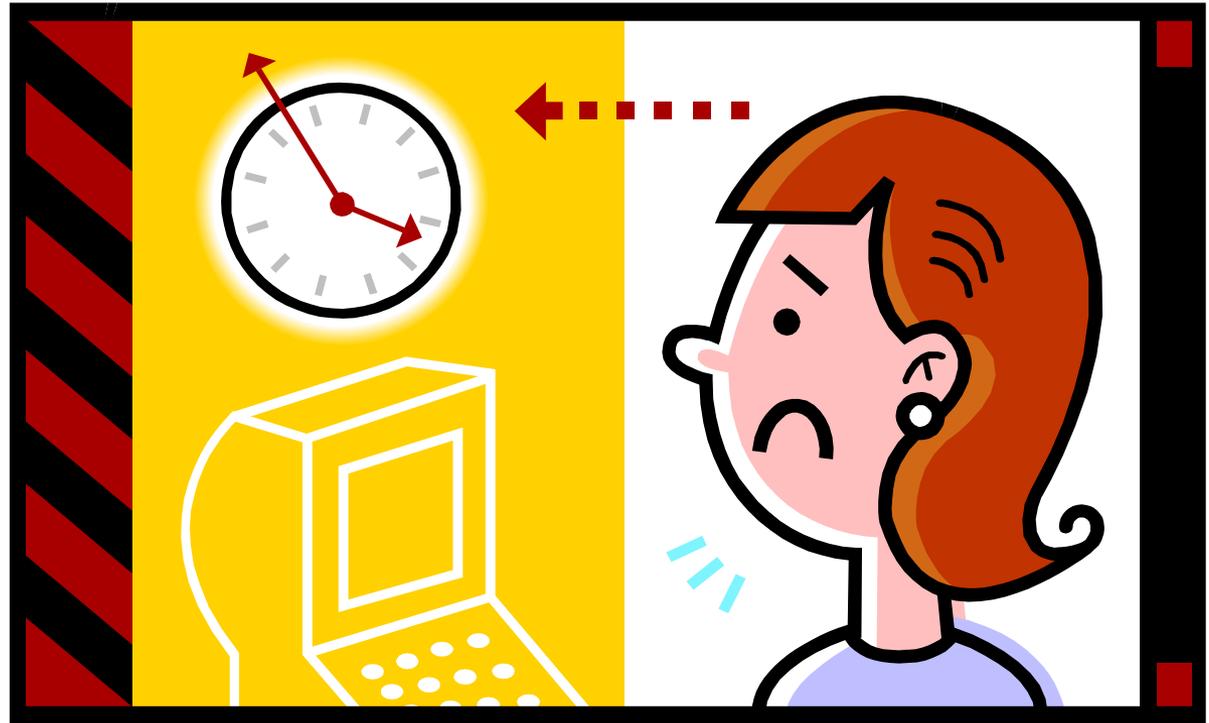
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Do's and don'ts for getting started cont'd

