

Saxon-JS - Bug #5079

resolve-uri doesn't take static-base-uri of included module into account, even with relocate:off Saxon EE compiled/exported XSLT

2021-09-03 20:51 - Martin Honnen

Status:	New	Start date:	2021-09-03
Priority:	Low	Due date:	
Assignee:		% Done:	0%
Category:	XSLT Conformance	Estimated time:	0:00 hour
Sprint/Milestone:		Spent time:	0:00 hour
Applies to JS Branch:	2	SEF Generated with:	
Fix Committed on JS Branch:		Platforms:	
Fixed in JS Release:			

Description

I learned today that using the option `-relocate:off` when exporting an XSLT stylesheet having included or imported modules is the key to "preserve" the static base URI of each module as otherwise the `static-base-uri()` is simply the URI of the complete SEF file.

When testing with Saxon JS 2 (2.3, both under Node.js as in the browser), however, I found that exporting from EE for Saxon-JS with `-relocate:off` ensures that Saxon-JS has a different `static-base-uri()` for templates from different modules but that `resolve-uri($relative-uri)` doesn't seem to take that static base URI into account for included modules.

So running e.g.

```
<?xml version="1.0" encoding="UTF-8"?>
<xsl:stylesheet xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  exclude-result-prefixes="#all"
  version="3.0">

  <xsl:import href="xslt/inner-base-uri-test1.xsl"/>

  <xsl:output indent="yes"/>

  <xsl:mode on-no-match="shallow-copy"/>

  <xsl:template match="uri">
    <xsl:copy>
      <xsl:attribute name="static-base-uri" select="static-base-uri()"/>
      <xsl:attribute name="base-uri" select="base-uri()"/>
      <xsl:attribute name="resolve-uri" select="resolve-uri()"/>
      <xsl:apply-templates/>
    </xsl:copy>
    <xsl:next-match/>
  </xsl:template>

</xsl:stylesheet>
```

where the `inner-base-uri-test1.xsl` in the subdir is e.g.

```
<?xml version="1.0" encoding="UTF-8"?>
<xsl:stylesheet xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  exclude-result-prefixes="#all"
  version="3.0">

  <xsl:template match="uri">
    <xsl:comment>nested stylesheet module</xsl:comment>
    <xsl:copy>
      <xsl:attribute name="static-base-uri" select="static-base-uri()"/>
```

```

        <xsl:attribute name="base-uri" select="base-uri()"/>
        <xsl:attribute name="resolve-uri" select="resolve-uri(.)"/>
        <xsl:apply-templates/>
    </xsl:copy>
</xsl:template>
</xsl:stylesheet>

```

against an XML sample like

```

<?xml version="1.0" encoding="UTF-8"?>
<uris>
  <uri>foo.xml</uri>
  <uri>../foo.xml</uri>
  <uri>../../foo.xml</uri>
</uris>

```

shows that the static-base-uri() result is different in the included module from the subdirectory but the resolve-uri(.) call for the main stylesheet's template and the included one's gives the same result:

```

<?xml version="1.0" encoding="UTF-8"?>
<uris>
  <uri static-base-uri="
file:/C:/Users/marti/OneDrive/Documents/xslt/blog-xslt-3-by-example/resolve-uri-test/compiler/base
-uri-test1.xsl" base-uri="https://martin-honnen.github.io/xslt/2021/sample-uris1.xml" resolve-uri=
"https://martin-honnen.github.io/xslt/2021/includes/foo.xml">foo.xml</uri>
  <!--nested stylesheet module--><uri static-base-uri="
file:/C:/Users/marti/OneDrive/Documents/xslt/blog-xslt-3-by-example/resolve-uri-test/compiler/xslt
/inner-base-uri-test1.xsl" base-uri="https://martin-honnen.github.io/xslt/2021/sample-uris1.xml"
resolve-uri="https://martin-honnen.github.io/xslt/2021/includes/foo.xml">foo.xml</uri>
  <uri static-base-uri="
file:/C:/Users/marti/OneDrive/Documents/xslt/blog-xslt-3-by-example/resolve-uri-test/compiler/base
-uri-test1.xsl" base-uri="https://martin-honnen.github.io/xslt/2021/sample-uris1.xml" resolve-uri=
"https://martin-honnen.github.io/xslt/2021/foo.xml">../foo.xml</uri>
  <!--nested stylesheet module--><uri static-base-uri="
file:/C:/Users/marti/OneDrive/Documents/xslt/blog-xslt-3-by-example/resolve-uri-test/compiler/xslt
/inner-base-uri-test1.xsl" base-uri="https://martin-honnen.github.io/xslt/2021/sample-uris1.xml"
resolve-uri="https://martin-honnen.github.io/xslt/2021/foo.xml">../foo.xml</uri>
  <uri static-base-uri="
file:/C:/Users/marti/OneDrive/Documents/xslt/blog-xslt-3-by-example/resolve-uri-test/compiler/base
-uri-test1.xsl" base-uri="https://martin-honnen.github.io/xslt/2021/sample-uris1.xml" resolve-uri=
"https://martin-honnen.github.io/xslt/foo.xml">../../foo.xml</uri>
  <!--nested stylesheet module--><uri static-base-uri="
file:/C:/Users/marti/OneDrive/Documents/xslt/blog-xslt-3-by-example/resolve-uri-test/compiler/xslt
/inner-base-uri-test1.xsl" base-uri="https://martin-honnen.github.io/xslt/2021/sample-uris1.xml"
resolve-uri="https://martin-honnen.github.io/xslt/foo.xml">../../foo.xml</uri>
</uris>

