

FOSI Tip 

The key to fixed-width alignment is to make sure the columns created by the various indent categories do not overlap. Columns may abut, but `algroup` does not work when columns overlap.

FOSI Tip 

Generated tables can also be used to align columns of text. However, there are drawbacks to that approach, as described in **Table formatting limitations** on page 799.

Algroup (Side-by-Side) 

[OS B.4.4.19, Tutorial 2–10]

The `algroup` category has two purposes:

- **Side-by-side alignment.** `Algroup` is used with the indent category to align blocks of text and/or graphics into side-by-side columns whose widths are predefined in the FOSI. This is called **fixed-width alignment**. It is useful for glossaries and similar lists as well as for side titles. This side-by-side capability may also be needed for title pages, tables of contents, page headers or footers, to name a few examples.
- **Wraparound graphics.** `Algroup` supports wrapping text around a graphic whose width is not predefined in the FOSI. This is called **variable-width alignment**. The indent category is not used. Wrapping may be from left to right or right to left, and can wrap around one or multiple graphics.

OutSpec DTD fragment

```
<!ELEMENT algroup - o EMPTY>
<!ATTLIST algroup
  refpoint (top, first, middle, last, bottom, capheight) #IMPLIED
  postspace %yesorno -- toggle -- #IMPLIED
  hgutter CDATA -- ATI: a size -- #IMPLIED
  direction (ltr, rtl) -- ATI -- #IMPLIED
  valignnext %yesorno -- ATI: toggle -- #IMPLIED>
```

NOTE: `Algroup` does not have an `inherit` attribute. The category must be coded in an `e-i-c` to have any effect. When `algroup` is specified in an `e-i-c`, any empty characteristics default to the `envdesc`, `docdesc`, or system default setting, as detailed in **Figure 23 Inheritance and defaulting flow chart** on page 50.

The following table details `algroup` characteristics.

Table 62 Algroup characteristics

Characteristic	Values	Default	Notes
refpoint (align to)	bottom	top	top means the tallest ascender of the first line, while <code>first</code> means the baseline of the first line. Last refers to the baseline of the last line, while <code>bottom</code> refers to the deepest descender of the last line.
	first		
	last		
	top		

*continued . . .***KEY**

Monospaced fonts are used for user input and FOSI categories, characteristics, and attributes.

In OutSpec DTD fragments, a single underscore means support only for print/PDF output. A double underscore indicates both Edit window and print/PDF support.

Table 62 *Algroup characteristics (cont'd)*

Characteristic	Values	Default	Notes
hgutter (gutter)	SIZE/DISTANCE	0pt	<p>Defines the minimum gap between a variable-width graphic and the following block or text that wraps around it. Specifying a positive value in this field causes an automatic alignment of the current object with the next text or graphical block. The size of the wraparound object determines the amount of the indentation.</p> <p>hgutter must specify a non-zero value (which can be as small as 0.001pt) to enable wrapping around a variable-width graphic.</p> <p>NOTE: Wrapping does not occur if the width of a graphic, or the cumulative width of graphics, is greater than the available space.</p>
direction	<hr/> ltr rtl	ltr	<p>ltr refers to left to right alignment, which means the graphic is positioned on the left side so text wraps around its right edge. rtl refers to right to left alignment, which means the graphic is positioned on the right side so text wraps around its left edge.</p>
minwidnext (min wd next)	SIZE/DISTANCE		Specifies the minimum width allowed for the block of text that wraps around the graphic.
valignnext (permit valign)	TOGGLE	0	Controls whether additional elements wrap around the graphic. It works only with variable-width objects.
postsp (apply post space)	TOGGLE	0	When <code>postspace="1"</code> , the <code>postsp</code> for the current element is applied before the next element wraps underneath.

NOTE: The content of an `e-i-c` with `algroup` cannot be broken across pages.

NOTE: `Algroup` is not supported for the Edit window.

