

Refactoring XML Documents

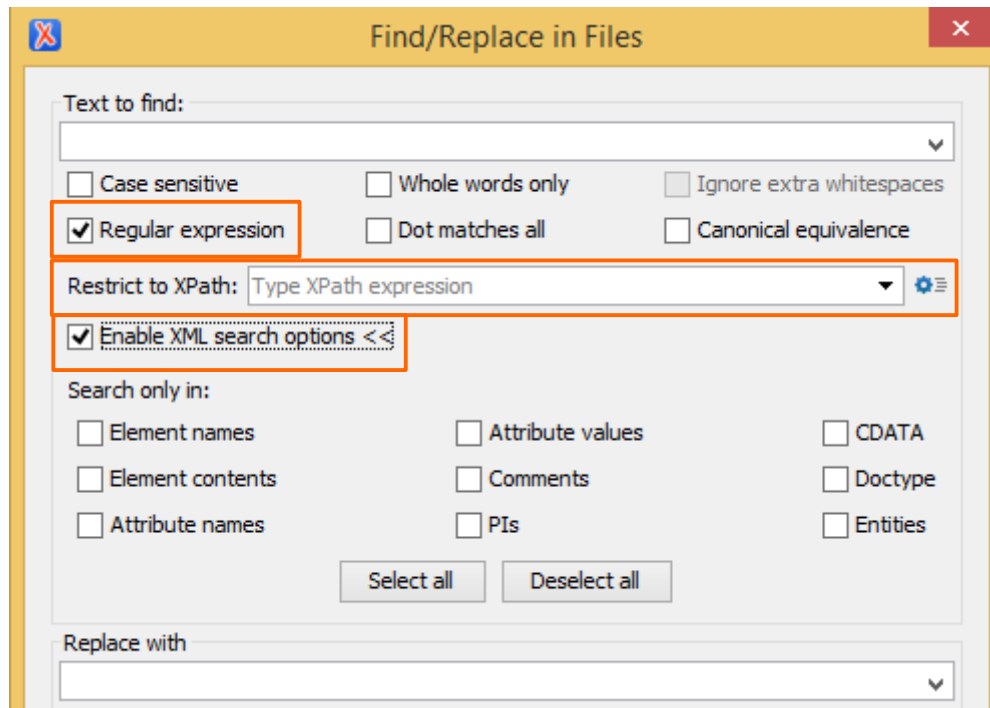
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Why do we need this tool?



Aren't the existing tools enough?



- limited structure-aware
- complex

Aren't the existing tools enough?

Q: Isn't a more structure aware solution already here?

A: Yes, **XSLT** and **XQuery Update**

XSLT

```
<xsl:stylesheet
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  version="2.0">
  <xsl:template match="node() | @*">
    <xsl:copy>
      <xsl:apply-templates select="node() | @*" />
    </xsl:copy>
  </xsl:template>
</xsl:stylesheet>
```

XQuery Update

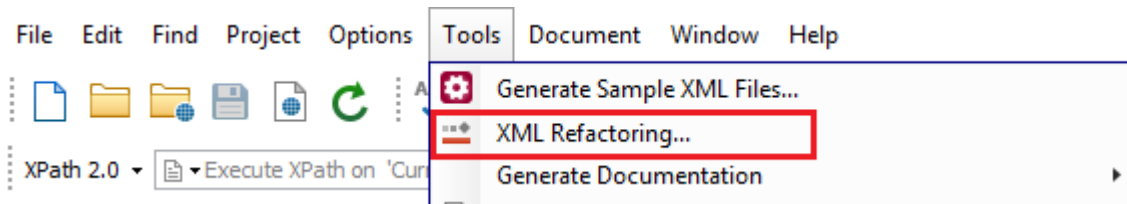
(insert node **test**
as first into **\$node**,
delete node **\$attribute**)