- Don't pick a large project

- Don't pick a new product release

- Don't start with your flagship product

- Don't expect to release product for two years
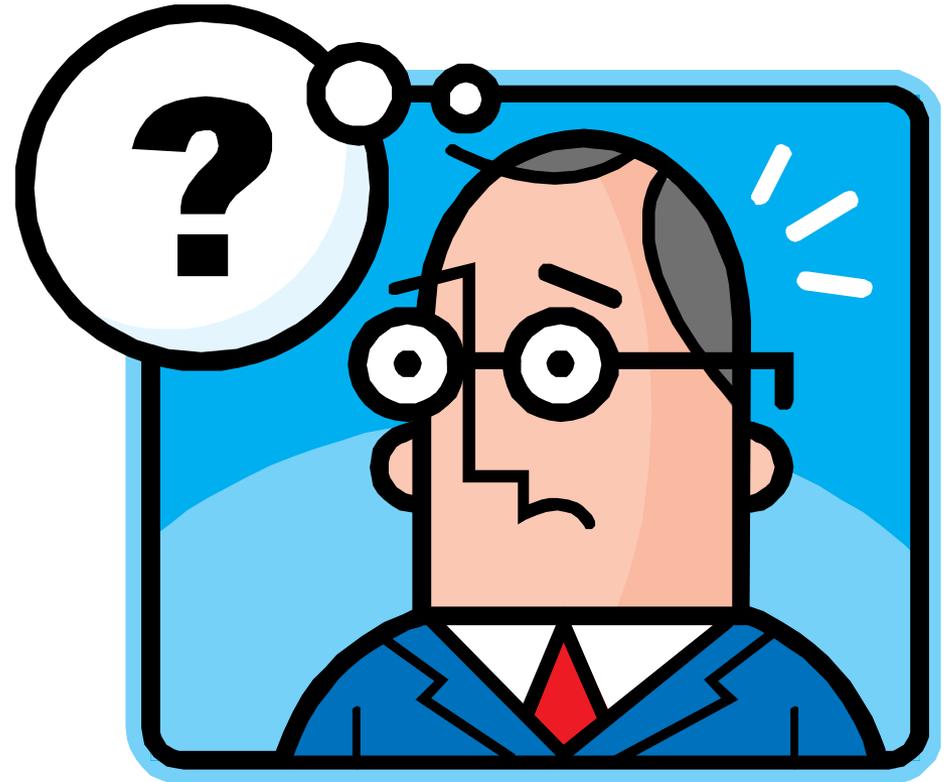
Why, why, why, why?

- Why Agile?
- Why DITA?
- Why now?
- Why me?

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Lots of questions

- What is the process?

- What tools do we need?

- How do we estimate?

- etc.

When we started: our current state

- Waterfall development-based
- Focus on hard copy & PDF with limited web help
- Not optimized for output to social media or web
- Cumbersome to share content
- Translation is costly since reuse is not optimized
- Document production is inefficient – not modular
- Serves as both customer & training documentation

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Our Vision

- Produce best-in-class documentation

- Move to a topic-based, structured writing format to support VESTA 4.0, and future projects, that use an "Agile" development environment

- Share information for reuse with other departments

- Allow training to build course material specific to the classroom needs - support with learning objectives and exercises

- Reduce translation costs

- Use Darwin Information Typing Architecture (DITA)

- Implement a Component Content Management System (CCMS)

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Document development in an Agile environment

- Agile software development involves:
  - Defining user stories
  - Identifying tasks: work unit completed in 1-2 days
  - Collaborative project planning
  - Releasing small functional modules
  - Delivering frequently
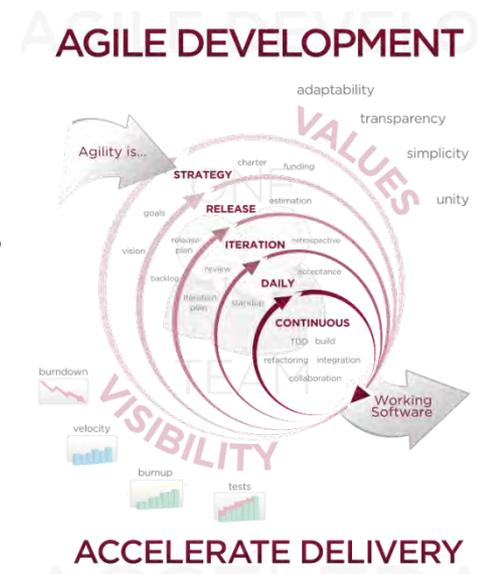
- DITA document development involves:
  - Defining user tasks (*use of behaviour objectives*)
  - Identifying small chunks of information topics that are stand alone
  - Collaborative authoring of topics: concept, reference, task
  - Releasing individual topics for functional and usability testing
  - Delivering topics in different contexts (maps)

Tool Objectives & Requirements

- Support DITA and Agile development

- Select tools that are considered industry best-in-class

- Minimize tool, implementation, and training costs

- Focus on what we can implement today at minimal cost to support the VESTA 4.0 project and build the foundation to support future projects

