How to give a talk

Tim Sheard, Andrew Black and David Maier

Revised February 2020

What's involved?

- General Concerns
  - Who is your audience?
  - What kind of talk will it be?
- Preparing for the talk
  - Gathering and organizing material
  - Preparing the slides
- Giving the talk
  - What is the point of the talk?
  - Timing your talk
  - Answering questions

Know your Audience

- Whom will you talk to?

- What do they know?

  What knowledge can you assume everyone has?
  What don't you have to say.

- What do they expect?

Kinds of Talk

- **Standard Conference Talks (15–20 minutes)**
  - Audience is specialized
  - Such a talk is an advertisement for your research
    goal is to persuade listeners to look further

- **Long Conference Talks (invited, special slot)**
- **Class presentation (usually shorter, 10–15 minutes)**
- **Job Interview (45–60 minutes): broad audience**

Ogilvy on Advertising

- David Ogilvy (http://www.ogilvy.com) — *Good advertising makes a promise.*
  - 29 January 1996 Newsweek ads promise:
    - A Ford Contour will make driving fun.
    - Campbell's Chunky soups give you a fast, square meal.
    - Grand Marnier will add mystery to your life.

- What do you promise?
  - If they read my paper…
    - My method will let you optimize large joins in a few seconds …
    - and add mystery to your life.

Steps for giving a talk

- Gather material

- Create the slides

- Practice the talk

- Anticipate Questions

- Give the talk

Gather Material

- Find material you will need

- Pay attention to talk parameters

- Create lists of important ideas

- Find appropriate graphics and pictures
  - These are the *only* things that *need* to be projected.

Choosing Material From a Paper

- Mark examples and graphics to use (or adapt).

- Decide if you need additional examples.

  - for example, to replace formal definitions

- Tick off sections to emphasize, cross off ones to skip.

- Consider if another order is better for the talk— listener can't jump around like a reader can.

  - **Algorithm, Implementation Details, Performance Results**
    - ➡ *Performance Results, Algorithm, Implementation Details*

- Difficult sections — might omit if they are hard to explain quickly.

  - No proof or derivation details.

  - Avoid large tables of results. Remove any entries that you won't talk about

  - Avoid complex diagrams (anything that can't be digested in under a minute).

    - In a longer talk, consider presenting them piecemeal

Planning your slides

- Calculate the number of slides to use.
  - Usually 1.5–3 min/slide, except for:
    - title pages
    - contents pages
  - Maier: "One minute per slide is <u>impossible</u>!!"
  - Black: it depends on your slides

- Do a story board (a visual outline): 16 per page

- Try for *at least* $^1/_3$ slides with visually interesting feature: diagram, (simple) table, graph, photograph.

- Draft slides on quarter pages (or 3" x 5" cards)
  Helps limit amount of material on slides.

Storyboard

Drafting Template

Slides are Prompting Notes

- Think of text on the slides as notes a reader might take during the talk.
  - *Don't* duplicate everything you will say.
  - You should talk to *all* points on slides.
    If you're not going to talk about it, <u>remove it</u>.
  - Abbreviations, sentence fragments okay
    - helps listener get through material <u>quickly</u>
  - Compare:
    - Next we consider the case where n is strictly between 0 and 1.

    - Case 2: 0 < n < 1

Slide characteristics

- Keep visuals simple and uncluttered

- Restrict text: 4–8 lines per page.

- Use color and font changes to carry a message
  (*e.g.*, related concepts or experimental results in the same colors)

- Use LARGE fonts.

- Use graphics rather than words where possible.

