WHAT WOULD STEVE DO?
Design Your Presentation

Structure, design, and deliver your talk for maximum impact

Markus Puschel
Design Your Presentation

Structure, design, and deliver your talk for maximum impact

Principle: Contrast
Rule for fonts: change at least two attributes (weight and size)

Principle: Alignment
Left alignment is savior
Roadmap
Roadmap

**Principle: Acknowledgment**

**Slides**

**Activity**

www.freepardons.ca
Why does design matter so much?

- People will remember good presentations, but if they are bad they will never forget.
- For a good presentation it is crucial to have good content and slides.
- It should be well presented.
Why does design matter so much?

- People will **remember** good presentations, but if they are bad they will never forget.
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**Contrast could be improved**

**Not enough spacing**

**Random placement**
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Why does design matter so much?

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- For a good presentation it is crucial to have good content and slides.
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Too much text!!
Let's cut down some of the words...
Why does design matter so much?

- People *remember* good presentations
- Good content and slides are important
- Well presented
Roadmap

Content

Slides

Activity

www.freepardons.ca
Content and its organization

Motivate what and why?  Problem statement
Content and its organization

Motivate what and why?  Problem statement

Emotions get our attention
Content and its organization

Motivate what and why?  Problem statement
Content and its organization

Motivate what and why?  

Problem statement

WHAT WOULD STEVE DO?
Content and its organization

Motivate what and why?
Problem statement
Overview/roadmap

Repeat every section
Show once
Don’t show
Content and its organization

Motivate what and why?

Problem statement

Overview/roadmap

Main results

Proposed idea
Content and its organization

Motivate what and why?

Problem statement

Overview/roadmap

Discuss results

Main results

Proposed idea
Roadmap
Basic layout

you get judged by the area
Basic layout

Simple and Consistent

Visual quality

you get judged by the area

Technical content

Bright text on dark background

Black text on white background
Picture is worth thousand words

The set of points in a plane that are equidistant from a given point

\[ x^2 + y^2 = 1 \]
Picture is worth thousand words

The set of points in a plane that are equidistant from a given point

$x^2 + y^2 = 1$

recall 72 hrs later
Anticipation space – edge of seat
Anticipation space – edge of seat

Animations

Left – Right
Top – Bottom
Anticipation space – edge of seat

Animations
Left – Right
Top – Bottom

Pop-up via multiple slides
Something like Steve did
Bullets: can kill your presentation

Our Web site offers a growing young, affluent, educated & employed audience!

- 170,000 unique readers viewing over 500,000 pages/ month
- 70% of online readers are between the ages of 18 – 54
- 62% are women
- 70% earn more than $50,000/ year
- 64% attended college
- 78% employed
- 1 out of 3 are “executive/ professional/ managerial” level

Reaching consumers with money to spend is valuable to advertisers.
Bullets: One thought per slide

We reach consumers with money to spend.
We reach consumers with money to spend.
Bullets: One thought per slide

We reach consumers with money to spend.
Fonts

- Serif: textbooks (Times Roman)
- Sans-serif: slides (Calibri)
- Arial is less attractive
- No fancy fonts like Chancery
- Use only one or two fonts

Is this Font size okay?
Colors

- Use with consistency – too many is bad
- Avoid fully saturated colors
- Use desaturated colors

Color blind
Colors

- Use with consistency – too many is bad
- Avoid fully saturated colors
- Use desaturated colors

- Warm colors grab more attention than cool colors

Boxes

Color blind
Colors

**Principle: Layering**
Transform information via different visual layers
Graphics: visualize

The set of points in a plane that are equidistant from a given point

CIRCLE

3%  
10%  
65%  
recall 72 hrs later
Graphics: visualize

Transform $T$

Spiral

function for $T$ of fixed size $n$ or library for $T$ of arbitrary size

Pivot $x$

$\leq x$ recurse $> x$ recurse
Data presentation: graphs
Data presentation: graphs

Correct type of graph? Is the message clear?
Data presentation: graphs

Correct type of graph? Is the message clear?

