

**CS 376 – Presentations  
 Visual Aids**  
  
 John T. Bell  
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**Advantages and Disadvantage**  
 Table 4-1. Advantages and disadvantages of different types of visual aids.

Type	Advantages (+) and Disadvantages (-)
Projected Slides	+ can effectively show images + can effectively emphasize key details - are boring if no images are included - are overwhelming if too many details are included
Posters	+ allow audience to control the pace + allow for one on one exchanges with the speaker - are difficult to read in crowded hallways - are overwhelming if too many details are included
Writing Boards	+ are good for derivations + are slow for detailed drawings - are difficult to read if handwriting is poor - force presenter to turn away from the audience
Films	+ are effective for showing dramatic changes + are effective for conveying sounds - cause audience to focus solely on screen - must meet high expectations of the audience
Demonstrations	+ are effective for engaging the audience + are effective for incorporating sounds and smells - can fail
Handouts	+ ensure that audience leaves with the message + gives audience something to take notes on. - can be distracting if handed out too early.
Passed Objects	+ allow audience to touch, smell, and taste. - can be distracting if audience is large.

BAD SLIDE

- There are advantages and disadvantages to all types of visual aids
- Projected Slides
    - + Can effectively show images and animations
    - + Can effectively emphasize key details
    - Are boring if no images are included
    - Are overwhelming if too many details are included
  - Posters
    - + Allow the audience to control the pace
    - + Allow for one on one exchanges with the speaker
    - Are difficult to read in crowded hallways
    - Are overwhelming if too many details are included

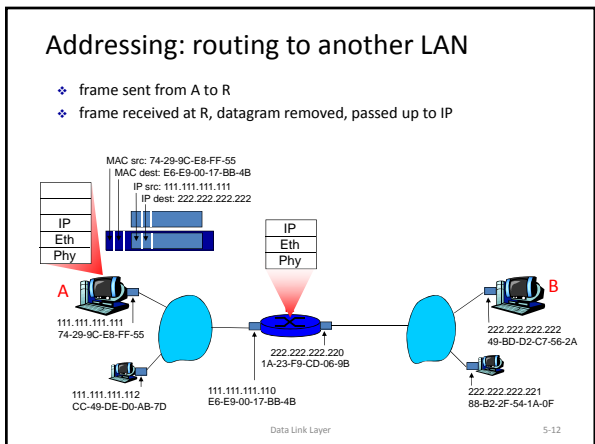
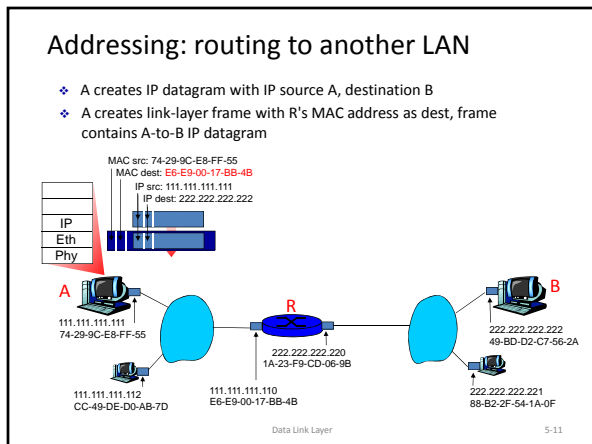
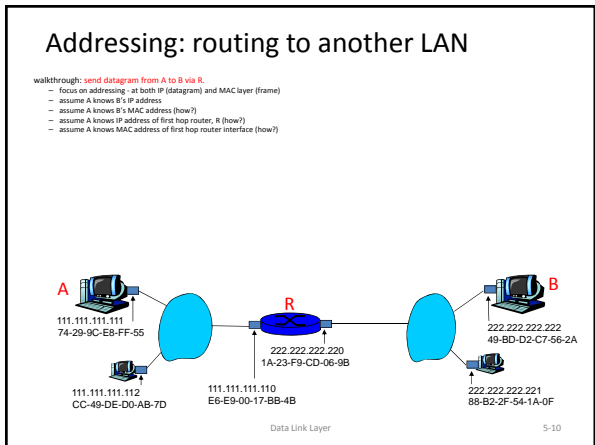
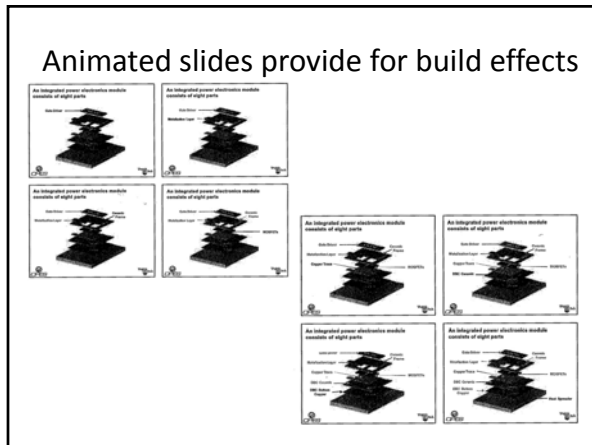
- There are advantages and disadvantages to all types of visual aids - II
- White boards & chalk boards
    - + Are good for derivations ( the pace is slow & natural. )
    - Are difficult to read if handwriting is poor
    - Are slow for detailed drawings
    - Force presenter to turn away from the audience
  - Overhead Transparencies – As above except:
    - + Allows the presenter to face the audience.
    - + Allows the presenter to scroll back and save work
    - + Does not require constant erasing
    - Limited real estate as compared to a full white board

