Preparing and Delivering Presentations

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Cmput 603

… including material from J Nelson Amaral, M desJardins and others…
General Comments about presentations in general:

- People are uni-processors: if they're reading, they're NOT listening. Therefore, it makes sense to write as LITTLE material on your slides as possible. You should avoid complete sentences; by using Bullets! You should use LARGE fonts. Use pictures!

- Give a simple example FIRST, before giving the formal definitions, theorems, etc. Then perhaps use that example to "instantiate" the definitions, etc. (Don't worry: people typically do an amazingly great job of generalizing from such examples.) Help parse by splitting out phrases on separate lines.

- Try to avoid technical terms, if at all possible. (Or at least give a simple example of the idea.)

- Be sure to re-read slides, and check!

- Move over…

- Hard to read color? Too small?

- No bullets… Bad line breaks

- Just skipped?

- Typos

- Why have this junk?? What does it mean?

- … lighting? … movement? … monotone voice?

- Context? Why am I saying this?

- 4.1
Presentations

- People are uni-processors:
  - If reading, NOT listening ⇒ minimize text!
  - *Avoid complete sentences*; use Bullets!
- **Simple examples FIRST**
  - ... before formal definitions, theorems, ...
  - use example to "instantiate" the definitions
- Easy to read *fast*:
  - Avoid technical terms
  - Include relevant *Pictures!*
  - Separate lines for each idea
  - Use **LARGE** fonts... *colors* are fun ... *so is animation*
- Proof-read!!

[Image: http://www.gettyimages.ca/detail/78742884/Fuse]
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Presentations

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  - If reading, NOT listening ⇒ minimize text!
  - Avoid complete sentences; use Bullets!

- Simple examples FIRST
  - ... before formal definitions, theorems, ...
  - use example to "instantiate" the definitions

- Easy to read fast:
  - Avoid technical terms
  - Lots of Pictures!
  - Separate lines for each idea
  - Use LARGE fonts... colors are fun ... so is animation

- Proof-read!!

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Outline

- Preparing the presentation
  - Contents
  - Form
- Delivering the presentation
  - Before presentation
  - During presentation

While focus is on *Research* Presentations, similar ideas for Course presentations.
Why Have Presentations?

- Important to have ideas
- Important to develop/validate ideas
- Important to **disseminate** ideas
  - Publications
  - Presentations
    - locally: in lab, team, ...
    - non-locally: in workshops, conferences, ...
- Also presentations for...
  - courses
  - project meetings
  - ...

Goal of Presentation

Possible Purpose(s):
- to entertain
- to inspire
- to persuade
- to inform or educate

Goal of Research Presentation:
- Say enough to get them excited... and
- motivated to read paper!

Goal of Educational Presentation:
- Emphasize high points of text
- Reinforce ideas
- Give examples
- Bring up auxiliary issues

http://toastofedmonton.shawwebspace.ca/pages/view/planning_a_presentation/
Presentation ~ Story

Tell a story!!

Should FLOW...
  - Beginning, middle, end
  - Not a shopping list!

Structured, to answer...
  - Task itself
    - Def’n: What is problem?
    - Motivation: Why should audience care?
  - Results... How you solved it?
    - (Theoretical? Empirical? ...)
    - Why impressive?

Conclusion
  - What do you want them to remember?

http://www.bbc.co.uk/scotland/education/wwww/buildings/standard/shopping/?item=list
Structure of Presentation

Think of how material should flow... perhaps

A. Opening
   - Captures the audience attention
   - Leads into the topic

B. Body
   - Point #1
     a. Statement
     b. Supporting material
   - Point #2
     a. Statement
     b. Supporting material
   - ...

C. Conclusion
   - Review / summary

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Prepare for your Audience

Goal: intended audience to understand material

Know your audience!
- If a “general audience”: Give the necessary background
- If talking to researchers in your field: Don’t waste time on basics

Imagine you didn’t know this material
- What would YOU need to get it?

Emphasize
- what is important
- (what you’ve done)
- why they should care!
What (not) to say ...

