Introductory Remarks

At first glance it is simple. The “T” in HTML is for text; the “G” in SVG is for graphics. We have two distinct worlds.

But then we can look at the real world of shop signs, corporate logos, CD and album covers, packaging, and labels and we find that the artists of the real world have blurred the line between text and graphics in fascinating ways. In the Arab world, as in the world of Chinese calligraphy writing and art, semantics and geometry become juxtaposed, fused and counter-pointed in ways numerous and hard to categorize.

In this paper we are interested in exploring the relationship between the characters of text and the geometry of their presentation. We’re also interested in discussing how that relationship can affect accessibility in various ways and for various audiences. We’re also interested in identifying some of the ways that SVG as a standard, and that SVG authors as practitioners might improve accessibility for graphically rich text. Ultimately, we’re interested in raising (or perhaps re-raising) the issue of what is the difference between presentation and semantics when it comes to graphics.

What SVG can do currently with text: theory and practice

The SVG 1.1 specification for text (<http://www.w3.org/TR/SVG/text.html> ) is approximately 90 pages long (if printed). SVG provides the ability to vary these properties of text:

1. Directionality (left to right being the default)
2. Inter-word and inter-character spacing
3. Alignment (relative to baseline)
4. Decoration (things like boldface, underline and the like)
5. Orientation (rotation)
6. Squeezing to fit (using textLength and lengthAdjust)
7. Relative sizing (using viewBox)
8. Aligning to a curve (using textPath)
9. Substring styling (using tspan)
10. The character set itself (using SVG fonts and WOFF)

Support for these features is not uniform across browsers . There are, indeed, discussions afoot suggesting SVG font support be replaced with a weaker server-side downloadable technology of WOFF.

Additionally, through others of SVG’s features (like masks, clip-paths, filters, gradients, transforms, animation, replication, pattern, and script), we have the ability to

1. Fill typefaces with all manner of texture and pattern
2. Rotate, stretch, and skew text
3. Distort the shapes of characters (using feDisplacement)
4. Fill typefaces with animation
5. Animate text moving along paths
6. Simulate 3D effects
7. Vary shapes of glyphs dynamically

What is currently lacking in SVG1.1 (without extensive scripting or server-side intervention) are the following:

1. Flowing text into a rectangle (as in the HTML <textarea>)
2. Glyph to path conversion for access to font geometry
3. Flowing lines of text into shapes (as with word poems)
4. Allowing text to be “top-aligned” so that characters conform to a top-line rather than a baseline.
5. Reshaping glyphs to fit non-rectangular containers.

We will argue that all of the above features are a part of the extant world (both the physical and web-based world) and that for reasons of accessibility (as broadly interpreted) they are useful additions to SVG. In particular there is need for such effects, and SVG is the place where most logically they belong.

How do people use text in “the wild?”

In beginning work on this subject we sought to gather examples of real world uses of text. We not only kept a lookout for such things as shape distortions and varied geometries, but did some Internet searching for special text effects.

A wide variety of interesting effects were found. (Many can be seen at http://srufaculty.sru.edu/david.dailey/svg/top-align.htm )

Examples of text departing from standard alignment:

Glyph Distortion

<http://wwwdelivery.superstock.com/WI/223/1850/PreviewComp/SuperStock_1850-23262.jpg>

<http://arro-signs.co.uk/3d-letters/chinese-writing/>

<http://www.asiafinest.com/forum/lofiversion/index.php/t235558.html>

<http://www.chinasmack.com/2010/pictures/chinese-character-art.html>

<http://en.bidt.org/designer/413.html>

[http://www.amazon.com/Wallmonkeys-Peel-Stick-Wall-Graphic/dp/B005IVQS98/ref=sr\_1\_23?s=baby-products&ie=UTF8&qid=1317522255&sr=1-23](http://www.amazon.com/Wallmonkeys-Peel-Stick-Wall-Graphic/dp/B005IVQS98/ref%3Dsr_1_23?s=baby-products&ie=UTF8&qid=1317522255&sr=1-23)

<http://www.hiddengarments.cn/index.php/tag/zhaoqing/page/4/>

Free fonts (SIL license – Crass Roots; ArtOfIlluminating –free; Goudy BookLetter 1911 public domain; Miama ofl-Licensed;