

How to integrate <oxygen/> XML compare and merge tools



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Overview

- XML documents comparison
- Integrate <oxygen/> XML Diff as external tool
- Merging directories or a set of files
- Using the merge support form a plugin

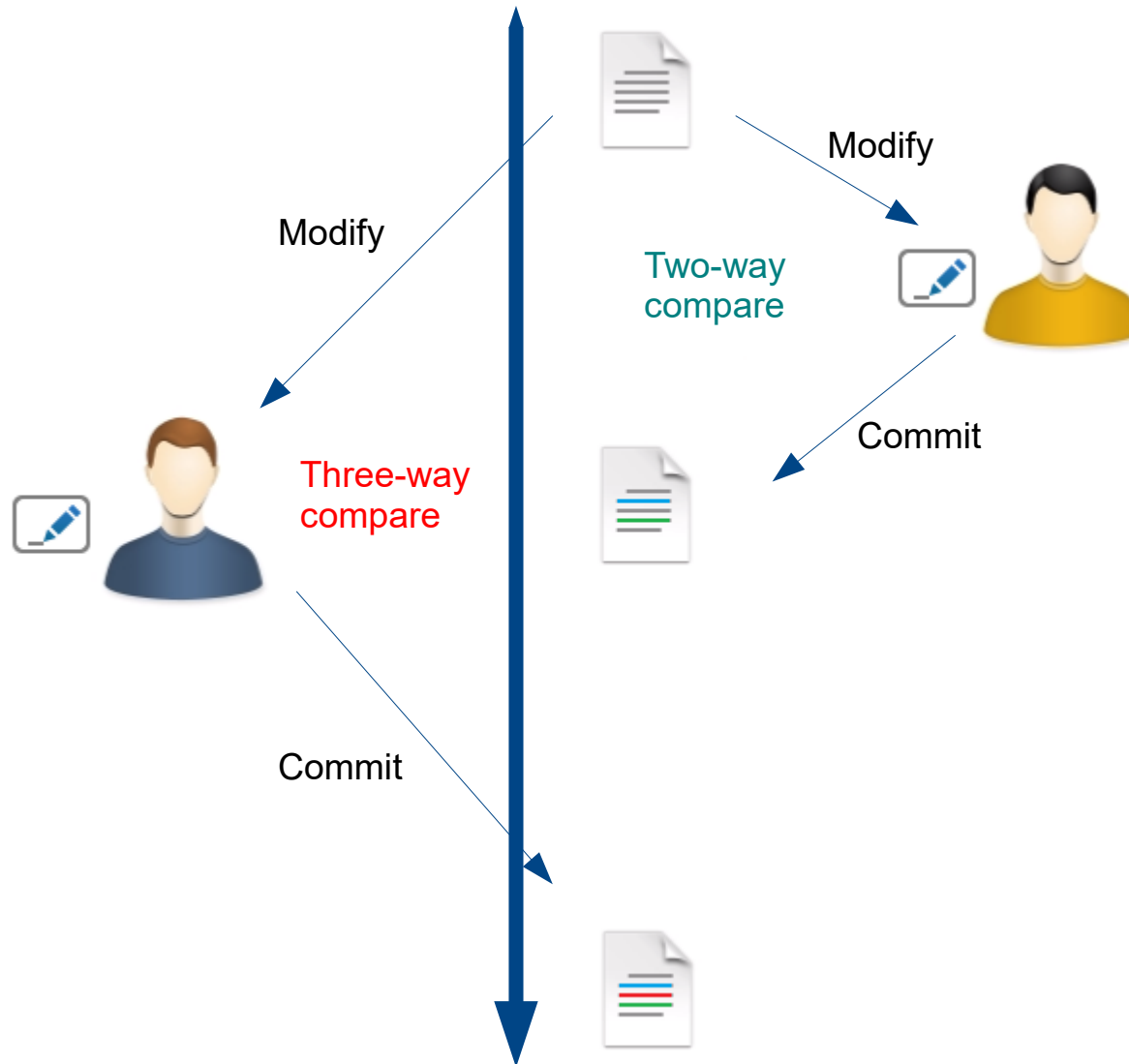
XML Comparison

- More and more XML-based documents are used for technical documentation
- Documents stored on versioning systems or CSMs
- Contributors can work in the same time on the same files
- Integrating the modifications can be a challenge