Example

Related Disciplines

Week 6: Give a Talk
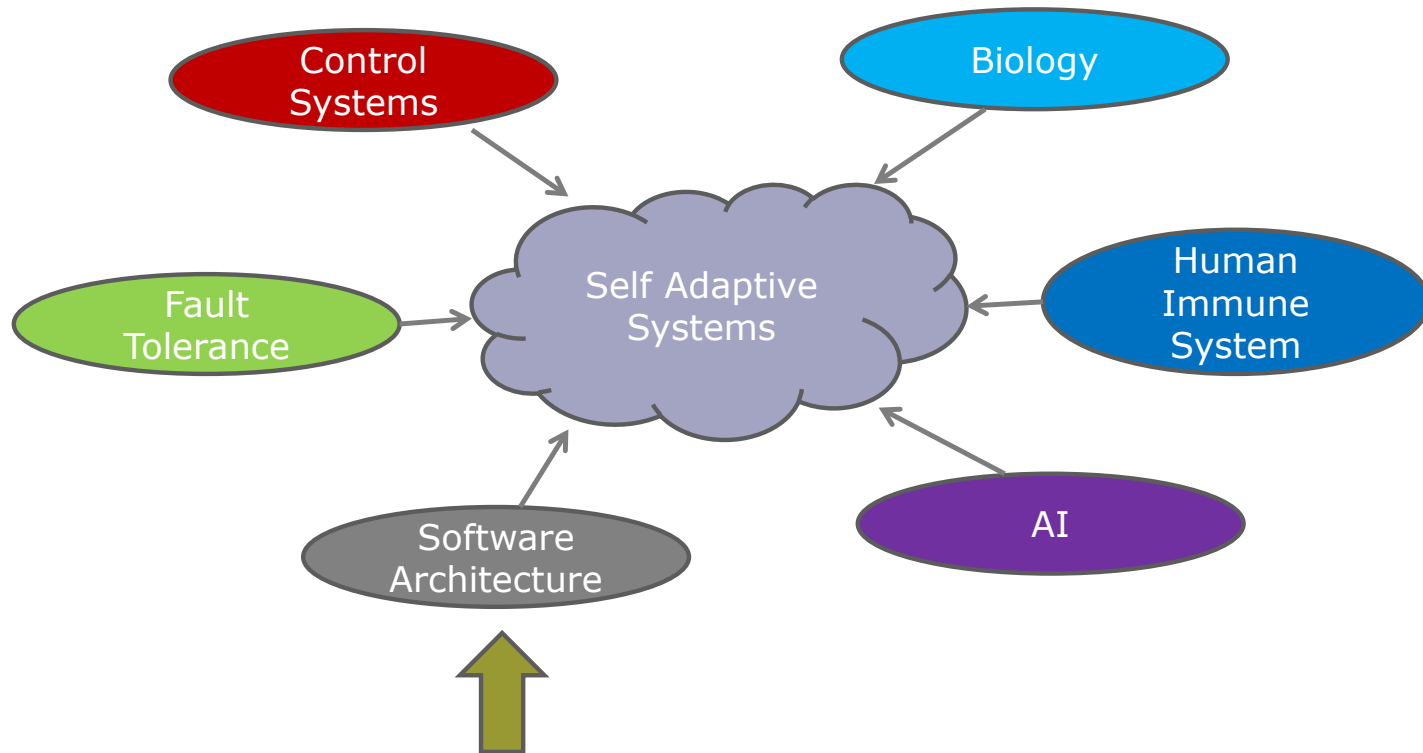
Compare to:

- Disciplines relevant to Self-Adaptive Systems:
  - Biology
  - Human Immune System
  - AI
  - Control Systems
  - Fault Tolerance
  - Software Architecture

Formatting

- Pointsize to use depends on font.
  - Helvetica: 32pt 24pt 18pt 16pt 12pt 8pt 6pt
  - **Impact: 32pt 24pt 18pt 16pt 12pt 8pt 6pt**
  - **Times: 32pt 24pt 18pt 16pt 12pt 8pt 6pt**
- On text slides, use visual elements so audience can keep their place
  - bullets, indentation, highlight, different-length lines
- Titles are not always necessary.
- Number your slides – useful at question time

