



DITA-OT Patterns and Anti-patterns

Well, anti-patterns first, then patterns

Robert D Anderson, IBM

One of the original DITA Open Toolkit crew

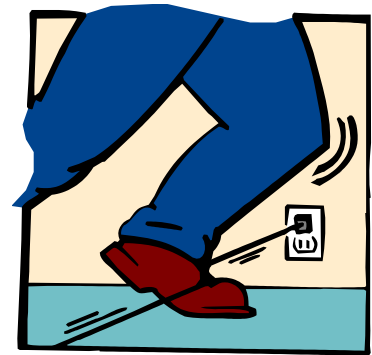
Co-Editor, DITA 1.1 / DITA 1.2 / DITA 1.3

My tweets from @robander will not overwhelm your timeline

November 15, 2015

Overview

- Who are we, why are we here?
- Anti-patterns, and patterns
 - Where have people been tripped up?
 - What happened?
 - How could it have been done better?
- What did I miss?
 - Any experience you think could / should have gone better?
- Resources



Professional details unchanged from last year:

- Still one of the original DITA Open Toolkit developers
- Still authoring tools developer with IBM for 15+ years
- Still working on DITA support since 2001
- Still co-editor of the DITA 1.1, DITA 1.2, and DITA 1.3 specifications
- Still somewhat obsessed with music
 - Enough so that I maintain the Music of DITA Project
 - For details on that ... see resources or talk to me after the presentation



Personal details changed a bit



Who's in the audience...?

- DITA Open Toolkit users:
 - Command line?
 - Through other tool, such as oXygen?

- Toolkit hackers?
 - On your own?
 - Working with or supporting others?

- Toolkit version level?
 - 1.8 or earlier?
 - 2.0 or later?



What are we here to learn?

- How some use the toolkit wrong
- How they tend to get hurt
- Ideally, how to avoid that
- Answers to questions that come up during the talk
- *Please, feel free to ask questions during the talk*



Anti-pattern: just start hacking away!

- It's open source. So I should just edit source, right?
- Comes with many pitfalls:
 - Upgrades are more difficult
 - Hard to take advantage of new fixes or features
 - May duplicate work others are already doing
 - May not be possible to integrate with future releases
 - May not be possible to share with other writers
- I've encountered several companies unable to upgrade versions because of this approach



Preferred approaches...

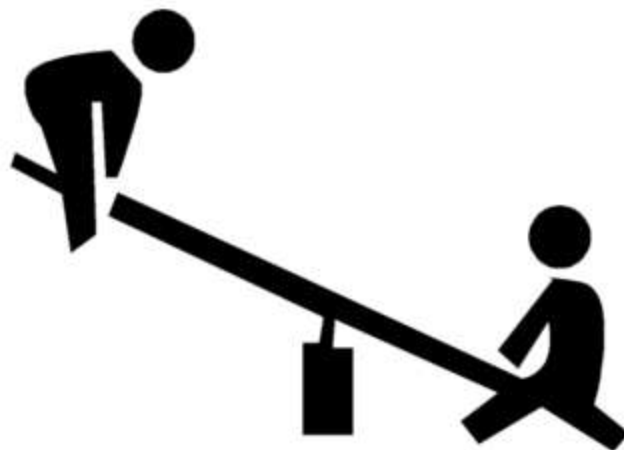
- ...vary based on your skills, need, and time.
- Use plug-ins for major changes / extensions
- If it's a bug, *please please please* open an issue
 - Issue page has a link to contribution guidelines
- When applicable, contribute the change back to DITA-OT



Anti-pattern: overloading the One True Transform

- Adding style after style after style to single transform – well, it *can* work, and you can also drown in parameters.
- You *can* do this:

```
dita ... -f xhtml -Darg1=a -Darg2=b -Darg3=z  
dita ... -f xhtml -Darg1=Whee -Darg2=b -Darg3=X  
dita ... -f xhtml -Darg1=off -Darg2=4 -Darg3=q
```



Pattern: xhtmlA, xhtmlB, xhtmlUp, xhtmlDown

- “New transform” might sound more complicated, but is it?