Default behavior

By default, when an `e-i-c` contains an `algroup`, the next element aligns to it, if the `e-i-cs` are coded with `indent` categories that create separate, non-overlapping columns. To prevent an element from automatically aligning

with a preceding `algroup` element, code `textbrk noalignprev="1"`. This is described further in **Textbrk** on page 441.

Algroup examples

The following example shows how an element automatically aligns with a previous element that contains an `algroup`. This approach can also be used to support side titles.

Figure 245 `Refpoint="first"`

aucox raste	Malesuada nisi congue enim. Mæcenas aliquet. Dest vel sollicitudin mattis, turpis ipsum semper tellus ponawers.
cenret justo	Grafide ligula ut odio. Nam sit amet erat.
ionec ponawers	Sit amet erat. Quisque porta rhoncus massa magna nunc, pulvinar in, molestie non, tristique consequat. Nunc hendrerit felis ut arcu. Duis commodo tincidunt lectus. Suspendisse potenti. In hac habitasse platea dictumst.

XML fragment

```
<definition-list>
<definition-item>
<term>aucox raste</term>
<definition>
<paragraph>Malesuada nisi ...</paragraph>
</definition>
</definition-item>
<definition-item>
<term>cenret justo</term>
<definition>
<paragraph>Grafide ligula ...</paragraph>
</definition>
</definition-item>
<definition-item>
<term>ionec ponawers</term>
<definition><paragraph>Sit amet ...</paragraph>
</definition>
</definition-item>
...
```

FOSI fragment

```
<e-i-c gi="definition" context="definition-item">
<charlist inherit="1" charsubsetref="block">
<indent inherit="1" leftind="8.5pi" rightind="0" firstln="*">
...
</e-i-c gi="definition-item" context="definition-list">
```

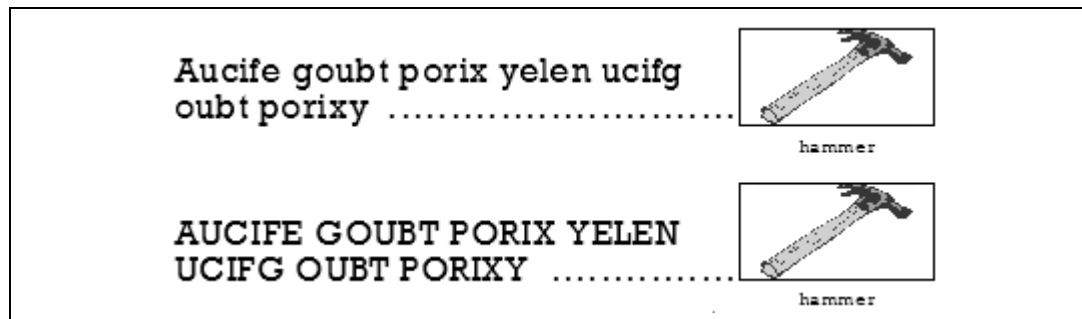
```

<charlist inherit="1" charsubsetref="block">
<presp minimum="6pt" nominal="6pt" maximum="6pt" priority="med">
...
<e-i-c gi="definition-list">
<charlist inherit="1">
...
<e-i-c gi="paragraph" context="definition" occur="first">
<charlist inherit="1" charsubsetref="endline">
...
<e-i-c gi="paragraph" context="definition" occur="notfirst">
<charlist inherit="1" charsubsetref="block">
<presp minimum="4pt" nominal="4pt" maximum="4pt" priority="med">
...
<e-i-c gi="term" context="definition-item">
<charlist inherit="1" charsubsetref="block bold">
<indent inherit="1" leftind="0" rightind="**+8pi" firstln="**">
<algroup refpoint="first">
...

```

In the image below, notice the dots are at the text baseline. However, the text and graphic are bottom aligned, which means the alignment is different when the text contains characters with descenders.

