

# Effective Presentations



**ELEC 3040/ELEC 3050**  
**J. Y. Hung & V. P. Nelson**



# Why is this topic important?

- Employers rank communication skills #2 behind technical expertise as desired traits for new engineers
  - 20-25% of engineers' time spent writing
  - 70-75% of time communicating
    - Reading, writing, speaking & listening
  - Good communication skills enhance professional advancement opportunities

# Presentation Types (1)

- Elevator Talk

- **Audience:** someone unknown
  - potential client/sponsor/employer
- **Duration:** 2-3 minutes
- **Setting:** informal
- **Focus:** “big picture” (no digressions)
- **Minimize:** tech details, jargon
- **Desired outcome:** gain listeners’ interest

# Presentation Types (2)

- Project Talk
  - **Audience:** supervisor/colleagues/company officials
  - **Setting:** meeting
  - **Purpose:** share progress/accomplishments/work remaining/expected results
  - **Desired outcome:** listeners understand your project
    - More detail than elevator talk
    - Plan to address possible concerns
    - Avoid defensiveness

# Presentation Types (3)

- Conference Presentation

- **Audience:** technical experts (different levels)
- **Setting:** session of several presentations
- **Purpose:** share results, solicit feedback, initiate conversations
- **Desired outcome:** wider audience awareness of work
  - Discuss finer points of data with audience
  - Provide handout
  - Ignore audience coming/going

# Project Presentation Types

- **Project Proposal**

- Problem analysis, requirements, specifications
- Preliminary design options

- **Design Review**

- Requirements
- Proposed design and preliminary test results
- Project plan

- **Final Review**

- Requirements
- Final design and test results
- Conclusions

# Oral Presentations

- Most guidelines for written documents apply
  - Consider who your audience is.
  - What do you want the audience to take from your presentation?
- Plan and practice your presentation & timing
- Use appropriate graphics
- Don't substitute “glitz” for “substance”
  - especially distracting PowerPoint *animations*
- Show enthusiasm & professional demeanor
  - engagement, posture, movements, perceived comfort level
- Speak to the audience – make eye contact
  - vocal pitch, tone, volume, “place-holders” (*like, um, actually, ...*)
- Consider, in advance, how you will answer questions

# Steps to a successful presentation

1. Divide responsibilities (“team” communication)
2. Determine audience, tone, style, length, format
3. Develop an outline
4. Write a draft
5. Revise and proofread
6. Review (peer and other) & revise again
7. Rehearse the presentation
8. Generate the final presentation



# Know your audience

- What are they interested in?
- What do THEY want from your talk?
- What do YOU want them to know/learn?
- What do (and don't) they already know?
- What is their attitude toward me and my subject?
- What are their values?

# Consider the three V's

- Verbal (7%) – what speaker says
- Vocal (38%) – how it's said
  - pitch, enthusiasm, inflection/intonation
- Visual (55%) – speaker appearance
  - eye contact, facial expressions, gestures, posture

