How To Make a Conference Poster

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This is a short list of things that helped me designing my first conference poster. Hopefully, some of these hints will help you, too.

1 Introduction

Making a poster for your paper is something you have to learn during your late years of graduate school or first years of PhD. There are a lot of do's and don't's, but most of are just best practices that you sort of have to catch up on on the way.

In this short how-to, I'll present what helped me along the way.

2 Getting started

For many people, getting started is the hardest part. There is no or only a very vague ideo what you want to present and even less so how you want to present it. However, as there is not yet a prototype of the final product, you cannot use an iterative process of critique and update yet. Here, then, are a few things to consider.

2.1 Fix your tools

First, decide on your weapon of choice. For many, this is going to be some (desktop) publishing software or drawing software. Although I really like the power of LaTeX for writing papers, I don't find it to work well in designing posters, as I want more liberty in design there. Personally, I like working with Inkscape, as it ships naturally with all operating systems, works well with LaTeX formulas and allows me to easily draw most of the figures I need. However, I'd probably use the combination of InDesign and Illustrator, if I had readily access to them.

2.2 Make a template

I have designed many a page for my school's yearbook and am now convinced of the benefits of having a template, so this is a natural next step. As posters usually have A0

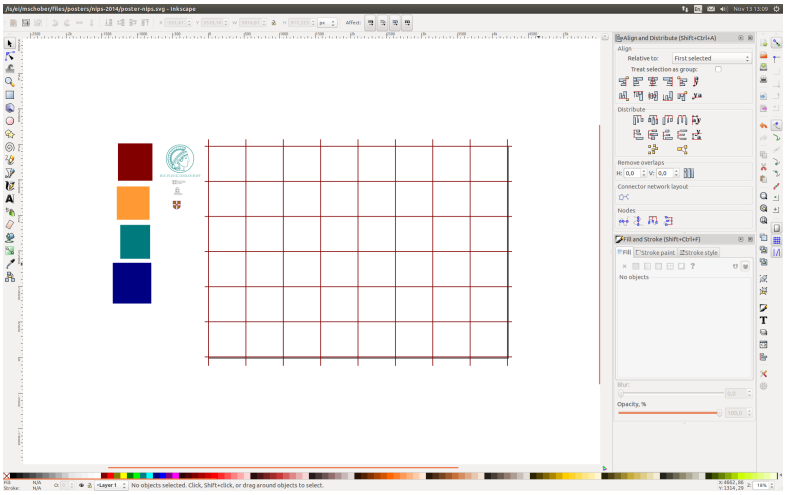

Figure 1: Using Inkscape, I first create a regular grid to help me structure the poster. I also create rectangles of all colors that I want to use and import relevant logos (left).

format, just load an empty page of A0 (doesn't matter if you use landscape or portrait here) and give it some all-purposes structure.

I personally first define a grid on the paper, both vertically and horizontally. The grid should not be too coarse (i.e., even if you already decided to use three columns, you should define at least six, likewise for the rows), but also not too fine, because the purpose of the grid is to restrict your design and therefore narrows your choices too make it easier. Something between 5-15 works best for me. See Fig. 1 to see this process in action.

Next, choose one or two fonts and three font sizes. For bullet points, font size 28 works good for me. For subheadings, around 50 works good and the title can be as big as possible. Some people suggest sans serif fonts for headings and serif fonts for body text, but this is no hard rule. Headings can be as big as your space allows, ranging all from 70 to 150.

Also, if you have some sort of corporate design or a set of special pre-defined colors and logos, now is the time to put it readily accessible in the file. Since I work with Inkscape, I just make a small box of all my colors next to the template page and also put all the logos I am going to use somewhere in the upper left or right corner.

2.3 Collect essential content

By essential content, I mean all the figures and formulas that need to be on the poster in any case. Usually, this should be at least all the figures that are in your paper. For formulas, it's reversed: try to put very little formulas on the poster with the number of formulas in your paper being a very hard maximum.

