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:

- 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

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

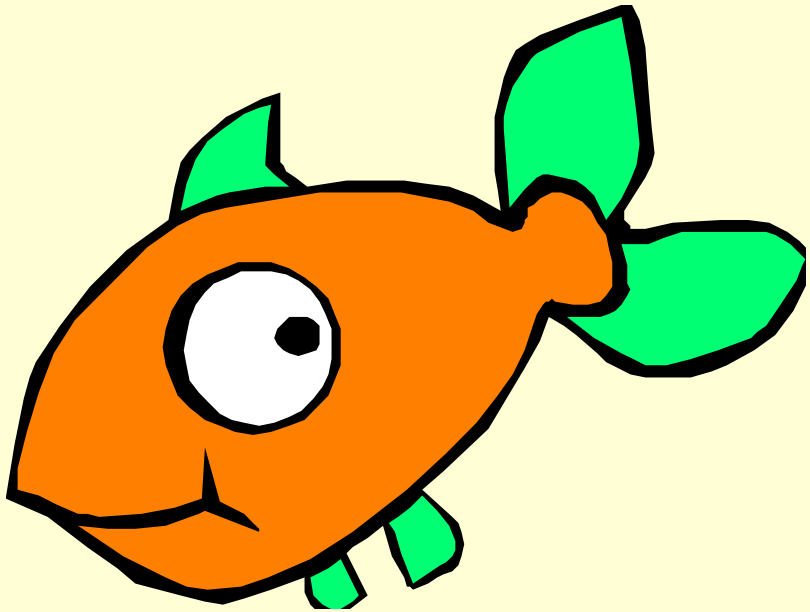
The order in which you did the research is irrelevant

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

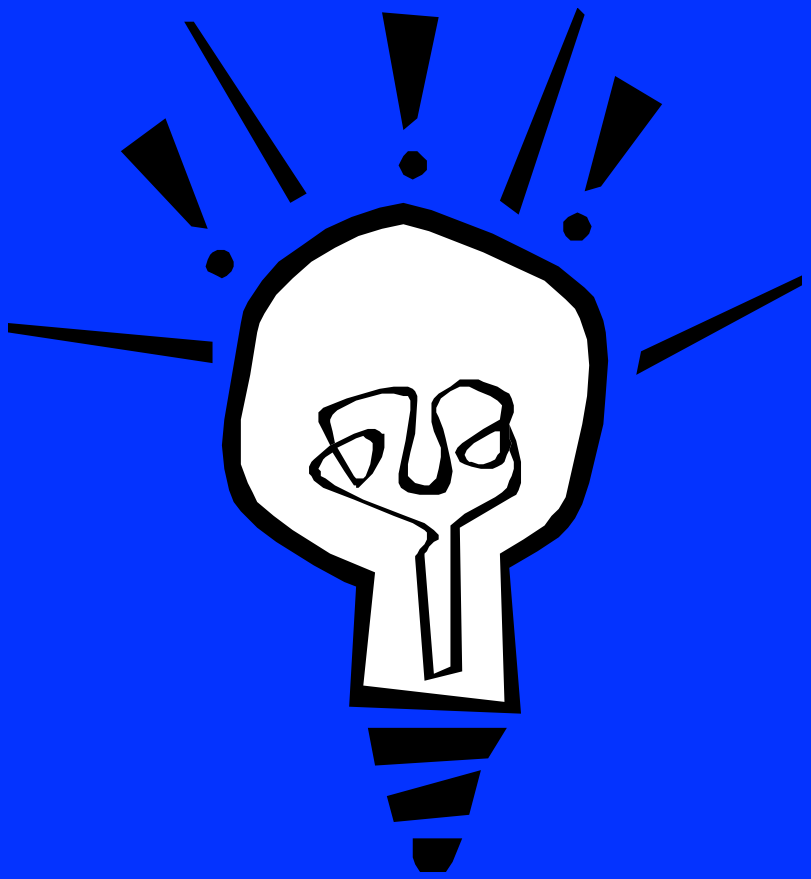
- Speak slowly
- Speak clearly
- Project your voice
- Pause after delivering a packet of information or asking a question

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 ***sspecial effectss***, *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/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

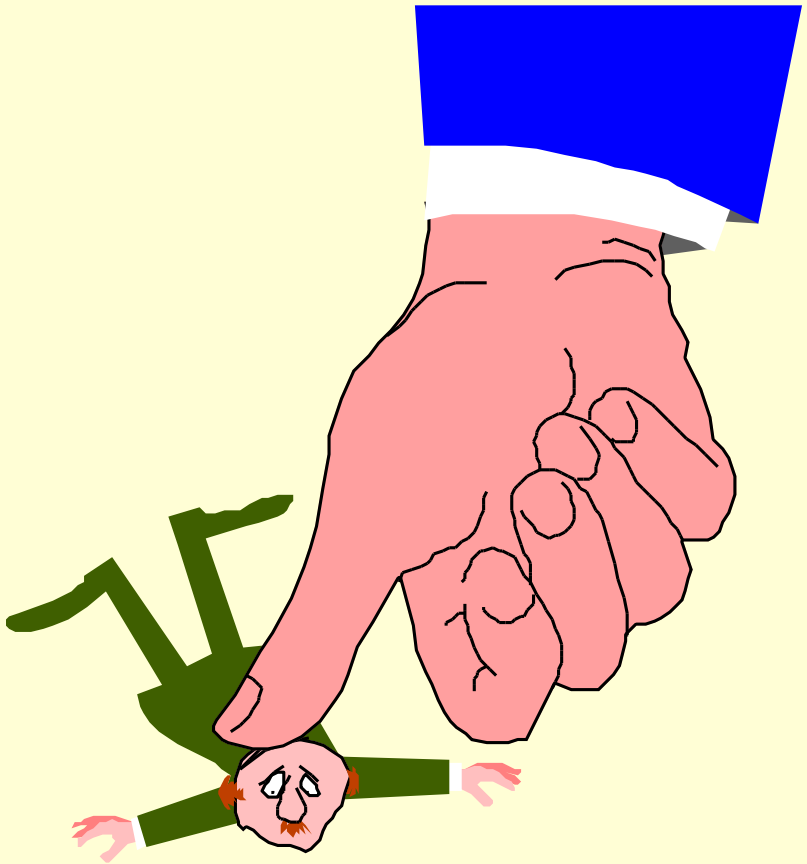
Being boring

- 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 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*

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.