

Introduction to XSLT using Oxygen XML Editor

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Agenda

- XSLT Editing, Content Completion Assistant
- XSLT Validation
- XSLT Transformations
- XSLT Documentation
- XSLT Unit Testing



XSLT

(eXtensible Sstylesheet Language Transformations)

- A language for transforming XML
- Is an XML-based language

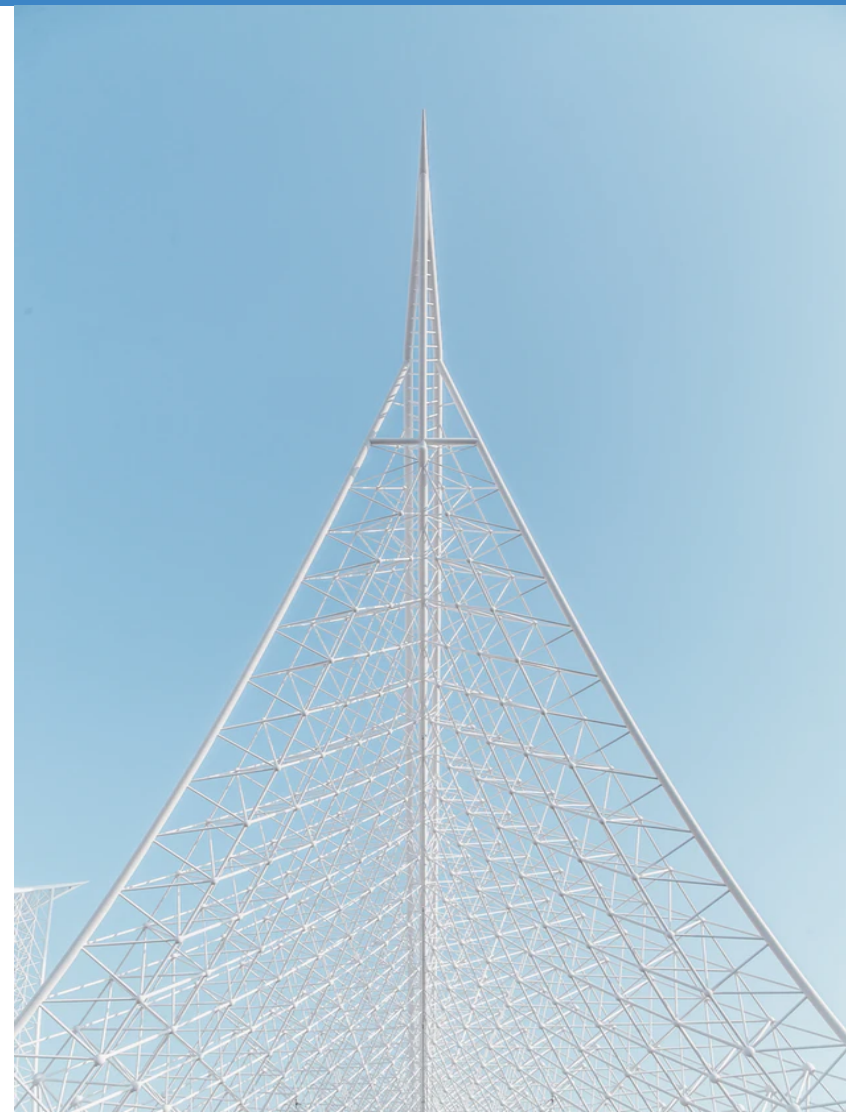


w3.org/TR/xslt



XSLT Specification

- XSL Transformations (XSLT) Version 1.0
 - W3C Recommendation 16 November 1999
- XSL Transformations (XSLT) Version 2.0
 - W3C Recommendation 23 January 2007
- XSL Transformations (XSLT) Version 3.0
 - W3C Recommendation 8 June 2017



Question: What XSLT versions do you use?

- ❑ None, I do not use XSLT
- ❑ XSLT 1.0
- ❑ XSLT 2.0
- ❑ XSLT 3.0



Demo

- Stylesheets editing, validation, and transformation



XSLT Stylesheet



Demo- Generate HTML

- Create a stylesheet to generate an HTML file



```
<books>
  <book targeturi="bookTargetUri">
    <title>XSLT 2.0 Programmer's Reference</title>
    <author>Michael Kay</author>
    <image description="XSLT 2.0" src="XSLT.jpg"/>
    <paperback>955 pages</paperback>
    <publisher>Wrox</publisher>
    <isbn>0764</isbn>
    <description>XSLT 2.0 Programmer's Reference,
      3rd Edition, is the authoritative reference
      guide to the language</description>
  </book>
</books>
```