- Support authoring & publishing with the DITA Open Toolkit

- Enable support for WIKI & dynamic publishing from a web server

- Support publishing to mobile devices
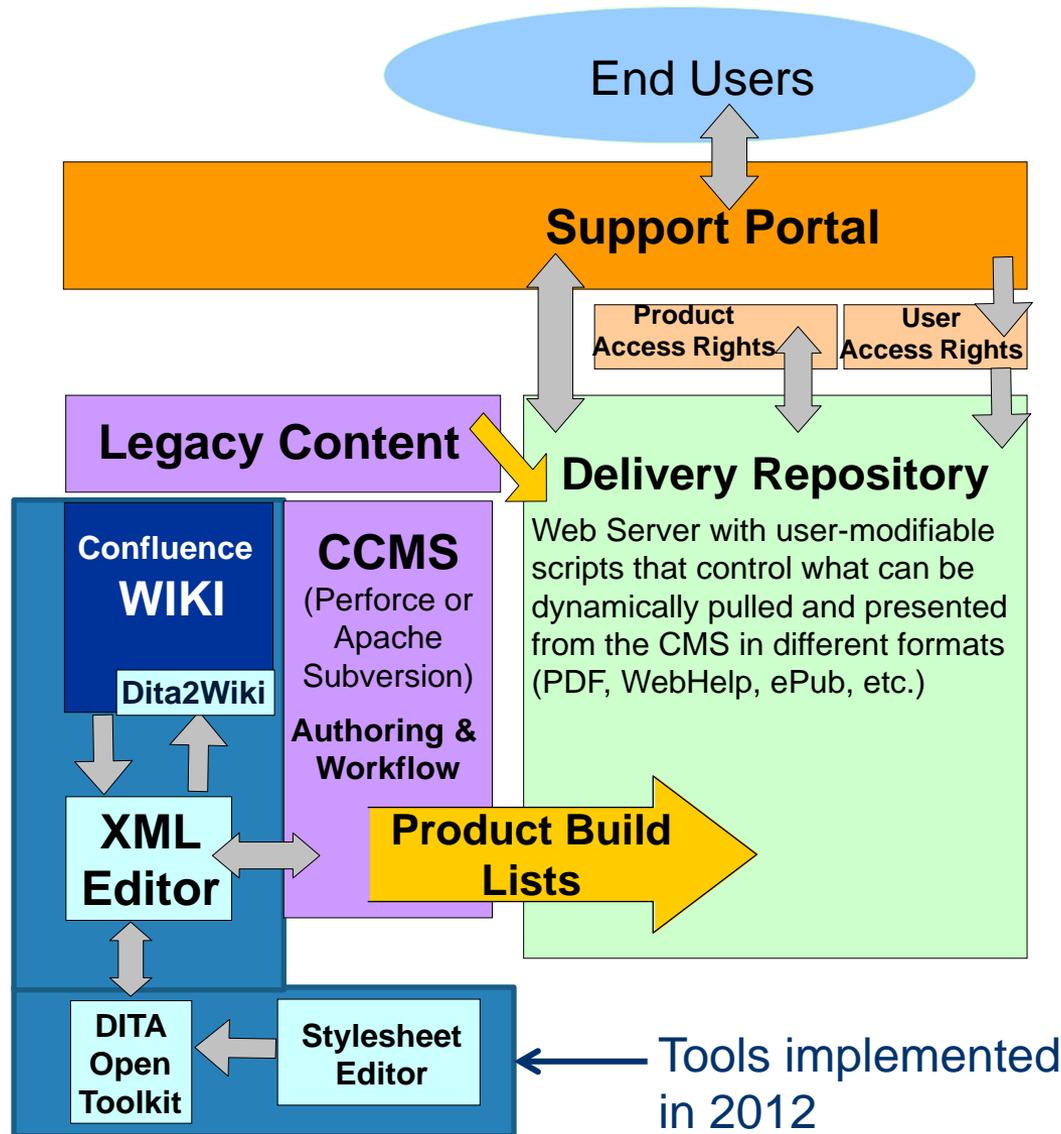
- Minimize the customization of output style sheets

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Next step – DITA Tool Evaluations

