SYSTEM-FUNC (Arbortext Editor extension)   [Tutorial 1–15]

When `attloc="SYSTEM-FUNC"`, the `attname` value is treated as the name of an ACL function. An ACL function called by SYSTEM-FUNC must be loaded before documents are formatted. The function may be entered at the command line, but for production purposes should be included in a startup file.

If the function exists and has been sourced, it is evaluated and the return value is assigned to the characteristic specified by `fillchar` in the category specified by `fillcat`.

If the function does not exist or has not been not sourced, an error message similar to the following is displayed: "[A30045] Att match: no user defined function named "testfunc". This is a FOSI coding or application ACL error."

The function must take these arguments:

- `Window`, which is a window identifier
- `Oid`, which is the oid of the element for the current `e-i-c`

If the formatting engine cannot find the ACL function specified in a FOSI, the following message is displayed in a Generated Text Message window.

[A30045] Att match: no user defined function named "changeCase". This is a FOSI coding or application ACL error.

NOTE: Functions used in attribute rules must not modify the source document or errors will occur.

NOTE: Include the ACL package name when calling an ACL function. For example, `opmanual:decode` calls the function `decode` in package `opmanual`.

SYSTEM-FUNC–related ACL

`fosivar_value(window, varname, oid)`. The `fosivar_value` function is called from functions invoked by `attloc="SYSTEM-FUNC"`. Arguments required by the function are:

- `Window` is the window ID that is an argument to the function called by SYSTEM-FUNC. The value of this parameter can be -1.
- `Varname` is the name of a FOSI string variable or counter variable whose value is to be returned.
- `Oid` is the object identifier (OID) of the element in the user's document whose `e-i-c` is being processed

DRAFT © 2012

```
<charlist inherit="1" charsubsetref="block prespace">
<indent inherit="1" firstln="1em">
</charlist>
<att>
<specval attname="level" attloc="para" attval="#EQ#document-level.txt">
<charsubset>
<chgmark barthick="3pt" baroffset="6pt" type="content"></chgmark>
...
```

An attribute with type NUMBER can be tested against a FOSI counter, as illustrated below. In this example, if the *code* attribute on <section> is less than the *code* attribute on <document>, the <section> is suppressed. If the *code* attribute on <section> is greater than the *code* attribute on <document>, the <section> is suppressed and "ERROR CONDITION" is output.

Figure 53   Compare a NUMBER attribute to a counter

DTD fragment

```
<!ATTLIST document code NUMBER ...>
<!ATTLIST section code NUMBER ...>
```

FOSI fragment

```
<counter initial="0" style="arabic" enumid="document-codect">
...
<e-i-c gi="document">
<charlist inherit="1>...</charlist>
<att>
<fillval attname="code" attloc="document" fillcat="enumerat"
fillchar="increm">
<charsubset>
<enumerat enumid="document-codect" setvalue="1">
...
<e-i-c gi="section">
<charlist inherit="1></charlist>
<att>
<specval attname="code" attloc="section" attval="#LT#document-codect">
<charsubset charsubsetref="SUPPRESS"></charsubset>
</att>
<att>
<specval attname="code" attloc="section" attval="#GT#document-codect">
<charsubset charsubsetref="SUPPRESS">
<usetext source="\ERROR CONDITION\">
<subchars charsubsetref="message-format"></subchars>
...
```

In the next example, SYSTEM-FUNC calls an ACL function that performs a substring operation on the contents of the <item> element and returns the first three letters to the FOSI, which saves it to a string variable. In the page header

DRAFT © 2012

on verso pages, the FOSI outputs the first three-letter string that appears on the verso page. In the page header on recto pages, the FOSI outputs the first three-letter string of the last item that appears on the recto page.

Figure 54   SYSTEM-FUNC substring for page headers

XML fragment

```
...
<item>Donec nun cellentesque libero dolor, ornare non...</item>
<item>Duis ligula neque, fermentum eu, dictum in...</item>
<item>Etiam vel tortor id massa luctus feugiat ...</item>
<item>Fusce ut nulla a ipsum viverra elementum...</item>
<item>Gravida massa, ut cursus tortor erat vitae massa...</item>
<item>Hellentesque dapibus dui. Phasellus vitae nisl...</item>
<item>Integer pellentesque dapibus dui. Phasellus...</item>
<item>Nun cellentesque libero dolor, ornare non...</item>
<item>Qui velit gravida massa, ut cursus tortor erat...</item>
<item>Rasellus scelerisque tempor orci. Suspendisse...</item>
...
```

ACL function

```
function first_three_letters(window,oid)
{return substr(oid_content(oid),1,3)}
```

FOSI fragment

```
<stringdecl textid="three_letters.txt">
...
<pageset id="document.page">
```

DRAFT © 2012

```
<rectopg width="16pi" nomdepth="24pi">
<pageres>...</pageres>
<pagespec pgid="document.recto0">...</pagespec>
</rectopg>
<rectopg width="16pi" nomdepth="24pi">
<pageres>...</pageres>
<pagespec pgid="document.recto1">
...
<header nomdepth="15pt" spaflow="12pt">
<usetext source="three_letters.txt[BO]">
<subchars charsubsetref="block right bold"></subchars>
</usetext>
<ruling thick="0.5pt" lentype="rel" rellen="col" type="single">
<leading inherit="1" lead="3pt">
<textbrk startln="1" endln="1">
</ruling>
</header>
...
<versopg width="16pi" nomdepth="4in">
<pageres>...</pageres>
<pagespec pgid="document.verso1">
...
<header nomdepth="15pt" spaflow="12pt">
<usetext source="three_letters.txt[FI]">
<subchars charsubsetref="block left bold"></subchars>
</usetext>
<ruling thick="0.5pt" lentype="rel" rellen="col" type="single">
<leading inherit="1" lead="3pt">
<textbrk startln="1" endln="1">
</ruling>
</header>
...
<e-i-c gi="item">
<charlist inherit="1" charsubsetref="block prespace">...</charlist>
<att>
<fillval attname="first_three_letters" attloc="SYSTEM-FUNC"
fillcat="savetext" fillchar="conrule">
<charsubset>
<savetext textid="three_letters.txt">
</charsubset>
</att>
...
```

In the following example, #FOSI is used to determine if an optional <title> is present. If so, generated paragraph numbering is output before <title>. If <title> is not present, the generated numbering is output before the paragraph.