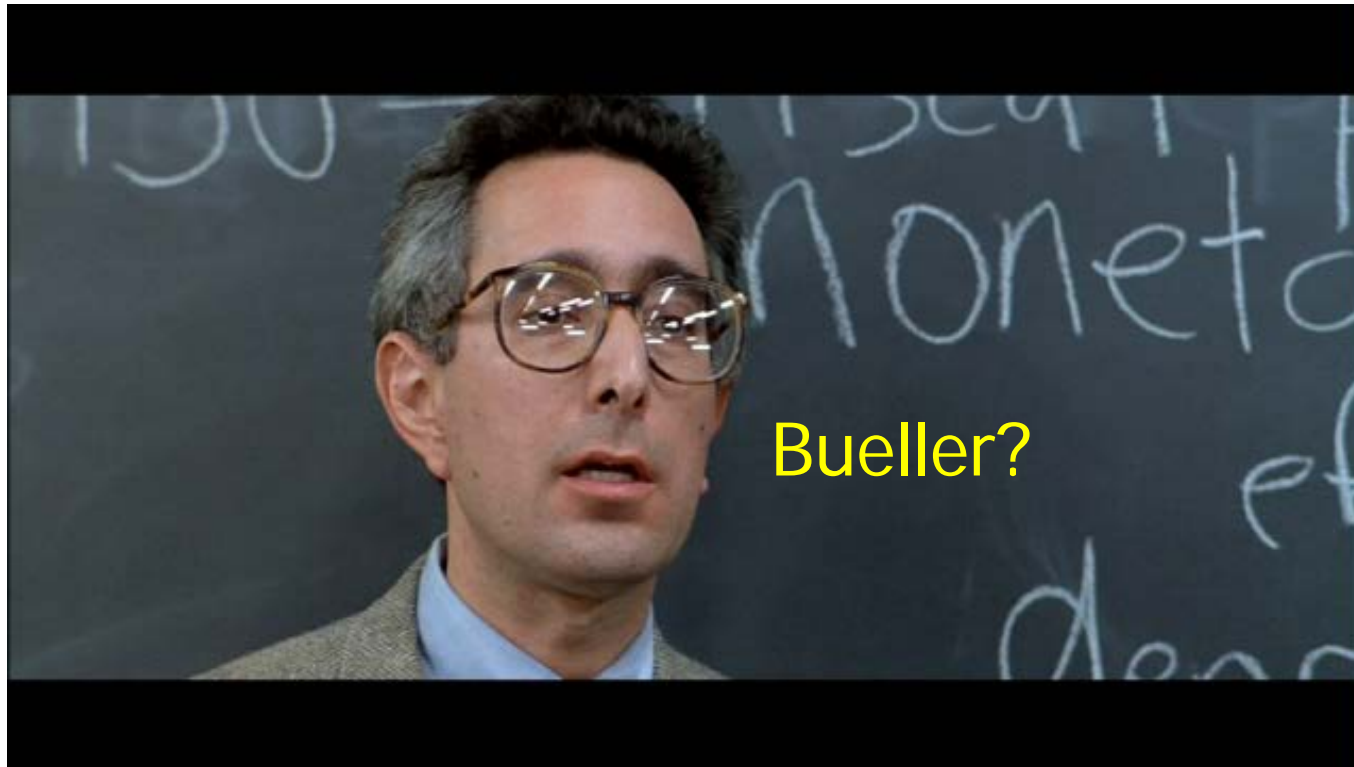
*Opinions often formed in the first 30 seconds!*

# Organization is important

- Say what you will tell them
- Tell them
  - *Consider limiting number of main points*
- Tell them what you told them
  - *Summarize main points*

## Don't:

- Speak in monotone
- Read your slides
- Look bored with your own presentation
- Use annoying mannerisms
- Use placeholders (ok, you know, like, actually, uh...)



## Do:

- Personalize your talk (humor, quotes...)
- Speak loudly, vary your tone and pace
- Stay within your allotted time
- Make eye contact
- Ask questions

**- Practice!!!**



# Use a very large font

40 point 28 point 18 point 12 point

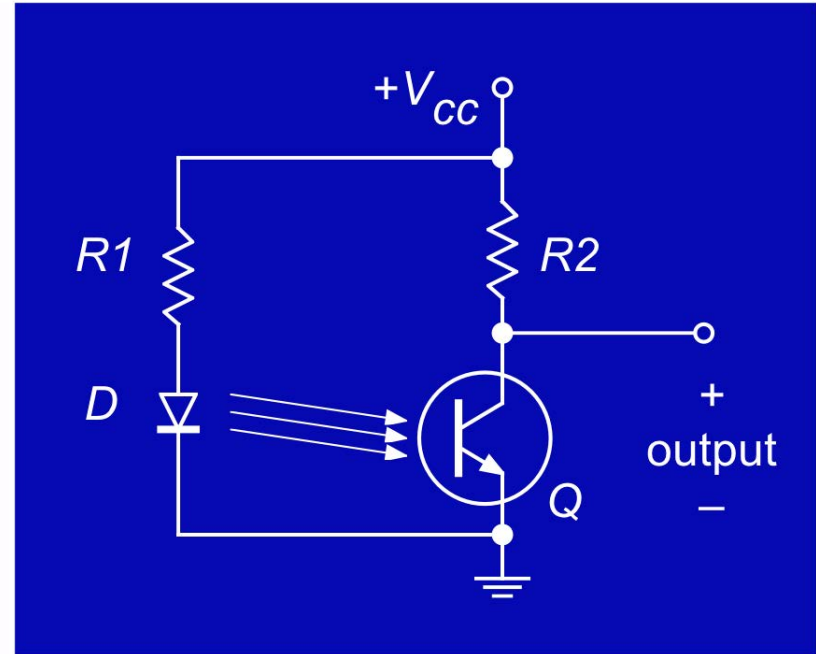
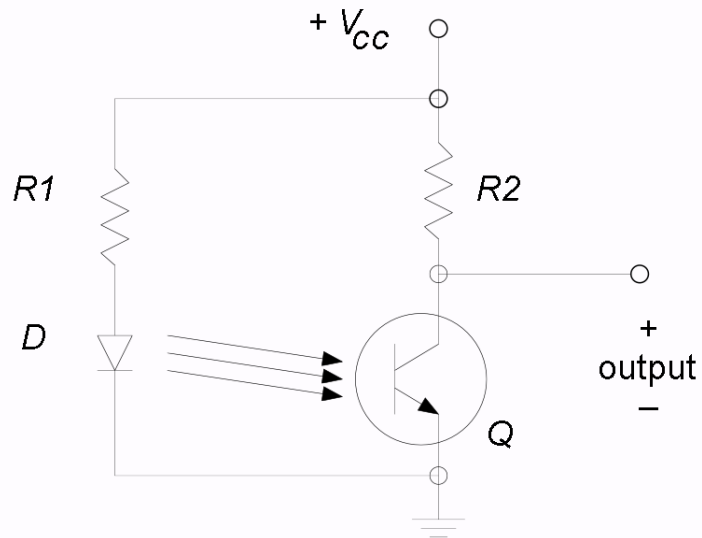
- use a small number of lines per slide
- key words & phrases rather than sentences
- proofread for spelling!
- go easy on the equations
- don't overdo color