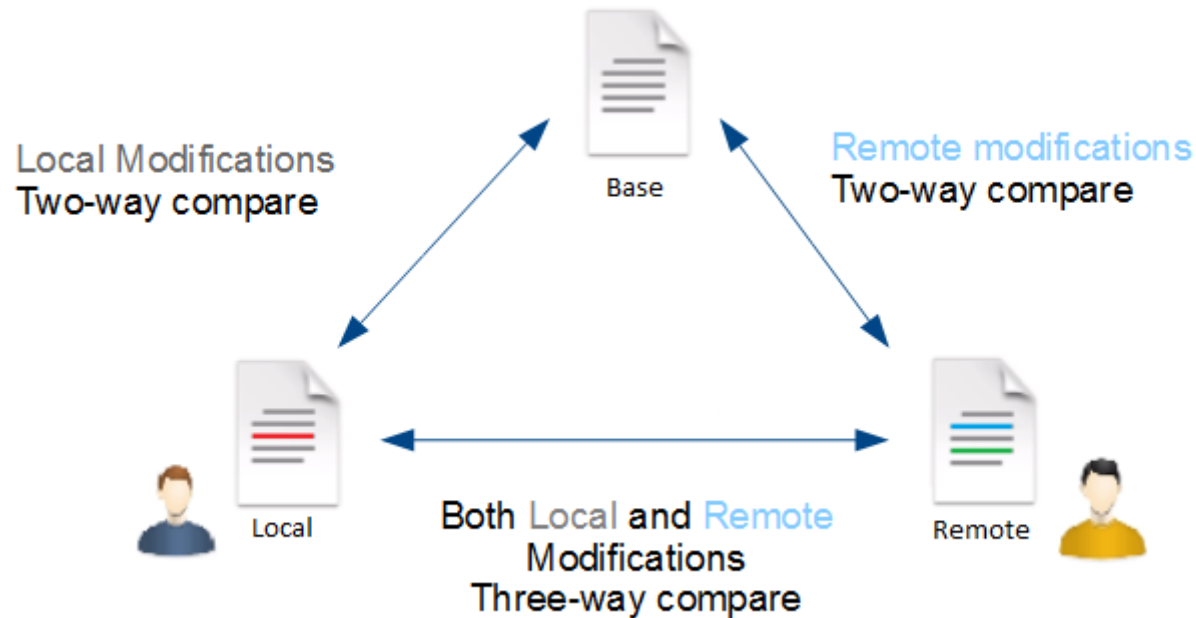
Comparison Challenges

- Most built-in applications are using text comparison
- It is important to use an XML comparison tool
- Compare against a base to determine the changes

Documents Workflow



Three-way Compare



Diff and Merge Tools

Oxygen provides tools to visualize and merge the changes

- Diff Directories (2-Way)
- Diff Files (2-Way and 3-Way)
- Compare Directories Against a Base (3-Way)
- Automatic file merge tool (3-Way)

Integrating Diff Files Tool

Diff Files tool can be integrated as an external application

Command line parameters:

```
diffFiles.bat [-ext] [leftFile] [rightFile] [ancestorFile] [mergeOutputFile]  
              [-leftRO=true | false] [-rightRO=true | false]
```

- ext** – instructs the application that it is used as an external comparison tool for another application
- leftFile** – the file that will be displayed on the left side
- rightFile** – the file that will be displayed on the right side
- ancestorFile** – the base (ancestor) file
- mergeOutputFile** – the merge output/result file. Will be displayed in the left side and its initial content will be the left file content
- leftRO** – enables (true) or disables (false) editing of the left-side file
- rightRO** – enables (true) or disables (false) editing of the right-side file