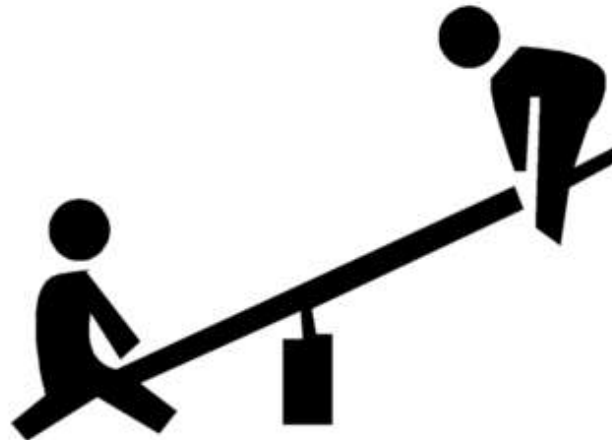
- Consider:

```
dita ... -f xhtmlA
```

```
dita ... -f xhtmlB
```

```
dita ... -f xhtmlC
```

```
...
```



Anti-pattern: startcmd, Java command line

- Java command line was added years ago as a *slightly* simpler command line syntax (as opposed to Ant).
 - Extra processing overhead
 - No access to many options
- “startcmd” batch script
 - It’s a kludge!
 - But a necessary one for many, until 2.0
 - More details in the lightning talk later
- Use the `dita` command line interface!



Anti-pattern: customizing more than you need

- When customizing one template in `FunnyRules.xsl`, copy the entire file, and tweak that template
- Becomes very easy to miss changes to other templates
- *Some will debate this one, but it has caused trouble.*



Well, if not that, then what?

- Only copy the templates you need to change
- If the template you need is also very big, consider isolating even those changes.
 - *Also: you can ask for existing templates to be refactored*
 - *Over time, I've tried to break apart many too-large templates*

For example:

- XHTML: `dita2htmlImpl.xsl` has 226 templates

- PDF:
 - `commons.xsl` has 138 templates
 - `commons-attr.xsl` has 162 attribute sets
 - `front-matter-attr.xsl` has 11 attribute sets

Anti-pattern: PDF customization directories



- Convert customization directories into plug-ins!
- Also, remember the “not just one PDF” idea from earlier.



Anti-pattern: tying unrelated features together

- Unrelated plug-ins that are set up to depend on each other
- Unrelated features submitted as a bulk pull request
- Preferred approach: isolate functions when possible
 - Easier to reuse for new purposes
 - Easier to test / share / contribute



Anti-pattern: “We’ll just sort of re-do the scripts”

- We reused an existing process; DITA-OT targets reused from our own Ant scripts
- Difficult to upgrade for new features; design differences came out at bad times
- With every customization in our code, cost of keeping up with OT increases



General anti-patterns for XSLT

- Using XSLT 1.0 – should use 2.0
- Using named templates – use modes when possible
- Using priorities – may be good for some situations, but tend to cause problems in DITA-OT due to specialization related imports



Summary: if the road ahead looks questionable...



... realize you might not be on the best path ...



... before it's too late to turn back.



Your turn... who here has had to raise this sign?



Resources

- DITA-OT project and documentation:
 - <http://dita-ot.org>

- DITA-OT Plug-in documentation:
 - http://www.dita-ot.org/2.2/dev_ref/plugins-overview.html

- Sample plug-ins, startcmd info:
 - <http://metadita.org/toolkit/>

- Music of DITA Project:
 - <http://metadita.org/music/>

Disclaimer

© Copyright IBM Corporation 2015. All rights reserved.

U.S. Government Users Restricted Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

THE INFORMATION CONTAINED IN THIS PRESENTATION IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. WHILE EFFORTS WERE MADE TO VERIFY THE COMPLETENESS AND ACCURACY OF THE INFORMATION CONTAINED IN THIS PRESENTATION, IT IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. IN ADDITION, THIS INFORMATION IS BASED ON IBM'S CURRENT PRODUCT PLANS AND STRATEGY, WHICH ARE SUBJECT TO CHANGE BY IBM WITHOUT NOTICE. IBM SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES ARISING OUT OF THE USE OF, OR OTHERWISE RELATED TO, THIS PRESENTATION OR ANY OTHER DOCUMENTATION. NOTHING CONTAINED IN THIS PRESENTATION IS INTENDED TO, NOR SHALL HAVE THE EFFECT OF, CREATING ANY WARRANTIES OR REPRESENTATIONS FROM IBM (OR ITS SUPPLIERS OR LICENSORS), OR ALTERING THE TERMS AND CONDITIONS OF ANY AGREEMENT OR LICENSE GOVERNING THE USE OF IBM PRODUCTS AND/OR SOFTWARE.

IBM customers are responsible for ensuring their own compliance with legal requirements. It is the customer's sole responsibility to obtain advice of competent legal counsel as to the identification and interpretation of any relevant laws and regulatory requirements that may affect the customer's business and any actions the customer may need to take to comply with such laws. IBM does not provide legal advice or represent or warrant that its services or products will ensure that the customer is in compliance with any law.

IBM, the IBM logo, FileNet, Lotus, and WebSphere are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both. A current list of IBM trademarks is available on the Web at www.ibm.com/legal/copytrade.shtml.

Other company, product, or service names may be trademarks or service marks of others.

All statements regarding IBM future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.