# Effective Visuals

*Help the audience visualize what you are trying to describe*

1. Good visibility
2. Simplicity
3. Manageability

# Make figures audience-friendly

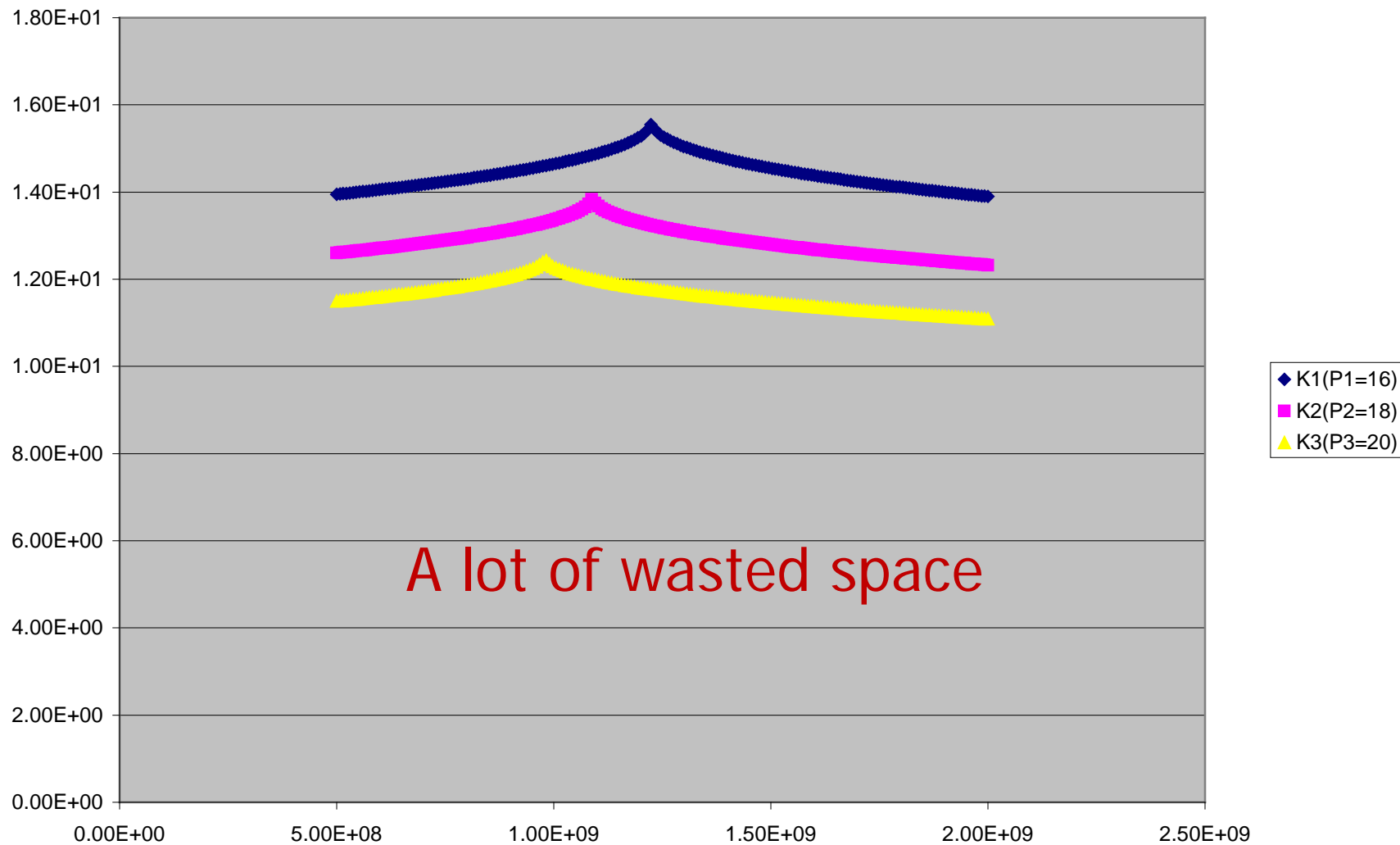


Can you comfortably read these diagrams?