Bad Slides

ONE WAY TO MAKE YOUR SLIDES NEARLY UNREADABLE IS TO USE ALL CAPITAL LETTERS IN A SANS-SERIF FONT. THIS GUARANTEES ALMOST A UNIFORM FIELD OF GRAY FROM ANYONE WATCHING FROM THE BACK OF THE ROOM. IT ALSO HELPS IF YOU RUN ITEMS TOGETHER, RATHER THAN STARTING EACH ON A NEW LINE. FILL UP THE SLIDE FROM TOP TO BOTTOM WHILE YOUR ARE AT IT. IF YOU PREPARE SLIDES IN THIS MANNER, THEN YOU SHOULD ALSO READ THEM WORD-FOR-WORD OFF THE SLIDE WHILE KEEPING YOUR BACK TO THE AUDIENCE. TRY TO MAKE YOUR VOICE AS MONOTONOUS AS THE SLIDES. SOMETIMES YOU CAN GET A PAYOFF FROM THE LOCAL OPTOMETRIST FOR THE EYE STRAIN IT CAUSES. ABOUT THE ONLY THING THAT WOULD MAKE THIS SLIDE ANY WORSE IS IF I COULD FIGURE OUT A WAY IN POWERPOINT TO JUSTIFY THE RIGHT MARGIN.

Easy with Keynote

ONE WAY TO MAKE YOUR SLIDES NEARLY UNREADABLE IS TO USE ALL CAPITAL LETTERS IN A SANS-SERIF FONT. THIS GUARANTEES ALMOST A UNIFORM FIELD OF GRAY FROM ANYONE WATCHING FROM THE BACK OF THE ROOM. IT ALSO HELPS IF YOU RUN ITEMS TOGETHER, RATHER THAN STARTING EACH ON A NEW LINE. FILL UP THE SLIDE FROM TOP TO BOTTOM WHILE YOUR ARE AT IT. IF YOU PREPARE SLIDES IN THIS MANNER, THEN YOU SHOULD ALSO READ THEM WORD-FOR-WORD OFF THE SLIDE WHILE KEEPING YOUR BACK TO THE AUDIENCE. TRY TO MAKE YOUR VOICE AS MONOTONOUS AS THE SLIDES. SOMETIMES YOU CAN GET A PAYOFF FROM THE LOCAL OPTOMETRIST FOR THE EYE STRAIN IT CAUSES. ABOUT THE ONLY THING THAT WOULD MAKE THIS SLIDE ANY WORSE IS IF I COULD FIGURE OUT A WAY IN POWERPOINT TO JUSTIFY THE RIGHT MARGIN.
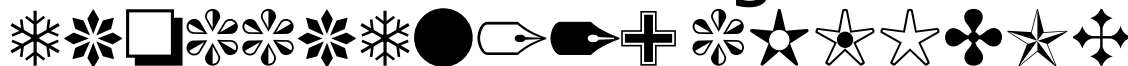
Distracting the Audience

- You <u>paid</u> for all those fancy fonts and features in your text editor; you ought to get your money's worth out of <u>them</u>.

  If **you** use enough *distracting* elements on your slides, the *audience* will be so pre-occupied they won't even notice you don't know what you are saying.

  ☞ & don't **forget** the dingbats!
  ❄❄◻❄❄❄●☛☛✚❄☆☆☆♣☆✦

Animation

- Having new items "appear" can help lead audience through material
- But:

dissolves

fly-ins

and silly effects

are distracting if over-used

animated gifs

Other Considerations

- Can be confusing to combine topics on a slide
  - Ok not to fill up a slide.
  - Blank space is your friend.

- Authors & date usually good enough for a citation.
  example: [Launchbury & Sheard, 1995]

- If you want to refer back to a slide, repeat it.
  - it can help to put a miniature of a previous slide in a corner

Practice the talk

> If you remember only one thing from this talk, this should be it!

