Giving Technical Talks

Jaspal Subhlok

how not to endlessly repeat the same mistakes
Overview

- Why are you Giving a Talk?
- How to Organize a Talk
- Some More Detailed Advice
  - Ten Commandments
  - Seven Deadly Sins
- Conclusions
Acknowledgements:

- Based on a talk by Scott Drysdale, Dartmouth College
  who in turn acknowledges
- Paper by Ian Parberry:
  http://www.eng.unt.edu/~ian/guides/speaker.html
- and a talk by Bill McKeeman
Your Reason for Giving a Talk

- Somebody is making me do it
- I want to impress the audience with brilliance.
- I want to get a job
- I want the audience to understand my research.
- I want to detail everything I know on the subject while someone is still listening

Ability to give a good talk does help your career
A technical talk is great for conveying:

• context
  – What has been done before?
  – Why is the research important?
  – What problems are still open?

• An overview and framework
  – What does this research contribute?
  – What methods were used to solve problems?

• Enthusiasm and excitement
A technical talk is a poor way to convey:

- Nitty-gritty details
- Lots of factual information
- Theorems & proofs

Leave those to technical papers…
The Parts of a Technical Talk

- Introduction
- Body
- Technicalities
- Conclusion
- Questions
Introduction

• Define the problem
• Motivate the problem and hook audience
• Introduce needed terminology
• Discuss earlier work
• Explain the key contributions
• Provide a roadmap for the rest of the talk
Body

- Describe the main hypothesis, experiments, analysis
- List the major results
- Explain the significance of the results
Technicalities

• Present a key lemma or technical idea …
• Descend into detail briefly, slowly and carefully
• perhaps convince people that what you have done is not trivial …
Conclusions

• Summarize the key points – regain lost audience
• Make observations that would have been confusing in the beginning
• Give weaknesses, open problems
• Indicate that the talk is over
Questions

• Genuine request for information —> answer the best you can

• Questioner wants to look smart and knowledgeable —> be polite and complimentary

• Malicious questions
  – be polite and measured in response
  – Move questions “offline” if needed
  – Say “I don’t know” (with assurance) if needed
Who is your Audience?

• General public
• CS folks (e.g. colloquium)
• CS folks in your area (e.g. seminar class)
• Experts in the exact area of your research (focused workshop)
Addressing your Audience?

- General public
  Introduction  Body  Technicalities
- CS folks, e.g., a colloquium
  Introduction  Body  Technicalities
- CS folks in your area, e.g., seminar class
  Introduction  Body  Technicalities
- Experts, e.g., focused workshop
  Introduction  Body  Technicalities
The Ten Commandments

- Repeat key concepts
- Remind, don’t assume
- Give examples, not proofs
- Use logical order
- Size talk to the time

- Maintain eye contact
- Maintain ear contact
- Simple visuals
- Employ pictures
- Do not get anxious
Use Logical Order

• You are telling a story. What order will make the best sense to the audience?
• Avoid forward references
• Motivate each step, tie it back to the overall outline
• Remember that the audience is not as familiar with the material as you are!
Size Talk to Time

• Leave time for audience interaction
• Plan to end at least 5 minutes early
• Plan what to leave out if you get behind
• You can’t include everything. Keep the most important stuff – the rest can be read from the paper
Maintain Eye Contact

• It is a way to communicate
• It is how you tell if the audience is following, lost, bored, etc.
• Talk to your audience - don’t read your talk, talk to your feet, talk to the screen
Maintain Ear Contact

- Speak slowly
- Speak clearly
- Project your voice
- Pause after delivering a packet of information or asking a question
Simple Visuals

- Make sure that the text is large enough to read.

- The purpose of the slide is to give the audience a structure, as something to jog their memory as to the point you are trying to make, or as a concrete expression of a formula, etc. It should not be a verbatim transcript of what you are saying. If you are saying exactly what is on the slide then you are doing something wrong.
Simple Visuals

- Too many **special effects**, fonts, **colors**, etc. make slides hard to read and understand and distract from your talk.
Pictures Pictures

• One picture (graph, diagram) can save 5 minutes of explanation
• Good picture are worth the (considerable) time to make them
• …. but don’t litter your overheads with pictures from the web
Do Not Get Anxious

• Prepare, Practice, Get Experience
• Quietly organize your thoughts before talk
• Try out the projection equipment beforehand
  – Think about what you will do if the equipment does not work
• Pause and take a deep breath if panic strikes
Seven Deadly Sins

- Trying to include too much
- Going over your time
- Being boring
- Speaking unintelligibly
- Arrogance
- Losing your audience
- Including material you don’t really understand
Trying to include too much

• Symptom - Time almost up and you are halfway through your talk
• Symptom - Tearing through slides faster than the audience can read them
• Symptom - Too many slides. Plan on at least two minutes per regular slide.
• Disaster - you left the most important stuff to the end, and are out of time
Being boring

• Presentation is a public performance
• You have to be energetic, animated, enthusiastic. (You can overdo this.)
• If you don’t seem to be interested, why should your audience be interested?
• If you find the material boring, so will your audience. Pick more interesting material.
Speaking unintelligibly

• Don’t mumble
• Don’t talk in a monotone
• Don’t use jargon or undefined terms
• Don’t swallow your words or endin...
• Avoid mannerisms that distract your audience from what you are saying
• Speak slowly if it helps
Arrogance

- The fact that you know more about your talk than the audience does not make you superior to them.
- Do not put down or belittle questioners.
Losing your audience

- Over their heads (slow down, back up)
- Beneath their interest (get to the good stuff)
- Too big a step (go back and fill in details)
- Not enough relevant examples
- *Loss detector: eye contact*
Conclusions

• Everybody can learn to give good talks
• Plan and organize your talk
• Think from the audience’s point of view
• Keep the focus on key points and ideas
• Practice! Get feedback. Get better.