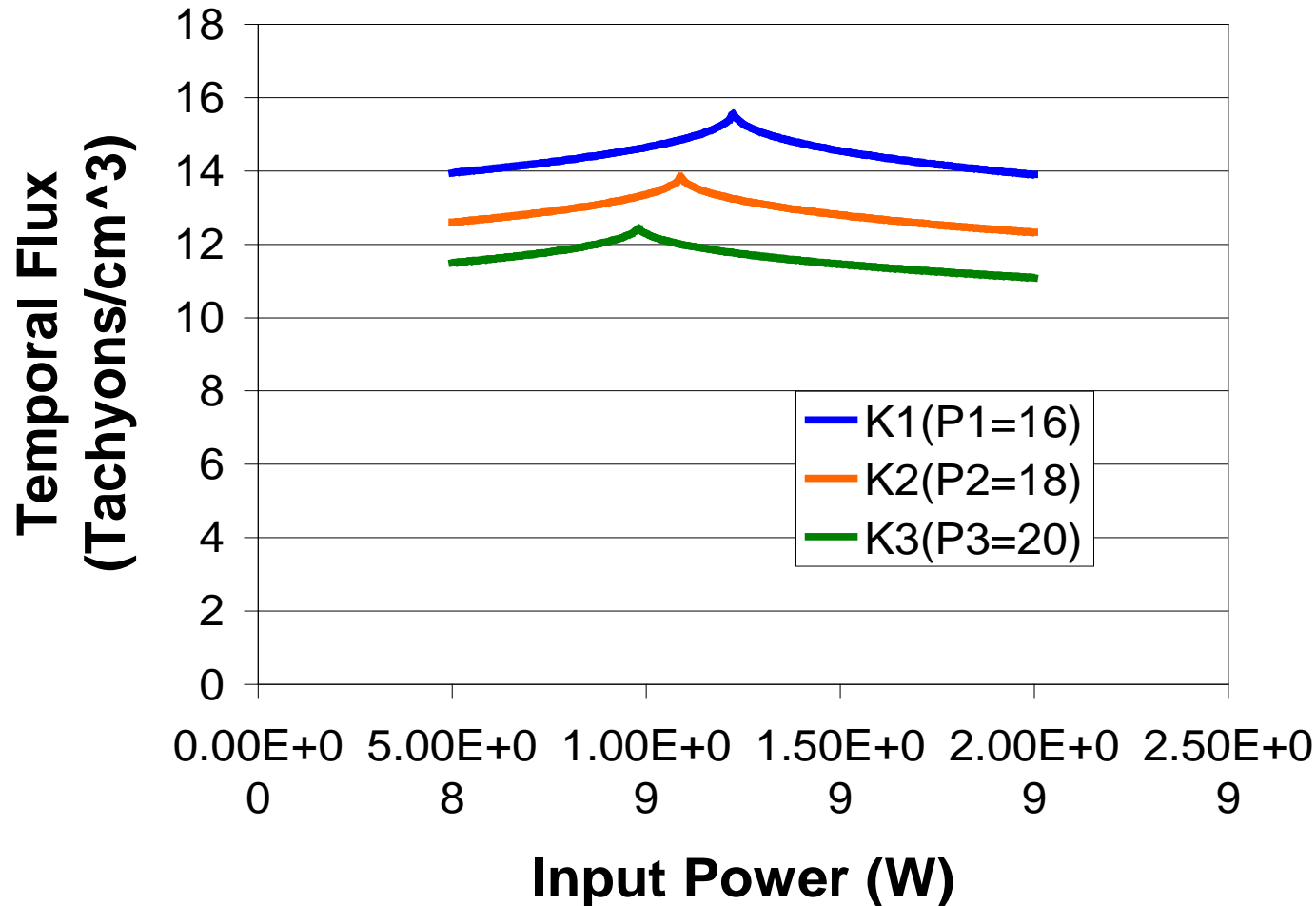
# Example of a bad plot

temporal flux vs Plinth Setting for different power inputs



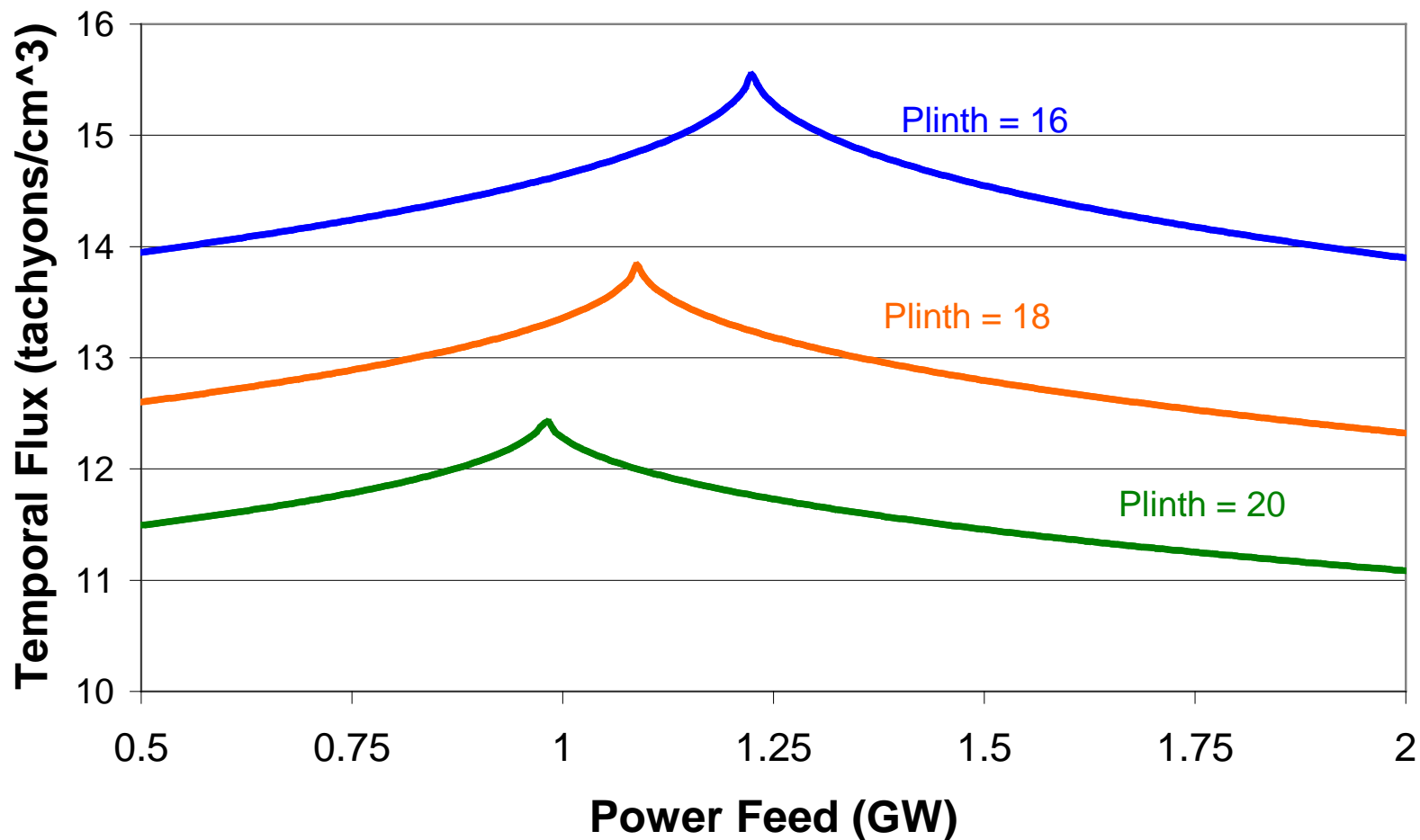
# Example of an improved, but still poor plot

## Temporal Flux Comparison



# Example of a better plot

## Temporal Flux Comparison



# A Wasted Visual

## The Temperature Control Project

Introduction

Objectives

Solution

Conclusions

Does this really provide the audience with any "information"?