Figure 246 Refpoint="bottom"



XML fragment

```

<definition-list>
<definition-item>
<term>Aucife goubt porix yelen ucifg oubt porixy</term><definition>
<paragraph><graphic name="hammer.tif"/></paragraph>
<paragraph>hammer</paragraph>
</definition>
</definition-item>
<definition-item>
<term>AUCIFE GOUBT PORIX YELEN UCIFG OUBT PORIXY</term>
<definition>
<paragraph><graphic name="hammer.tif"/></paragraph>
<paragraph>hammer</paragraph>

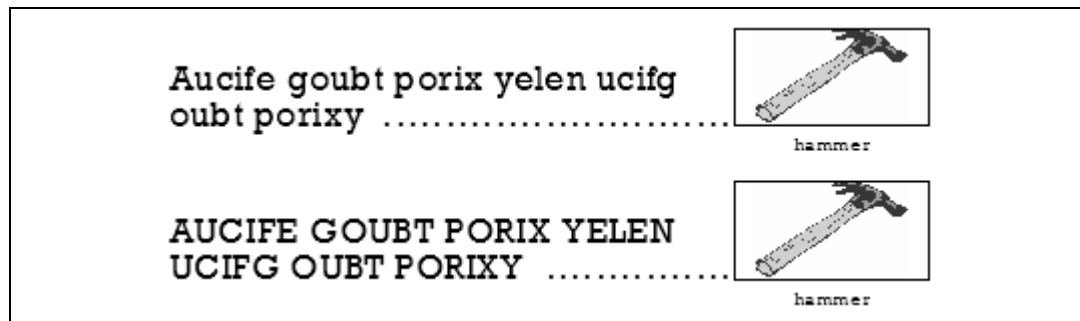
```

```

</definition>
</definition-item>
...
FOSI fragment
<flowtext numcols="1">
<column width="31pi+7.426pt">
</flowtext>
...
<e-i-c gi="definition-item" context="definition-list">
<charlist inherit="1" charsubsetref="block">
<presp minimum="14pt" nominal="16pt" maximum="18pt" priority="med">
...
<e-i-c gi="definition-list">
<charlist inherit="1">
<font inherit="1" famname="Rockwell" size="18pt">
<leading inherit="1" lead="18pt">
...
<e-i-c gi="paragraph" context="definition" occur="only">
<charlist inherit="1" charsubsetref="endline"></charlist>
<att logic="and">
<specval attname="editor-only" attloc="SYSTEM-VAR" attval="#NONE">
<specval attname="term-width" attloc="definition-list" attval="wide">
<charsubset charsubsetref="left"></charsubset>
...
<e-i-c gi="paragraph" context="definition" occur="first">
<charlist inherit="1" charsubsetref="endline center">
...
<e-i-c gi="paragraph" context="definition" occur="middle">
<charlist inherit="1" charsubsetref="block">
<presp minimum="6pt" nominal="6pt" maximum="6pt" priority="med">
...
<e-i-c gi="paragraph" context="definition" occur="last">
<charlist inherit="1" charsubsetref="block center">
<font inherit="1" size="10pt">
<leading inherit="1" lead="11.5pt">
<presp minimum="6pt" nominal="6pt" maximum="6pt" priority="med">
...
<e-i-c gi="term" context="definition-item">
<charlist inherit="1" charsubsetref="block left hyphen-off">
<indent inherit="1" leftind="0" rightind="*+23.5pi" firstln="*">
<algroup refpoint="bottom">
<usetext source="\ \,dotfill" placemnt="after">
<subchars charsubsetref="right">
...

```

Compare the alignment of the graphics in the following figure with the previous figure. Setting `refpoint="last"` aligns the graphics to the baseline, and the output is consistent regardless of whether the text contains characters with descenders.

Figure 247 Refpoint="last"**FOSI fragment**

```
<e-i-c gi="term" context="definition-item">
<charlist inherit="1" charsubsetref="block left hyphen-off">
<indent inherit="1" leftind="0" rightind="**+23.5pi" firstln="**">
<algroup refpoint="last">
<usetext source="\ \,dotfill" placemnt="after">
<subchars charsubsetref="right">
...
```

The next figure shows two 15pi-wide columns horizontally aligned to the baseline of the first line of text in each <term> and <definition>.