- No title
- Fonts are too small
- Grid lines competing with data
- contrast
- Units
- No axes labels
Good graph

Items sold in First Quarter of 2002

- **Title:** aligned
- **Grid lines:** layering
- **Legible font**
- **Axes labels:** horizontal
- **Color contrast**

<table>
<thead>
<tr>
<th>Month</th>
<th>Items sold in First Quarter of 2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>20 Blue Balls, 30 Red Balls</td>
</tr>
<tr>
<td>February</td>
<td>30 Blue Balls, 40 Red Balls</td>
</tr>
<tr>
<td>March</td>
<td>90 Blue Balls</td>
</tr>
<tr>
<td>April</td>
<td>30 Blue Balls, 40 Red Balls</td>
</tr>
</tbody>
</table>
Good graph

- Discrete cosine transform 2 (DCT-2)
- Performance [Gflop/s]
- Generated library
- FFTW 3.2a
- Intel IPP 5.2
- Input size

- Background/grid lines inverted
- Another way of layering
- Line styles to distinguish (color is much better though)
- No legend
- Connection labels ↔ lines immediate
<table>
<thead>
<tr>
<th>signal processing concept</th>
<th>algebraic concept (coordinate free)</th>
<th>in coordinates</th>
</tr>
</thead>
<tbody>
<tr>
<td>filter</td>
<td>$h \in \mathcal{A}$ (algebra)</td>
<td>$\phi(h) \in \mathbb{C}^I \times I$</td>
</tr>
<tr>
<td>signal</td>
<td>$s = \sum s_i b_i \in \mathcal{M}$ (\mathcal{A}\text{-module})</td>
<td>$s = (s_i)_{i \in I} \in \mathbb{C}^I$</td>
</tr>
<tr>
<td>filtering</td>
<td>$h \cdot s$</td>
<td>$\phi(h) \cdot s$</td>
</tr>
<tr>
<td>impulse</td>
<td>base vector $b_i \in \mathcal{M}$</td>
<td>$b_i = (\ldots, 0, 1, 0, \ldots)^T \in \mathbb{C}^I$</td>
</tr>
<tr>
<td>impulse response of $h \in \mathcal{A}$</td>
<td>$h \cdot b_i \in \mathcal{M}$</td>
<td>$\phi(h) \cdot b_i = (\ldots, h_{-1}, 0, h_1, \ldots)^T \in \mathbb{C}^I$</td>
</tr>
<tr>
<td>Fourier transform</td>
<td>$\Delta : \mathcal{M} \to \bigoplus_{\omega \in \mathbb{W}} \mathcal{M}_\omega$</td>
<td>$\mathbf{F} : \mathbb{C}^I \to \bigoplus_{\omega \in \mathbb{W}} \mathbb{C}d_\omega \rightleftharpoons \phi \to \bigoplus_{\omega \in \mathbb{W}} \phi_\omega$</td>
</tr>
<tr>
<td>spectrum of signal</td>
<td>$\Delta(s) = (s_\omega)<em>{\omega \in \mathbb{W}} = \omega \mapsto s</em>\omega$</td>
<td>$\mathbf{F}(s) = (s_\omega)<em>{\omega \in \mathbb{W}} = \omega \mapsto s</em>\omega$</td>
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<tr>
<td>frequency response of $h \in \mathcal{A}$</td>
<td>n.a.</td>
<td>$(\phi_\omega(h))<em>{\omega \in \mathbb{W}} = \omega \mapsto \phi</em>\omega(h)$</td>
</tr>
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</table>
Data presentation: tables

