

ARM Posters: Making them Better
(2009 -- The Year of Readable Fonts)
Warren Wiscombe, ARM Chief Scientist

We have distributed ARM poster guidelines for a long time, but many people don't follow them. We have instituted Chief Scientist Poster Design Awards and People's Choice Awards to provide concrete exemplars of greatness, but many people ignore them.

So this year we are trying a new tack. Instead of a list of guidelines, we are asking you to follow just one: use readable fonts in text AND graphics. We are declaring this, 2009, The Year of Readable Fonts.

Readability implies minimum font sizes as follows:

- * 36 pt for body text
- * 54 pt for headings
- * 80 pt for titles

Choice of font is equally important. Some of you may not know that serif fonts were invented for printing at small sizes in newspapers (else why "Times" font?). They improve readability at 9- and 10-pt sizes, and save paper. But they are horrible at 36-pt sizes. At such large sizes, sans-serif fonts are much better.

But not all sans serif fonts are equally good. The knee-jerk choices of Helvetica and Arial are inferior; they have constant stroke widths and are blocky and cramped. Fonts like Optima, Comic Sans, and Arial Rounded are much more readable, especially in blocks of text. Compare the following (24-pt) fonts:

Helvetica

Arial

Optima

Comic Sans

Arial Rounded MT Bold

Last but not least, worry about *fonts in your graphics*. Don't just paste a graphic from a journal paper. You might get away with somewhat smaller fonts in

graphics, but nothing smaller than 24-pt unless you want to cause eyestrain or worse in your viewers. Axis label, legends, graph titles all need to be re-done for posters. Hairline curves need to be thickened to 2- or 3-pt wide. Non-bold curve colors like green need to be changed. And try to label curves directly rather than using legends.

Among all our previous guidelines, we think this is the one that will most improve ARM posters. And it has the salutary side benefit of keeping down the *amount* of text and teaching you how to say the same thing in fewer words (good training for slides as well). We are asking you to mightily resist the temptation to use smaller font sizes than we recommend, just to pack more information in. Nothing is more salutary for posters than being able to read them from the proverbial 5 feet away.

If you want to improve your poster 200% without thinking further about poster design, just become a poster child for The Year of Readable Fonts, and stop here. If you want to hear more about the underlying philosophy, continue.

Posters as a Communication Medium

Posters are an entirely different communication medium than talks. Posters must seduce an audience that is *standing and mobile* -- a crucial difference from a seated, captive audience. You must grab their attention in the first few seconds with an eye-catching, elegant, simple design, readable from five feet away, as they hover in momentary indecision whether to stay or go. If a poster lacks both readability and eye-catching design, few will stop, and fewer will remember it.

Posters should be an advertisement for the quality of your logical mind. They show how well, or how poorly, you can organize information. If you are successful in mastering this new medium, people will be impressed with you. Those same people will be reviewing your postdoc applications, promotions, proposals, and papers, so why would anybody disrespect these viewers?

The only answer I have been able to come up with, is that people think more information is better, and when making a poster they follow this road to near its end, filling up all the available white space on the poster, while shrinking the font size to accommodate more and more information.

But this centers the design of the poster around a desire to show off. Look how much I know! That entirely misses the point of a poster -- to attract readers who

will tarry for a minute or so, and remember your stuff. No one who tries to walk in the shoes of readers, would even dream of creating the dense, cramped posters which still fill too many ARM poster boards.

Walking in the shoes of readers is the primary tip for making good posters. Most of the other tips are simply corollaries and could be thought of by any intelligent person.

In our large ARM poster sessions, you have only a few sec to attract someone's attention. It happens that quickly. We may not realize that, because we tend to ignore the many people who pass our poster without stopping. We tend only to remember those who stopped -- a tiny fraction of the passersby. Imagine if we could double or triple our catch rate with an attractive poster that almost stops people in their tracks.

Instead, too many posters send subtle cues to "move along". They are crowded with too much information having too small of a font size. They put their Conclusions down at knee level instead of eye level. They expect the reader, in the one minute or so they may allot, to get through an amount of material that would take 5-10 min of speed reading. They firehose the reader and expect the reader to sort it all out.

After being firehosed at each of, say, 10 posters, our poor reader can hardly be blamed for bailing out to chat with colleagues or make a trip to the bar.

It is our job to grab and hold the reader's attention in such a way that the bar, and chatting with colleagues, are less seductive alternatives. People enter a poster session, after all, with a powerful drive to learn something, and if you make it easier for them to do that, you will capture them. They want to learn. Help them!