[XSLT 2.0 Programmer's Reference](#)

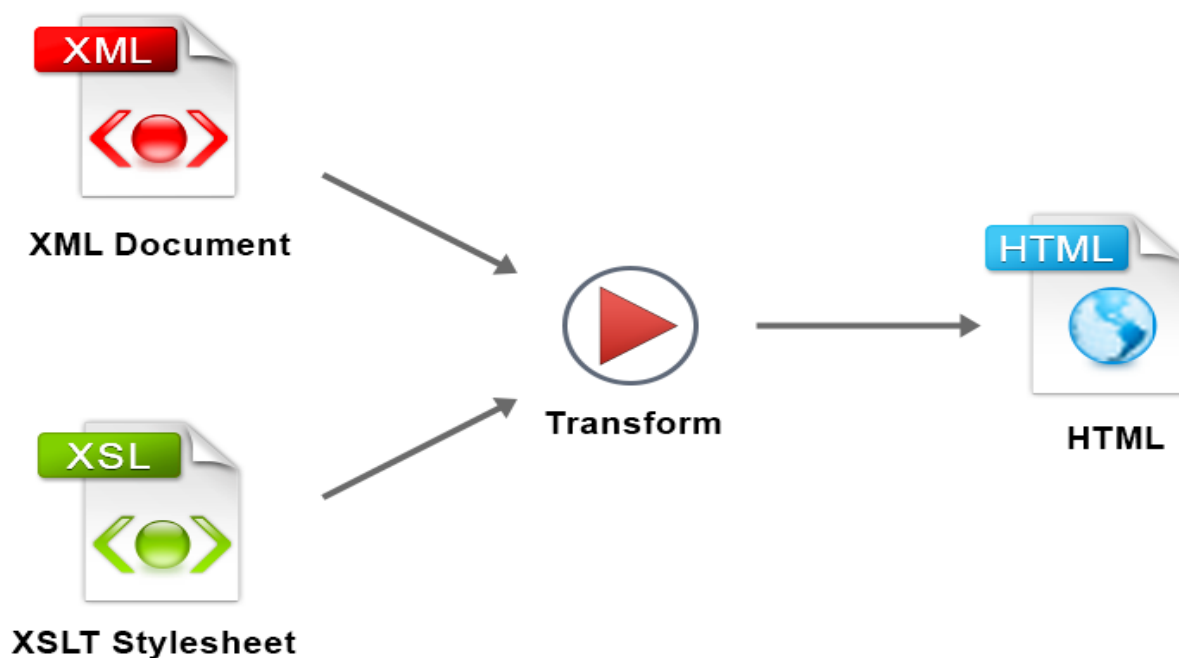
by Michael Kay

Paperback: 955 pages | **Publisher:** Wrox | **Isbn:** 0764

XSLT 2.0 Programmer's Reference, 3rd Edition, is the authoritative reference guide to the language.

