

Technical Presentation Milestone Presentation

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Fall 2011



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- 1 **The Technical Presentation Milestone: Mechanics**
- 2 **Presentation Skills**
 - Planning
 - Showing
 - Telling
 - Answering Questions
- 3 **Presentation Styles**
- 4 **Conclusion**

Webpages

`http://patricklam.ca/tpm`

My TPM page for Software Engineering students

`http://www.ece.uwaterloo.ca/~tppe000/`

TPM page by Prof. Harder for ECE students

Why the TPM?

Co-op employers:

“UW students cannot give presentations.”

When?

2B

What's in a TPM presentation?

Technical presentation, normally related to your 2B work term.

- 12-15 minutes (with slides);
- 5 minutes question-and-answer;
- 2 evaluators and a peer audience.

Do not talk for more than 15 minutes and 30 seconds.

What should I talk about?

Explain something you know (well).

Show enthusiasm!

Purpose

Goal: Inform or persuade.

Your presentation is not:

- a sales pitch;
- a lecture; or
- your work-term report in slide form.

Level: appropriate for 2B students.

Evaluation

- 4 criteria, each marked out of 2:
 - organization;
 - quality of overheads;
 - presentation style;
 - response to questions.
- 2 markers; your total is the sum of marks
- to pass, you need 12/16 with at least 1/2 for each criterion

Results from S2011

The Class of 2014 had the following results:

- 93 students
- 79 credit (85%)
- 10 no-credit (10%)
- 4 no-grade (i.e. no-show)

Hoops I

Time and Place:

MW 2:30-5:30 in EIT3145

Sign ups:

on Quest for TPM 1X000.

Bring your .ppt or .pdf file.

Dress appropriately and attend all talks in your session.

Pick up your evaluation a week after the presentation.

Hoops II

Three Required Slides:

- Title Slide: title, name, date
- Outline
- Summary

Timer



(thanks Douglas Wilhelm Harder for these pictures).

Recovery Options

If you fail:

Try again in 3A.

The TPM is a degree requirement.

Example TPM Presentations

<http://www.ece.uwaterloo.ca/~tpe000/Examples/>

- Comparison of PostgreSQL and MySQL/InnoDB
(Baverstock)
- How Apple's launchd Compares to a Standard System V init
(Zarnett)
- Network Security—Passive and Active Methodologies
(Robinson)
- Next Generation Optical Media
(Armstrong)



Next: tips and opinions about presentations.

- Planning
- Showing
- Telling
- Answering questions

Tips on Planning



Give yourself enough time to prepare and practice!
(This talk took me 1 full day to prepare.)



Pick a topic

From 2B work-term report, perhaps.

Next, learn about your topic.



Questions to think about

What's your objective?

What do you want to say about it?

(Who is your audience?)

What is your evidence?

Organize your thoughts

Nov, 30

TPM talk:

15 mins - TPM requirements and conventions

- webpage and scheduling

- structure

- content

- passing/failing consequences, evaluation

- examples

↳ reasons people fail

35 mins - good technical presentations

- lessig style (at end), Cognitive style of Power fun

- speaking tips

- presentation layout

- practicing

- answering questions

- preparing talks



Practicing

Do practice!

Consider:

- going to EIT 3145;
- timing your presentation;
- getting friends to critique you.

Purpose of Slides

Visual information:

- tables, diagrams, charts, maps

Help focus audience attention.

Showing

Non-Purpose of Slides

Not for you!

Not for reference afterwards!



Showing

How many slides?

About 1 per minute.

Showing

Good Slide Design

Good qualities:

- Readable (large fonts)
- Consistent
- Contain appropriate content

Showing

Bad Slide Design

A list of pitfalls:

- disunity of purpose
- backgrounds
- too much text, or text too small
- weird fonts
- bizarre transitions
- spelling and grammar mistakes
- use of Word

Graphics

Do use graphics! (when appropriate)

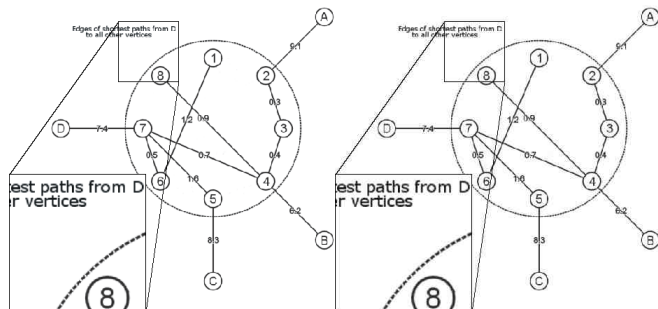
Major graphics formats:

- PNG: lossless compression
- JPEG: lossy compression

Don't use JPEG for line art!