- **Test document**: converted to DITA topics: 1st & 2nd chapters and 1st & 2nd appendices of the *RCS Concentrator Implementation Guide*

- **Downloaded and installed**:

  - DITA Open Toolkit (DITA-OT)

  - **Desktop DITA Editors**: Oxygen XML Editor, Syntext Serna, XMetaL Author, XMLmind XML Editor, FrameMaker 10, Stylus Studio XML editor, XMLSpy, MadCap Flare

  - **FrameMaker plug-in**: DITA-FMx

  - **Web/browser DITA Editors**: Codex and EasyDITA

  - **Word plug-ins**: Quark XML Author & SimplyXML Content Mapper

  - **Publishing engines**: RenderX XEP, Apache FOP (free), XMLmind DITA Converter, DITA2Go, ePublisher, Arbortext, & Antenna House

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Tool Implementation: Phase 1 - 2012

End Users

Support Portal

Product Access Rights

User Access Rights

Legacy Content

Delivery Repository

Web Server with user-modifiable scripts that control what can be dynamically pulled and presented from the CMS in different formats (PDF, WebHelp, ePub, etc.)

Confluence WIKI

Dita2Wiki

CCMS
(Perforce or Apache Subversion)

Authoring & Workflow

XML Editor

Product Build Lists

DITA Open Toolkit

Stylesheet Editor

Tools implemented in 2012

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Implementation: TPG DITA Authoring (TDA)

Tool selection, installation & setup

- Deployed: Oxygen XML Editor, RenderX XEP, ePublisher Express
- Created task, concept, reference, map, bookmap, & glossary templates
- Made minor changes to the DITA Open Toolkit (DITA-OT)
- Set up TDA transformation scenarios (PDF, WebHelp, CHM, ePub)
- Created *TDA Procedures* to document how to use new tools
- Using Adobe Acrobat Shared Review (problems publishing to Wiki)
- Stored all topics and maps in Perforce and evaluating CCMS
- Completed first delivery of DITA-based documentation for VESTA 4.0

DITA Conversion

- Stilo FrameMaker-to-DITA ruleset and pre- & post-conversion guidelines
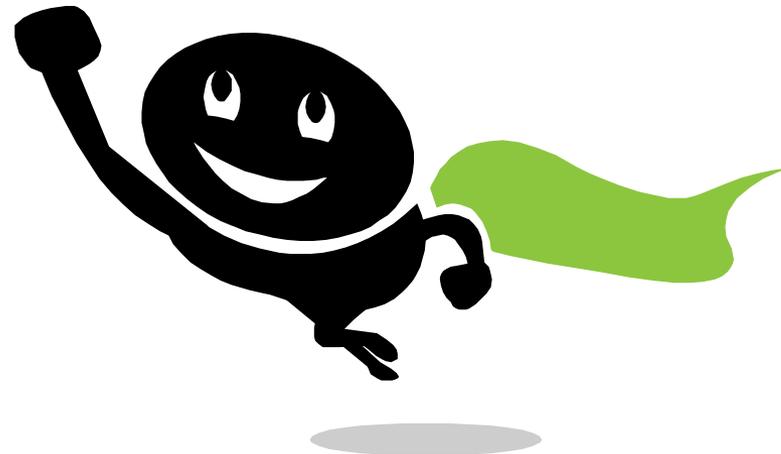- So far, we've converted 500 pages via the Cassidian Stilo-Migrate portal

