How to give a talk

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November 2010
Outline

- Preparation
- Presentation
Rule 1: Tell a story

- **Background**
  - “Once upon a time, …”
- **Problem**
  - “The ogre ate all the apples, so the children went without…”
- **Solution**
  - “The anti-ogre fence…”
- **Evaluation**
  - “Ogre infestations declined 58% over 5 years…”
- **Conclusions**
  - “We recommend anti-ogre fences”
Rule 2: 1-2-3 rule

- One idea per slide
Microbenchmarks

Traffic Model: Batched Poisson

<table>
<thead>
<tr>
<th>Load</th>
<th>0.45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allowed Rate</td>
<td>0.5</td>
</tr>
<tr>
<td>Frequency</td>
<td>12 / day</td>
</tr>
<tr>
<td>Transit Delay</td>
<td>60 min</td>
</tr>
<tr>
<td>( \Delta \phi )</td>
<td>180°</td>
</tr>
</tbody>
</table>
Rule 2: 1-2-3 rule

- **Two** minutes per slide
- 30 minute talk: no more than 15 body slides
  - unless very sparse
  - like this talk!
Rule 2: 1-2-3 rule

- At most **three** topics
  - figure them out first
  - depends on the nature of the audience
  - work backwards
Rule 3: Use outlines

- Outlines show *connections*
  - as important as the details
- Start with an outline
- Repeat the outline or section title for each section
  - ‘roadmap’
Rule 4: Use few words

- "Words on presentation slides are a very good idea, but only when the audience is deaf."

  Prof. W. Cowan, University of Waterloo
For example...

- A lush green valley in the Himalayas, looking down a thousand meters to stepped rice fields by a rushing river
Rule 5: Use friendly fonts and colours

- **KioskNet Architecture**
- **Downlink Scheduling**
  - Problem Definition
  - Existing Approaches
  - Our Solution
  - Simulation
- **Implementing the KioskNet System**

- Especially for graphs
Rule 6: Never show tables when you can show graphs
Table 4. Cases of meningococcal disease in Dublin 1998 by area of residence

<table>
<thead>
<tr>
<th>Area</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
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<td>5</td>
<td>8</td>
</tr>
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<td>6</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
</tr>
</tbody>
</table>
The area map

From epinorth.org
Rewl 7: Typoos relfect porely on ur comptence
Rule 8: Use examples

- As in this talk!
Rule 9: Avoid colloquialisms

- It’s like, duh
Rule 10: Describe related and past work

“If I have seen further it is only by standing on the shoulders of Giants.”

*Isaac Newton*
Rule 4 & 10: Describe related and past work

“If I have seen further it is only by standing on the shoulders of Giants.”

Isaac Newton
Rule 11: Talk about your contributions

- Don’t make the audience guess what they are
Rule 12: Highlight insights

- The story behind the work is what audiences come to talks for
  - What didn’t work? Why?
  - What would you do differently next time?
Rule 13: End with a summary slide

- Leave it up on the screen when you stop for questions
Outline

- Preparation
- Presentation
Rule 1: Talk to the audience, not the screen

- Scan the audience, see if they are understanding
- Pace your talk
Rule 2: Never read from notes

- Expand from ‘headlines’
Rule 3: Walk audiences through formulae

\[
\log N^* (t) = \log \left( \prod_{i=1}^{n} N^i \left( \frac{t_i}{\sigma} \right) \right) = \sum_{i=1}^{n} \log \left( N^i \left( \frac{t_i}{\sigma} \right) \right) \approx \sum_{i=1}^{n} \log \left( 1 + \frac{(\sigma_i)^2}{2} \left( \frac{t_i}{\sigma} \right)^2 \right) \tag{EQ 14}
\]

It is easily shown by the Taylor series expansion that when \( h \) is small (so that \( h^2 \) and higher powers of \( h \) can be ignored) \( \log(1+h) \) can be approximated by \( h \). So, when \( n \) is large, and \( \sigma \) is large, we can further approximate

\[
\sum_{i=1}^{n} \log \left( 1 + \frac{(\sigma_i)^2}{2} \left( \frac{t_i}{\sigma} \right)^2 \right) \approx \sum_{i=1}^{n} \frac{(\sigma_i)^2}{2} \left( \frac{t_i}{\sigma} \right)^2 = \frac{1}{2} \left( \frac{t}{\sigma} \right)^2 \sum_{i=1}^{n} (\sigma_i)^2 = \frac{1}{2} t^2 \tag{EQ 15}
\]

where, for the last simplification, we used Equation 10. Thus, \( \log N^* (t) \) is approximately \( 1/2 \ t^2 \), which means that

\[
N^* (t) \approx \sigma^2 \tag{EQ 16}
\]
Rule 4: Always introduce graph axes
Rule 5: Speak slowly and clearly
Rule 6: Respect questioners

- Hear questions fully
- Defer them if needed
Rule 7: Practice makes perfect

- Practice a talk at least three times
- Talk in front of a mirror
- Have it videotaped, if possible
Rule 8: Arrive early

- Test your laptop or better yet, borrow one
- Bring a memory stick
- Do the talk on a white/black board if necessary
Rule 9: Bring a pointer

- Laser, stick, or pen
Rule 10: A little humour goes a long way

“This is humiliating. Couldn’t you drop me a block from school?”

From The New Yorker
Rule 11: End on time

- Keep track of the time
Summary

- Rule 1: Tell a story
- Rule 2: 1-2-3 rule
- Rule 3: Use outlines
- Rule 4: Use few words
- Rule 5: Use friendly fonts and colours
- Rule 6: Never show tables when you can show graphs
- Rule 7: Typoos relfect porely on ur comptence
- Rule 8: Use examples
- Rule 9: Avoid colloquialisms
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- Rule 11: Talk about your contributions
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