A trick which is due to Søren Hauberg and that helped me a lot, is to get into an empty room in front of a black board or a piece of paper and "present" the *empty* board as your

poster. Draw all the images and figures that you need as you go along. This way, you know exactly what you want to show and what is not needed.

By collecting, I mean that you make it all readily accessible for the tools you work with. For instance, in Inkscape I put all the formulas and figures around the empty page. I always keep a copy of the original size around the actual poster and also immediately put a copy on the poster, which I rescale, such that in the end all the figures have space on the poster and I have some white space left.

3 First draft

At this point, your poster should already have some content, namely the figures and formulas. Depending on the number of figures that you have, it even might appear pretty full already. The next step is to really stuff it. Put in the poster title, author names, affiliations and email addresses or homepage links, if so desired. Put in the acknowledgements at the bottom of the poster. Put in all headings that come to mind immediately (say, *Results*, *Experiments*, *References*, *Introduction*). Talking about references: put in all references that absolutely have to be on the poster. At the end of this process, the poster should already appear fullish.

I then proceed as follows: I group the things I have into some sort of bubbles and then designate some rectangular space on the poster where they will belong for the first draft. This should lead to some sort of structure on the poster already. Then I try to think about the the things that are not on the poster yet but need to be on there: how do I give a motivation/introduction to the thing? How much detail/background do I need to give to explain the method/experiments? Do I need a discussion on the poster? Keep adding headings and allocate space as you move along this train of thought.

After you've got everything on there, it's time to make it look somewhat nice for the first time. How can you make your concept visually pleasing? Do you want to apply any visual tricks? Is there a way you can give your poster an unique appearance while still providing all the necessary material? Try different things out while playing with the content you got. Does it fit or do you see a way it could possibly fit, then go for it. If it doesn't fit, don't waste your time on making it possible anyway (except you feel that this might be your career-changing poster). The end of this process should leave you with a general concept.

From there, you should have a second look at the content. Now fill in the "bullet points" where applicable. Double check that there is no unnecessary content on the poster. Check that each group of things has the right size acording to its importance.

And when that's all set and done, you really spend some time making it look nice, with correct size and alignment of objects, colors, etc. After that, you send it off to your collaborators and from there, you can make it an iterative process until converged to "fair enough".

4 Tips and tricks

Here, I collect just some more hints that didn't fit in one of the other sections.

- You can put a QR code in places where you want to put a link. This can either be a link to your homepage or the project page, or a link to supplementary material (video, source code, etc.). QR codes don't need to be black and white, but the contrast must be positive, i.e. the darker color needs to play the rôle of the black color.
- Acknowledgements don't need to follow the template: make the font very small and let it be one or two lines max at the very bottom of the poster.
- The grid is only there to help you get started. Once you decided on the general postition of your material, you may stretch and shorten rows and columns as you need. However, it is visually pleasing for the eye, if you keep a rectangular structure.
- One way to get all the necessary formulas and figures very fast, is to extract them directly from your paper. You can use `pdftk` to slice your paper in individual pages and then use `pdftocairo` to convert it into a SVG. Import all the SVG files into Inkscape and you can drag and drop to put it all on the page. Here's a link to the original article I took this trick from: `http://stackoverflow.com/questions/12084742/extracting-vector-graphics-from-pdf-with-inkscape`
- Make sure to use all the help from your software that it offers and be aware that it will take some time to familiarize yourself with it. For instance, Inkscape offers automatic alignment and distribution of objects, you can copy the shape of objects, such that all figures have identical size, you can use layers to make sure not to accidentally move something after you finalized a section, and so forth.

5 Other resources

Here's a list of links that I also found helpful:

- `https://www.cs.utexas.edu/sites/default/files/about_us/documents/MakingPosters.pdf`
- `http://blog.felixbreuer.net/2010/10/24/poster.html`