Where to find it

- Toolbar

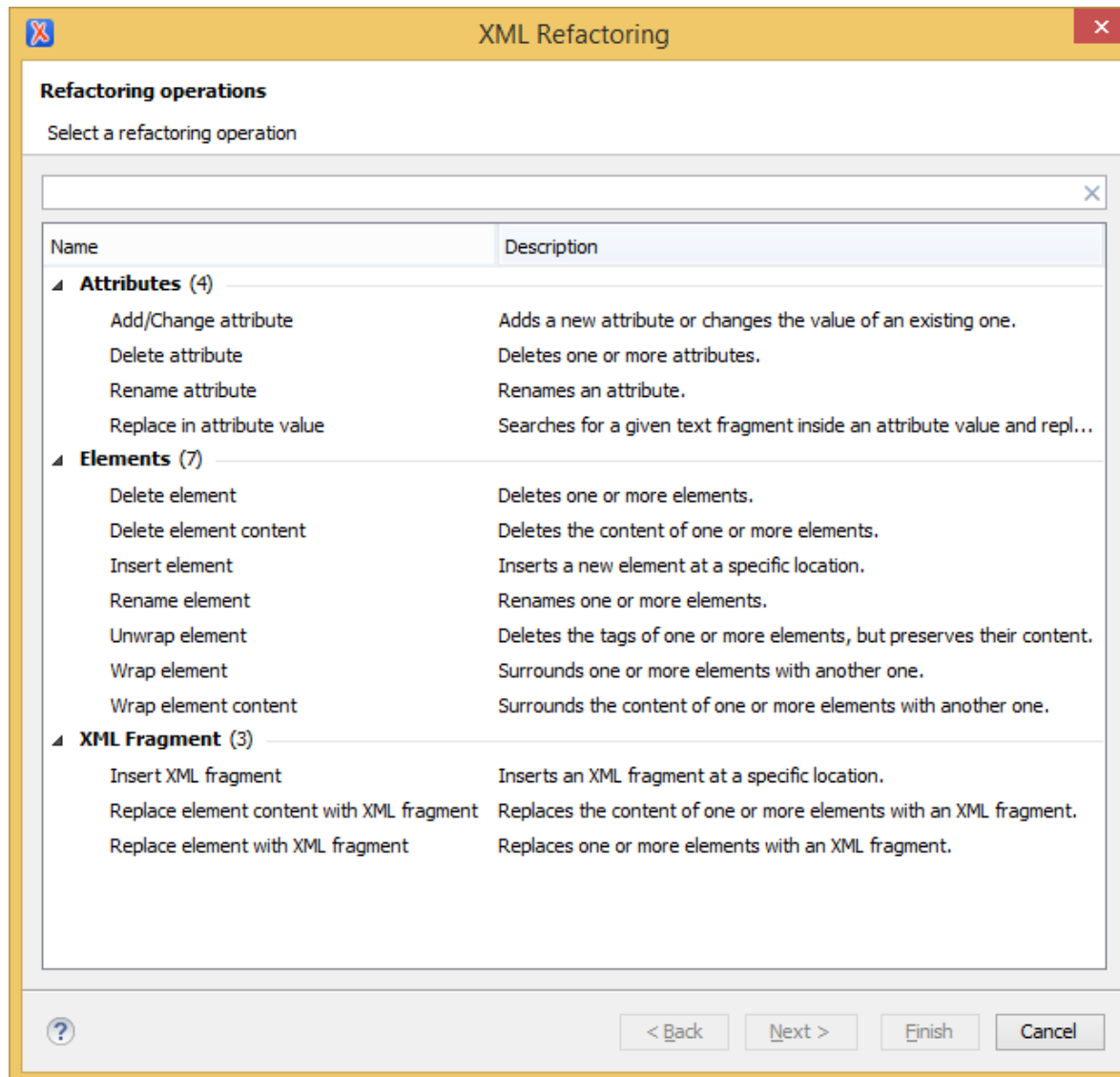


- Main menu

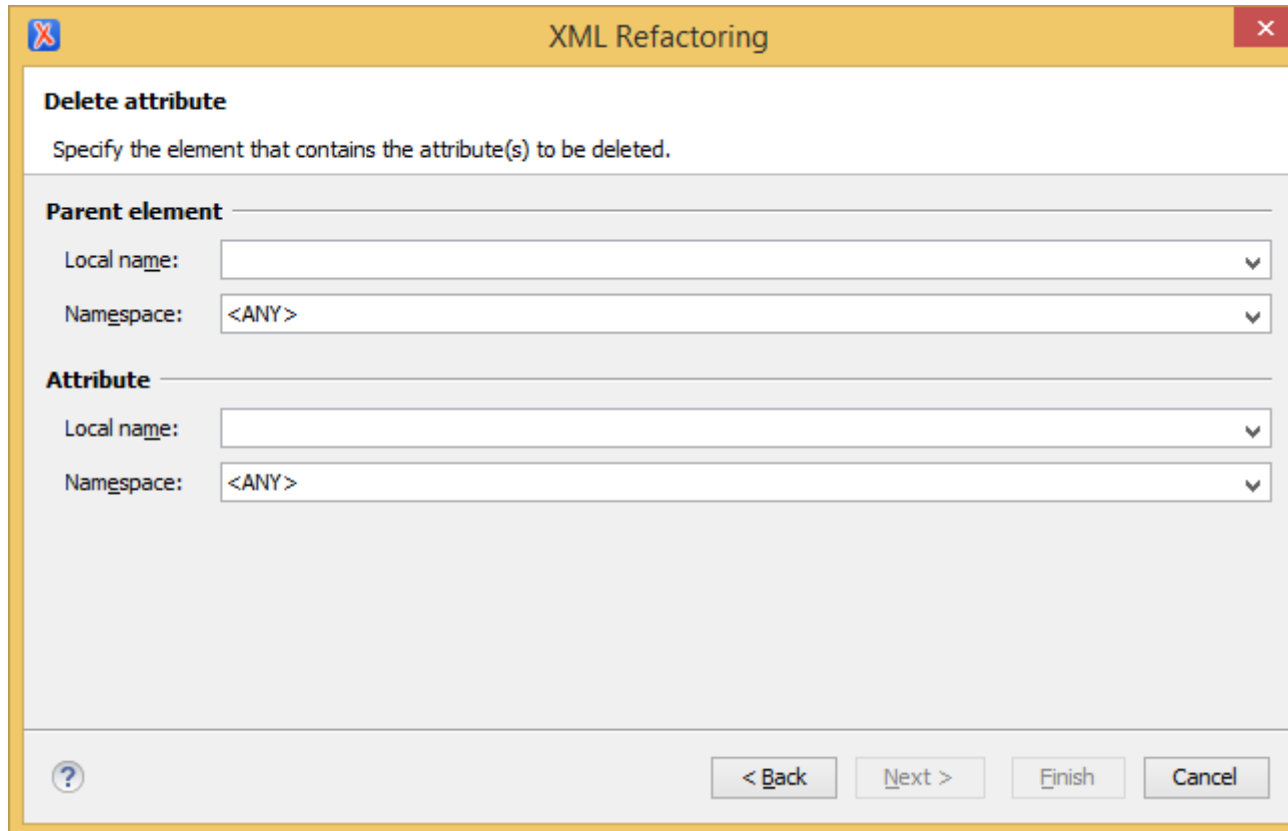


- Project view
- DITA Map Manager

Choose operation



Configure parameters

A screenshot of the "XML Refactoring" dialog box in Oxygen XML Editor. The dialog has a yellow title bar with a close button. The main content area is titled "Delete attribute" and contains the instruction "Specify the element that contains the attribute(s) to be deleted." Below this, there are two sections: "Parent element" and "Attribute". Each section has a "Local name:" field and a "Namespace:" dropdown menu. The "Namespace:" dropdowns are currently set to "<ANY>". At the bottom of the dialog, there is a help icon (question mark) on the left and four buttons: "< Back", "Next >", "Finish", and "Cancel".

XML Refactoring

Delete attribute
Specify the element that contains the attribute(s) to be deleted.

