Giving Technical Talks

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It is not what you say but what the audience remembers 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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    http://www.eng.unt.edu/~ian/guides/speaker.html
  • and a talk by Bill McKeeman
Your Reason for Giving a Talk

• My grade depends on it
• I want to impress the audience with my 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
- Discuss state of the art…

Then

- Explain the key contributions
- Provide a roadmap for the rest of the talk
Body

- Describe the main hypothesis, experiments, analysis
- List 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
• Use logical order
• Size talk to the time

• Maintain eye contact
• Maintain ear contact
• Clear 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
Clear Visuals

- Make sure that the text is large enough to read.
  Yes, that includes graphs and charts.

- 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.
Clear Visuals

- Too many *special effects*, *fonts*, *colors*, etc. make slides hard to read 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/room configuration beforehand
- Pause and take a deep breath if panic strikes
Seven Deadly Sins

• Trying to include too much
• Going over your time
• Speaking unintelligibly
• Being boring
• Losing your audience
• Including material you don’t understand
• Answering without understanding
Trying to include too much
Going Over Your Time

• Symptom - Time almost up and you are half way through your talk
• Symptom – 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
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
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?
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
Answering Without Understanding

Knee jerk response to questions is normal under stress. Resist it!

- Audience does not have your perspective
- Don't assume they asked the question you expected. Ask for clarification
- Don't dodge the question. Say "I don't know" if need be
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.