- If you have not given the talk before, rehearse it **out loud**.
    - try it out for length: you'll be surprised!
    - running through a talk silently doesn't give an accurate time estimate
        - If you go over the allotted time, we'll take away a lot of points
    - I sometimes stand in front of a mirror; video recording is even better
    - Regeneration is easier than generation.

Anticipate Questions

- When you give the talk you'll be expected to answer questions. Prepare for this!
  - Know what to expect
  - Prepare and practice strategies for effective question answering
  - Prepare extra slides for questions you might get
  - Present to colleagues; see what questions you get

Before the Talk

1. Know your venue
   - Visit the site beforehand
   - Know where it is, how to get there, don't be late
   - Find the session chair beforehand

2. Stage fright? Try to relax
   - What is the *real* consequence of messing up?

3. Have crib notes for yourself
   - points to emphasize
   - words to say in difficult parts
   - slides to drop, where to slow down

Grab your audience

- Try to set the tone of a conversation with the audience.
  - Try to make audience contact on title slide

- Try to say something intriguing in first two minutes (and in last minute)
  - personal anecdote—how work or interest came about (takes time)
  - appropriate joke
  - question to audience
  - interesting statistic or relevant prop

Delivery

- Don't stand rooted to one spot. (Unless you're talking to 500 people in a completely darkened room.)

- Talk to, and look as far as, the back row.

    - We've NEVER heard a talk where the speaker was too loud.

- Regulate your rate of speaking – use crib notes to remind yourself to slow down

    Don't be afraid of silence: use it to separate ideas, emphasize key points

- Avoid "upspeak" (where everything you say is a question)

- If you tend to fidget, hold a pen

- Make eye contact, find some responsive faces.

    Need to notice questions when they happen.

Directing Attention

- How to get the audience to pay attention to the right part of your slides?
  - Verbally
    - "Notice that the curve has two bumps ..."
  - Gesturing
    - Pointers, computer cursor, your finger, ~~laser pointer~~
    - Add "balloons" as animations
    - Best: if screen is low, walk up and point there

Using Notes

- Can be okay, but make sure they are *notes*, rather than full text. (**Don't** read your talk.)
  - 3" x 5" cards
  - Speaker's notes on second screen of your projection software
    - don't work for me, because I walk around.

- In case you lose the thread when switching slides: consider just one line for each slide with the first thing to say.

Timing

- Have time targets for certain slides.

  Have slides to omit

- If chair surprises you "5 minutes left", maybe the best thing to do is stop and think:
  - How can I recover?
  - What should I omit?
  - What's the best use of the time left?

- Know that your conclusion will take x seconds

  Jump to conclusion x seconds before the end of your time-slot

- ***Don't* refer to lack of time—**

  it makes you look unprepared.

Answering Questions

"I was gratified to be able to answer promptly.
I said I didn't know."

Mark Twain

Be sure you understand the question.

- Listen to the **entire** question.

- Restate
  + if you are not sure you understand
  + if the audience might not have heard

- Ask if you've answered the question adequately, but don't engage in an extended dialog.

Don't get rattled

- Questioner may be speaking to show off knowledge.

- Take a little time to think, if needed.

