Engin100.250
Oral Presentations: Planning and Delivery

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Why an oral report?

- Speaking is one of the most important skills in engineering (or any profession)
- It provides an opportunity to learn how to explain complex ideas in this important way

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Importance of public speaking

- A search on the Barnes and Noble website for books on public speaking turned up how many results?

3,205 results

NB: Oral presentations are

- Subject to a number of constraints
- Not the same as a written report given aloud

    – Why are these things true?
    – What do they imply?

Oral presentations: there is a difference…

- It's hard to follow a complicated talk.
- The listener cannot go back and revisit material.
- People cannot pay attention very long.

Condition of Audience

Alert

Drowsing

Asleep

Comatose

Short   Medium   Long

Duration of Talk
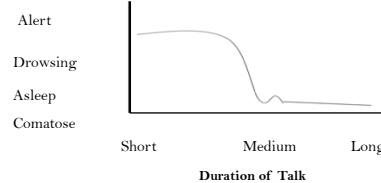
A Highly Scientific Graph Showing Changes in Audience Attention Over Time

Things to recall before you speak

- You cannot give all the information in a presentation that you can in a written report

- The audience can only remember 3 or 4 main points from a talk

- A talk must be properly organized to bring out those main points

Oral presentations require

- Organization   • Visuals
- Language   • Practice

Practice!

A talk must be

- Organized to bring out those main points

- Planned so there's enough time devoted to each topic

- Planned so that you meet your time limit

Some old, but good advice:

- Estimate the number of words
- Make an outline
- Develop the ideas into paragraphs
- Use interesting and clear language
- Practice your delivery

Adapted from Harry Shafter. (1963). *How to Prepare Talks and Oral Reports.* New York: Pocket Books.

Estimate the number of words

Unless you know how many words you you're allowed (and this means paragraphs) you won't know how much you can devote to each part of your talk.

Make an outline

Otherwise your text won't be organized
  – You won't use your time efficiently
  – Your audience will have trouble following you

Break your ideas into paragraphs

- This will help you organize ideas
- It will help you draw up a talk of the right length

  - *You should know what a paragraph is by now*

Use interesting and clear language

- Obviously, clear language is better understood
- Interesting language-- vivid language-- is more closely listened to

Estimating words

Most people speak between 100 and 150 words per minute

– Why is this important to know?

Because a properly developed paragraph generally contains between 100 and 150 words.

Therefore, most people speak about a paragraph a minute

This is useful to know when it comes to planning your talk

Back to organization

As usual, we look to the "Rule of Three"
– Introduction
– Body
– Conclusion

How much time do you have for your oral presentations?

12 Minutes
(But what does this mean?)

This means about 12 developed paragraphs or about 1,800 words maximum

A different way to think of this:

A little more than five and a half double-spaced pages of typed text-- *and this is the maximum.*

Possible distribution of text for a twelve minute talk

- Introduction (1 paragraph)
- Body
  - Point A (3 paragraphs)
  - Point B (4 paragraph)
  - Point C (3 paragraphs)
- Conclusion (1 paragraph)

Let's consider the distribution of text

- Introduction: a bit
- Body: a lot
- Conclusion: a bit

Recall that your audience will remember 3 or 4 main ideas.

> *Where are they discussed?*

Possible distribution of text for a twelve minute talk

- Introduction (1 paragraph)
- Body
  - Point A (3 paragraphs)
  - Point B (4 paragraph)
  - Point C (3 paragraphs)
- Conclusion (1 paragraph)

Or this?

- Introduction (2 paragraphs)
- Body
  - Point A (4 paragraphs)
  - Point B (4 paragraph)
  - Point C (4 paragraphs)
- Conclusion (1 paragraph)

It depends on your presentation.

What might your main points be?

Some points on presentation itself

Some points to recall about the act of speaking

- You aren't alone in fearing public speaking
- Stage fright is actually helpful
- Even professional speakers suffer from stage fright
- People are afraid to speak in public because they haven't had practice doing it

The key to minimizing stage fright is preparation and practice

But this doesn't mean memorization

The Cleveland Orchestra

Courtesy of The Cleveland Orchestra / PHOTOGRAPHER: Roger Mastroianni

http://clevelandartsprize.org/awardees/Cleveland_Orchestra.html

The Modern Jazz Quartet

http://5-string-bass-guitar-notes.blog.hr/2011/11/index

Gerry Mulligan Quartet

http://userserve-ak.last.fm/serve/_/3058585/Gerry+Mulligan+Quartet+03raffxlarge3.jpg

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TURANDOT
ATTO PRIMO
Giacomo PUCCINI