# A Better Visual

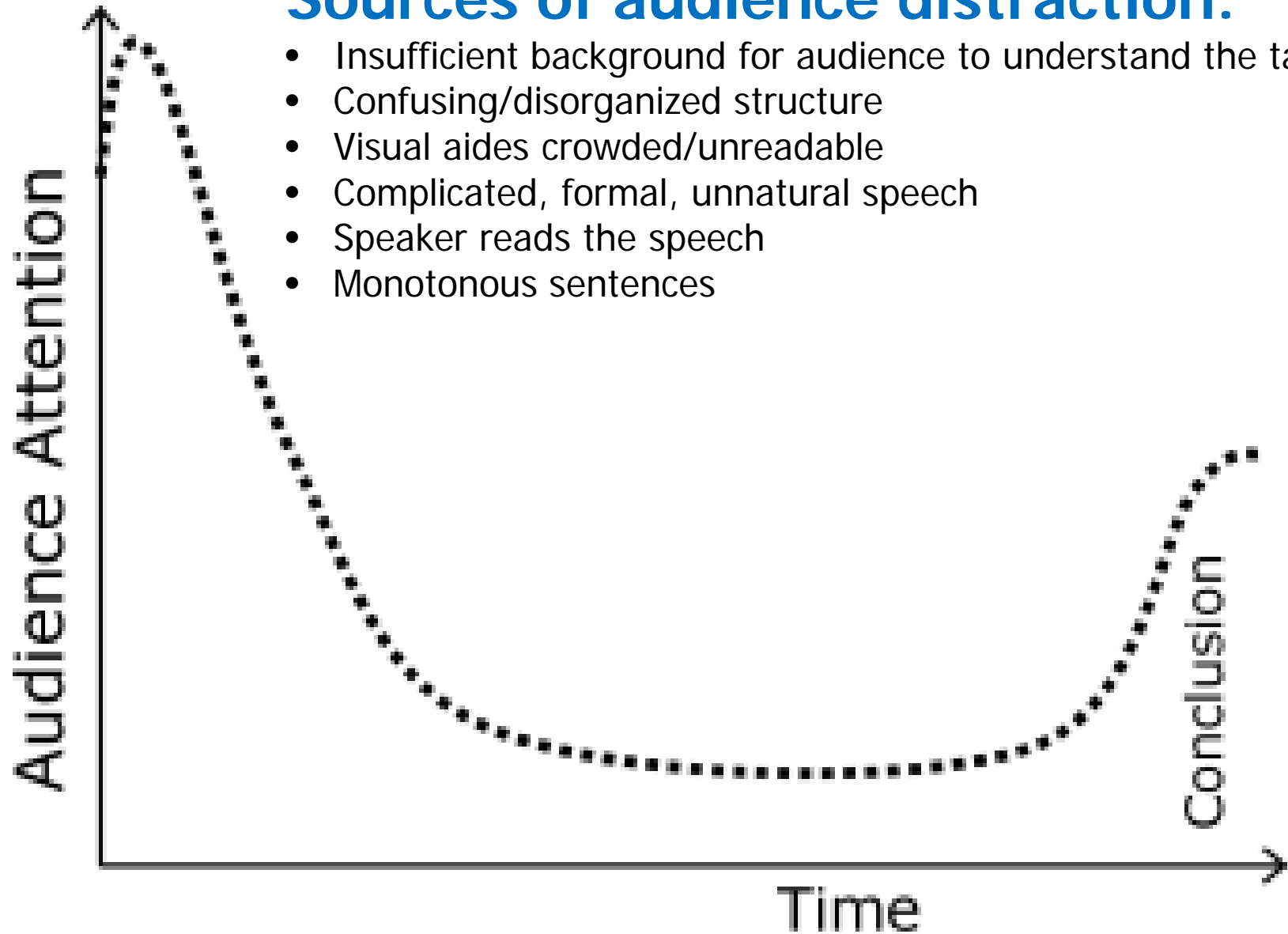
## The Temperature Control Project

1. **Objective** – maintain temp
2. **Solution** – IC sensor,  $\mu$ controller, fan control
3. **Future work** – high fan power