Fixed-width alignment with `algroup` requires specific indents to be coded in the FOSI. In other words, column widths do not automatically adjust to the longest content. However, attributes set by users can provide a choice of column widths. For example, a *term-width* attribute on <definition-list> or similar structure could have choices such as *narrow*, *even*, and *wide*. Another approach is to provide attribute choices for column ratios, such as *one:four*, *two:three*, *three:two*, and *four:one*.



Fixed-width alignment with `algroup` requires specific indents to be coded in the FOSI. In other words, column widths do not automatically adjust to the longest content. However, attributes set by users can provide a choice of column widths. For example, a *term-width* attribute on <definition-list> or similar structure could have choices such as *narrow*, *even*, and *wide*. Another approach is to provide attribute choices for column ratios, such as *one:four*, *two:three*, *three:two*, and *four:one*.

Figure 248 Equal-width columns

<i>aucibuor tahon cusassa pellentesque buivamus rutrum</i>	Malesuada nisi congue enim. Im cenas aliquet. Pellentesque, est vel sollicitudin
<i>beugian trnare ligula commodo adipiscing nisi justo acen molestie non tristique consequat</i>	Gravida ligula ut odio. Nam no information avert erratum
<i>donec honcusem porrat hac habitasse platea</i>	Sit amet erat. Quisque porta rhoncus massa magna nunc, pulvinar in, molestie non, tristique consequat, dui. Nunc hendrerit felis ut arcu. Duis an commodo tincidunt lectus.

XML fragment

```

<definition-list>
<definition-item>
<term>aucibuor tahon cusassa pellentesque buivamus rutrum</term>
<definition><paragraph>Malesuada nisi congue enim. Im cenas aliquet.
Pellentesque, est vel sollicitudin</paragraph>
</definition>
</definition-item>
<definition-item>
<term>beugian trnare ligula commodo adipiscing nisi justo acen molestie
non tristique consequat</term>
<definition><paragraph>Gravida ligula ut odio. Nam no information
avert erratum</paragraph>
</definition>
</definition-item>
<definition-item>
<term>donec honcusem porrat hac habitasse platea</term>
<definition><paragraph>Sit amet erat. Quisque porta rhoncus massa
magna nunc, pulvinar in, molestie non, tristique consequat, dui.
</paragraph>
<paragraph>Nunc hendrerit felis ut arcu. Duis commodo tincidunt lectus.
</paragraph>
</definition>
</definition-list>

```

FOSI fragment

```

<pagespec ...>
<flowtext numcols="1">
<column width="31pi+7.426pt">
</flowtext>
</pagespec>
...
<docdesc>
<charlist>

```

```

<font famname="Times New Roman" size="12pt" posture="upright"
weight="medium" width="regular" smallcap="0" offset="0">
<leading lead="14pt">
<hyphen hyph="1">
<indent leftind="0" rightind="0" firstln="*">
<quadding quad="justify" lastquad="relative">
<highlt scoring="0" scorewt="0.5pt" allcap="0" scorespc="1">
<presp minimum="0pt" nominal="0pt" maximum="0pt" condit="discard"
priority="med">
<postsp minimum="0pt" nominal="0pt" maximum="0pt" condit="discard"
priority="high">
<keeps widowct="2" orphanct="2">
<textbrk startcol="0" startpg="off" newpgmdl="none" startln="1" endln="1">
<span span="1">
...
<e-i-c gi="definition" context="definition-item">
<charlist inherit="1" charsubsetref="block">
<indent inherit="1" leftind="16pi+7.426pt" rightind="0" firstln="*">
...
<e-i-c gi="definition-item" context="definition-list">
<charlist inherit="1" charsubsetref="block">
<presp minimum="6pt" nominal="6pt" maximum="6pt" priority="med">
...
<e-i-c gi="definition-list">
<charlist inherit="1">
...
<e-i-c gi="paragraph" context="definition" occur="first">
<charlist inherit="1" charsubsetref="endline">
...
<e-i-c gi="paragraph" context="definition" occur="notfirst">
<charlist inherit="1" charsubsetref="block">
<presp minimum="4pt" nominal="4pt" maximum="4pt" priority="med">
...
<e-i-c gi="term" context="definition-item">
<charlist inherit="1" charsubsetref="block italic">
<indent inherit="1" leftind="0" rightind="*+15pi" firstln="*">
<algroup refpoint="first">
...