```

<https://martin-honnen.github.io/xslt/2021/resolve-uri-test1.html> is the online, client-side Saxon-JS 2.3 test case.

The result that Saxon-Java gives is showing differences for the resolve-uri(.) calls based on whether it is done in the template of the main stylesheet or the included module e.g.

```

<?xml version="1.0" encoding="UTF-8"?>
<uris>
  <uri static-base-uri="https://martin-honnen.github.io/xslt/2021/includes/base-uri-test1.xsl"
base-uri="https://martin-honnen.github.io/xslt/2021/sample-uris1.xml"
resolve-uri="https://martin-honnen.github.io/xslt/2021/includes/foo.xml">foo.xml</uri>
  <!--nested stylesheet module-->
  <uri static-base-uri="
https://martin-honnen.github.io/xslt/2021/includes/xslt/inner-base-uri-test1.xsl"
base-uri="https://martin-honnen.github.io/xslt/2021/sample-uris1.xml"
resolve-uri="https://martin-honnen.github.io/xslt/2021/includes/xslt/foo.xml">foo.xml
</uri>
  <uri static-base-uri="https://martin-honnen.github.io/xslt/2021/includes/base-uri-test1.xsl"
base-uri="https://martin-honnen.github.io/xslt/2021/sample-uris1.xml"
resolve-uri="https://martin-honnen.github.io/xslt/2021/foo.xml">../foo.xml</uri>

```

```
<!--nested stylesheet module-->
<uri static-base-uri="
https://martin-honnen.github.io/xslt/2021/includes/xslt/inner-base-uri-test1.xsl"
  base-uri="https://martin-honnen.github.io/xslt/2021/sample-uris1.xml"
  resolve-uri="https://martin-honnen.github.io/xslt/2021/includes/foo.xml">../foo.xml</uri>
<uri static-base-uri="https://martin-honnen.github.io/xslt/2021/includes/base-uri-test1.xsl"
  base-uri="https://martin-honnen.github.io/xslt/2021/sample-uris1.xml"
  resolve-uri="https://martin-honnen.github.io/xslt/2021/foo.xml">../../foo.xml</uri>
<!--nested stylesheet module-->
<uri static-base-uri="
https://martin-honnen.github.io/xslt/2021/includes/xslt/inner-base-uri-test1.xsl"
  base-uri="https://martin-honnen.github.io/xslt/2021/sample-uris1.xml"
  resolve-uri="https://martin-honnen.github.io/xslt/2021/foo.xml">../../foo.xml</uri>
</uris>
```

So it seems Saxon-JS 2.3 has a bug in resolve-uri, not taking the static-base-uri into account, even when running an exported SEF/JSON file that was exported with -relocate:off.

Files

sample-uris1.xml	132 Bytes	2021-09-03	Martin Honnen
base-uri-test1.xsl	745 Bytes	2021-09-03	Martin Honnen
base-uri-test1.xsl-relocate-off.sef.json	3.41 KB	2021-09-03	Martin Honnen
inner-base-uri-test1.xsl	634 Bytes	2021-09-03	Martin Honnen