## Other tips



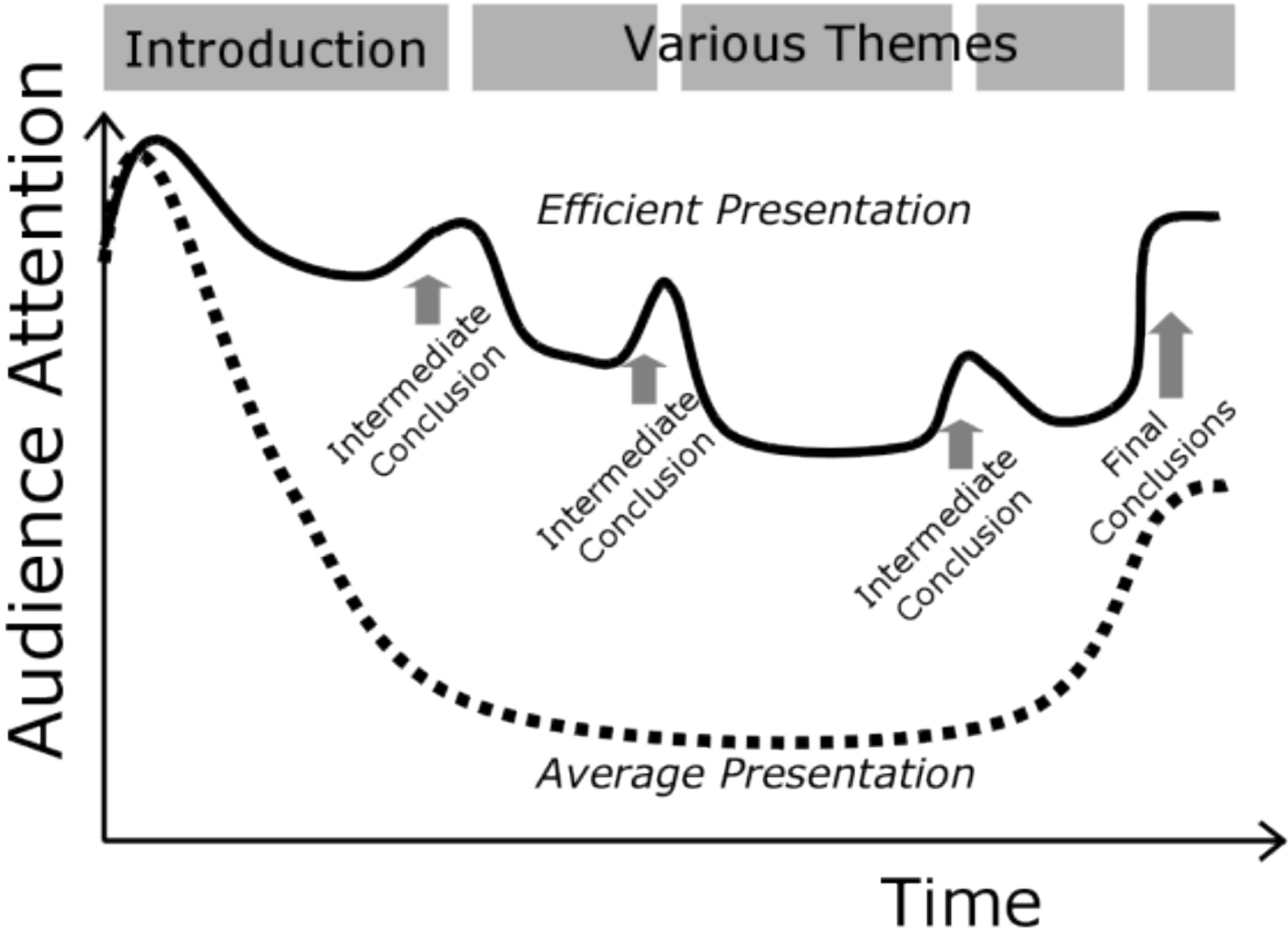
- Don't downplay your own expertise
- Stay within your allotted time...
- But don't go too fast!
- Go over big ideas twice
- Consider audience attention span...



