

# XSLT transformation to convert JATS XML data into other formats such as HTML

임정희

M2community



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# What is XSLT?

## 1. XSL(eXtensible Style Language)

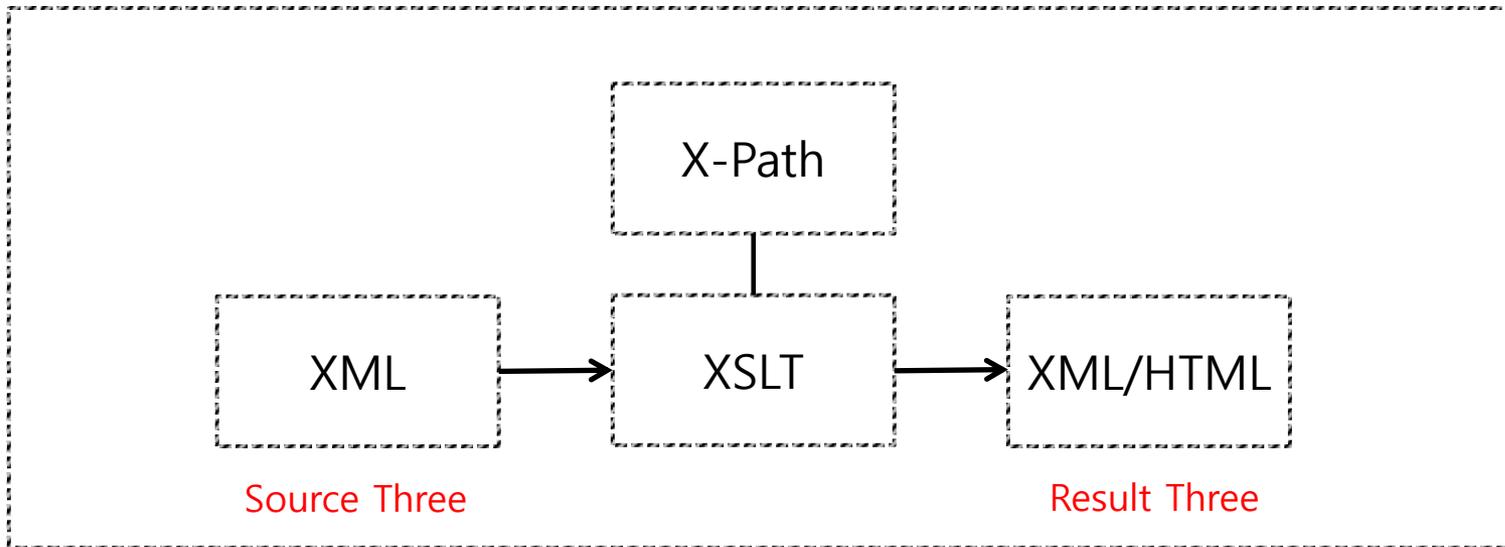
- XML 문서를 변환하고, 포매팅 정보를 기술하기 위해 개발된 stylesheet 언어

## 2. XPath (XML Path Language)

- XML 문서의 특정 부분 (요소, 속성, 텍스트 등)을 지정하는 언어.

## 3. XSL-FO (XSL Formatting Objects)

- XSL-FO는 XML 데이터를 포매팅 하기 위한 언어.



# What is XSLT?

## XSLT(XSL Transformations)?

- ✓ XSL의 가장 중요한 부분
- ✓ XML 문서를 다른 포맷의 문서로 변환하는 언어
- ✓ XPath를 사용하여 XML 문서에서 이동
- ✓ W3C 권고안