SourceTree Compare

SourceTree Compare View

```
3 <topic id="topic_xk5_gqk_qy">
- <title>Your first Oxygen Add-on</title>
4 + <title>Your First Oxygen Add-on</title>
5 <body>
6 <p> A <xref href="http://blog.oxygenxml.com/2014/08/the-oxygen-sdk-part-2-frameworks.html"
7 format="html" scope="external">framework configuration</xref> provides validation, content
- completion and visual editing support for a certain XML vocabulary. </p>
- <p>Existing framework configurations which come bundled with <b>Oxygen</b> can be extended and
- modified. For example the <b>DITA</b> framework configuration which adds support for editing
- <b>DITA</b> documents can be modified to remove existing actions, add custom actions or
- modify lots of other behaviors: <xref
8 + completion, and visual editing support for a certain XML vocabulary. </p>
9 + <p>Existing framework configurations that come bundled with <b>Oxygen</b> can be extended and
10 + modified. For example, the <b>DITA</b> framework configuration that adds support for editing
11 + <b>DITA</b> documents can be modified to remove existing actions, add custom actions, or
12 + modify many other behaviors: <xref
```

Oxygen XML Diff

3 <topic id="topic_xk5_gqk_qy">	<topic id="topic_xk5_gqk_qy">	3
4 <title>Your First Oxygen Add-on</title>	<title>Your first Oxygen Add-on</title>	4
5 <body>	<body>	5
6 <p> A <xref href="http://blog.oxygenxml.com/2014/08/	<p> A <xref href="http://blog.oxygenxml.com/2014/08/the-oxygen	6
7 format="html" scope="external">framework configu	format="html" scope="external">framework configuration</x	7
8 completion, and visual editing support for a certa	completion and visual editing support for a certain XML voca	8
9 <p>Existing framework configurations that come bundl	<p>Existing framework configurations which come bundled with <	9
10 modified. For example, the DITA framework c	modified. For example the DITA framework configuratio	10
11 DITA documents can be modified to remove	DITA documents can be modified to remove existing a	11
12 modify many other behaviors: <xref	modify lots of other behaviors: <xref	12

Integrate with SourceTree

Configure the External Diff tool in SourceTree Options dialog, in the Diff tab.

"Diff Command"

[Oxygen install dir]/diffFiles.exe, and for

"Arguments" -ext \$REMOTE \$LOCAL \$LOCAL

"Merge Tool"

[Oxygen install dir]/diffFiles.exe, and for the

"Arguments" -ext \$LOCAL \$REMOTE \$BASE \$MERGED

Integrate with Command Line Git

To configure git to use a <oxygen/> Diff Files for comparison you need to add the following lines in the ".gitconfig" file:

```
[diff]
  tool = oxygendiff
[merge]
  tool = oxygendiff
[difftool "oxygendiff"]
  cmd = '[Oxygen install dir]/diffFiles.exe' -ext $REMOTE $LOCAL $LOCAL
[mergetool "oxygendiff"]
  cmd = '[Oxygen install dir]/diffFiles.exe' -ext $LOCAL $REMOTE $BASE $MERGED
  trustExitCode = true
[difftool]
  prompt = false
```

Run Oxygen Diff Files from command line using: "git difftool file.xml".

For MacOSX you need to specify the path to the "diffFilesMac.sh", for Linux "diffFiles.sh"

