

# Some Suggestions for Making a Presentation

by Mihai Buiu and Leslie Lamport, edited by T. H. Hankins February 12, 2007

## Golden rule

**Human attention is very limited. Don't cram too much information, either in each slide, or in the whole talk. Avoid details: they won't be remembered anyway.**

## Organization

- Have a very clear introduction, to motivate what you do and to present the problem you want to solve. The introduction is not technical in nature, but strategic (*i.e.* why this problem, big idea).

- If you have a companion paper, mention it during the talk and recommend it for more details. Don't put all the details in the talk. Present only the important ones.

- Use only **one idea per slide**.

- Have a good conclusions slide: put there the main ideas, the ones you really want people to remember. Use **only one "conclusions" slide**.

- The conclusion slide should be the last one. Do not put other slides after conclusions, as this will weaken their impact.

- Having periodic "talk outline" slides (to show where you are in the talk) helps, especially for longer talks. At least one "talk outline" slide is very useful, usually after the introduction.

- Don't count on the audience to remember any detail from one slide to another (like color-coding, applications you measure, *etc.*). If you need it remembered, re-state the information a second time.

- Especially if you have to present many different things, try to build a unifying thread. The talk should be sequential in nature (*i.e.* no big conceptual leaps from one slide to the next).

- Try to cut out as much as possible; less is better.

- Help the audience understand where you are going. Often it's best to give them a high-level overview first, and then plunge into the details; then, while listening to the details they can relate to the high-level picture and understand where you are. This also helps them save important brain power for later parts of the talk which may be more important.

## Mechanics

- Use a good presentation-building tool, like MS PowerPoint. Avoid  $\text{\LaTeX}$ , except for slides with formulas (Leslie Lamport himself says that slides are visual, while  $\text{\LaTeX}$  is meant to be logical). Good looks are important. If you need formulas, try TeXPoint, George Necula's  $\text{\LaTeX}$  for Powerpoint.

- Humor is very useful; prepare a couple of puns and jokes beforehand (but not epic jokes, which require complicated setup). However, if you're not good with jokes, better avoid them altogether. Improvising humor is very dangerous.

- The more you rehearse the talk, the better it will be. A rehearsal is most useful when carried out loud. Five rehearsals is a minimum for an important talk.

- The more people criticize your talk (during practice), the better it will be; pay attention to criticism, not necessarily to all

suggestions, but try to see what and why people misunderstood your ideas.

- Not everything has to be written down; speech can and should complement the information on the slides.

- Be enthusiastic.

- Act your talk: explain, ask rhetorical questions, act surprised, *etc.*

- Give people time to think about the important facts by slowing down, or even stopping for a moment.

- Do not go overtime under any circumstance.

- Listen to the questions very carefully; many speakers answer different questions than the ones asked.

- Do not treat your audience as mentally-impaired: do not explain the completely obvious things.

## Text

- Slides should have short titles. A long title shows something is wrong.

- Use uniform capitalization rules.

- All the text on one slide should have the same structure (*e.g.* complete phrases, idea only, *etc.*).

- Put very little text on a slide; avoid text completely if you can. Put no more than one idea per slide (*i.e.* all bullets should refer to the same thing). If you have lots of text, people will read it faster than you talk, and will not pay attention to what you say.

- Don't use small fonts.

- Use very few formulas (one per presentation). The same goes for program code (at most one code fragment per presentation).

- Do not put useless graphics on each slide: logos, grids, affiliations, *etc.*

- Spell-check. A spelling mistake is an attention magnet.

## Illustrations

- Use suggestive graphical illustrations as much as possible. Don't shun graphical metaphors. **Prefer an image to text**. In my presentations I try to have 80% of the slides with images.

- Do not put in the figures details you will not mention explicitly. The figures should be as schematic as possible (*i.e.* no overload of features).

- Do not "waste" information by using unnecessary colors. Each different color should signify something different, and something important. Color-code your information if you can, but don't use too many different colors. Have high-contrast colors.

- A few real photos related to your subject look very cool (*e.g.* real system, hardware, screen-shots, automatically generated figures, *etc.*). Real photos are much more effective during the core of the talk than during the introduction. I hate talks with a nice picture during the introduction and next only text; they open your appetite and then leave you hungry.