Parent element

Local name:

Namespace:

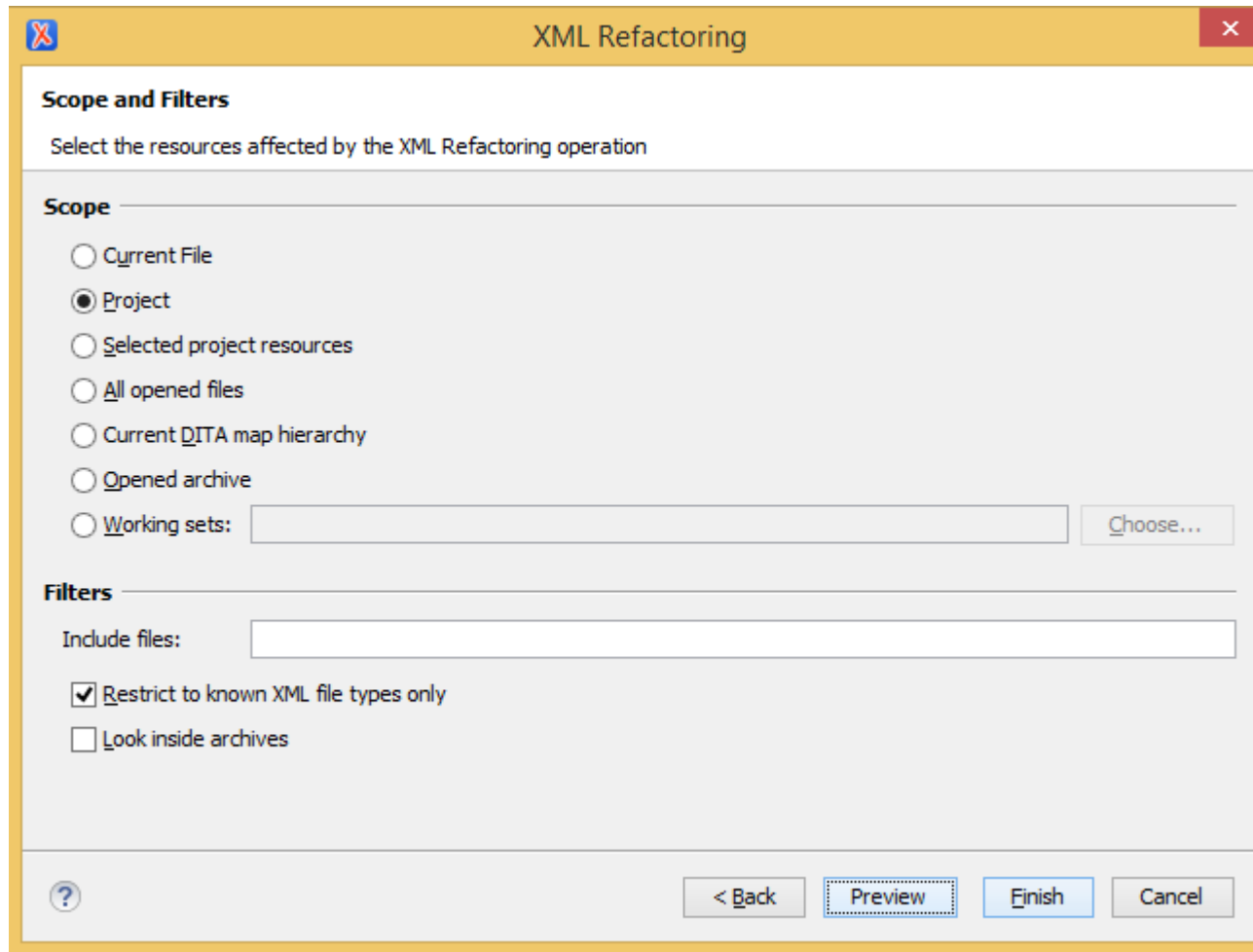
Attribute

Local name:

Namespace:

? < Back Next > Finish Cancel

Select scope



Summary

Two parts:

1. the user perspective.
 - using **predefined operations** for various tasks
2. the developer perspective.
 - creating a **custom operation**
 - **sharing** it with the team

Change Attribute Value

Use the XML Refactoring tool to modify an entry from a multi-value attribute

```
<para os="linux;windows;mac">  
  Before installing the photo...</para>
```



```
<para os="linux;win;mac">  
  Before installing the photo...</para>
```

Predefined operations

Attribute operations

- **Add/Change** attribute
- **Delete** attribute
- **Remove** attribute
- **Replace** in attribute value

Element operations

- **Insert** element
- **Rename** element
- **Wrap** element
- **Wrap** element content
- **Unwrap** element
- **Delete** element
- **Delete** element content

XML fragment operations

- **Insert** XML fragment
- **Replace** element with XML fragment
- **Replace** element **content** with XML fragment

Convert an element

Q:How to convert the first bolded paragraph from a section to a title?