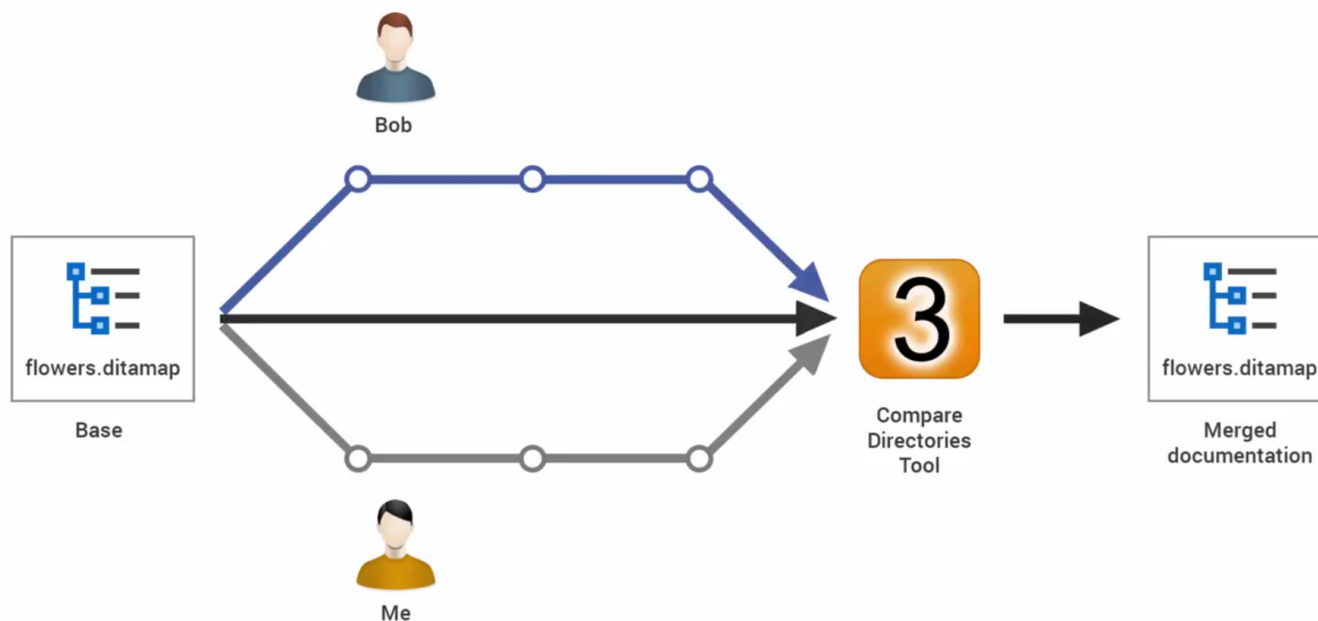
Integrate with Command Line Git

Or you can run the following commands from the command line:

