

# Apache™ FOP Design: User Agent

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## 1 Introduction

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Technically the user agent is Apache™ FOP in the role of determining the output format and when resolving various attributes. The user agent is represented by a class that is available to others to specify how FOP should behave.

The user agent is used by the formatting process to determine certain user definable values.

It will enable the customisation of values for generating and rendering the document.

The user agent must be available to the layout processor and the renderer. Users can supply their own user agent or use the default one for a particular renderer.

The user agent needs to be made available to the property resolution layout process and the renderer.

Standard Features:

- error handling, what to do if fo markup is invalid
- auto overflow value and handling error-if-overflow
- adjusting length values (eg. for borders) to renderable values
- available fonts
- converting cm/in to pt (dpi)
- active state for multi properties
- title, used to identify a set of pages (in a page sequence)
- the width (in inline-progression-dimension) of a character with treat-word-as-space true
- maximum space used by conditional areas from region-reference-area
- if there should be "hot links" to before floats or footnotes
- when to clear side floats if space in inline-progression-dimension is not enough
- placement of left over footnotes on a page with a region-body
- using color property as border colour
- interpreting all border styles (except outset) as solid
- thin, medium and thick values for border width
- initial font-family value
- absolute font sizes (eg, xx-small, x-small etc.)
- relative font sizes (eg. larger, smaller)
- small caps simulation
- font weight mapping
- baseline info for a font if not available
- determining sub/superscript when another baseline is dominant
- scaling method for external-graphic and instream-foreign-object
- the width of a replaced element
- "normal" line height value
- text alignment (stretching the line with letter and word spacing)
- text transform
- initial color
- rendering intent of auto
- dot character for leader
- line breaking with leaders, use optimum length when breaking the line
- page height/width of auto

- left and right caption widths
- glyph orientation vertical of auto
- rendering processor of content-type (mime type)

Interactive Features:

- inline and block scroll amount
- dynamic effects, links and property sets
- initial "pause-after", "pause-before" and "voice-family" value
- treating fixed as scroll on background attachment
- media usage of auto