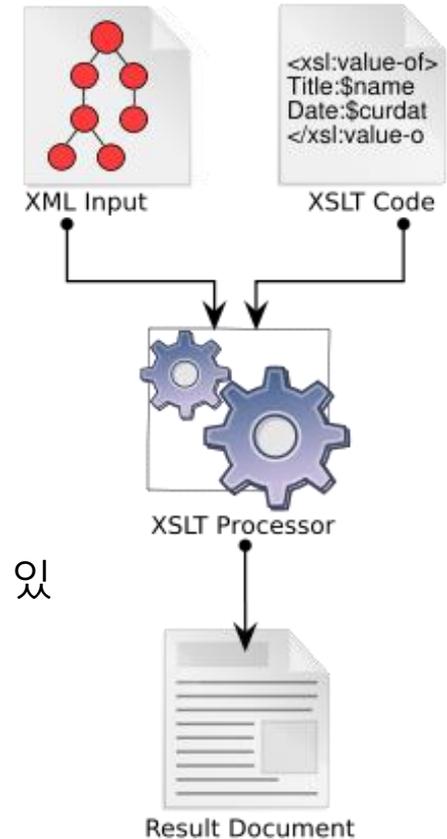
- 새로운 요소를 추가하거나 기존에 존재하는 요소들을 제거할 수 있음
- XML 문서에 존재하는 요소들은 XSLT에 의해 정렬되거나 재배열 될 수 있으며 보여지거나 감춰질 수 있음

### XSL Stylesheet 선언

```
<?xml version="1.0" encoding="UTF-8"?>  
<xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
```

### XSL Stylesheet 문서연결

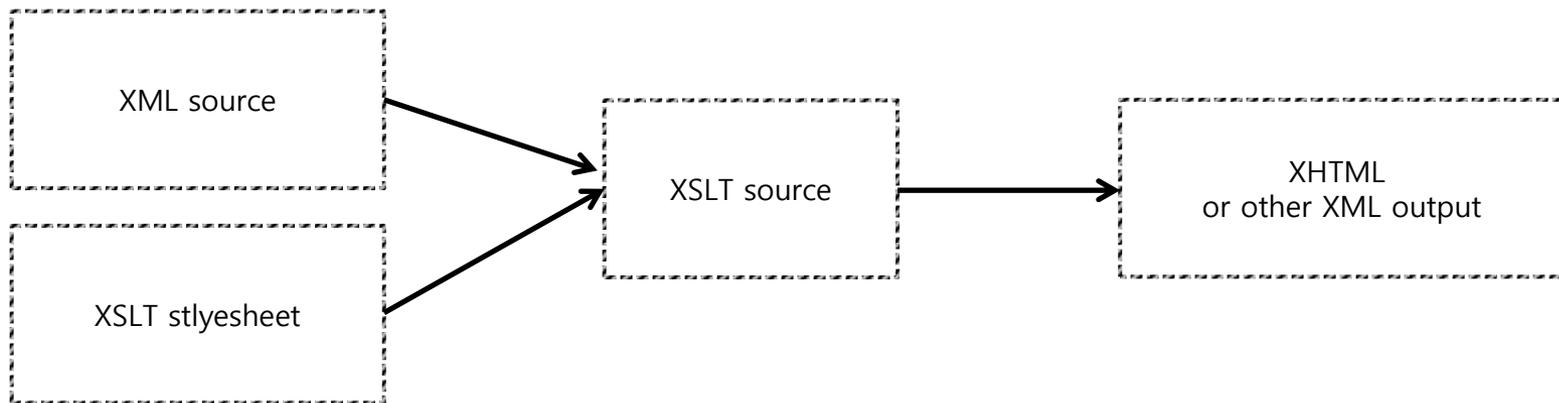
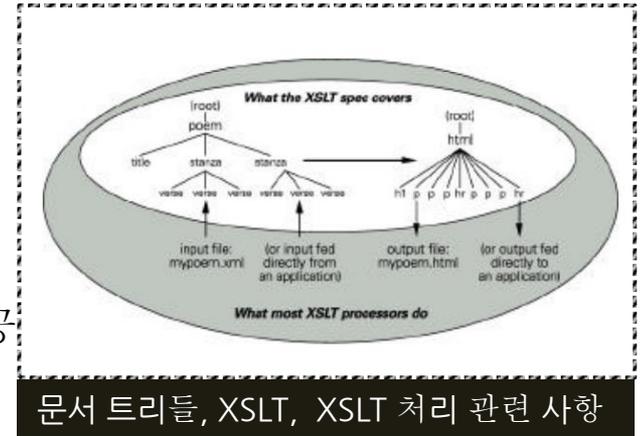
```
<?xml version="1.0" encoding="UTF-8"?>  
<?xml-stylesheet type="text/xsl" href="example1.xsl"?>
```