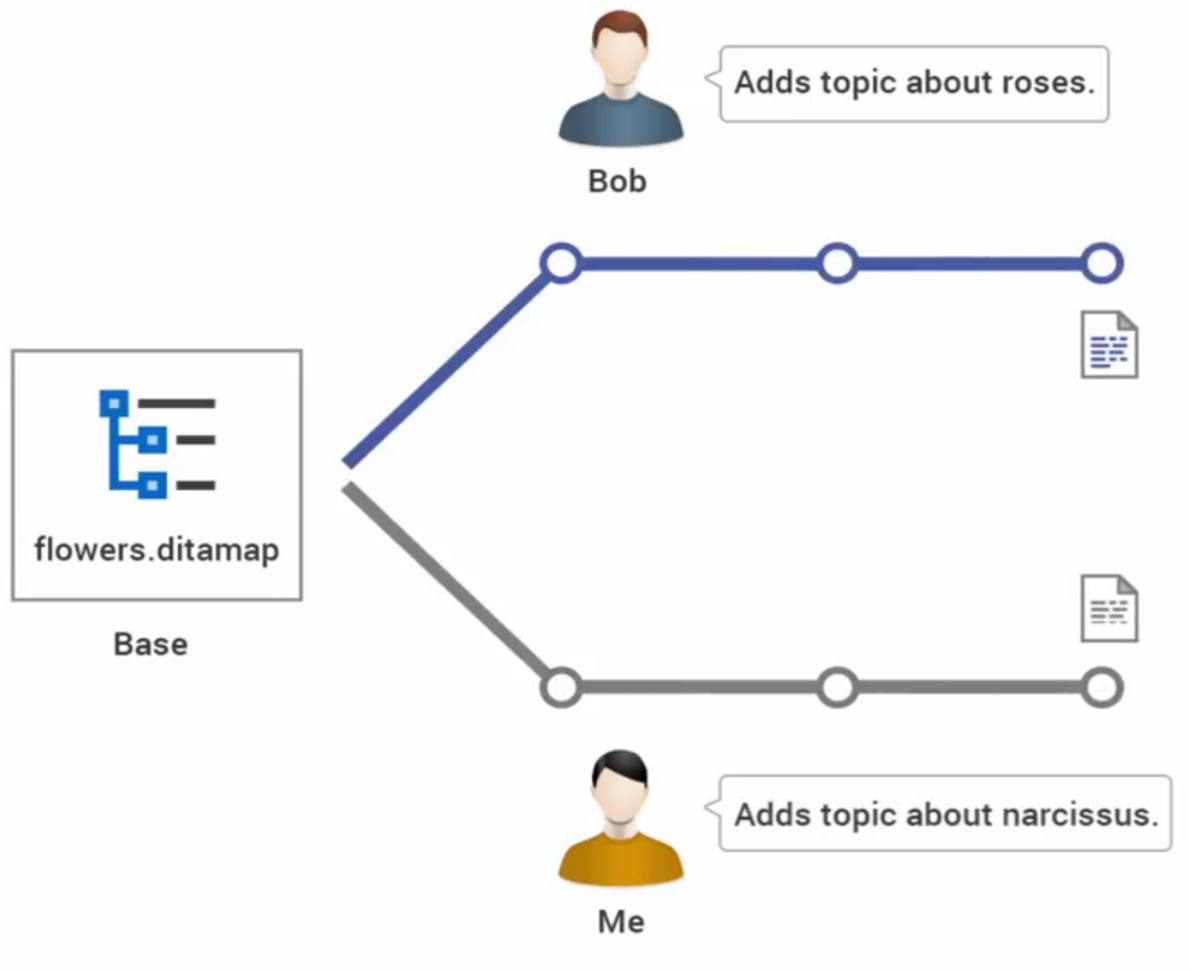
```
git config --global diff.tool oxygendiff
git config --global difftool.oxygendiff.cmd '[Oxygen install dir]/diffFiles.exe -ext
$REMOTE $LOCAL $LOCAL'
git config --global merge.tool oxygendiff
git config --global mergetool.oxygendiff.cmd '[Oxygen install dir]/diffFiles.exe
-ext $LOCAL $REMOTE $BASE $MERGED'
git config --global mergetool.oxygendiff.trustExitCode true
```