- Think of what you’d LIKE to hear...
  - High points; not irrelevant details
- Think of what you’d be able to UNDERSTAND
  - Not complicated algorithms, complicated proofs, ...
- Proof?
  - If essential: Sketch: Yes  Details: No
- Algorithm?
  - If essential: Sketch: Yes  Details: No
- Tangentially related material – eg, things tried?
  - If audience would think about it ⇒ Yes (sketch)
  - If so obscure ⇒ No
- Unmotivated, hard-to-describe alg... that didn’t work?
  - No!
How Much to Say?

- What do you want intended audience to know, when done?
  - Say THAT!
  - Say ONLY THAT!
    - Everything you say should relate to this msg(s)!

- Having too much can be bad...
  - Superset of a good talk is NOT a better talk
Timing

- Know how long you have
  - How long is the talk? Are questions included?
- A good heuristic is 2-3 minutes per slide
  - Maybe... depends on your own pacing...
- Can rarely say everything about a topic, so don’t worry about skipping some things!
Content, per Slide

- Try to put ONE idea on each slide
  - ... corresponding to title
- If you have to split, use
  Title #1
  Title #2
- PPT slides are “free”
  - Can use multiple slides for “theme”,
    ... unless too fragmented
Extra Slides

If you
  - anticipate some questions
  - have tangentially related ideas
have AUXILIARY slides, at end of presentation!
Use to answer questions

? Use later, for longer talk?
Other Thoughts, wrt Contents

- Be sure **YOU understand the material!**
  - ... even if someone else’s slides!
  - Heuristic:
    - Think through to one level more depth than slides...

- **Re-read slides**
  - make sure they are understandable
  - make sure they “flow”

- **Ok to be cute**... but not too cute...
  - Never have off-color comments
Outline

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Make it easy for Audience to Track

- Pictures better than words
  - ... if relevant!
- Use colors consistently
  - Eg, write everything that the user types, in blue
- A full slide of text can be overwhelming!
  - Use animation to present information incrementally.
- Use line breaks to help parse
- Notation:
  - Do not use the same variable for many purposes...
    - not even if in different fonts!
  - Think of saying it: big_A vs little_a vs A vs B
Make EASY to understand

- $\Rightarrow$ vs $\implies$
- $a = \langle 2,3 \rangle$ vs $a = \langle 2,3 \rangle$
- $\times$ vs $\times$
- $\epsilon$ vs $\in$
- $!= vs \neq$
- Use spacing to help viewer

Unambiguous

- $l$ vs $1$; $0$ vs $0$
- $\mathbb{R}$ vs $\mathbb{R}$
- $\{ ... \}$ for set; $[...]$ for tuple; ...

$A = f(b(x), g(y))$ forall $x, y$

$A = f( b(x), g(y) ) \text{ for all } x, y$
Easy to Understand

- YOU control the space in your slides...
  - Use it effectively!

- Make figures LARGE!
Yadda Yadda Yadda

- Blahs (332)
- P: 0.8836 ± 0.0928
Yadda Yadda Yadda

- Blahs (332)
- P: 0.8836 ± 0.0928
Graphs

- Label axes of graphs
  - Accuracy? Error? Inches? Miles? ...

- Do NOT use “Fig 1” or “Table 2”
  - Unlike paper, viewer cannot go back ...
  - Readers will NOT remember ...
Make EASY to understand

- In general...
  - If something helps readers understand **papers**, it probably applies here, to **presentations**!

- Define terms...
  - ... before use!
  - Use in example, to illustrate
Use Diagrams!

- Many Computing Science ideas correspond to some *procedure*
  - Perhaps with subroutines...

```
  Database
  ▼
  ▼
A → B → C
  ▲
Input → Output
```

- Distinguish Data from Process
- Be sure to include "implicit inputs"
  - Eg database
Use RoadMap

- Roadmap slides
  - if >15 minutes
  - helps “wake people up”

- Organization
  - *Tell’em what you’re going to tell’em*
    - ≈1-2 minutes
  - *Tell’em*
  - *Tell’em what you told’em*
    - ≈1 slide (1 minute)
Timing Issues

- Manage time
  - Have “accordion slides”
  - If necessary, skip material
    - Plan for this...

- People best remember the *LAST* thing you say
  - ... Contributions, Future Work
  - ... Future Work, **Contributions**
Overhead Material?