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TDA process
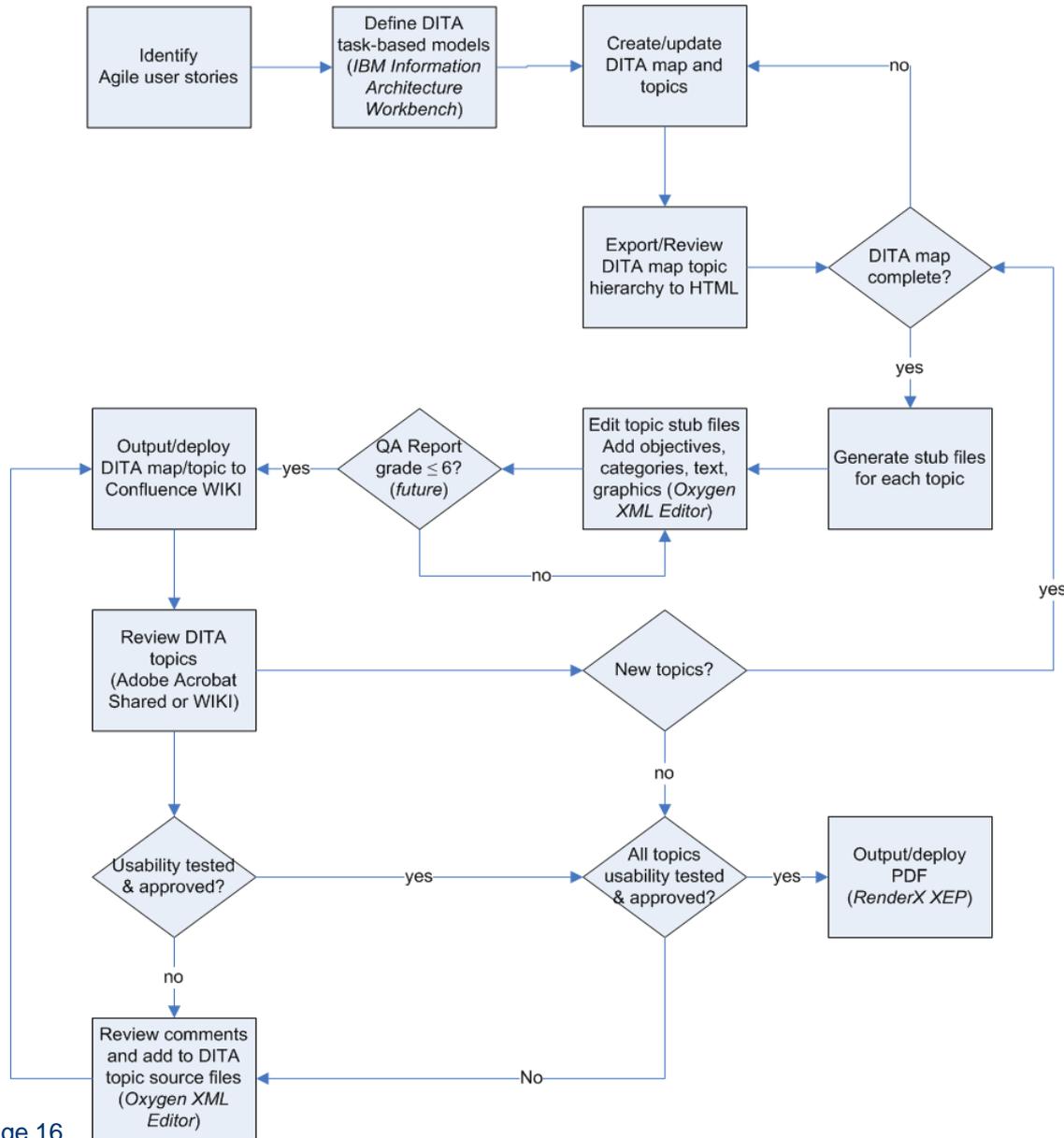
Onwards and upwards

- We continue to learn

- We continue to develop best practices

- We continue to invest in the technology

Is Agile right for you?

- You may not have a choice!

- What type of product are you developing?

- How is it sold?

- Lessons learned?

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Demos

- TDA task, concept, reference, map, glossary templates

- *TDA Procedures* (PDF and WebHelp outputs)

- *VESTA 4.0* document (TDA PDF output)

- Cassidian Stilo Migrate Portal (FrameMaker to TDA) (https://cassidian2.stilo-migrate.com)

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Q&A

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DITA Tool Evaluations
Backup slides

