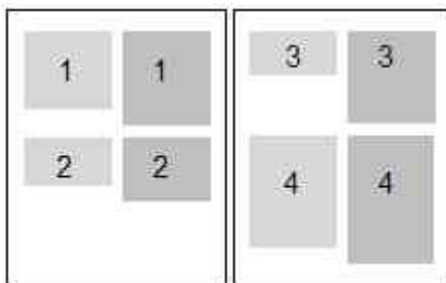


How to output two languages side by side

Supporting two languages side by side generally uses `algroup` and `indent` categories. It may be tempting to use generated tables, but that approach has drawbacks, as described in **Table limitations** on page 544.

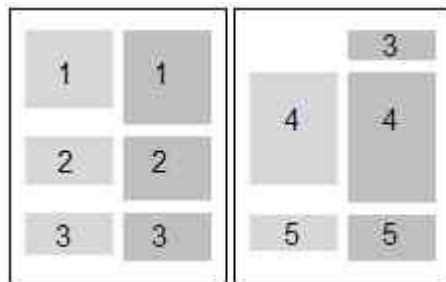
When `algroup` is coded in an `e-i-c`, the content of the element is kept together and does not permit a page break. **Figure 269** below illustrates the short pages that result when side-by-side blocks are unbreakable. This increases the number of pages in the document.

Figure 269 Unbreakable side-by-side blocks



However, only the first `e-i-c` to be aligned requires the `algroup` category. When `algroup` is not coded in the second `e-i-c` to be aligned, page breaks are permitted in the content. To avoid short pages, output the longer language in the second column. Do not code `algroup` in the `e-i-c` for the second column so that page breaks are allowed. **Figure 270** shows how more content fits on a page when the second side-by-side block is allowed to break.

Figure 270 Breakable side-by-side blocks



The next figure shows a paragraph in English and a paragraph of nonsense text aligned side by side. English is specified as the hyphenation language for the first column. French hyphenation is specified for the second column.

Figure 271 Side-by-side paragraphs in two languages



DTD fragment

```
<!ELEMENT chapter (col1,col2)+>
<!ELEMENT (col1|col2) (#PCDATA)>
```

XML fragment

```
<chapter>
<col1>Only fragments...</col1>
<col2>A dolor sit...</col2>
<col1>The best-known...</col1>
<col2>Vestibulum erat...</col2>
...
```

FOSI fragment

```
<hyphrule language="en" wordbrk="enhyph.exc"
brkafchr="_\/+-" clbrkok="0" brkalways="1">
<hyphrule language="fr" wordbrk="frhyph.exc"
brkafchr="_\/+-" clbrkok="0" brkalways="1">
...
<e-i-c gi="col1">
<charlist inherit="1" charsubsetref="block prespace">
<hyphen lang="en" hyph="1">
<indent inherit="1" leftind="0" rightind="*+7pi" firstln="*">
```

```
<algroup refpoint="first">
...
<e-i-c gi="col2">
<charlist inherit="1" charsubsetref="block prespace">
<hyphen lang="fr" hyph="1">
<indent inherit="1" leftind="9pi" rightind="*+7pi" firstln="*">
...
```

When groups of elements must be aligned side by side, some of the DTD markup and FOSI coding are a little different, as illustrated in the following figure.

Figure 272 Side-by-side element groups

<p>The best-known dummy text is Lorem Ipsum, which is said to have originated in the 16th century. It is composed in a pseudo-Latin language which more or less corresponds to "proper" Latin. It contains a series of real Latin words.</p>	<p>Vestibulum erat massa, hendrerit id, suscipit et, accumsan id, tellus. Pellentesque rutrum. Sed erat diam, imperdiet sit amet, malesuada pretium, sodales nec. Wagna. Nulla lobortis iaculis metus. Pellentesque enim. Quisque nec risus. Sed pulvinar nunc non urna. Nullam augue. Aliquam erat volutpat.</p>
<p>The advantage of its Latin origin and the relative meaninglessness of it does not attract attention to itself or distract the viewer's attention from the layout.</p>	<p>Phasellus dapibus, tellus ac feugiat aliquam, urna nibh imperdiet purus, ut eleifend elit velit in eros. Donec in augue. Vestibulum nec tortor a enim volutpat matris. Integer pellentesque dapibus dui.</p>
<p>One disadvantage of it is that in Latin certain letters appear more frequently than others. Moreover, in Latin only words at the beginning of sentences are capitalized; this means that cannot accurately represent.</p>	<p>Duis ucrsus suscipit eros. Curabitur molestie iaculis nulla. Maecenas nisi justo, tempus sed, imperdiet non, tincidunt sed, iacus. Sed scelerisque lobortis sapien. In hac habitasse platea dictumst. Cras aliquet, libero vitae pellentesque ultrices, dui velit gravida massa, ut cursus tortor erat.</p>
<p>Thus, has only limited suitability as a visual filler for German texts.</p>	<p>Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos. Nullam dui.</p>