- Give context
  - Course: chapter in text, auxiliary readings, ...
  - Research:
    - collaborators, funders
    - bibliography ... esp your results, if job talk
  - Typically at end
  - List... do NOT “itemize”!

- If use image/ideas from others (web): give citation ... get permission
  - Especially if slides are handed out
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Practice, Practice, Practice

Practice!
Give talk to
- professional colleagues (students, advisor, collaborators)
- friends, or spouse, or...

Include slide numbers (at least during practice)

Never give a talk for the first time 😊
- If inexperienced, practice your timing:
  - ~2 times on your own, to get the general flow
  - ≥1 dry run to work out the kinks
  - A run-through on your own, night before the talk

M desJardins

http://leerydemonstrates.com/recursion
Just Before Presentation

- You are in charge!
  - Arrive early, to engineer your room
    - lighting
    - decide where to stand
    - move obstacles away
    - ...

- Details...
  - Plug in laptop
  - Turn off cell phone, messaging (Skype, ooVoo), ...
  - ...

Interact with Audience

- *Don’t just read your slides!*
- Interact with the audience!
  - Make eye contact
  - See if audience is tracking
  - Ask questions!
- Adjust your voice for emphasis ...
- Pause
Questions

- Questions from audience are typically good!
  - Helps audience “wake up”!
  - Helps you gauge how well they are tracking
- Feel free to “delay” answer
  - If relevant slides coming later
  - If off-topic: “take this off-line”
- If question is relevant, but not anticipated: Ok to pause, to think it through...
- Reward the questioner
  - ... even if the question is ...sub-optimal ...
Move!

- Do not just sit ...
- You can (should!) move around
- Don’t fidget
- Point to PRESENTATION, not to your laptop!

“Work the room” ... effective motions:
- To emphasize something, or catch audience's attention: Walk closer to the audience and stop
- To make a new point / change topic: Move to new location
- When asking question: Walk towards the audience and wait for a reply ... after getting reply, return to original position
If you make a mistake ...

- Don’t fret, pout, get upset ...
- If critical...
  - just go back to problem and fix it!
  - or... fix it when necessary
- If not critical, just go on!
  - Perhaps mention this issue at END
  - ... or not...
Nervousness

- Every speaker must confront Nervousness
  - aka speech anxiety, stage fright, platform panic, ...
- Feeling nervous before a presentation is healthy
  ⇒ your presentation is important to you;
    you care about doing well.
- Need to manage and control your nervousness
  ... to become an effective speaker!

http://toastofedmonton.shawwebspace.ca/pages/view/overcoming_nervousness/
Overcoming Nervousness

- Realize
  - you are an expert on this topic!
    - ... you know it better than the audience!
  - audience wants you to succeed!
- Prepare thoroughly
- Concentrate on the message - not the medium
- Turn nervousness into positive energy!
  - Harness nervous energy; transform it into enthusiasm!
- Gain experience

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Series of Presentations

- When giving a SEQUENCE of related presentations
  - Eg, a course, or seminar series, or ...
- Have “landmark slides” covering ENTIRE series
- Take time at start of each lecture to...
  - ... set the context (wrt global “landmark slides”)
  - ... REVIEW previous material
- At end of each lecture:
  - summarize current situation
  - point to future material
Some Useful Resources

Writing:
- Lynn DuPre, *Bugs in Writing*
- Strunk & White, *Elements of Style*

Giving talks:
- Toastmasters
  [http://toastofedmonton.shawwebspace.ca/pages/view/i_speak_two_languages_body_and_/](http://toastofedmonton.shawwebspace.ca/pages/view/i_speak_two_languages_body_and_/)
- Mark Hill, “Oral presentation advice”
- Patrick Winston, “Some lecturing heuristics”
- Simon L. Peyton Jones, et al., “How to give a good research talk”
- Dave Patterson, “How to have a bad career in research/academia”

Fun: Gettysburg Powerpoint Presentation:
Summary

- Use ideas for Good Papers...
  - Tell a story! Structure...
- Preparation
  - Think of what you want audience to know
    - Include (only) that!
  - Large print, easy to follow...
  - Be concise, focused
- Delivery
  - Engineer your environment to facilitate communication
  - Relax, and Enjoy!