DITA Tool Evaluation - 1

Tool	Cost	Evaluation
FrameMaker 10	$399	Tested creation of DITA modules using FrameMaker 9 & 10. FM adds FM-specific comments and codes (interface configuration and processing commands) to the source XML files; removes comments (eg, Cassidian copyright notice); adds a namespace to every file (this could cause processing problems with other DITA-processing tools); no direct text view; changes all xrefs to fm-xref; page column setting is not global nor is the setting remembered (Format>Page Layout>Column Layout>Room for Side Heads). All images are resized even when OK in source DITA files. Must upgrade to FM10 to get DITA 1.2 support. Supports only Documentum & Sharepoint CMS.
DITA-FMx	$235	Installed DITA-FMx addon to FM 9; difficult to install & configure, have to manually install DITA Open Toolkit and Java SDK; unable to create PDF from DITA-FMx (have to generate a FM book file); FM-specific comments and codes still added to the XML source files. DITA 1.1 only
MadCap Flare	$999	You can not author DITA modules directly with Flare, you can import DITA modules; Flare converts them to XHTML. Flare can output files to the DITA format. MadCap recommends that XMetaL Author be used to create DITA modules and that Flare be used to create outputs.
XMetaL Author	$895	Very usable DITA editor. Integrates well with other JustSystems products for implementing enterprise-wide XML authoring. Wide support for other plug ins (CMSs, etc.). Includes RenderX XEP.

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DITA Tool Evaluation - 2

Tool	Cost	Evaluation
Oxygen XML Editor	$560	Most versatile and usable DITA editor tested. Very cost effective when bundled with RenderX XEP (*DocBench*). Supports any WebDAV enabled CMS. Built-in client for *Apache Subversion*.
RenderX XEP	$360	DITA to production-quality PDF rendering engine that can be implemented as a server component ($4400+) to support dynamic publishing. It can also be directly integrated into other products/environments.
XMLmind DITA Converter	$275	Converts DITA documents to production-quality XHTML, HTML, JavaHelp, WebHelp, EclipseHelp, EPUB, PDF, RTF, OpenOffice formats. Can be installed on a server ($750). It is used independently of the editing tool and produces good quality output reliably and very quickly.
SimplyXML Content Mapper	$499	Plug-in to Microsoft Word. Uses a subset of around 100 of the possible 500 DITA tags. Unable to open or import existing DITA files on a local disk, all files must exist in a common repository, like SharePoint, Documentum, Componize, SQL Server, etc.
Quark XML Author	$799	Plug-in to Microsoft Word. Unable to get a desktop copy to test with and the system needed would be too expensive, $100,000+. Quark seems very focused on enterprise-wide solutions.
DITA2Confluence	free	Enables publishing of DITA content to the Confluence WIKI. Content source maintained in DITA but output to WIKI to enable users to edit or annotate the content throughout its life cycle. No DITA round-tripping.

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DITA Tool Evaluation - 3

Tool	Cost	Evaluation
DITA Open Toolkit	free	Need to use with an XML Editor: integrated well with Oxygen XML Editor and XMetal Author. Direct PDF output is OK but needs to be customized, as a minimum, to add a front cover and change colors. PDF output produced from XMetaL Author offered the best output options. PDF output from Oxygen is also acceptable. Outputs from XMLmind DITA Converter also seem to be very reliable and flexible.
MAXit Checker or AcroLinx IQ	$2500	Plug in to XMetaL Author/FrameMaker that monitors text for compliance with Controlled English or Simplified Technical English (ASD-STE100). Use fits well with the DITA minimalist writing approach.
WebWorks ePublisher	$295	Easy import of DITA content (only need ditamap). Good control of output formats via ePublisher Designer. Directly supports Confluence WIKI output. Already using with experience in customizing.
Other tools tested		**XMLspy**: although web site states that DITA is supported, I couldn't find any direct support for creating DITA modules (no templates, no help, etc) and I couldn't figure out how to create a DITA document! **Syntext Serna**: couldn't create PDF; difficult to navigate from map to modules, validation errors don't indicate source of errors. **Stylus Studio XML editor**: unable to install! **DITA2GO**: difficult to use and no PDF output. **Codex**: web-based editor, couldn't create or import my DITA modules because it didn't support the DITA tags being used. **EasyDITA**: web-based editor, problems with uploading and linking between files.

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