```

Algroup can be used for multiple columns that have different reference points for alignment, as illustrated in the next figure. Nested pseudo-elements are needed to handle the different algroup reference points. Columns one and two align at the first baseline. Columns two and three align at the last baseline.

NOTE: The indent syntax `*+` is used here to indicate the width of the columns created, which makes it a little easier to make sure the columns do not overlap.

Figure 249 TOC with mixed algroup reprints

1. Ipsum and more and more to test turnover lines in the Table of Contents ...	2
2. Another long long title to test tumover lines in the table of contents.....	6
3. Lorem ipsum for a title	7
4. Ipsum lorem and another long long title to test turnover lines in the Table of Contents.....	9
5. Ipsum and more	11
6. Another title	12
7. Lorem	13
8. Ipsum lorem	17
9. Ipsum and more and more	18
10. Another long long title to test tumover lines in the table of contents.....	19
11. Lorem ipsum and a long long title to test turnover lines in the table of contents.....	20
12. Ipsum and lorem	21

XML fragment

```

<section>
<title>Ipsum and more and more to test turnover lines in
the Table of Contents</title>
...
<section>
<title>Another long long title to test turnover lines in
the table of contents</title>
...
<section>
<title>Lorem ipsum for a title </title>
...
<section>
<title>Ipsum lorem and another long long title to test
turnover lines in the Table of Contents</title>
...
<section>
<title>Ipsum and more</title>
...
<section>
<title>Another title </title>
...
<section>
<title>Lorem </title>
...
<section>

```



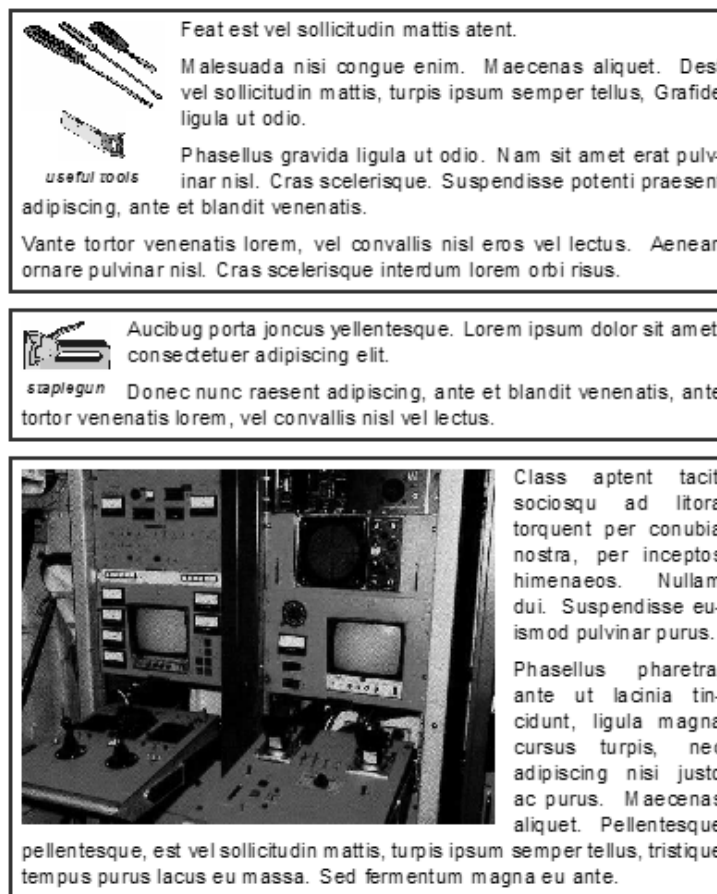
```

<indent inherit="1" leftind="0" rightind="*+2pi" firstln="*">
<algroup refpoint="first">
<usetext source="\.,4pt" placemnt="after">
...
<e-i-c gi="col2.fmt">
<charlist inherit="1">
<indent inherit="1" leftind="2.5pi" rightind="*+20pi" firstln="*">
<usetext source="dotfill" placemnt="after">
...