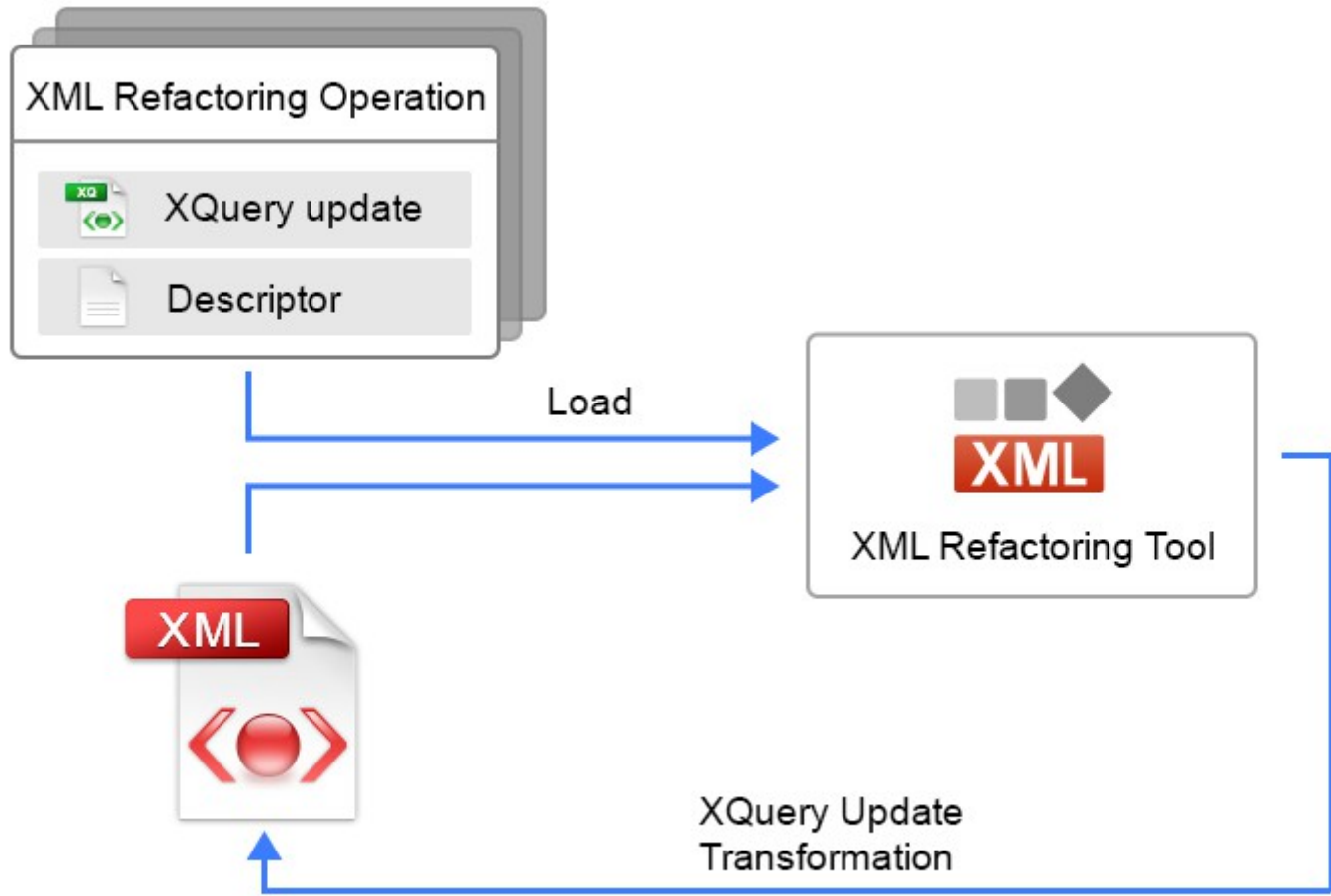
A: By combining two built-in operations:

1. **Rename** element
2. **Unwrap** element

```
<section>
  <p><b>Lock your phone</b></p>
  <p>To lock your phone, press the <term>Lock</term> key with this icon <image
    href=" ../image/Lock.jpg" id="image_pmp_g14_2g" height="1em"/>.</p>
</section>
```

```
<section>
  <title>Lock your phone</title>
  <p>To lock your phone, press the <term>Lock</term> key with this icon <image
    href=" ../image/Lock.jpg" id="image_pmp_g14_2g" height="1em"/>.</p>
</section>
```

XML Refactoring process



XML Refactoring process

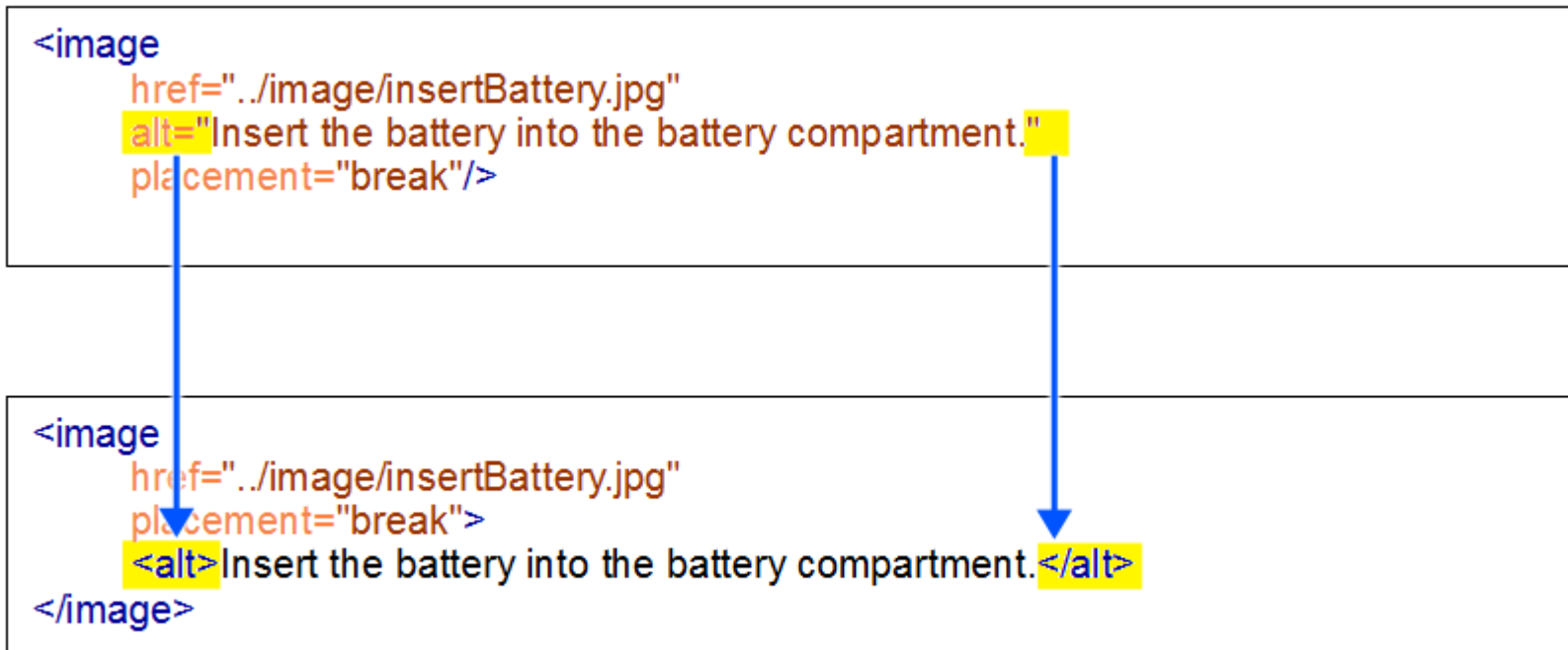


- preserve attributes order
- preserve DOCTYPE
- preserve entities

Convert an attribute to an element

Q: How to convert the **alt** attribute to an element with the same name?