- Question may be off the mark — does it reveal a misperception?
  - "you don't understand" vs.
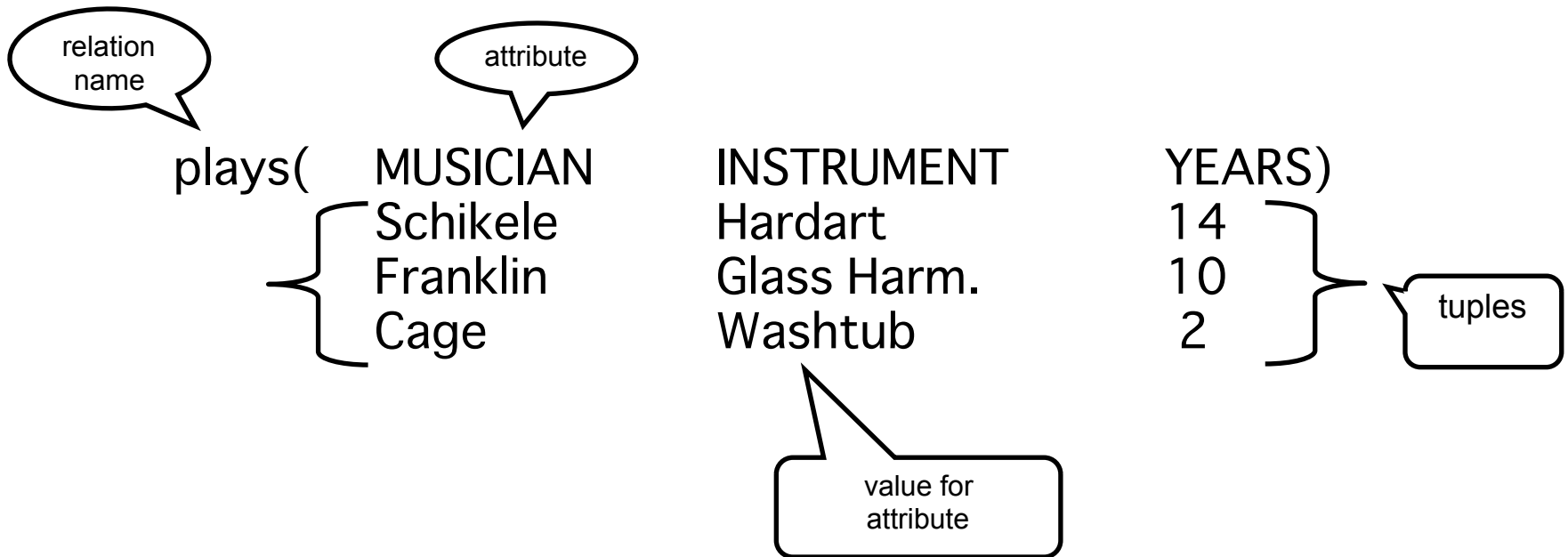 - "I didn't explain that very clearly"

Advice from Many Sources

- Emphasize results and interpretations over minutiae of techniques.

  - Even if technique is the contribution, emphasize basics, and results obtained.

- Expect to use a non-uniform level of detail.

- Don't forget a slide with name, affiliation, co-investigators, sponsors — typically the title page

- Plan some flexibility into the talk.

  - Slides you can omit if you are running long, or the audience looks bored.

- Tell your audience what to remember
  - *Interpret* a graph or equation in the text.
  - *Tell* people what they're supposed to see in a figure

- Don't feel compelled to put a title on every slide.

- Involve the audience — e.g., ask a rhetorical question, relate a concept or question to common experience

- Build in "re-entry points"—places where a listener can pick up the thread again

  - That was an outline of the correctness proof of the algorithm, but you don't need to master it to understand our performance experiment...

Explanation and definition via example

relation name

attribute

plays(MUSICIAN   INSTRUMENT   YEARS)
       Schikele   Hardart   14
       Franklin   Glass Harm.   10
       Cage   Washtub   2

tuples

value for attribute

Simplify Charts and Graphs

Benchmark	Disk I/O	CPU	Idle
TPC-A	141.3	554.23	53.4%
TPC-B	3559.4	1255.83	22.3%
TPC-C	1298.0	988.65	61.1%
TPC-D	1904.4	1667.56	44.2%

Fewer significant digits, remove or minimize non-data distractions, align columns

Compare:

Benchmark	Disk I/O	CPU	Idle
TPC-A	141.3	554.23	53.4%
TPC-B	3559.4	1255.83	22.3%
TPC-C	1298.0	988.65	61.1%
TPC-D	1904.4	1667.56	44.2%

