Oral Presentations -- The Basics

“How do you know that?”
Get what you want!
Image

- Credible
- Knowledgeable
- Trustworthy
- Open to criticism
- Decisive
- Interested
- Enthusiastic
- Believes in project
Presentation Organization
For Mid-Project Review

• Section 1
  – The problem you are trying to solve

• Section 2
  – Your proposed solution

• Section 3
  – Your plan

• Questions
  – Listen
Mid-Project Review Suggestions

• Describe the problem
• Describe how people solve the problem now (current technology, prior art), and make clear what the gap is
• Describe the options
• Describe the selected design, including strengths and weaknesses
• Describe what your design **does** rather than what it **is**
• Make it clear that team is using engineering analysis to drive the design
• Audience needs to know the design is analysis driven, but does not need to know the details
• Provide audience with a plan for future work
• Provide audience with a detailed description of final project deliverables
• No apologies ("our design could have been better," "we were not able to contact person X at the company")
• Presentation, not a speech
• Need not be a star
• Tell a compelling, engineering-driven story with no fluff
• If short on time, cut rather than speed, but retain important material
Be Results Oriented

- Get important information out first, e.g. the concept
- Do not present as history ("first we did this then we did that")
- Audience wants results, not how you got there
How to Present Your Material on Slides
“How do you know that?”

Present credible evidence

Cite credible sources
Assertion-Evidence Structure

• Headline states the assertion of the slide
• Slide body backs up the assertion with evidence
  – Relevant images
  – Experimental data
  – Basic equations
  – Product rendering
Assertion-Evidence Example

Sentence
Fillets reduce leading edge vortices in nature and in engineering.

Headline
Fillet on dorsal fin of shark

Visual Evidence
Fillet on Seawolf submarine

Source: http://writing.engr.psu.edu/slides.html
Example Showing a Design Choice

Composite materials are ideal for polar plates

Advantages
- Easy to shape
- Light in weight
- Resistant to corrosion

Disadvantages
- Low conductivity
- High cost (at present)

Source: http://writing.engr.psu.edu/slides.html
Think Newspaper Headlines

• Two-thirds of Minnesotans: no public money for Vikes' stadium
• Chile military rolls out post-quake aid effort
• Postal Service's emerging model: No Saturday delivery
• Supreme Court muddies clean water act
• Effort to tighten Minnesota's gun law getting folks riled up

• University officials consider furloughs
• Professor ratings aid students in class selection
• OTC to showcase science technology
• Prominent agronomy professor to retire at age 70
• NCAA study spurs rule changes to protect athletes from injuries

Star Tribune and MN Daily, Feb. 2010
People With Disabilities Are Active

- Wheelchair sports
- Disability Culture has driven demand for solutions
- ADA has provided legal clout
- Health care cost-effectiveness push by insurance companies reins in the pace

Photos from Paraplegia News and Sports ‘n Spokes
## Roof Chopping Data

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Roof Chopping Data

![Graph showing the relationship between weight and chopping time. The x-axis represents weight in pounds, ranging from 120 to 240. The y-axis represents chopping time in minutes, ranging from 0 to 16. The data points are scattered, with a trend line indicating a negative correlation.]
Heavier People Chop Faster

![Graph showing the relationship between weight and chopping time. The graph indicates that heavier people tend to chop faster.](graph.png)
Your Goals At the Mid-Project Review

1. Convincethe audience that you know what you are talking about.

2. Convincethe audience that your approach is worthy of further investment.
Resources

• The Craft of Scientific Presentations
  – Available as an e-book in the UMN Library

• www.writing.engr.psu.edu/

• www.writing.engr.psu.edu/presentations/speaking.pdf

• ME 4054 on-line lecture notes