



INSIGHT  
by David Berman, FGDC, R.G.D.

## Fonts for the blind

**A**fter perhaps 10,000 generations of humanity, we live in the first where all information can be available in electronic form—a liberating time, especially for those with disabilities.

Assistive technologies built into computers and smartphones are becoming a larger part of all of our lives. Screen readers, text-size zooming, along with colour and contrast settings all make communicating digital documents easier for everyone, especially those with visual impairments.

Skillful design and typography can re-inject the tone and emphasis of the spoken voice visually, as well as adding structure and priority to text elements. Designers express emphasis with thicker letters, caps or switching to italics. And we expose information hierarchy by making headings more prominent than body copy.

These are our conventions for those who easily read but what about those who don't see so well? Can typography help?

Canada is a world leader in government online accessibility, and Ontario is the first jurisdiction on Earth to legislate web accessibility for the private sector as well (first big AODA deadline: 1 January 2014!)

When designers follow accessibility standards for markup, screen readers (tech that reads out loud) are aware of a document's structure while also knowing where to place emphasis. (A great side benefit: because search engines are also blind, a well-structured document or web page gets better SEO.)

Granted, for designers the effort to structure web pages or InDesign and PDF files for accessibility takes time to learn, but that discipline pays off with a broader audience, better systems ...and knowing you've done good.

Of course, the basics of good typographic design (legibility, readability, size, avoiding justification) all help when documents go electronic. However there are additional techniques and opportunities to consider when designing accessible PDFs, ebooks or HTML pages.

For example, in early Web days the limited font sets installed on computers forced designers into lowest-common-denominator typography, or to painstakingly convert their gorgeous type into inaccessible graphics—pictures of text that can't be read by a screen reader or search engine. Solution: today we can stream any typeface (with Adobe Typekit, Google Fonts, or Font Squirrel...), while carefully controlling kerning and wordspacing in HTML5. We get typographic flexibility without

trading off accessibility and efficiency.

Embracing style sheets, columns, and other tricks rigorously in InDesign is likely the most important step to easily outputting PDF (or HTML or epub) that makes sense to assistive technologies.


When we design for the extremes, everyone benefits. An accessible PDF can reformat itself ... whether a reader rotates a tablet, pinch-zooms a smartphone, or asks Siri to read it out.

Humans have been wired for spoken language for at least 50,000 years. Sharing ideas in written form evolved about 6,000 years back and progressed to movable type 500 years ago. Today, everyone can be a publisher, and today's screen readers now bring back the spoken voice to documents. So how can we convey all the richness and nuance of typography to a synthetic voice?

People pronounce words in different ways by changing tone, cadence or volume—and consequently influence the meaning dramatically. But what does a screen reader do with bold, italics, or headings? Even when we follow the Web Content Accessibility Guidelines (WCAG) and carefully mark up text with `<strong>` for bold and `<em>` for italics, the voices in screen readers don't necessarily transmit these nuances... yet.

Perhaps it's time for type to take a quantum leap forward, with each OpenType font hinting (or even designating) which synthetic voice should announce words tagged in that face, whether on a screen reader for the blind or for listening to an ebook on your iPhone.

Imagine if Wedding Script spoke with an upper-crust British accent, while DIN could be voiced by German typographer Erik Spiekermann. And Comic Sans, okay I'm not going there ... well maybe Chris Rock or Garfield? Our future may include Disney releasing fonts as movie and e-book merchandising, and celebrities knowing they've "arrived" when a typeface bearing their name exudes a character we're all familiar with.

Crazy good or bad? Maybe. The headline is that we are designing at a time where the opportunity for inclusive design begs a rethink of typography itself. So what's stopping us? 

@DavidBerman is a special advisor to the UN on how to use accessible design to fulfill the Millennium Development Goals.



Perhaps it's time to take a quantum leap forward, designating a specific spoken voice for each OpenType font.