# XSLT 이해-구성 요소

## 문서, 트리, 변환

- ✓ XSLT 프로세서들은 문서를 원본 트리로 읽음
- ✓ XSLT 스타일시트가 지정한대로 변환 작업을 수행
- ✓ 결과 트리를 생성한 다음 파일로 기록
- ✓ XSLT에서는 입/출력에 관한 것을 지정하지 않음=>유연성 제공
- ✓ XSLT 여러 다른 형태의 파일로 전달가능



# XSLT 예시

```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE article PUBLIC "-//NLM/DTD JATS (Z39.96) Journal Publishing DTD v1.0 20120305//EN"
"JATS-journalpublishing.dtd">
<article xmlns="en" article-type="research-article" xmlns:xlink="http://www.w3.org/1999/Math/MathML"
xmlns:xlink="http://www.w3.org/1999/xlink">
  <front>
    <journal-meta>
      <journal-id journal-id-type="nlm-ta">Asian-Australasian Journal of Animal Sciences (AJAS)</journal-id>
      <journal-title-group>
        <journal-title>Asian-Australasian Journal of Animal Sciences
          (AJAS)</journal-title></journal-title-group>
      <issn pub-type="ppub">1011-2367</issn>
      <issn pub-type="epub">1976-5517</issn>
      <publisher>
        <publisher-name>Asian-Australasian Association of Animal Production Societies (AAAP) and Korean Society
          of Animal Science and Technology (KSAAT)</publisher-name></journal-meta>
      <article-meta>
        <article-id pub-id-type="doi">10.5823/ajas.2014.12.11</article-id>
        <article-id pub-id-type="pub-id">ajas-2014-12-11</article-id>
        <article-categories>
          <subj-group>
            <subject></subject></subj-group>
          <article-categories>
            <title-group>
              <article-title>Direct Interaction between Ras Homolog Enriched in Brain and FKS06 Binding Protein 38 in
                Cashmere Goat Fetal Fibroblast Cells</article-title></title-group>
            <contrib-group>
              <contrib contrib-type="author">
                <name>{surname}Wang/{surname}<given-names>Xiaoqing</given-names></name><xref rid="af1-ajas-27-12-1671"
                  ref-type="aff">1</xref><xref rid="fn2-ajas-27-12-1671" ref-type="author-notes">a</xref></contrib>
              <contrib contrib-type="author">
                <name>{surname}Wang/{surname}<given-names>Yanfeng</given-names></name><xref rid="fn2-ajas-27-12-1671"
                  ref-type="author-notes">a</xref></contrib>
              <contrib contrib-type="author">
                <name>{surname}Zheng/{surname}<given-names>Yuxi</given-names></name></contrib>
              <contrib contrib-type="author">
                <name>{surname}Hao/{surname}<given-names>Xiyao</given-names></name></contrib>
              <contrib contrib-type="author">
                <name>{surname}Xiang/{surname}<given-names>Yan</given-names></name></contrib>
              <contrib contrib-type="author">
                <name>{surname}Wu/{surname}<given-names>Manlin</given-names></name></contrib>
              <contrib contrib-type="author">
                <name>{surname}Wang/{surname}<given-names>Xiao</given-names></name><xref rid="cl-ajas-27-12-1671"
                  ref-type="corresp">*</xref></contrib>
              <contrib contrib-type="author">
                <name>{surname}Wang/{surname}<given-names>Zhigang</given-names></name><xref rid="cl-ajas-27-12-1671"
                  ref-type="corresp">*</xref></contrib></contrib-group>
            </article-categories>
          </front>
        </article>
      </journal>
    </article>
  </front>
</article>
```

