Visuallys in presentations: special considerations

You want the visuals to support your presentation, not distract from it.
Choose your visual depending on purpose
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
Avoid putting both a visual and text (apart from labels) on the same slide
PowerPoint

Most commonly used visual medium for talks

Millions of PowerPoint presentations given every day

You can’t escape it

*But you don’t have to let it be boss.*
The most abstract information is often in title and is most prominent

- PowerPoint encourages bullet points.
- Bullet points often fool users into trying to make “lists.”
- Such “lists” are not always true lists.
- Even so, second-level lines contain more information than the title.
  - And if there is a third level (or fourth), it has the most information.
    - But that information is in tiny letters at the bottom.
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Let’s consider some aspects of visuals used in presentations.
Be sure there is enough contrast between background and text
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Problem Ideation

• What problems do students face that we could solve and develop into a marketable device?

• Would our device have a positive impact on the greater good?

• The design space revealed by a patent search must be large enough.
Be sure your text is large enough to be read easily.
Be sure your text is large enough to be read easily.
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
The seven by seven rule

• No more than seven words per line
• No more than seven lines per slide
Text slides in presentations

Use uniform fonts
Use uniform general design
Make sure design is rational
Make sure any text is in parallel phrases
Do not use distracting backgrounds
Some general rules for slides

• Choose your visual depending on purpose
  – To inform
  – To dramatize
• Choose the best visual for the purpose
• Be sure there is enough contrast between background and text
• Do not use distracting backgrounds
• Be consistent in design
Don’t make slides too dense with either text or visuals.
In an initial experiment circa 2010, the researchers exposed a 5 mm-thick ceramic plate of titanium carbide to chlorine at 500° C. They obtained a porous carbon layer on its surface that would fit the bill for electrode material for a supercapacitor. This layer, called carbide derived carbon contained pores that could store large numbers of ions from the electrolyte of a supercapacitor. Deposited on the surface of a silicon wafer, CDC, the researchers theorized, could be micromachined into electrodes.

But to make their theory reality, the researchers had to resolve several issues, such as creating a CDC layer that would actually stick to the surface of a silicon wafer and that would be capable of absorbing sufficient ions to allow storing energy in a supercapacitor.

Graphics for oral presentations

Not busy       Not distracting

– And they should be parallel in structure and design
Make sure that your titles reflect what follows: often what follows will be a subset of the title.
Common features of European Languages derived from Proto Indo-European

- Distinct parts of speech
- Elaborate tense and tense-aspect structures
- General use of articles (Slavic languages excepted)
- Nouns in most languages exhibit gender
- Many Europeans speak more than one
Major European Language Groups Derived from Proto Indo-European

Germanic
  West Germanic
  East Germanic

Romance
  French
  Italian
  Spanish
  Portuguese
  Neapolitan
  Catalan

Slavic
  Four main branches

Celtic
  Brythonic
  Goidelic
Some Significant Astronomers

Nicholas Copernicus
Tycho Brahe
Johannes Kepler
Galileo Galilei
Percival Lowell
Fred Hoyle
The Quintuple-Threat

• Title that doesn’t reflect what follows
• Big blocks of text
• Diagram
• Equation
• Graph (with scales too small to read)

ALL ON A SINGLE SLIDE!
Title That Doesn’t Cover What Follows

- Wasdfv vasdr ewe cerwe rsss
- Llkjwe wlkoie cwd fdrs lwe cerwe rsss cwd fdrs cwd fdrs fdrs fdrswasdr ewe cerwe rsss cwd fdrscwd
- Zwlkoie cwd fdrswasdr lwe cerwe rsss cwd fdrscwd fdrscwd fdrswasdr ewe cerwe rsss cwd fdrscwd fdrswlkoiecwd fdrsr
- Wasdfv wlkoiecwd fdrslwe cerwe rsss

**Boltzmann Factor**

\[ P_i \propto \frac{\exp\left(-\frac{E}{kBT}\right)}{Z} \]

http://nj.usgs.gov/rapher/tutorial/examples.html
Avoid the temptation to put everything in bulleted “lists,” (or even in lists).
HOW LONG DOES YOUR BATTERY LAST?

- Shorter range of travel than you would like
- Prevents people from buying electric vehicles

http://www.caranddriver.com/nissan/leaf
Doing a Market Survey

- We used Survey Monkey to conduct a survey
- If we could produce our device, people would buy it
- Our objectives need to re-worked
  - Customers care about a product’s appearance more than we thought
  - We had concentrated entirely on the product’s function
Consider using pictures with call-outs or labels instead of written descriptions.

*Such as the ones on the next slides.*
Concert Flute

• A tube (often of silver) consisting of three main sections
  – Head joint
  – Body
  – Foot joint
• Has a set of keys of one or two sorts
  – Plateau keys or American keys (closed)
  – French keys (open holes)
• Head joint has embouchure surrounded by lip-plate
Yamaha Concert Flute

Head Joint  Body  Foot Joint

Lip-Plate with Embouchure  Plateau Keys  French Keys

www.fluteworld.com/Yamaha-YFL-481H--and--YFL-461H.html
The jazz rhythm section across the decades

- 1900 to ca. 1917
  - Guitar
  - Bowed-bass
  - Drums

- 1917 to ca. 1930
  - Piano
  - Banjo
  - Tuba
  - Drums

- 1930 to today
  - Piano
  - Guitar
    - After 1945 usually amplified
  - Plucked Bass
  - Drums
The jazz rhythm section across the decades

- 1900 to ca. 1917
  - Guitar
  - Bowed-bass
  - Drums
- 1917 to ca. 1930
  - Piano
  - Banjo
  - Tuba
  - Drums
- 1930 to today
  - Piano
  - Guitar
  - After 1945 usually amplified
  - Plucked Bass
  - Drums

Note all of the text in small font along the left margin.

Lots of empty space here. Why?

Negative Example
The jazz rhythm section across the decades

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Instruments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900 to ca. 1917</td>
<td>Guitar, String bass, Drums</td>
</tr>
<tr>
<td>1917 to ca. 1930</td>
<td>Piano, Banjo, Tuba, Drums</td>
</tr>
<tr>
<td>1930 to today</td>
<td>Piano, Guitar (amplified after 1945), String bass, Drums</td>
</tr>
</tbody>
</table>
Jazz Rhythm Section: 1900 to Now

Early 1900s: String bass, guitar, drums

1920s: Piano, tuba, banjo, drums

1930s and after: Piano, string bass, guitar, drums
The Jazz Rhythm Section: Early 1900s
Jazz Rhythm Section: 1920s to early 1930s
Jazz Rhythm Section: Mid 1930s to today
Visuals summary

• Decide what you are trying to convey before choosing a visual
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  – 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
Picture Credits

[1] Hogan Jazz Archive, Tulane University
[10] http://www.guitarcenter.com/Gold-Tone/AC-6-Composite-Resonator-6-String-Banjitar-Maple-1361988162903.gc?country=us&currency=usd&source=4WWRWXGP&gclid=Cj0KEQiA4eqyBRDUh70mv9vCtsoBEiQAqps8il1oKuBsghmwPhPCv2pS7DrhYeCrjkoXZUzt4wjszAaAqnr8P8HAQ&kid=productads-plaid%5E140837817621-sku%5E1361988162903@ADL4GC-adType%5EPLA-device%5Eadid%5E57619015002