Showing

Graphics



Don't use JPEG for line art!

(thanks Douglas Wilhelm Harder for these pictures.)



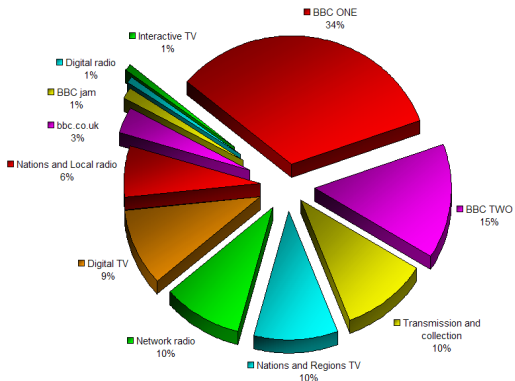
Showing

Charts

Maximize information density.

Showing

Nonmaximal information density



(Public domain; source: http://commons.wikimedia.org/wiki/File:BBC_licence_fee_expenditure_percentage_2005-6_Redvers.png)

Speaking well

Try to:

- vary your tone;
- speak at suitable volume;
- enunciate clearly;
- show enthusiasm;
- show good posture;
- make eye contact.



Speaking poorly

Do not:

- speak too fast;
- read all of the talk from cue cards;
- hesitate (“um, ah, like”) unnecessarily;
- put hands in pockets;
- fix gaze at any one spot;
- panic.



Questions:

- probe your knowledge of topic;
- display unscripted interaction.



Answering Questions

Answering strategy

You may repeat the question.

Answer the question that was asked.

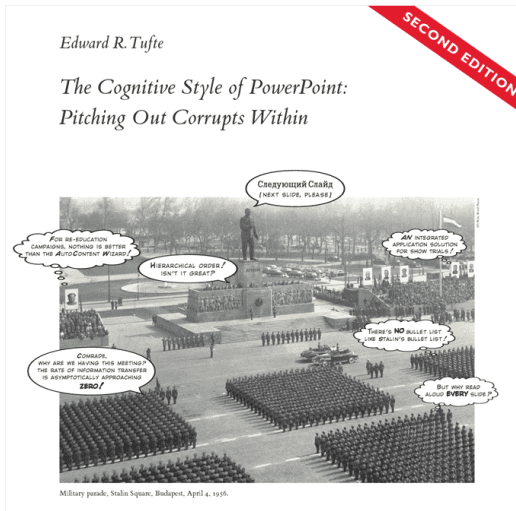
“I don't know” is not a wrong answer.

Don't try this at home

A few out-of-the-box ideas.

May help you create great presentations.

The Cognitive Style of PowerPoint



Gettysburg Address in PowerPoint

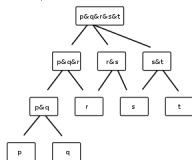
<http://norvig.com/Gettysburg/>

Handouts

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Improving Hob's Specification Language (AOSD '05)

(letters = preconditions)



Specifications aggregate,
hurting scalability

Solution: Scopes

Case Studies: ⑧

- data structures (singly- & doubly-linked lists, arrays as sets, stacks, queues, pqueues)
- Minesweeper benchmark (750 lines impl, 250 lines spec)
- Water numerical computation benchmark (2000 lines impl, 500 lines spec)

Module must
allocate array:



```

proc init() ensures Init & ...
proc add() requires Init & ...
proc del() requires Init & ...
proc isEmpty() requires Init & ...
  
```

Solution: Defaults

Contributions: ⑨

- Hob framework for modular program analysis
 - Set specification language; abstraction functions
 - Scope invariants, defaults
- Enables multiple diverse analyses to interoperate
- Statically verifies data structure consistency properties

Lessig Style

`http://randomfoo.net/oscon/2002/lessig/free.html`

Summary

Described the format of the Technical Presentation Milestone.

Gave tips on presentations:

- planning;
- speaking;
- organizing slides; and
- answering questions.

Described alternate presentation styles.