### Before:

<table>
<thead>
<tr>
<th>shift operator</th>
<th>abstract</th>
<th>realized</th>
</tr>
</thead>
<tbody>
<tr>
<td>shift operation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>space mark</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$k$-fold shift operator</td>
<td>$q \diamond t_n = \frac{1}{2}(t_{n+1} + t_{n-1})$</td>
<td>$x \cdot C_n = \frac{1}{2}(C_{n+1} + C_{n-1})$</td>
</tr>
<tr>
<td>space shift</td>
<td></td>
<td></td>
</tr>
<tr>
<td>signal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>filter</td>
<td></td>
<td></td>
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</tbody>
</table>

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</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>space mark</td>
<td>$t_n$</td>
<td>$C_n$</td>
</tr>
<tr>
<td>$k$-fold shift operator</td>
<td>$T_k(q)$</td>
<td>$T_k(x)$</td>
</tr>
<tr>
<td>space shift</td>
<td></td>
<td></td>
</tr>
<tr>
<td>signal</td>
<td></td>
<td></td>
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<tr>
<td>filter</td>
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<td></td>
</tr>
</tbody>
</table>

$$q = T_1(x) = x$$
## Data presentation: tables

### Before:

<table>
<thead>
<tr>
<th>concept</th>
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<th>realized</th>
</tr>
</thead>
<tbody>
<tr>
<td>shift operator</td>
<td>$q$</td>
<td>$T_1(x) = x$</td>
</tr>
<tr>
<td>shift operation</td>
<td>$\circ$</td>
<td>.</td>
</tr>
<tr>
<td>space mark</td>
<td>$t_n$</td>
<td>$C_n$</td>
</tr>
<tr>
<td>$k$-fold shift operator</td>
<td>$q_k = T_k(q)$</td>
<td>$T_k(x)$</td>
</tr>
<tr>
<td>space shift</td>
<td>$q \circ t_n = \frac{1}{2}(t_{n+1} + t_{n-1})$</td>
<td>$x \cdot C_n = \frac{1}{2}(C_{n+1} + C_{n-1})$</td>
</tr>
<tr>
<td>signal</td>
<td>$\sum s_n t_n$</td>
<td>$\sum s_n C_n(x)$</td>
</tr>
<tr>
<td>filter</td>
<td>$\sum h_k T_k(q)$</td>
<td>$\sum h_k T_k(x)$</td>
</tr>
</tbody>
</table>

### After:

- also the first column gets a header
- everything left aligned
- space between rows
- three horizontal lines only, I like the top and bottom ones bolder
- space to the left edge removed
- space to the right edge removed
### The Economist poll of forecasters, December averages (previous month’s, if changed)

