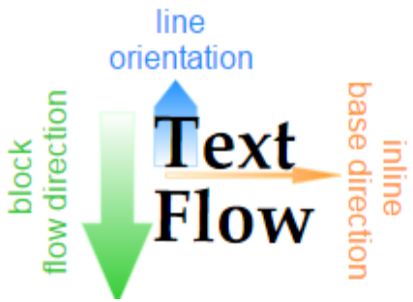
Comparison of text direction, orientation elements in different standards

Standard:	CSS	EPUB	PAGE	ALTO	Examples
	http://www.w3.org/TR/css3-writing-modes/		http://schema.primaresearch.org/PAGE/gts/pagecontent/2013-07-15/pagecontent.xsd	http://www.loc.gov/standards/alto/v3/alto-3-0.xsd	
Why language support?	Aim of language support is creating readable presentations of text from XML documents.			It's necessary to record enough text characteristics of a physical page 1. to be able to reproduce a representation of the physical page from the ALTO. 2. and to be able to process the text from the ALTO to create an index or transform the text to a file with another format, for example EPUB. How is for example hebrew recorded in ALTO? Is a word that must be red right to left be recorded as "hebrew" or "werbeh" in ALTO? In the last case ("werbeh") creating the representation is not a problem. Is that different from the EPUB?	It began with shape use cases where skewed text is involved: http://altoxml.github.io/alto_shape_use_cases/ALTO_shape_usecases.html Examples of Siang Hock...
Elements and attributes					

					
block flow direction	**writing mode** horizontal-tb | vertical-rl | vertical-lr	**-epub-writing-mode**	--	Would writing mode be useful feature in ALTO? Is it to be able to determine the reading order of the strings in order to be able to process the text?	
			orientation (attribute of (text)RegionType elements) Range: -179.999,180 *The angle the rectangle encapsulating a region has to be rotated in clockwise direction in order to correct the present skew (negative values indicate anti-clockwise rotation).*	**rotation** (attribute of blocktype elements like textBlock, composedBlock, …) *Tells the rotation of the block e.g. text or illustration. The value is in degree counterclockwise.* A rotated rectangle can also be described with a polygon. If the text is rotated it's necessary to have something as the "reading direction" to be able to make a representation of the page.	
Inline base direction	**direction** ltr | rtl	**dir**	**readingDirection** (attribute of textRegion) ltr | rtl | ttb | btt *The direction in which text in a region should be read (within lines)*		

line orientation	**text orientation** mixed | upright | sideways-right | sideways-left | sideways | use-glyph-orientation *sideways-right: In vertical writing modes, this causes text to be set as if in a horizontal layout, but rotated 90° clockwise.* *A baseline is a line along the inline axis of a line box along which individual glyphs of text are aligned. Baselines guide the design of glyphs in a font (for example, the bottom of most alphabetic glyphs typically align with the alphabetic baseline), and they guide the alignment of glyphs from different fonts or font sizes when typesetting.* *The text-orientation property then determines how text is laid out within the line box.* *The text-orientation component of the writing mode determines the line orientation, and controls details of text layout such as the glyph orientation.* *The line orientation determines which side of a line box is the logical "top" (ascender side).*	**-epub-text-orientation**	**readingOrientation** (attribute of textRegion) Range: -179.999,180 *The angle the baseline of text within a region has to be rotated (relative to the rectangle encapsulating the region) in clockwise direction in order to correct the present skew (negative values indicate anti-clockwise rotation).*		
bidirectionality					