Benchmark	Disk I/O	CPU	Idle
TPC-A	140	550	55%
TPC-B	3560	1250	20%
TPC-C	1300	990	60%
TPC-D	1900	1670	45%
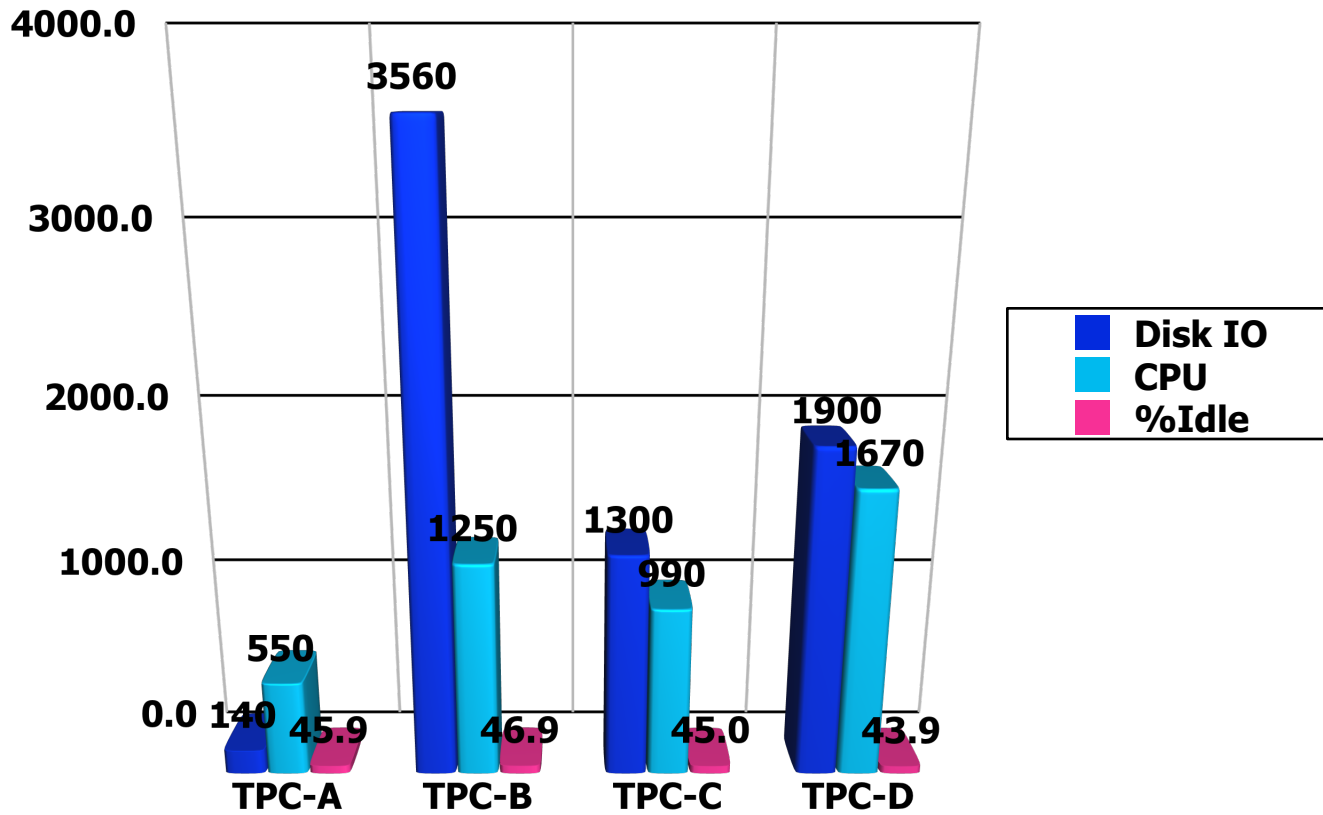
Transaction-processing benchmarks