DTD fragment

```
<!ELEMENT (col1|col2) (para+)>
```

XML fragment

```
<chapter>
<col1>
<para>The best-known...</para>
<para>The advantage...</para>
</col1>
<col2>
<para>Vestibulum erat...</para>
<para>Phasellus dapibus...</para>
</col2>
</col1>
```

```

<para>One disadvantage...</para>
<para>Thus, has...</para>
</col1>
<col2>
<para>Duis ucrsus...</para>
<para>Class aptent...</para>
</col2>
...

```

FOSI fragment

```

<e-i-c gi="col1">
<charlist inherit="1" charsubsetref="block">
<hyphen lang="en" hyph="1">
<indent inherit="1" leftind="0" rightind="*+12.5pi" firstln="*">
<algroup refoint="first">
...
<e-i-c gi="col2">
<charlist inherit="1" charsubsetref="block">
<hyphen lang="fr" hyph="1">
<indent inherit="1" leftind="14.5pi" firstln="*">
...
<e-i-c gi="para">
<charlist inherit="1" charsubsetref="block">
<presp minimum="0.5pi" nominal="0.5pi" maximum="0.5pi" priority="med">
...

```

If the first language in the document should be output in the second column (and vice versa), `savetext`, `usetext`, and formatting pseudo-elements are needed, as demonstrated in the next figure, which uses the same DTD and XML fragments and some of the FOSI coding from **Figure 272** above.

Figure 273 Swap language columns

<p>Vestibulum erat massa, hendrerit id, suscipit et, accumsan id, tellus. Pellentesque rutrum. Sed erat diam, imperdiet sit amet, malesuada pretium, sodales nec, Wagna. Nulla lobortis iaculis mems. Pellentesque enim. Quisque nec risus. Sed pulvinar nunc non urna. Nullam augue. Aliquam erat volutpat.</p> <p>Phasellus dapibus, tellus ac feugiat aliquam, urna nibb imperdiet purus, ut eleifend elit velit in eros. Donec in augue. Vestibulum nec tortor a enim volutpat mattis. Integer pellentesque dapibus dui.</p> <p>Duis ucrvus suscipit eros. Curabitur molestie iaculis nulla. Maecenas nisi justo, tempus sed, imperdiet non, tincidunt sed, lacus. Sed scelerisque lobortis sapien. In hac habitasse platea dictumst. Cras aliquet, libero vitae pellentesque ultrices, dui velit gravida massa, ut cursus tortor erat.</p> <p>Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenseos. Nullam dui.</p>	<p>The best-known dummy text is Lorem Ipsum, which is said to have originated in the 16th century. It is composed in a pseudo-Latin language which more or less corresponds to "proper" Latin. It contains a series of real Latin words.</p> <p>The advantage of its Latin origin and the relative meaninglessness of it does not attract attention to itself or distract the viewer's attention from the layout.</p> <p>One disadvantage of it is that in Latin certain letters appear more frequently than others. Moreover, in Latin only words at the beginning of sentences are capitalized; this means that cannot accurately represent.</p> <p>Thus, has only limited suitability as a visual filler for German texts.</p>
--	---

FOSI fragment

```

<charsubset charsubsetid="SUPPRESS"><suppress sup="1"></charsubset>
...
<e-i-c gi="col1">
<charlist inherit="1" charsubsetref="block SUPPRESS">
<savetext textid="col2.txt" conrule="#CONTENT">
...
<e-i-c gi="col2">
<charlist inherit="1" charsubsetref="block SUPPRESS">
<usetext placemnt="after"
source="<col1.fmt>,#CONTENT,</col1.fmt>,<col2.fmt>,col2.txt,</col2.fmt>" >
</usetext>
...
<e-i-c gi="col1.fmt">
<charlist inherit="1" charsubsetref="block">
<hyphen lang="en" hyph="1">
<indent inherit="1" leftind="0" rightind="*+12.5pi" firstln="*">
<algroup refpoint="first">
...
<e-i-c gi="col2.fmt">
<charlist inherit="1" charsubsetref="block">
<hyphen lang="fr" hyph="1">
<indent inherit="1" leftind="14.5pi" firstln="*">
...

```