```

Fixed-width alignment in previous examples uses `indent` to create side-by-side columns. The next example shows variable-width alignment, which uses `algroup` to wrap text around one or more graphics of unknown width.

Figure 250 Wraparound graphic



XML fragment

```
<definition-list>
<definition-item>
<term>
<graphic name="screwdrvr.tif"/><graphic name="saw.tif"/>
<caption>useful tools</caption>
</term>
<definition>
<paragraph>Feat est vel sollicitudin mattis atent. </paragraph>
<paragraph>Malesuada nisi congue enim. Maecenas aliquet. Dest vel
sollicitudin mattis, turpis ipsum semper tellus, Grafide ligula ut
odio.</paragraph>
<paragraph>Phasellus gravida ligula ut odio. Nam sit amet erat pulvinar
nisl. Cras scelerisque. Suspendisse potenti praesent adipiscing, ante
et blandit venenatis. </paragraph>
<paragraph>Vante tortor venenatis lorem, vel convallis nisl eros vel
lectus. Aenean ornare pulvinar nisl. Cras scelerisque interdum lorem
orbi risus.</paragraph>
</definition>
</definition-item>
<definition-item>
<term>
<graphic name="staplegun.tif"/>
<caption>staplegun</caption>
</term>
<definition>
<paragraph>Aucibus porta joncus yellentesque. Lorem ipsum dolor sit
amet, consectetur adipiscing elit.</paragraph>
<paragraph>Donec nunc raesent adipiscing, ante et blandit venenatis,
ante tortor venenatis lorem, vel convallis nisl vel lectus.</paragraph>
</definition>
</definition-item>
<definition-item>
<term>
<graphic name="instrument.jpg"/>
</term>
<definition>
<paragraph>Class aptent taciti sociosqu ad litora torquent per conubia
nostra, per inceptos himenaeos. Nullam dui. Suspendisse euismod pulvinar
purus.</paragraph>
<paragraph>Phasellus pharetra, ante ut lacinia tincidunt, ligula magna
cursus turpis, nec adipiscing nisi justo ac purus. Maecenas aliquet.
Pellentesque pellentesque, est vel sollicitudin mattis, turpis ipsum
semper tellus, tristique tempus purus lacus eu massa. Sed fermentum
magna eu ante.</paragraph>
</definition>
</definition-item>
...
```

FOSI fragment

```

<e-i-c gi="caption" context="term">
<charlist inherit="1" charsubsetref="block center bold italic">
<font inherit="1" size="9pt">
<leading inherit="1" lead="12pt">
...
<e-i-c gi="definition" context="definition-item">
<charlist inherit="1" charsubsetref="block">
...
<e-i-c gi="definition-item" context="definition-list">
<charlist inherit="1" charsubsetref="block">
<presp minimum="14pt" nominal="16pt" maximum="18pt" priority="med">
<boxing toffset="6pt" boffset="6pt" loffset="6pt" roffset="6pt"
trel="top" bre1="bottom" siderel="col" thick="2pt" ttype="tsingle"
btype="bsingle" ltype="lsingle" rtype="rsingle">
...
<e-i-c gi="definition-list">
<charlist inherit="1"></charlist>
</e-i-c>

<e-i-c gi="graphic" context="term">
<charlist inherit="1" charsubsetref="block center">
...
<e-i-c gi="paragraph" context="definition">
<charlist inherit="1" charsubsetref="block">
<presp minimum="6pt" nominal="6pt" maximum="6pt" priority="med">
...
<e-i-c gi="term" context="definition-item">
<charlist inherit="1" charsubsetref="startline left hyphen-off">
<postsp minimum="2pt" nominal="2pt" maximum="2pt" priority="high">
<algroup refpoint="top" postspace="1" hgutter="9pt" direction="ltr"
valignnext="1">
...

```