A: By creating a **custom operation**



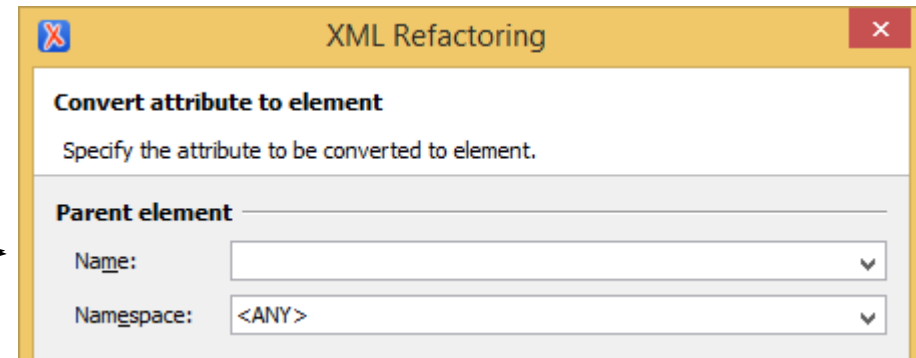
XQuery Script

```
(: Local name of the attribute's parent element. :)  
declare variable $element_localName  
  as xs:string external;  
  
(: Namespace of the attribute's parent element. :)  
declare variable $element_namespace  
  as xs:string external;
```

```
<refactoringOperationDescriptor  
  name="Convert attribute to element">  
<description>Converts the specified attribute....</description>  
<parameters>  
  <description>Specify the attribute...</description>  
  <section label="Parent element">  
    <elementParameter id="elemID">  
      <localName  
        label="Name"  
        name="element_localName">  
      </localName>  
      <namespace  
        label="Namespace"  
        name="element_namespace">  
      </namespace>  
    </elementParameter>  
  </section>  
</parameters>  
</refactoringOperationDescriptor>
```

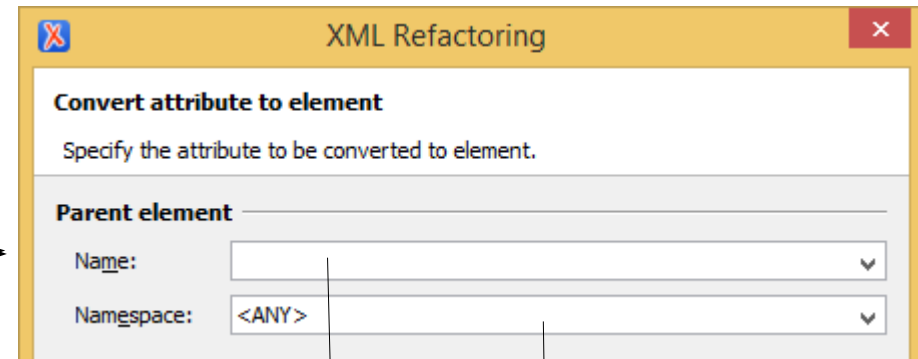

Descriptor

```
<refactoringOperationDescriptor
  name="Convert attribute to element">
  <description>Converts the specified attribute....</description>
  <parameters>
    <description>Specify the attribute...</description>
    <section label="Parent element">
      <elementParameter id="elemID">
        <localName
          label="Name"
          name="element_localName">
        </localName>
        <namespace
          label="Namespace"
          name="element_namespace">
        </namespace>
      </elementParameter>
    </section>
  </parameters>
</refactoringOperationDescriptor>
```



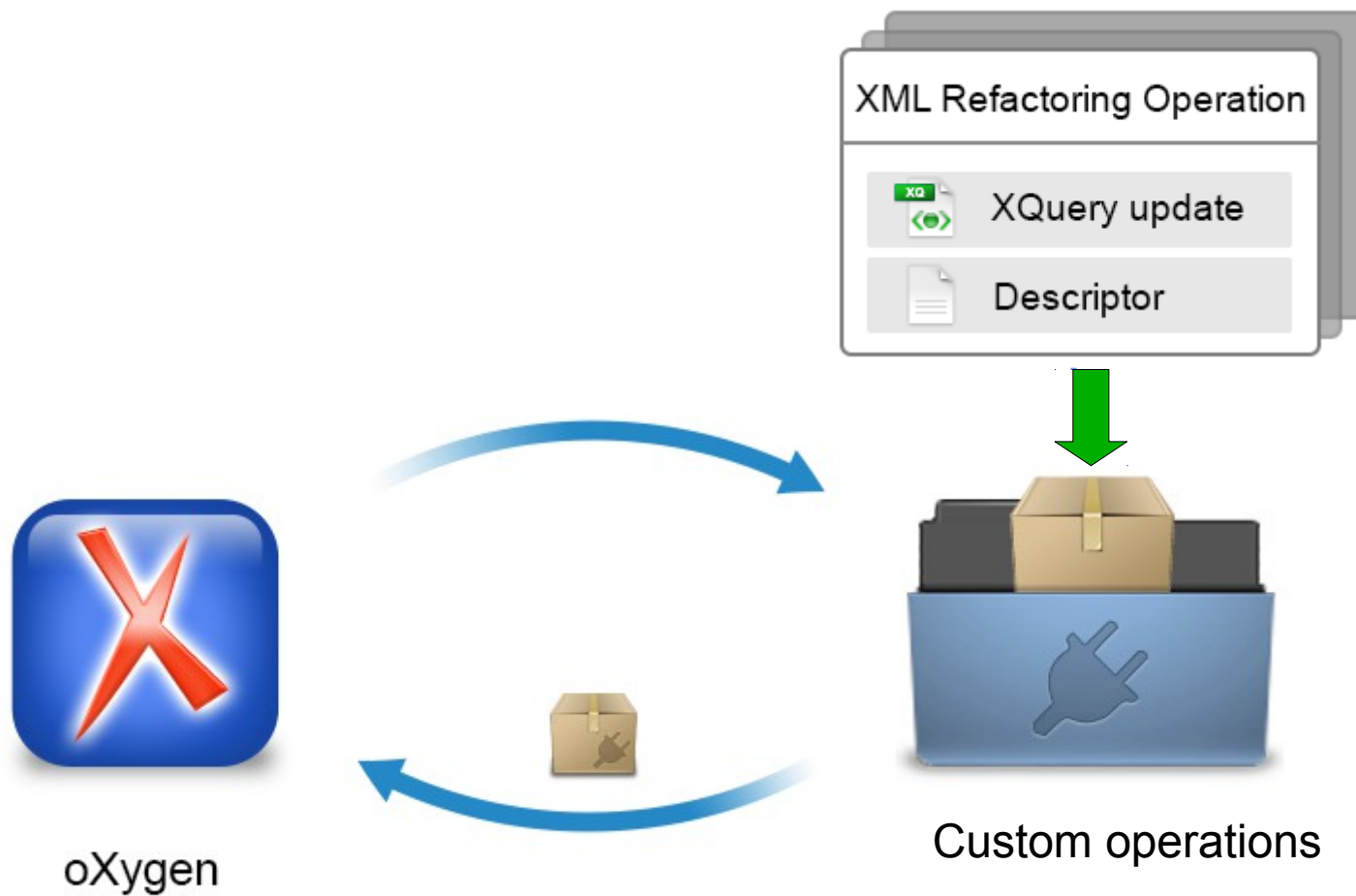
Working together

```
<refactoringOperationDescriptor  
  name="Convert attribute to element">  
  <description>Converts the specified attribute....</description>  
  <parameters>  
    <description>Specify the attribute...</description>  
    <section label="Parent element">  
      <elementParameter id="elemID">  
        <localName  
          label="Name"  
          name="element_localName">  
        </localName>  
        <namespace  
          label="Namespace"  
          name="element_namespace">  
        </namespace>  
      </elementParameter>  
    </section>  
  </parameters>  
</refactoringOperationDescriptor>
```