<table>
<thead>
<tr>
<th></th>
<th>Low/high range</th>
<th>Real GDP, % change</th>
<th>Consumer prices % increase</th>
<th>Current account % of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Australia</strong></td>
<td>2.3/2.9 2.3/3.7</td>
<td>2.6 (2.7) 3.0 (3.2)</td>
<td>3.4 2.7</td>
<td>-5.5(-5.6) -5.1(-5.2)</td>
</tr>
<tr>
<td><strong>Austria</strong></td>
<td>1.9/3.3 1.8/2.6</td>
<td>2.8 2.3 (2.1)</td>
<td>1.6 (1.7) 1.6 (1.7)</td>
<td>1.4 (1.1) 1.4 (1.1)</td>
</tr>
<tr>
<td><strong>Belgium</strong></td>
<td>2.6/3.0 1.8/2.4</td>
<td>2.8 (2.7) 2.0 (1.9)</td>
<td>2.2 1.9 (2.0)</td>
<td>1.8 2.1 (1.9)</td>
</tr>
<tr>
<td><strong>Britain</strong></td>
<td>2.5/2.7 1.8/2.8</td>
<td>2.6 2.4</td>
<td>2.3 2.1 (2.2)</td>
<td>-2.6 -2.7 (-2.8)</td>
</tr>
<tr>
<td><strong>Canada</strong></td>
<td>2.8/3.0 2.0/2.9</td>
<td>2.8 2.5</td>
<td>2.1 (2.2) 2.0 (2.1)</td>
<td>1.4 0.8 (0.9)</td>
</tr>
<tr>
<td><strong>Denmark</strong></td>
<td>2.8/3.8 1.9/3.0</td>
<td>3.3 (3.1) 2.3</td>
<td>1.9 (2.0) 1.9 (2.0)</td>
<td>2.3 (2.0) 2.2 (1.9)</td>
</tr>
<tr>
<td><strong>France</strong></td>
<td>2.0/2.3 1.6/2.5</td>
<td>2.1 (2.3) 2.0</td>
<td>1.9 (1.8) 1.5</td>
<td>-1.6(-1.5) -1.3(-1.2)</td>
</tr>
<tr>
<td><strong>Germany</strong></td>
<td>2.2/2.8 0.6/2.2</td>
<td>2.4 1.5 (1.4)</td>
<td>1.7 2.2 (2.3)</td>
<td>3.1 (3.6) 3.2 (3.7)</td>
</tr>
<tr>
<td><strong>Italy</strong></td>
<td>1.5/1.9 0.9/2.0</td>
<td>1.7 1.3 (1.2)</td>
<td>2.2 1.9</td>
<td>-2.3(-1.8) -1.9(-1.7)</td>
</tr>
<tr>
<td><strong>Japan</strong></td>
<td>2.7/2.9 1.4/3.0</td>
<td>2.8 (2.7) 2.0 (2.1)</td>
<td>0.2 (0.3) 0.5</td>
<td>3.7 (3.6) 3.7 (3.6)</td>
</tr>
<tr>
<td><strong>Netherlands</strong></td>
<td>2.5/3.0 1.6/2.9</td>
<td>2.7 2.3 (2.2)</td>
<td>1.6 1.7</td>
<td>7.3 (6.3) 6.3 (5.7)</td>
</tr>
<tr>
<td><strong>Spain</strong></td>
<td>3.3/3.7 2.5/3.2</td>
<td>3.5 2.9 (2.2)</td>
<td>3.6 (3.5) 2.8</td>
<td>-8.2(-8.1) -8.0(-7.8)</td>
</tr>
<tr>
<td><strong>Sweden</strong></td>
<td>4.0/4.7 2.6/3.7</td>
<td>4.4 3.2 (3.1)</td>
<td>1.4 1.8</td>
<td>6.5 (6.4) 6.1 (5.9)</td>
</tr>
<tr>
<td><strong>Switzerland</strong></td>
<td>2.4/3.1 1.5/2.6</td>
<td>2.9 2.1</td>
<td>1.2 1.1 (1.2)</td>
<td>13.8(13.5) 12.9</td>
</tr>
<tr>
<td><strong>United States</strong></td>
<td>3.2/3.3 1.6/2.9</td>
<td>3.3 2.2 (2.3)</td>
<td>3.3 (3.4) 2.1 (2.3)</td>
<td>-6.6 -6.4 (-6.5)</td>
</tr>
<tr>
<td><strong>Euro area</strong></td>
<td>2.5/2.7 1.5/2.5</td>
<td>2.6 1.9</td>
<td>2.2 2.1</td>
<td>-0.3(-0.4) -0.1</td>
</tr>
</tbody>
</table>

Source: OFFICIAL FORECASTS.
Slide numbers

48 vs. 48/200 vs. 48/50
Slide numbers

48 vs. 48/200 vs. 48/50

Important for Question/Answering session
Backup slides

Q. Can you explain it more?

Q. Can you tell me how you did it?
Last but not least
Act 1: Create the Story
Act 2: Deliver the Experience
Act 3: Refine and Rehearse
Principles of:

1. Alignment
2. Contrast
3. Layering
4. Anticipation
5. Consistency
6. Visualization
7. Acknowledgment
Roadmap

Content

Slides

Activity