Giving Technical Talks

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It is not what you say but what the audience learns that matters
Overview

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

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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
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 an audience? (who is not that familiar with the subject)
• Avoid forward references
• Motivate each step, tie it back to the story

The order in which you did the research is irrelevant
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 (not read) to your audience – (not to your feet or 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

• 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/room configuration beforehand
• 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 half way through your talk
- Symptom – Too many slides. Tearing through slides faster than the audience can read them

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 ending...
- 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*
Including material you don’t understand

• No excuse for it
• It is your talk even if you reference other material
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.