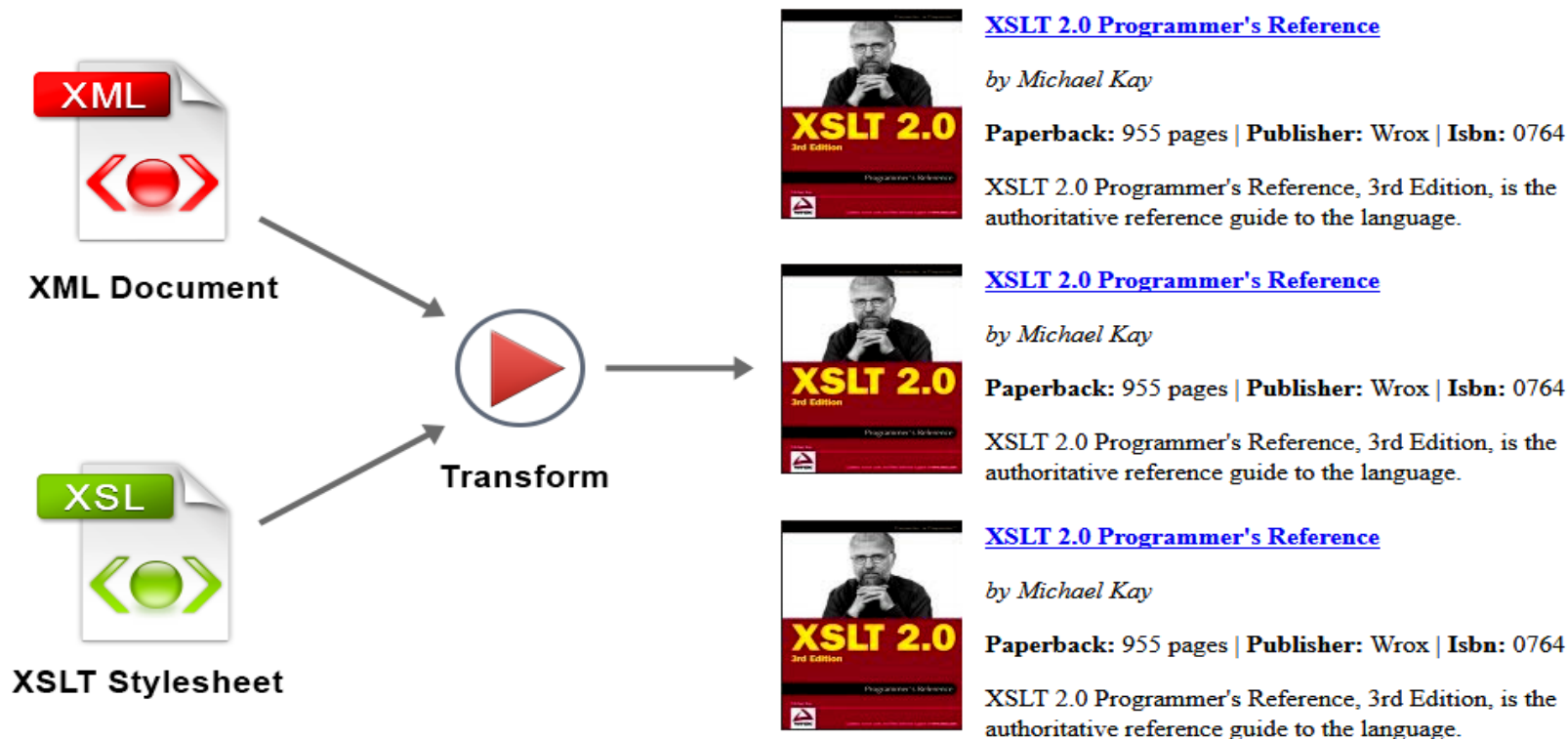
Demo – step 2

- Associate the XML with the XSL and generate an output



Demo – step 3

- Generate a table with books



Demo – step 4

- Generate books images

XML

```
<books>
  <book targeturi="bookTargetUri">
    <title>XSLT 2.0 Programmer's Reference</title>
    <author>Michael Kay</author>
    <image description="XSLT 2.0" src="XSLT.jpg"/>
    <paperback>955 pages</paperback>
    <publisher>Wrox</publisher>
    <isbn>0764</isbn>
    <description>XSLT 2.0 Programmer's Reference,
      3rd Edition, is the authoritative reference
      guide to the language</description>
  </book>
</books>
```

HTML



[XSLT 2.0 Programmer's Reference](#)

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Demo – step 5

- Generate title with link

XML

```
<books>
  <book targeturi="bookTargetUri">
    <title>XSLT 2.0 Programmer's Reference</title>
    <author>Michael Kay</author>
    <image description="XSLT 2.0" src="XSLT.jpg"/>
    <paperback>955 pages</paperback>
    <publisher>Wrox</publisher>
    <isbn>0764</isbn>
    <description>XSLT 2.0 Programmer's Reference,
      3rd Edition, is the authoritative reference
      guide to the language</description>
  </book>
</books>
```

HTML



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Demo – step 6

- Generate author in output

XML

```
<books>
  <book targeturi="bookTargetUri">
    <title>XSLT 2.0 Programmer's Reference</title>
    <author>Michael Kay</author>
    <image description="XSLT 2.0" src="XSLT.jpg"/>
    <paperback>955 pages</paperback>
    <publisher>Wrox</publisher>
    <isbn>0764</isbn>
    <description>XSLT 2.0 Programmer's Reference,
      3rd Edition, is the authoritative reference
      guide to the language</description>
  </book>
</books>
```

HTML



[XSLT 2.0 Programmer's Reference](#)

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Demo – step 7

- Generate book info in output

XML

```
<books>
  <book targeturi="bookTargetUri">
    <title>XSLT 2.0 Programmer's Reference</title>
    <author>Michael Kay</author>
    <image description="XSLT 2.0" src="XSLT.jpg"/>
    <paperback>955 pages</paperback>
    <publisher>Wrox</publisher>
    <isbn>0764</isbn>
    <description>XSLT 2.0 Programmer's Reference,
      3rd Edition, is the authoritative reference
      guide to the language</description>
  </book>
</books>
```

HTML



[XSLT 2.0 Programmer's Reference](#)

