L12: Oral presentations

Motivation

How people evaluate presentations

First impressions

Preparing the presentation

Motivation

Why place so much emphasis on oral presentations?

- You want to get your message out!
- You will be required to make presentations in your academic and professional career - count on it!
- Those who express themselves well:
  - Are held in high regard by their peers
  - Tend to advance more quickly in their careers than those who don't - regardless (almost) of your technical expertise
- Yet, according to a 1973 survey, public speaking is the number one fear of Americans!
  - We are less afraid of death than of public speaking

How people evaluate presentations

A "right brain" function

- An oversimplification of brain function but
  - **Right brain**: dominated by emotion and intuition
  - **Left brain**: associated with logical thinking and reason
- That means that _____ , not _____ , are important to the listener's interpretation of what you are saying

The 3 V's of giving a talk

- **Verbal**: What you say, content of what comes out of your mouth
- **Vocal**: How you say it – inflection, enthusiasm, intonation
- **Visual**: What the audience sees – speaker appearance, posture, gesture, facial expressions

- The Mehrabian myth (7:38:55)
  - Only 7% of your message's impact is due to verbal cues

Mehrabian's 1964 study on 'silent messages'

- Experimenter read single words (e.g., love, dear, terrible) in different tones and with different expressions, then asked participants how they knew what the speaker really meant, i.e., their intent
- The speaker's intent was decoded from visual clues 55% of the time, from vocal tone 38% of the time, and 7% from the actual words
- This result has often been taken out of context; it only applies when speakers are talking about their feelings or attitudes; it does not apply to technical presentations
- What to make of it:
  - We get most of our clues of the emotional intent behind people's words from non-verbal sources
  - When the two are in conflict, we believe the non-verbal every time
  - Talking gibberish with a nice smile and intonation will get you nowhere (except in politics)

First impressions

- In the first seven seconds of meeting you, people generally form subconscious opinions on your
  - Income level
  - Education level
  - Trustworthiness
  - Personality style
  - Confidence level
  - Intelligence
  - Work ethic
  - Dependability

Preparing the presentation

Analyze the audience

- Presentations are for the benefit of the audience, not the speaker
- Analyze their needs, and prepare the presentation to meet them
  - What are they interested in?
  - What do they want from your talk?
  - What does they already know about your talk?
  - What don't they know?
  - What is their attitude towards you and your subject?
- Rule of thumb
  - Identify the three main points for your talk
  - Then organize your talk to support them
  - Why? people will forget more than that

Organize the presentation

- Tell the audience a story: introduction, body, conclusion
- The conventional wisdom
  - Tell them what you are going to tell them
  - Tell it to them
  - Conclude by telling them what you just told them

- The **introduction**
  - Absolutely critical: if the audience doesn't follow it, they will tune out
  - Explain the problem in simple terms
    - *Nothing should be explained in such a way that it cannot be understood by an intelligent 12 year old* –Albert Einstein
  - Suggestions
    - Ask rhetorical questions
    - Narrate an experience the audience can relate to
  - The goal is to motivate the audience to continue listening

- The **body**
  - Organize it to support those main points
  - 2-4 slides that support each point
    - 1st of the group provides key ideas
    - The remainder give more of the detail
  - Don't be overly technical, avoid acronyms and jargon
  - Use analogies for complex material
  - Increase level of complexity as talk proceeds (12 year old → expert), that way EVERYBODY LEAVES HAPPY!
- The **conclusion**
  - As important as a good introduction
  - Tell them what you told them - summarize the main points
  - Motivate people to action, i.e., we better implement this!
    - OR motivate them to future research
    - OR explain to them what the next things you are going to address are

Meet the time constraints

- Don't be a Speedy Gonzalez or a Slow-Poke Rodriguez!
- Running over your allotted time is a sure way to make your audience unhappy, especially if there are presentations following yours

- **Rule-of-thumb**: take the length of time in minutes that you have and divide it by 2. That is a rough estimate of how many slides you need
- Preparation
  - Experience counts: practice, practice, practice
  - BUT do not over-prepare to the point of becoming scripted
  - Practice talk the night before the presentation, not right before the talk

Prepare for the Q&A

- *Are you familiar with the work of Bozo and Bozo from 1984 in which they proposed the exact same idea as yours?*