- There are advantages and disadvantages to all types of visual aids -III
- Films
    - + Are effective for showing dramatic changes
    - + are effective for conveying sounds
    - Cause the audience to focus solely on the screen.
    - Must meet high expectations of the audience.
  - Demonstrations
    - + Are effective for engaging the audience
    - + are effective for incorporating sounds and smells
    - Can fail

- There are advantages and disadvantages to all types of visual aids - IV
- Physical models
    - + are effective for showing three dimensions
    - Are ineffective unless large enough for all to see.
  - Handouts
    - + ensure that audience leaves with the message
    - + gives audience something to take notes on.
    - Can be distracting if handed out too early.
  - Passed objects
    - + allow audience to touch, smell, and taste.
    - Can be distracting if the audience is large.



- There are advantages and disadvantages to all types of visual aids - V
- Web pages
    - + Provide links to supplemental resources
    - + Rich palette of potential media
    - + Nothing to carry to the presentation
    - May encourage people to skip attending
    - Audience may read ahead or otherwise go off track
    - Need a backup in case of computer problems
    - + / - Audience can access the presentation later.
    - + / - Presentation may change over time.



### Guidelines for Readable Slides

- Use large ( $\geq 18$ -24 pt. ), sans-serif, mixed-case fonts. DO NOT USE ALL CAPS
- Use light fonts on dark background or dark on light. Avoid bad color combinations.
- Try to maximize images and minimize text ( equations, etc. )
- View your slides from far away, in typical lighting conditions.
- See also Table 4-2 and "Giving Presentations the EVL Way"

**TYPE SET IN ALL CAPITALS IS READ SLOWLY BECAUSE EVERY LETTER MUST BE READ**

Type set in lowercase is read more quickly because words can be recognized by their shapes

**TYPE**      **Type**

Figure 4-7. Difference between reading all capital letters and type set in uppercase and lowercase letters.

A title sentence is often better than a title phrase

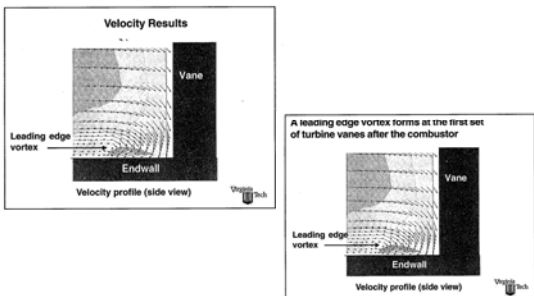


Figure 4-18. Two slides: (top) weaker slide with phrase headline, and (bottom) stronger slide with sentence headline.

Pictures are worth 1000 words.

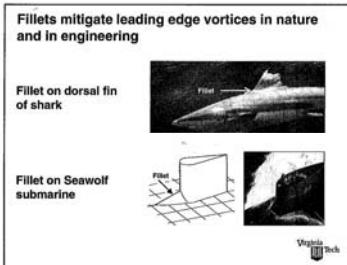


Figure 4-9. Presentation slide that uses a headline-body design. This slide comes from a presentation that introduced a fillet design for reducing the vortices that occur along turbine vanes in a gas turbine engine.

### Major Project Sites in 2012

- Zion Schooners
- Val's Wreck
- The Flora Hill
- Railroad Car Ferry Number 2
- The Silver Spray
- The Material Service Barge
- The 12<sup>th</sup> Street Beach Wreck
- The Buccaneer

Poor Slide

Better Slide

Eight of those sites represent significant active projects



## Change PowerPoint defaults

**Table 4-5.** Format defaults in Microsoft's PowerPoint that should be challenged for slides in scientific presentations.

Format	PowerPoint Default	Suggested Change
Typeface	Times New Roman	<b>Arial Boldface</b>
Type in headline	Centered 44 points	Left-justified 28 points
Type size in body	32 points	24-28 points
Separation indicator		
Main item in list	Bullet	Vertical white space
Secondary item in list	Sub-bullet	Indent
Entry animation	Fly from left	Appear
Background	Various templates	Light color (dark typeface) Dark color (light typeface)

## Improve your outline

**Better**

**Even Better:**

## Keep a good conclusions slide up for the question period

**In summary, the SVD method can effectively replace the exhaustive method**

SVD reduces the number of computations

SVD is close to the accuracy of the exhaustive method

140,000 Exhaustive Method vs 4,000 SVD Method (Number of Computations)

100% Exhaustive Method vs 87.7% SVD Method (Accuracy)

Questions?