Compare Dirs Against a Base

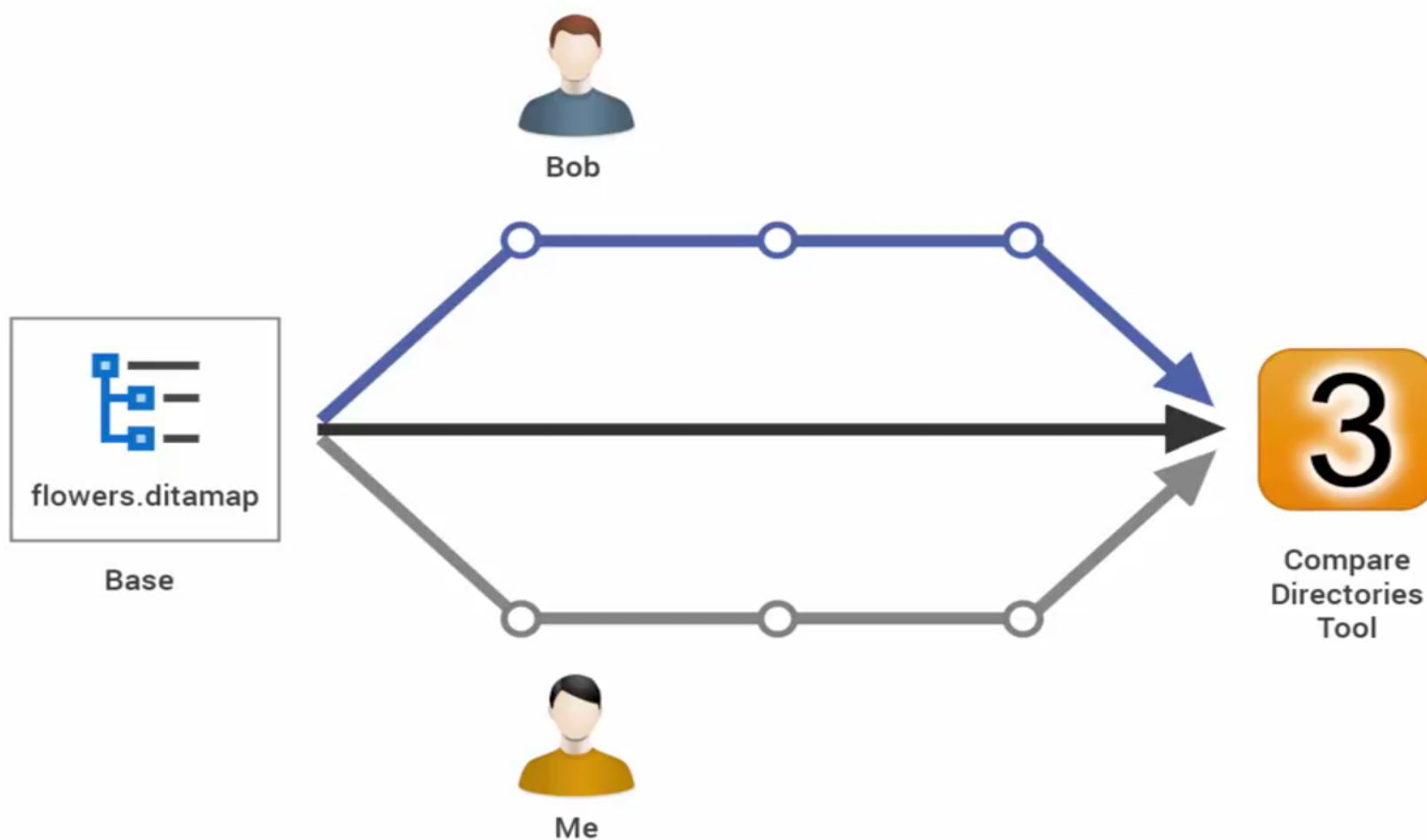
- Identify and merge changes between multiple modifications of the same directory structure
- Helpful for teams that have multiple authors contributing documents to the same directory system



Compare Dirs Against a Base



Compare Dirs Against a Base



Compare Dirs Against a Base

Offers information about conflicts and changes, and includes actions to easily merge, accept, overwrite, or ignore changes

Compare Directories Against a Base (3-way)

Changes made by others: 4. Your changes: 3. Conflicts: 3.

Name	Status	Description
topics\flowers\salsvia.dita	Modified by you and by others	Modified by you and by others
topics\flowers\roses.dita	Added by others	Added by others
topics\flowers\chrysanthemum3.dita	Added by others	Added by others
topics\flowers\chrysanthemum.dita	Deleted by you and by others	Deleted by you and by others
images\Rose.jpg	Added by others	Added by others
flowers.ditamap	Modified by you and by others	Modified by you and by others
concepts\winterFlowers.dita	Modified by others	Modified by others

Accept all non-conflicting changes

Auto [Settings] [Run] [Diff] [Merge] [Compare] [Ignore nodes by XPath]