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Demo – step 8

- Generate description in output

XML

```
<books>
  <book targeturi="bookTargetUri">
    <title>XSLT 2.0 Programmer's Reference</title>
    <author>Michael Kay</author>
    <image description="XSLT 2.0" src="XSLT.jpg"/>
    <paperback>955 pages</paperback>
    <publisher>Wrox</publisher>
    <isbn>0764</isbn>
    <description>XSLT 2.0 Programmer's Reference,
      3rd Edition, is the authoritative reference
      guide to the language</description>
  </book>
</books>
```

HTML



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Conclusion

- Create a stylesheet from scratch
 - XSLT and XPath content completion
 - XSLT Input view
 - Code templates
- Validation
 - Validation as you type
 - Highlight errors
- Transformation
 - Transformation scenarios
 - Multiple engines

Question: Do you use Oxygen for XSLT development?

- ❑ Yes
- ❑ I am testing Oxygen
- ❑ I use Oxygen but not for XSLT
- ❑ I develop XSLT with a different tool
- ❑ I do not use Oxygen and I do not work with XSLT



Demo – step 9

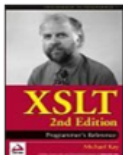
- Identify and rename an XSLT component (templates, variables, parameters, attribute sets, keys, functions, outputs)

```
<xsl:template name="output.html.stylesheets">
  <xsl:param name="stylesheets" select="''"/>
  <xsl:choose>
    <xsl:when test="contains($stylesheets, ' ')">
      <link
        href="{substring-before($stylesheets, ' ')}">
      </link>
      <xsl:call-template name="output.html.stylesheets">
        <xsl:with-param select="$stylesheets" name="stylesheets">
        </xsl:call-template>
      </xsl:when>
    <xsl:when test="$stylesheets != ''">
      <link rel="stylesheet" href="{ $stylesheets }">
```

Demo – step 10

- Group the books by technology

XSLT Books



[XSLT : Programmer's Reference \(Programmer to Programmer\)](#)

by *Michael Kay*

Paperback: 992 pages | **Publisher:** Wrox; 2 edition (May 3, 2001) | **Isbn:** 0764543814

This compact, relevant, updated version reflects recent changes in the XSLT specification and developments in XSLT



[Learning XSLT](#)

by *Michael Fitzgerald*

Paperback: 368 pages | **Publisher:** O'Reilly; 1 edition (November 18, 2003) | **Isbn:** 0596003277

Learning XSLT moves smoothly from the simple to complex, illustrating all aspects of XSLT 1.0 through step-by-step

XML Books



[XML Hacks 100 Industrial-Strength Tips & Tools](#)

by *Michael Fitzgerald*

Paperback: 478 pages | **Publisher:** O'Reilly; 1 edition (July 27, 2004) | **Isbn:** 0596007116

Developers and system administrators alike are uncovering the true power of XML, the Extensible Markup Language



[Effective XML: 50 Specific Ways to Improve Your XML](#)