Add this item using the PowerPoint "Appear" animation

Figure 4-22. Memorable conclusion slide for presentation that compares two computational methods: the exhaustive method and the singular value decomposition (SVD) method.<sup>49</sup> The methods can be used to simulate the way we hear sound from a vibrating structure.

## PowerPoint – 1/3

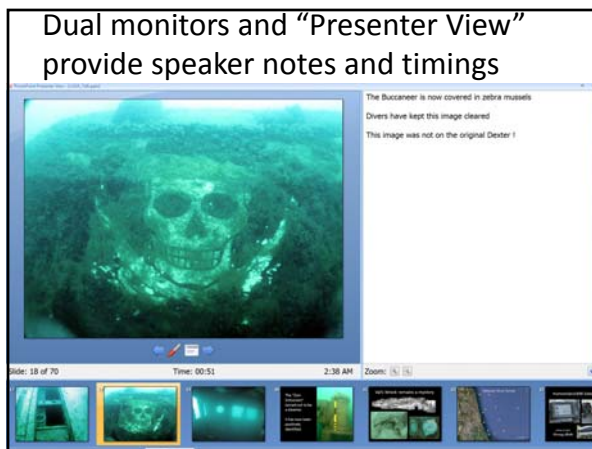
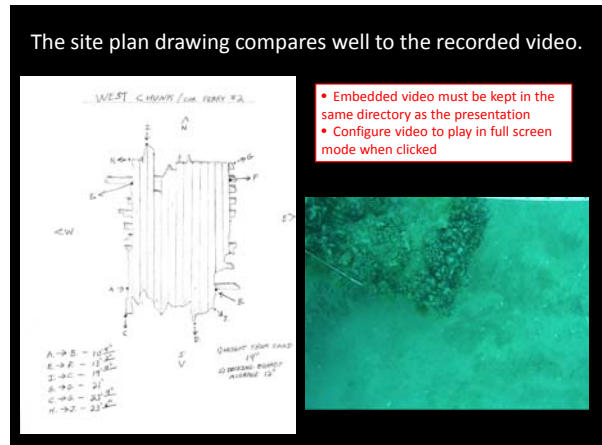
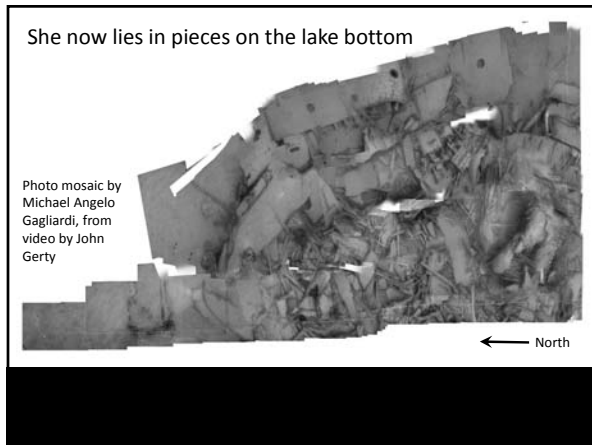
- Designed for business sales pitches, NOT scientific presentations
- Adjust defaults as described above
- Included imagery gets overused
- DO NOT use sound effects or "cute" transitions or animations. ("Appear" & "paths" are useful.)
- Rehearse your talk (standing, out loud), with transitions, and make sure you can get to any slide at any time.

## PowerPoint – 2/3

- PPS **show** is better than PPT project, because it launches automatically to show mode.
  - ( Unless dual monitors are available. )
- Be prepared for equipment malfunctions. You should know your talk well enough that you can give it without visual aids if you have to.
- Slides may be printed; So can handouts.
  - Please provide a 6 slide / page handout of your slides on the days that you speak.

## PowerPoint – 3/3

- Title layout preferable to text box
  - Titles appear on "Go to slide" dialogue
  - Also useful for outline mode.
- Make images as large as possible.
  - Crop & stretch to fit if possible.
  - Use black background if necessary when aspect ratios don't match.
- 'B' key blacks out screen for questions or side discussions. 'W' key whites it out.



- ### Posters
- Need to catch attention of passers-by:
    - Large meaningful titles
    - Attractive graphics.
  - Need a logical orderly flow, that is easy to follow.
  - Too much text is not read. ( "Gray space" )
  - Posters form the basis for discussions.
  - Make reprints or other handouts if appropriate.
  - One large sheet is better than lots of little ones.