E:\Demos\MergeDirectoriesDemo\flowers\flowers.ditamap

```
<?xml version="1.0" encoding="UTF-8" standalone="no" ?>
<topicref href="topics/index.dita" collection-type="sequence" />
<topicref href="concepts/springFlowers.dita" collection-type="sequence" />
<topicref href="topics/flowers/iris2.dita"/>
<topicref href="topics/flowers/snowdrop.dita"/>
</topicref>
<topicref href="concepts/summerFlowers.dita" collection-type="sequence" />
<topicref href="topics/flowers/gardenia.dita"/>
<topicref href="topics/flowers/hibiscus.dita"/>
</topicref>
<topicref href="concepts/autumnFlowers.dita" collection-type="sequence" />
<topicref href="topics/flowers/chrysanthemum1.dita"/>
<topicref href="topics/flowers/salsvia.dita"/>
</topicref>
<topicref href="concepts/winterFlowers.dita" collection-type="sequence" />
<topicref href="topics/flowers/narcissus.dita"/>
<topicref href="topics/flowers/gerbera.dita"/>
</topicref>
<?oxy_comment_start author="Mary" timestamp="20120510T11530" />
<topichead navtitle="Glossary" type="topic" id="glossary" />
```

E:\Demos\MergeDirectoriesDemo\flowers-reviewed\flowers.ditamap

```
<?xml version="1.0" encoding="UTF-8" standalone="no" ?>
<topicref href="topics/index.dita" collection-type="sequence" />
<topicref href="concepts/springFlowers.dita" collection-type="sequence" />
<topicref href="topics/flowers/iris.dita"/>
<topicref href="topics/flowers/snowdrop.dita"/>
</topicref>
<topicref href="concepts/summerFlowers.dita" collection-type="sequence" />
<topicref href="topics/flowers/gardenia.dita"/>
<topicref href="topics/flowers/hibiscus.dita"/>
</topicref>
<topicref href="concepts/autumnFlowers.dita" collection-type="sequence" />
<topicref href="topics/flowers/chrysanthemum3.dita"/>
<topicref href="topics/flowers/salsvia.dita"/>
</topicref>
<topicref href="concepts/winterFlowers.dita" collection-type="sequence" />
<topicref href="topics/flowers/gerbera.dita"/>
<topicref href="topics/flowers/roses.dita"/>
</topicref>
<?oxy_comment_start author="Mary" timestamp="20120510T11530" />
<topichead navtitle="Glossary" type="topic" id="glossary" />
```

Close

Integrate Merge Tool from Plugins

API to start 3-Way Directory Comparison Merge Tool

```
List<MergedFileState> DiffAndMergeTools.openMergeApplication(  
    baseDir,  
    personalModifiedFilesDir,  
    externalModifiedFilesDir,  
    mergeOptions)
```

- baseDir** – The directory containing initial, unaltered files.
- personalModifiedFilesDir** – The directory containing the files modified by you. These files are modified during the merging.
- externalModifiedFilesDir** – The directory containing the files modified by others.
- mergeOptions** – The options used in the merge operation. The keys that can be used in this map are found in MergeFilesOptionsConstants.

Obtain the list with the modified files and there status (deleted, added, modified).