Transaction-processing benchmarks

Legend:
- Disk IO
- CPU
- %Idle
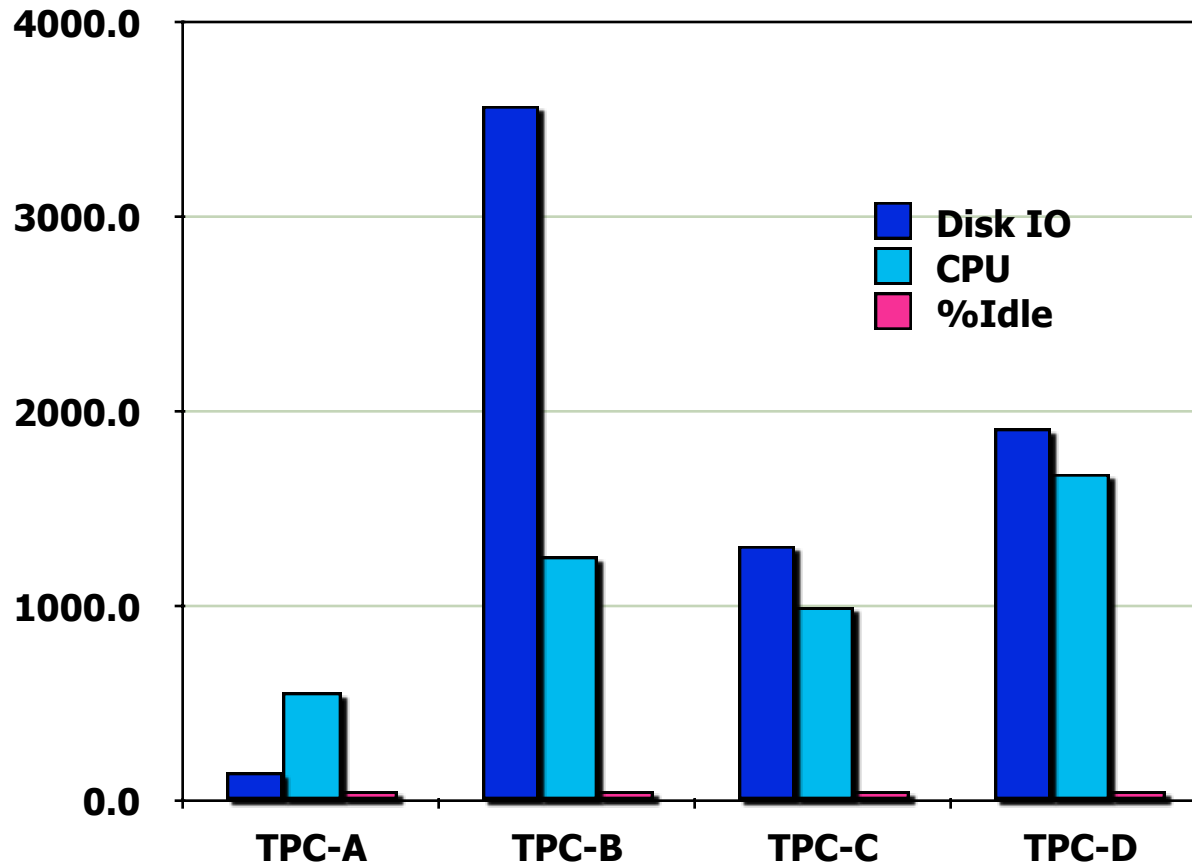