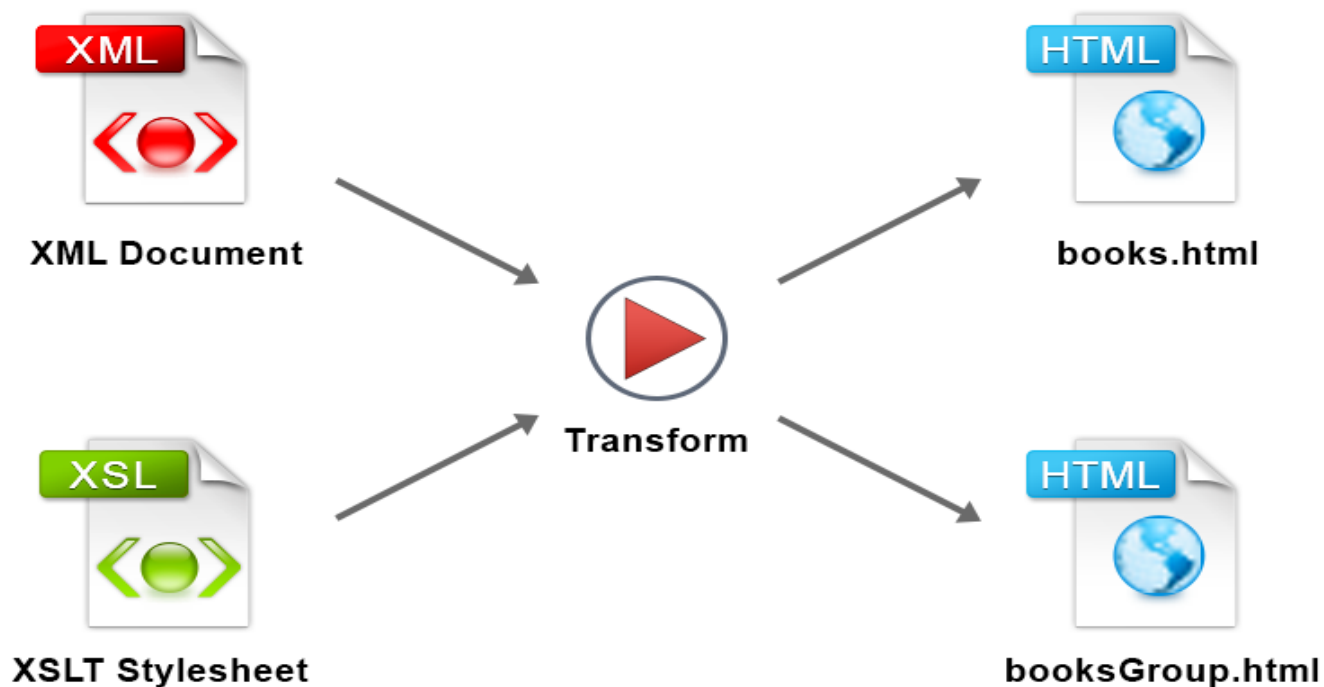
by *Elliott Rusty Harold*

Paperback: 336 pages | **Publisher:** Addison-Wesley Professional; 1st edition (September 12, 2003) | **Isbn:** 0321150406

Elliott Rusty Harold provides you with 50 practical rules of thumb based on real-world examples and best practices.

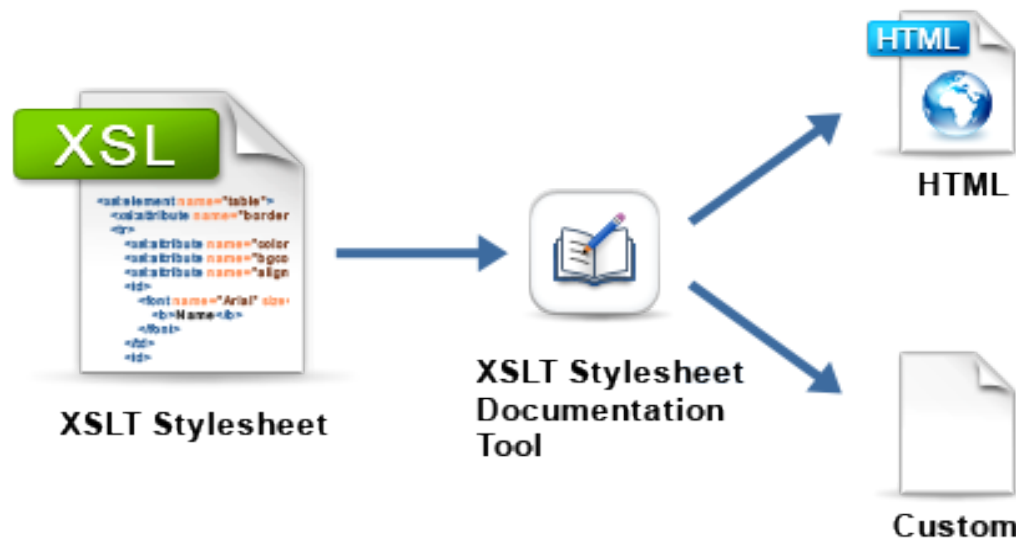
Demo – step 11

- Generate multiple HTML files



Demo – XSLT Documentation

- Generate XSLT Documentation



Demo – XSLT Unit Test (XSpec)

- Test you stylesheet



Conclusion

- XSLT Search and Refactoring
 - Rename XSLT occurrences
 - Search XSLT references/declarations
 - Component dependencies
- Transformation View
- XSLT Documentation Generator
- XSLT Unit Testing Support

Future Plans

- Improve XSLT 3.0 Support
- Provide Latest Saxon Version
- XSLT Unit Code Coverage
- and more ...



Resources

- [W3C XSLT Specification](#)
- [XSLT Support in Oxygen XML Editor](#)
- [Oxygen User Manual - Editing XSLT Stylesheets](#)
- [Oxygen XSLT Presentations and Tutorials](#)
- [Oxygen Emmet Plugin](#)

A long-exposure photograph of a multi-lane highway at night. The image shows curved lanes with prominent light trails from vehicles. White and yellow light trails from headlights and taillights curve along the road, while red light trails from taillights are visible in the adjacent lanes. The background is dark with some distant city lights and trees.

Questions?

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LinkedIn: [octaviannadolu](https://www.linkedin.com/in/octaviannadolu)