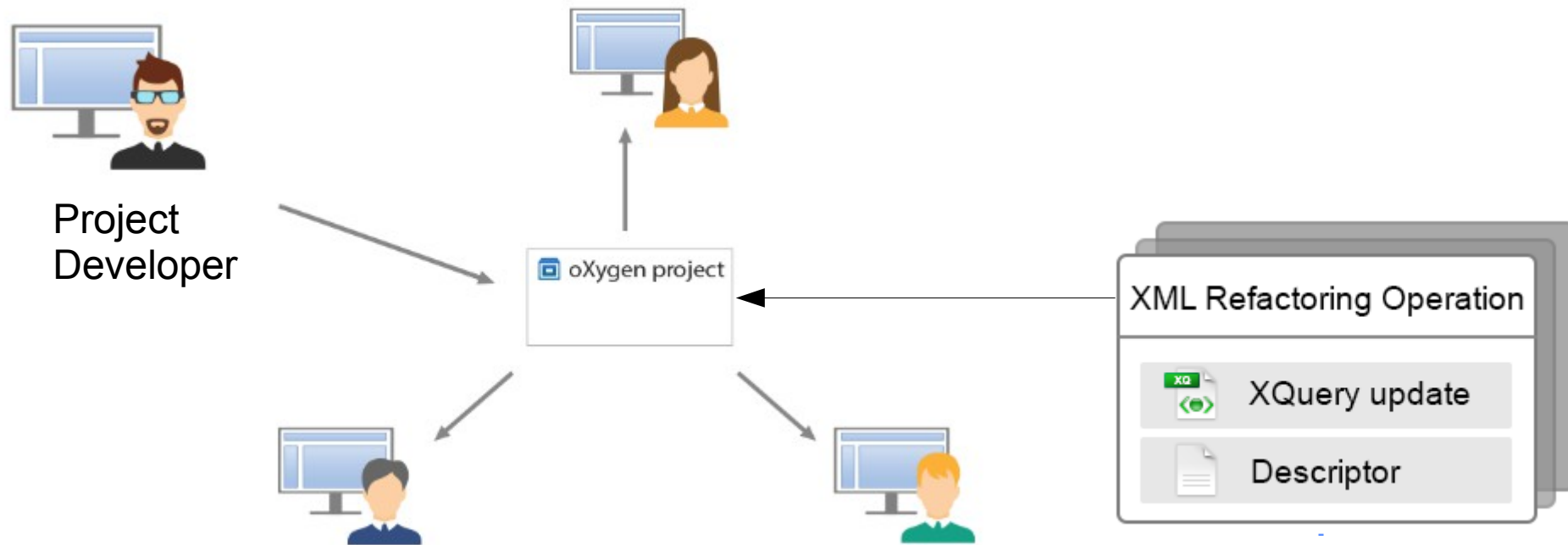


```
(: Local name of the attribute's parent element. :)  
declare variable $element_localName as xs:string external;  
  
(: Namespace of the attribute's parent element. :)  
declare variable $element_namespace as xs:string external;
```