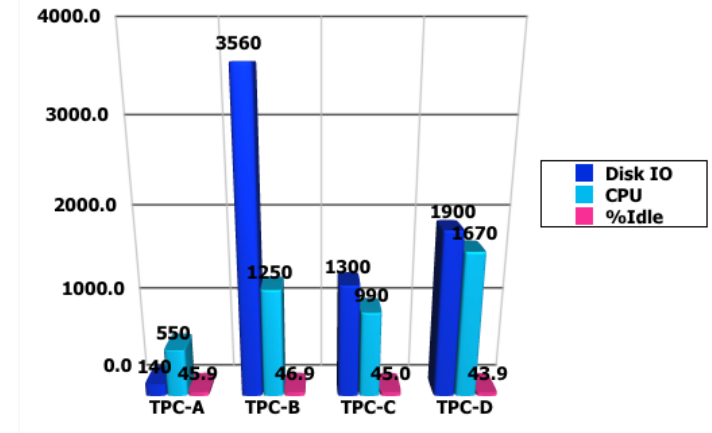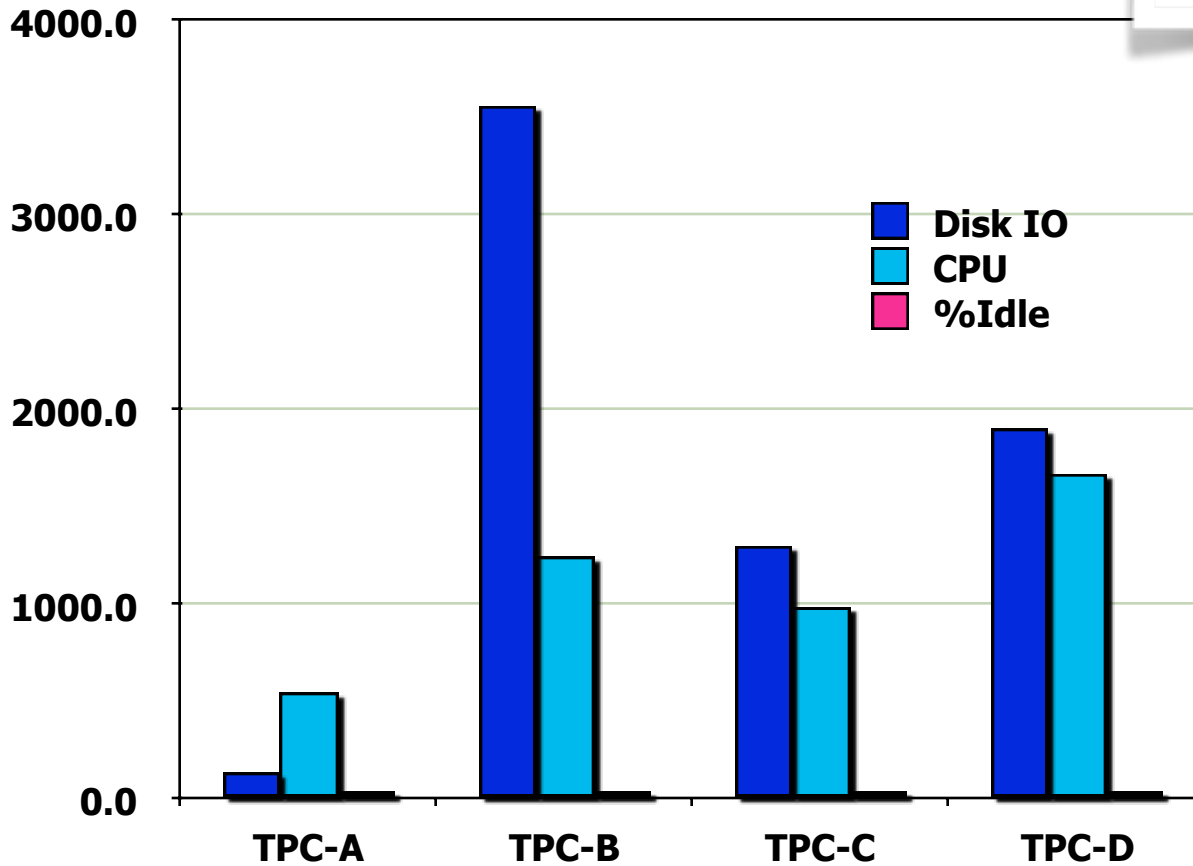
Class Activity

List ten things that are wrong with these slides