Merge Options

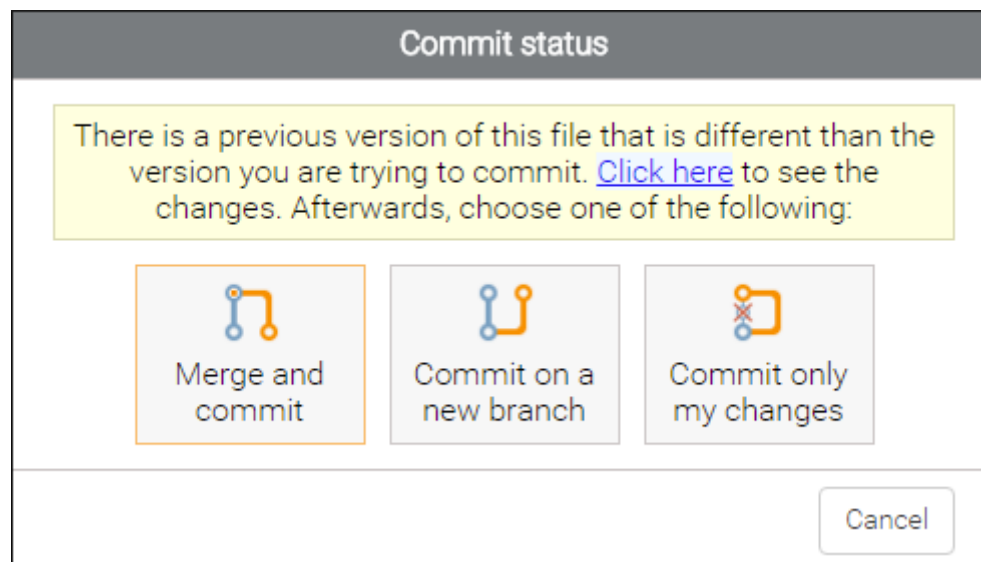
- Constants defined in [MergeFilesOptionsConstants](#):
 - FILTER_MODES_KEY - default state of the filter buttons
 - MERGE_DIALOG_TITLE - title of the merge dialog
 - VIRTUAL_PATH_FOR_PERSONAL_MODIFIED_FILES_DIRECTORY
 - It can be useful if you plan to do the merging in a temporary directory
 - The dialog can use this option to hide the real temporary directory path from the user

Merge Dialog Use Cases

- Integrate changes on a CMS
- Integrate changes on your local system
- Preview some modifications

Automatic Merge in Web Author

Allows the user to automatically merge his changes with the changes made by other people



<https://www.oxygenxml.com/doc/versions/18.1.0/ug-webauthor/topics/using-webapp-github.html>

Automatic Merge File Content

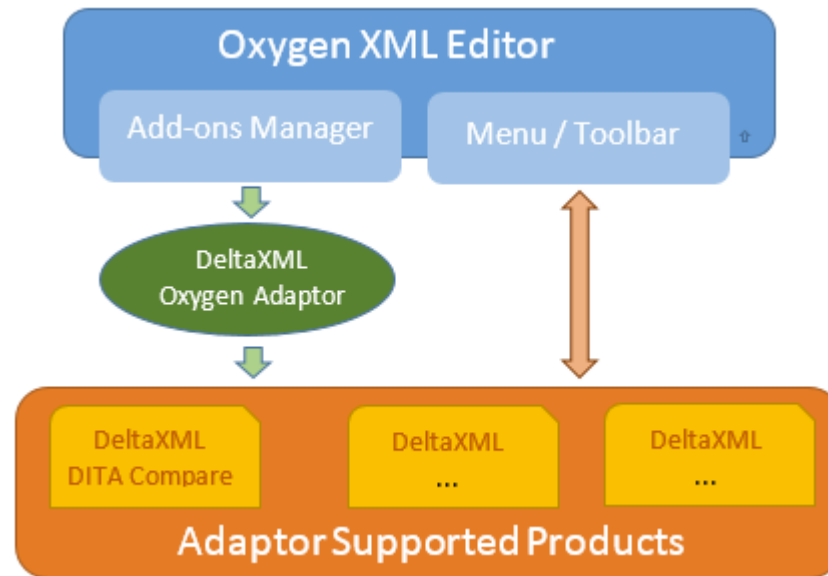
API to automatically merge files content:

```
MergeResult XMLUtilAccess.threeWayAutoMerge(ancestor, left, right,  
conflictResMeth)
```

- ancestor** – The original file string which has been modified into left and right.
- left** – The left version of the file string, the one with "our" changes.
- right** – The right version of the file string, the one with "others" changes.
- conflictResMeth** – The conflict resolution method to use.

Returns a merged file string where conflicts are resolved by using the left version of the file

Delta XML Plugin for <oxygen/>



<https://www.deltaxml.com/products/plugins/oxygen-plugin>

Thank you!

Questions?

<oxygen/> XML Editor
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