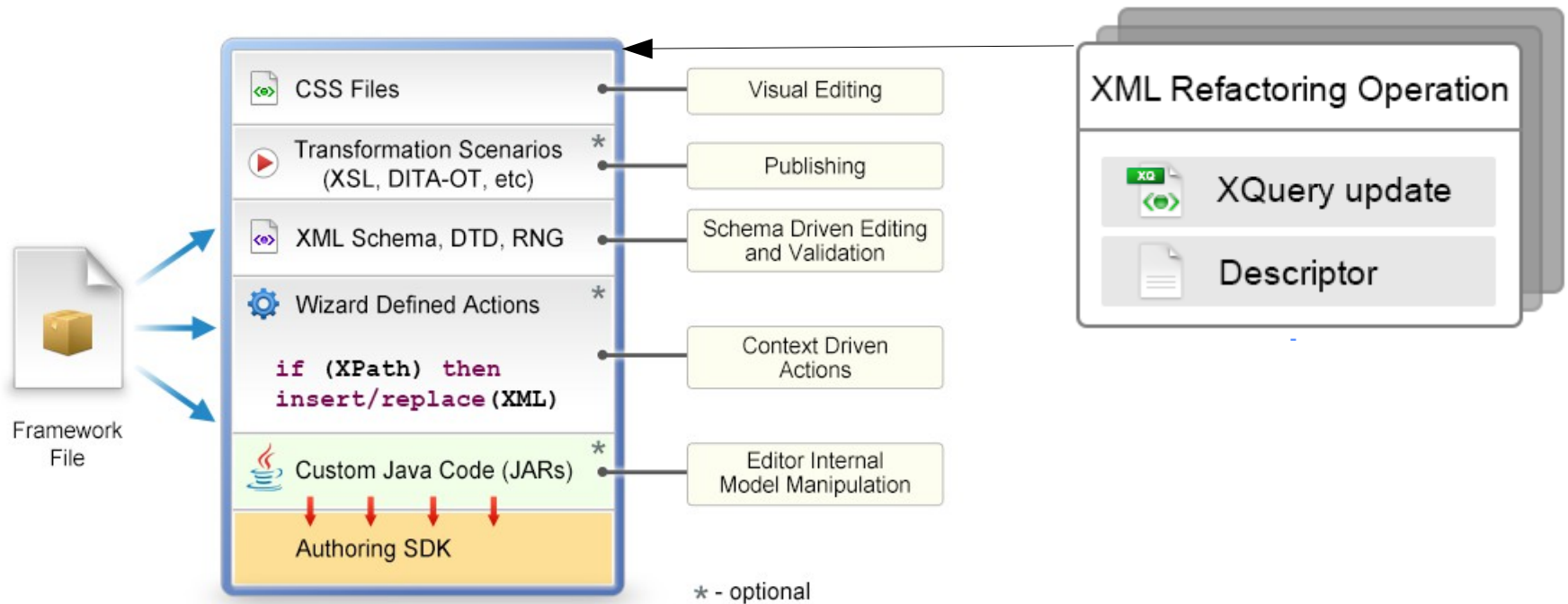
Sharing



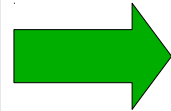
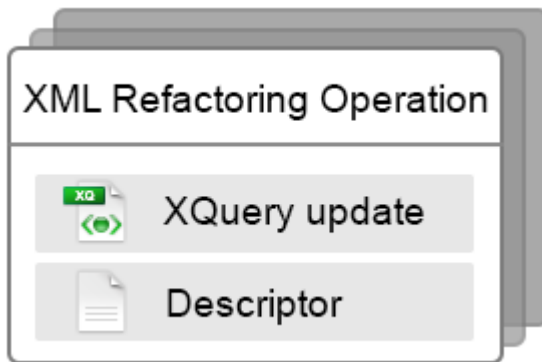
Sharing - Options/Project



Sharing - The framework

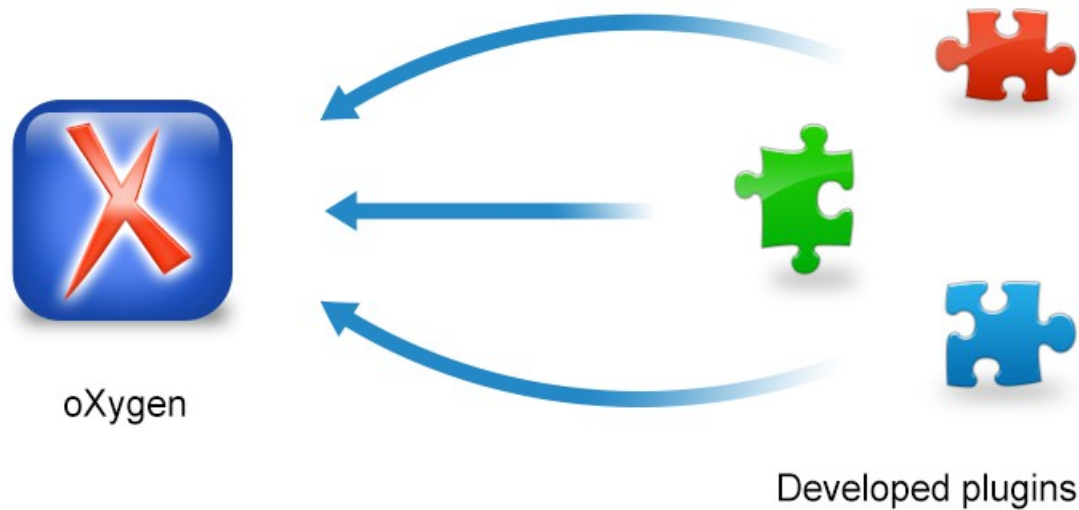


Sharing - The framework



Name	Size	Modified
D:\projects\exml\frameworks\test_cals	N/A	2015-05-29 12:16...
css	N/A	2015-05-29 12:16...
refactoring	N/A	2015-05-29 12:16...
convert-attribute-to-element.xml	2331	2015-05-20 14:08...
convert-attribute-to-element.xq	2031	2015-05-19 11:11...
root.framework	10424	2015-05-06 11:02...

Sharing - oXygen plugin



oXygen plugin descriptor

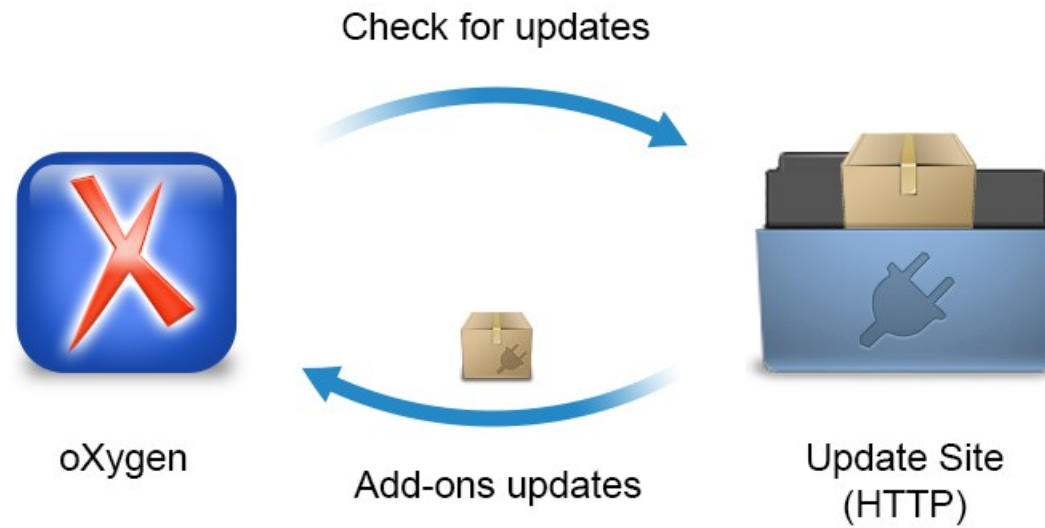
```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plugin PUBLIC "-//Oxygen Plugin" "../plugin.dtd">

<plugin
  id="refactoring.operations"
  name="Refactoring operations plugin"
  description="Contains operation descriptors and related scripts"
  version="1.0">
  <extension type="RefactoringOperationsProvider">
    <folder path="customDir"/>
    <folder path="customDir2"/>
  </extension>
</plugin>
```

