

RSS support for diary

Implementation of *RSS* feeds for the diary system is done using *XSLT* and *PHP*. I tried to make it only with *XSLT*, but I haven't found the function which would transform the date from components of year, month and day into the RFC 822 form, which is used in *RSS* version 2.0. So that conversion is done in *PHP*, using the *SimpleXML* extension.

Generating the feed

The source data, from which I generate the feed, is the diary index - an already existing *XML* file. The decision to store the index in *XML* now comes very handy, because the *RSS* is also *XML*, and to transform one structure to another, we can use *XSL* transformations (*XSLT*).

Transformation

This is my first *XSL* file (bold parts belong to the *XSLT*, rest is the output template):

```
<xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform">
  <xsl:output method="xml" encoding="utf-8" indent="yes" />
  <xsl:template match="/">
    <rss version="2.0">
      <channel>
        <title>diary.rozsnyo.com</title>
        <link>http://diary.rozsnyo.com/</link>
        <description>A variation to blog by Daniel Rozsnyó</description>
        <language>en</language>
        <language>cs</language>
        <language>sk</language>
        <generator>REAS Diary 2005/06/27, using XSLT</generator>
        <ttl>1440</ttl>
        <xsl:for-each select="//*[local-name()='document']">
          <xsl:if test="position() &lt;=10">
            <item>
              <title><xsl:value-of select=".*[local-name()='name']" /></title>
              <description><xsl:value-of select=".*[local-name()='desc']" /></description>
              <link>http://diary.rozsnyo.com/<xsl:value-of
                select="concat( format-number(..../../@id,'0000')
                  , '/'
                  , format-number(..../../@id,'00')
                  , '/'
                  , format-number(../@id,'00')
                  , '/'
                  , ../@id
                )" /></link>
              <!--
                the date is as YYYYMMDD here, but for the RSS2.0 it has to be
                converted into RFC822 format which is done in a post-processing
                step (using PHP)
              -->
              <pubDate><xsl:value-of
                select="concat( format-number(..../../@id,'0000')
                  , format-number(..../../@id,'00')
                  , format-number(../@id,'00')
                )" /></pubDate>
            </item>
          </xsl:if>
        </xsl:for-each>
      </channel>
    </rss>
  </xsl:template>
</xsl:stylesheet>
```

It contains few simple commands:

- style-sheet with an XML output
- template which matches the whole document
- loop over the document in the index (pre-sorted from newest to oldest document)
- condition for showing only 10 documents
- some of the copy-paste commands, with proper number formatting (zero padding)

Wrapper

The above transformation itself is executed on the server-side, in a *PHP wrapper*:

```
// create an XSL processor
$xmlslt = new xsltProcessor;

// transform the index
$xmlslt->importStyleSheet(DomDocument::load('./diary-index-to-rss.xsl'));
$xml = $xmlslt->transformToXML(DomDocument::load($index));
```

Once the feed is generated (as much as possible with *XSLT*), it's updated with *PHP*. The dates are converted from the *YYYYMMDD* representation to the required *RFC822* format:

```
// postprocessing (updating pubDate)
$xml = simplexml_load_string($xml);

foreach($xml->channel->item as $item) {
    $yyyymmdd = (string)$item->pubDate;
    $unix      = mktime( 0
                        , 0
                        , 0
                        , substr($yyyymmdd,4,2)
                        , substr($yyyymmdd,6,2)
                        , substr($yyyymmdd,0,4)
                        );
    $item->pubDate = date('r',$unix);
}
```

After that, we serve the result as a usual *XML* file:

```
// job done
header('Content-Type: text/xml; charset=UTF-8');
echo $xml->asXML();
```

Site integration

To make the life of the visitor even easier, we can put a hidden link to the *RSS* feed onto the web site. This invisible link is located in the *HTML's HEAD* section and has the following form:

```
<head>
<title>diary.rozsnyo.com</title>
<link rel="stylesheet" type="text/css" href="/index.css" />
<link rel="shortcut icon" href="/favicon.ico" />
<link rel="alternate"
      type="application/rss+xml"
      href="http://diary.rozsnyo.com/rss"
      title="diary.rozsnyo.com" />
<script type="text/javascript" src="/index.js"></script>
</head>
```

When you view the page in you favorite web browser with *RSS* support, you will be notified about the presence of the *RSS* and allowed to add the feed between your sources. Later, you do not need to visit the web site manually, because your *RSS* viewer will do that for you, and show you only the new articles.