## Sources of audience distraction:

- Insufficient background for audience to understand the talk
- Confusing/disorganized structure
- Visual aides crowded/unreadable
- Complicated, formal, unnatural speech
- Speaker reads the speech
- Monotonous sentences

# Pique interest periodically with intermediate conclusions





# Commonly-cited presentation “issues”

- Unreadable slides
  - Small text, poor color contrast, etc.
- Too much on a slide
  - Paragraphs, C programs, multiple diagrams
- Textual descriptions in place of diagrams
  - table vs graph, C code instead of flow diagram
- Lack of eye contact, distracting movements
- Low voice volume, monotone, etc.
- Visible tension or lack of confidence
- Apparent insufficient preparation/rehearsal

# Presentation assessment rubric

## ABET EAC Student Outcome 3

**(ELEC 3040/3050 Oral Presentation)**

*Graduates will demonstrate an ability to communicate effectively with a range of audiences.*

**Student** \_\_\_\_\_

**Partner** \_\_\_\_\_

TRAIT	Advanced	Competent	Developing	Unsatisfactory
<b>NONVERBAL SKILLS</b>	<p>Eye contact holds audience attention; seldom or never looks at notes.</p> <p>Movements seem fluid and help the audience visualize.</p> <p>Displays relaxed, self-confident nature, with no mistakes.</p>	<p>Consistent eye contact with audience; occasional return to notes.</p> <p>Movements/gestures enhance articulation.</p> <p>Displays little or no tension; quickly recovers from minor mistakes.</p>	<p>Minimal eye contact with audience, reading mostly from notes.</p> <p>Very little movement or descriptive gestures.</p> <p>Displays mild tension; has trouble recovering from mistakes.</p>	<p>No eye contact with audience; entire report read from notes.</p> <p>No movement or descriptive gestures.</p> <p>Tension and nervousness obvious; has trouble recovering from mistakes.</p>
<b>VERBAL SKILLS</b>	<p>Consistently strong, positive feelings about topic.</p> <p>Strong voice, precise pronunciation of terms; all audience members can hear presentation.</p>	<p>Occasionally shows positive feelings about topic.</p> <p>Clear voice, mostly correct pronunciation of word; most audience members can hear presentation.</p>	<p>Shows no feelings about topic.</p> <p>Quiet voice and/or incorrect pronunciation of terms; audience may have difficulty hearing.</p>	<p>Shows negative interest in topic.</p> <p>Mumbles, incorrectly pronounces terms; speaks too softly for a majority of audience members to hear.</p>
<b>LANGUAGE</b>	<p>Strongly enhances presentation effectiveness.</p> <p>Especially appropriate for the audience.</p>	<p>Technically correct; generally supports the presentation.</p> <p>Mostly appropriate for the audience.</p>	<p>Mundane or commonplace; partially supports presentation effectiveness.</p> <p>Sometimes appropriate for the audience.</p>	<p>Unclear, technically weak or incorrect; minimally supports presentation effectiveness.</p> <p>Often inappropriate for the audience.</p>
<b>ORGANIZATION</b>	<p>Organizational pattern is clear, consistently observable, and exhibits strong cohesiveness.</p> <p>Well prepared.</p>	<p>Organizational pattern is clearly and consistently observable; may have some extraneous content.</p> <p>Adequately prepared.</p>	<p>Organizational pattern is intermittently observable; extraneous content evident.</p> <p>Marginally prepared.</p>	<p>Organizational pattern is not observable. Poor choices of content.</p> <p>Inadequately prepared.</p>
<b>VISUALS</b>	<p>Excellent visuals that enhance understanding of presented information.</p>	<p>Appropriate visuals used and explained.</p>	<p>Visuals used, but not well-explained; some content difficult to view.</p>	<p>Little or no visuals, too much content on slides, or slides unreadable.</p>
<b>SUBJECT KNOWLEDGE</b>	<p>Demonstrates full knowledge of all information.</p> <p>Answers all questions with clear explanations and elaboration.</p>	<p>Demonstrates reasonable knowledge of information.</p> <p>At ease; gives expected answers to most questions, without elaboration.</p>	<p>Uncomfortable with some information.</p> <p>Able to answer only rudimentary questions.</p>	<p>Does not have grasp of most information.</p> <p>Cannot answer questions about subject.</p>

# References

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<http://www.d.umn.edu/~jgallian/goodPPtalk.pdf>
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<http://www.catalysis.nl/links/presentations/presentation.php>