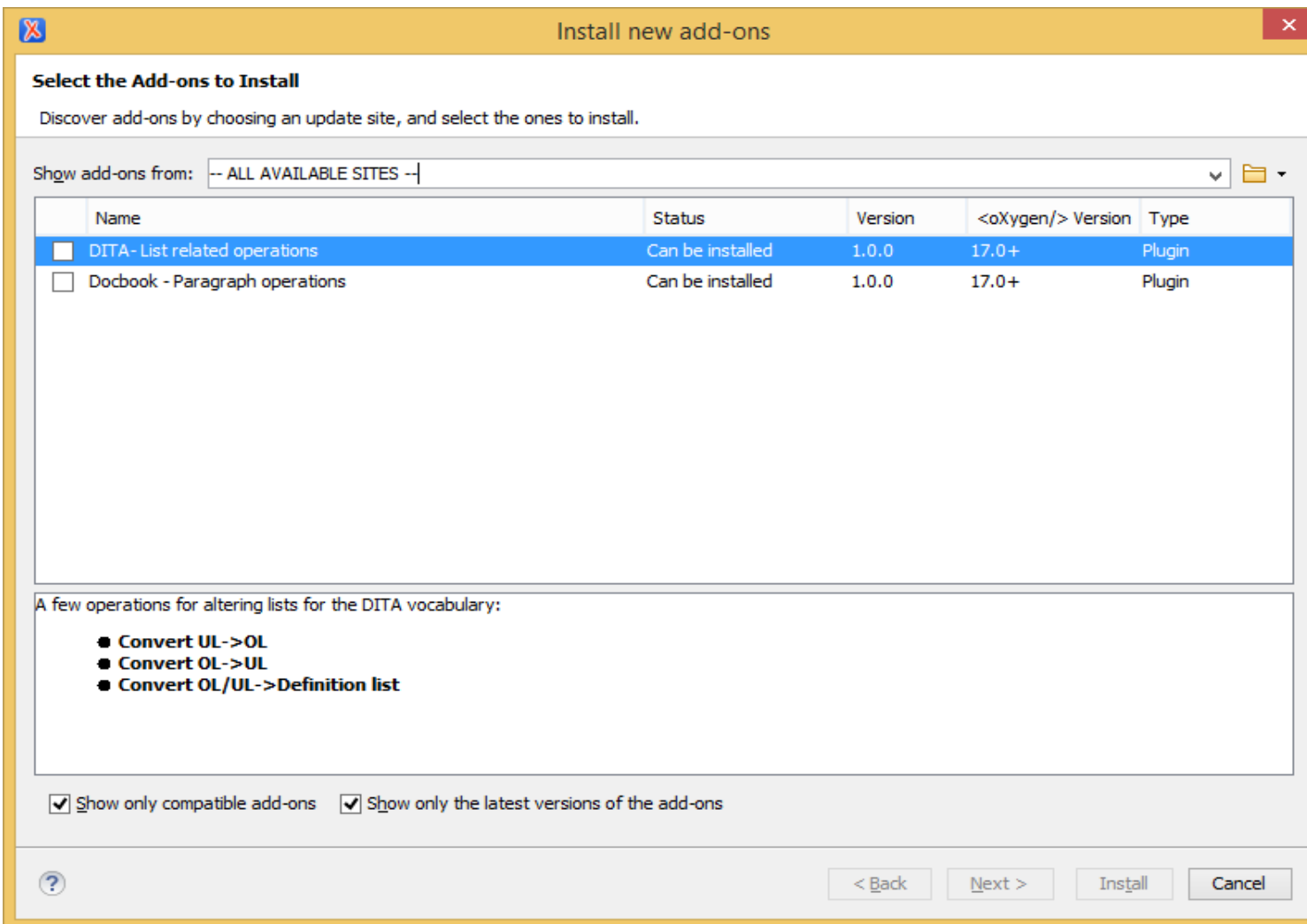

oXygen plugin descriptor

Name	Size	Modified
D:\Desktop\Presentations_framework\Pr...	N/A	2015-05-29 11:34:55
<ul style="list-style-type: none"> <ul style="list-style-type: none"> customDir <ul style="list-style-type: none"> convert-attribute-to-element.xml convert-attribute-to-element.xq <ul style="list-style-type: none"> customDir2 <ul style="list-style-type: none"> convert-lists.xml convert-lists.xq plugin.xml 	N/A	2015-05-29 11:35:08
	2331	2015-05-20 14:08:11
	2031	2015-05-19 11:11:38
	N/A	2015-05-29 11:35:30
	2331	2015-05-20 14:08:11
	2031	2015-05-19 11:11:38
	795	2015-05-29 11:34:41

Plugin/Framework → add-ons deployment



Plugin/Framework → add-ons deployment



Sharing – the other way

- [oXygen Installation Directory]/**refactoring/**

Future plans

- Define **custom operations** based on **XSLT** scripts



- Add **Favorites** support

- Editor contextul menu

- **Any sugestions???**

A blue speech bubble icon containing the word "feedback" in a simple, sans-serif font.

feedback



Thank you!

Questions?

<oxygen/> XML Editor
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