- For some strange reason, rectangles with shadows seem to look much better than without (especially if there are just a few in the figure).

- Sometimes a matte pastel background looks much better than a white one. [I like yellow text on a blue background. — THH]
- Exploit animation with restraint. Do not use fancy animation effects if not necessary. However, there are places where animation is extremely valuable, *e.g.*, to depict the evolution of a complex system, or to introduce related ideas one by one.
- Use strong colors for important stuff, pastel colors for the unimportant.
- Encode information cleverly: *e.g.* make arrow widths showing flows proportional to the flow capacity.
- Use thick lines in drawings (*e.g.* 1 1/2 points or more).

## Results

- Don't put useless information in result graphs (*e.g.* the 100% bar for each application).
- Label very clearly the axes of the graphs. Explain the unobvious ones. Use large fonts for labels; **the default fonts in Excel are too small.**
- Discuss the results numbers in detail; "milk" them as much as possible.

## References

I [M. Budiu] don't agree 100% with him, but Mark Jason Dominus gives some very good advice on presentations at

<http://perl.plover.com/yak/presentation>

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Here is some excellent advice from 1979 by Leslie Lamport, author of the L<sup>A</sup>T<sub>E</sub>X Manual. Note that this was written long before PowerPoint existed.

HOW TO PRESENT A PAPER  
Leslie Lamport 4 August 1979

Quotations from "East Coker" by T. S. Eliot.

"So here I am...

Trying to learn to use words, and every attempt

Is a wholly new start, and a different kind of failure

Because one has only learnt to get the better of words

For the thing one no longer has to say, or the way in which

One is no longer disposed to say it."

## What to Say

- Don't give your paper; the audience can't take it. If someone can understand in thirty minutes what it took you weeks to develop, then you're in the wrong business.
- Do advertise your paper. The purpose of an automobile ad is to get potential customers to the showroom, not to give technical specifications. The purpose of your talk is to get people who might be interested in your work to read the paper, not to save them the trouble of reading it.

- Giving a good presentation is an art, requiring both practice and talent. No rules can turn you into an artist, but the following suggestions might be helpful.

1. Describe simple examples rather than general results. Try to make the examples much too simple — you will not succeed.
2. Don't use formalism. If your results cannot be described simply and informally, then there is no reason why anyone should be interested in them.
3. It is better to be inaccurate than incomprehensible. The place for accuracy is in the paper. (However, false advertising is unethical.)

## How to Say It

- Slides are effective. Here are some suggestions for their proper use.
  1. Don't put too much on a slide — a picture of a thousand words is worthless. For 8 × 11 slides, all letters should be at least 3/8 inch high, with plenty of blank space. People in the back row have to read them, too. [0.375"/8" ≈ 1/21 — THH]
  2. Slides should be neat and legible. The listener isn't your secretary; it's not his job to decipher your handwriting.
  3. A rapid sequence of slides has a hypnotic effect. Unless you are a licensed hypnotist, don't use more than one slide per minute.
- Time your talk. Running over your allotted time is a mark of incompetence, and displaying your incompetence is a poor way to get someone to read your paper. Remember that talking to an audience takes longer than talking to a mirror.

## Da Capo

- You are now thinking: "All those dull speakers I've listened to should use these rules, but I don't need them because my talks are interesting." All those dull speakers are now thinking exactly the same thing. Read the rules again with the proper humility. They apply to everyone.  
"The only wisdom we can hope to acquire  
Is the wisdom of humility: humility is endless."

## Coda — For Session Chairmen

- Be utterly ruthless about enforcing time limits. Warn the speaker when he has 10 minutes left and when he has 5 minutes left, and stop him in midsentence when his time is up. The audience will be grateful. (A loud alarm clock works quite well if you don't turn it off until the speaker has finished talking.)
  - Protect the speaker and the audience from inappropriate questions. Questions should be allowed during the talk only if the audience is small and the question is a simple request for clarification. After the talk, you must be prepared to silence the following two kinds of questioner.
    1. One who leads the speaker into a long discussion of an obscure detail which is of no interest to most of the audience.
    2. One who monopolizes the time arguing with the speaker over unresolvable philosophical issues.
- Remember that silencing one person enables the rest of the audience to ask questions.