XML



XSLT Processor

```
157
158 <!-- Font used for Section titles and the like. -->
159 <xsl:variable name="titlefont">sans-serif</xsl:variable>
160
161 <!-- Font used for normal paragraph text. -->
162 <xsl:variable name="textfont">serif</xsl:variable>
163
164 <!-- Font size for normal paragraph text and the like. -->
165 <xsl:variable name="textsize" select="'10pt'" />
166 <!-- points -->
167
168 <!-- Vertical baseline-to-baseline distance for normal
169 paragraph text and the like. -->
170 <xsl:variable name="textleading" select="'2pt'" />
171 <!-- points -->
172
173
174
175
176 <!--
177 <!-- Attribute sets
178 <!--
179
180 <xsl:attribute-set name="page-header-title-cell">
181 <xsl:attribute name="width">51in</xsl:attribute>
182 </xsl:attribute-set>
183
184 <xsl:attribute-set name="page-header-pageno-cell">
185 <xsl:attribute name="width">0.51in</xsl:attribute>
186 </xsl:attribute-set>
187
188 <xsl:attribute-set name="page-header">
189 <xsl:attribute name="font-family">
190 <xsl:value-of select="$titlefont"/>
191 </xsl:attribute>
192 <xsl:attribute name="font-size">9pt</xsl:attribute>
193 <xsl:attribute name="line-height">12pt</xsl:attribute>
194 </xsl:attribute-set>
195
196 <xsl:attribute-set name="metadata-line">
197 <xsl:attribute name="font-size">9pt</xsl:attribute>
198 </xsl:attribute-set>
199
200 <xsl:attribute-set name="metadata-label">
201 <xsl:attribute name="font-family">
202 <xsl:value-of select="$titlefont"/>
203 </xsl:attribute>
```

XSLT

## Presidential Message

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## Presidential Message

Jung-Il Jin

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Korean Council of Science Editors (KCSE) has decided to rename its original news journal *Kwa Hak Pyeon Jib* to *Science Editing* starting this year (2014), and to transform it into a new publication in English. This transformation better reflects the characteristics of the newly born academic journal. It is KCSE's hope to promote the internationalization of and academic research through *Science Editing*. As president, I sincerely welcome such change and, at the same time, would like to thank editor, professor Kihong Kim, who has been leading this change.

KCSE hosted "Asian Science Editors' Forum" on September 30, 2013. Although the invitation to foreigners was limited—since it was the first forum to be organized by us—representatives from other countries such as China, Japan, Indonesia, and England spared no effort to praise KCSE's role and activities. Indeed, the sacrificial efforts of our executives have been well recognized internationally. Also, with the launch of the forum, I am motivated to establish a tentatively named, "Asian Association of Science Editors" in the near future.

The importance of publications by scientists is increasing globally, leading to an increase in competition and responsibilities. Today, the responsibilities of a science editor extend far beyond the technical editing of academic journals. They include quickly delivering accurate information and knowledge, resolving ethical issues relating to publication, utilizing new forms of information technology, protecting intellectual property rights, and attracting a wider range of readers. KCSE will continue to transform innovatively in order to respond to such demands and to keep pace with the changes. I hope that the newly published *Science Editing* which will be reborn thanks to the readers' great interest and support, becomes a world-renowned academic journal.

I pray for your good health and prosperity.

Jung-Il Jin

President of KCSE

HTML

# XSLT 예시

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http://dx.doi.org/10.6087/kcse.2014.1.15 sciedit-1-15 Educational Material Coding  
practice of Journal Article Tag Set eXtensible Markup Language HuhSun 1 \* 1Department  
of Parasitology and Institute of Medical Education, College of Medicine, Hallym  
University, Chuncheon, Korea \* hallym.ac.kr 2014 20 08 2014 1 15 04 06 2014 26  
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Journal Article Tag Set eXtensible Markup Language (JATS XML)  
coding is done automatically by XML filtering program and the accurate  
tagging is done through the Journal Article Tag Suite journal public  
Introduction of Journal Article Tag Set eXtensible Markup Language (JATS  
XML) files can be done by anyone who can understand English and have minimum  
knowledge on journal editing and publishing.... Programs and sample files Unicode  
supporting text editor, Edit plus (R) and web browser, Firefox are necessary. Conc  
JATS XML coding can be done according to the JATS DTD which provide the

xml

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xml + xsl + css

## Coding practice of Journal Article Tag Set eXtensible Markup Language

Sun Huh<sup>1</sup>)

[1] Department of Parasitology and Institute of Medical Education,

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xml + xsl

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Thank you.