- How do you handle it?
  - Rephrase the question, ask the person if that is what they meant. Why?
    - It gives you time to think
    - It ensures you answer the correct question!
    - It allows you to ask the questions in a positive light if it is hostile
  - Make eye contact, smile, remain relaxed
  - DO NOT get angry or put the person down - you're in power position
  - If you can't answer it
    - admit it - don't B.S
    - Offer to discuss it after the presentation, if questioner is persistent

- Be knowledgeable, but accept you cannot know every possible answer

Laying out the slides

- Use a large font: 24 point font or greater, so they can see it in the back of the room
- Have a goal of 5-7 bullet items per page
- The text on each bullet should fit in 1-2 lines
- Use color and fancy **graphic** graphics sparingly
- Go easy on the backgrounds
- Do not use PowerPoint "CPU Wasters". For example the spiraling text and other frivolous visuals.
- Do use PowerPoint to introduce bullet items one at a time. This helps keep you on track with your discussion.

Need

- According to AppleInsid… million people owned iPods at the end of 2004 … hem while operating their automobil… ational Highway Tra… y Administration estimates that … istraction is a contributing … of 20 to 30 percent of all motor … hes – or 1.2 million accide… year. One research st… as … ed that driver inattention … ause as many as 10,000 de… ach ye… approximately $40 billio… amages. iPods can prese… istractio… ers that is similar to ce… nes in that the driver's a… ion is divide… en controlling the ste… wheel, watching … road, and navig… ntrols on the iPod. … tem is needed … w users to naviga… ng the music sele… s of their iPod witl… distracting their atte… om the road.

Objective

- The objec… this project is to design … totyp… vice that will make the i… fer to use while driving a… ob… allowing hands-free c… of the iPod. The device wi… th the user using spoken Englis… ands. The user will be abl… e simple voice commands to th… to control the opera… he iPod. In turn, the device will commu… as song titles that are displayed on the iPod s…

Need

- 10.3M people owned iPods in 2004; many use them while driving
- Driver distraction contributes to 20-30% of all accidents
- It may also lead to 10,000 deaths and $40B in damages per year
- iPods take the driver's attention away from the road
- A system is needed to control iPods w/o distracting their attention

Objective

- Design a hands-free control to make iPods safer to use while driving
- The device will interact with the user using spoken English
  - User issues simple voice commands to the device
  - The device communicates information verbally (e.g., song titles) to user

Equations and derivations

- Use sparingly
  - Academia teaches us to go through lots of steps on equations, but the goals of a typical classroom lecture are very different
- Don't derive or give too many intermediate steps, unless that is the point of your presentation (say a math conference)
- Give assumptions, important intermediates, and results
- People assume you have done your homework and derived the equation properly
- If you show an equation talk about it!
  - Every equation has it's own story, it is your job to tell it's story

The project proposal presentation

Introduction

- Provide an overview of the project and address the need, motivation, and objective
- Explain the concept in simple and concise terms

Problem statement

- Describe the state of the art regarding the technology
- If it is a new product, identify similar products that are available and what is unique about yours
- If it is a research oriented project, include basic theory and current work in this area

Requirements specifications

- Address the engineering requirements and provide a justification
- Describe standards and constraints that apply to your problem

Design alternatives

- Provide some preliminary design options that you have developed

The CDR presentation

Introduction

- Provide a brief overview of the motivation for the project

Requirements

- Recap the critical requirements that have to be met

Proposed design

- Present the high-level design
- Explain how it works and how its pieces fit together
- Include design details for all the subsystems and components
- Address how the proposed design meets engineering requirements
- Identify alternatives investigated

Preliminary test results

- Include test and prototype results

Project plan

- Provide a summary of the plan (schedule, responsibilities, cost)

The final presentation

Introduction

- Provide an overview and motivation for the project

The final design

- Describe the final design implementation
- Start with a high-level overview and describe how it operates
- Then, provide details on each subsystem

Testing and results

- Describe the key tests and results that show the functionality of the design
- Provide demonstrations if appropriate
- Indicate how the final system met or didn't meet the requirements

Conclusions

- Summarize conclusions about the project and provide recommendations for further work
- Indicate lessons learned