Example of
Full Score

http://www.free-scores.com/boutique/boutique-uk-frame-eur.php?clef=304998

Example of
Lead Sheet

From *The Real Book, C version*, Vol. 1

From *The Real Book, C version*, Vol. 1

These are like key phrases

From *The Real Book, C version*, Vol. 1

To be an effective speaker you must

- Prepare
  - An outline of key phrases
    - *Try doing it on note-cards*
- Practice
  - Saying your part aloud several times
    - *Over several days, if you can*
  - Say it to your friends or teammates

Possible key phrases for a talk on lasers

- Laser: acronym "light amplification through stimulated emission of radiation"

-Developed in 1958 at Bell Labs

-Atoms made up of protons, neutrons and Electrons in shells

-Laser light monochromatic, highly directional

-Lasers can have cores of many different materials

-Hundreds of uses: CD players, pointers, eye-surgery

Laser: acronym "light amplification through stimulated emission of radiation"

Visual: text showing abbreviation

Atoms made up of protons, neutrons and electrons in shells

Visual: diagram of atomic structure

Laser light monochromatic, highly directional

Visual: diagram of light waves

Lasers can have cores of many different materials

Visual: labelled photographs of various cores

Here's the trick…

Atoms made up of protons, neutrons and electrons in shells

Visual: diagram of atomic structure

F#-7

Laser light monochromatic, highly directional

Visual: diagram of light waves

Gmaj7

Lasers can have cores of many different materials

Visual: labelled photographs of various cores

D7

Practice will help eliminate

- Stumbling
- Poor diction
- Undue nervousness

Avoid certain vocal affectations

- Improper pitching
  - Don't make a statement sound like a question
- Temporizers
  - "Ahh"
  - "Umm"
  - "So"

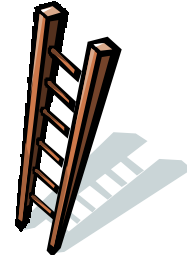
The speaker (delivery)

Goodwill: how do you get it?

Use interesting and clear language

Avoid abstractions

Hayakawa's ladder again

- Thing
- Device
- Musical instrument
- Brass instrument
- Tuba

Hayakawa's ladder again

http://www.musiciansfriend.com/brass-instruments/meinl-weston-6460-kodiak-series-6-valve-6-4-f-tuba

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Gestures: "What do I do with my hands?"

Posture

- Stand straight
- Don't slouch

Voice: try to project

Eye contact: look at people in the audience.

Even though it may be difficult for you.

Dress: the better you dress, the more you'll be taken seriously.

It may be unfair, but it's a fact.

Be Bold

Most of all, show enthusiasm!

People respond to enthusiasm; they want to share it.

How should the team stand?

Like a wing of flying geese

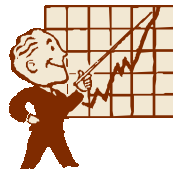But why?

Geese flying in echelon

http://images.google.com/imgres?

So that the speaker will have a claque

The Lobby of the Paris Opera House

http://www.spirit-of-paris.com/wp-content/photos/paris/divers/opera_spirit_of_paris.jpg

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Graphics for Oral Presentation

"The greatest number of ideas in the shortest time with the least ink in the smallest space."

Edwin R. Tufte on what makes an excellent graphic.

Visuals

- Decide what you are trying to convey before choosing a visual
  - Information
  - Dramatic effect
- If you wish to convey information, decide which visual is the most efficient means
- Introduce the visual
- Explain to the audience what they are to understand from the visual

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Visuals in presentations: special considerations

You want the visuals to support your presentation, not distract from it.

Graphics for oral presentations

- Not busy
- Not distracting

  – *And they should be parallel in structure and design*

Avoid putting both a visual and text (apart from labels) on the same slide

The seven by seven rule

- No more than seven words per line
- No more than seven lines per slide

Text slides in presentations

- Make sure that you use uniform fonts
- Make sure that you use uniform general design
  – Make sure your design is rational
- Make sure your text is in parallel phrases

Text slides in visual presentations: Use a large enough font

Font sizes

This is 40 point type

This is 36 point type

This is 24 point type

This is 18 point type

This is 16 point type

Remember: too much color and detail will distract an audience

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Be careful of slides more interesting than you are

PowerPoint: watch out out for distracting backgrounds or other designs

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PowerPoint

- ***Watch out out for distracting backgrounds or other designs***

Visuals summary

- Decide what you are trying to convey before choosing a visual
  - Information
  - Dramatic effect
- If you wish to convey information, decide which visual is the most efficient means
- Introduce the visual
- Explain to the audience what they are to understand from the visual

And don't distract the audience

Summary

- Prepare your talk
- Practice it (but don't memorize it)
- Be bold
- Show enthusiasm
- Use good, appropriate visuals