how to give good technical presentations

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credits

- Katherine Compton and Mark L. Chang "Terrible Presentations (…and how to not give one)"

412 mini-conference specifics

basic rules

- time budget
  - 15 minutes for the presentation
  - 5 minutes for
    - Q&A **and** hand-over to the next group
- any number of the group members can present (1..4)
- the order and time of presentations is posted
- list the project title and group members clearly on the first slide
- make it clear if your project is **analysis** or **design**

technical presentation specifics

what to talk about?

- What is the problem addressed?
- Why is this problem important?

problem motivation

- How is this problem currently addressed by others?
- Why and in what respect is our way to address this problem is better than those developed by others?

related work

- How did we addressed the problem?
  - approach
  - its evaluation

methods, results, conclusions drawn from the results

THE UNIVERSITY OF BRITISH COLUMBIA

General Advice Part 1

Why A Good Presentation?

- You want people to:
  - Understand your work
  - Be INTERESTED in your work
  - Think you're great!

- What happens if you give a bad one?
  - Few pay attention
  - They may fall asleep
  - Might think your work is not important

Tips For Presenting

- How to give **good** presentations:
  - Part I: Presence
    - Attitude
    - Voice
    - Mannerisms
  - Part II: Slide style
    - Understandable
    - Interesting
- Will show examples of what NOT to do

overview

- Keep audience interested
- Keep them with you

- Things that can affect this
  - Topic, topic depth
  - Attitude/Presence
  - Mannerisms

Know Your Topic

- Be prepared to get questions!
- "What if I don't know the answer?"
  - Know WHEN to say "I don't know"
  - Know HOW to say "I don't know"
  - Don't just stand there uncomfortably!
- Be able to recover from interruptions
- Know what to skip if you're running late
  - Don't just talk faster!

Know Your Audience

- Do they have a background like yours?
- How much hand-holding?
- Can you jump right in to specifics?
- How much motivation for your work?
- How detailed should you get?

Know Your Location

- Need to bring a laptop?
- Need to bring a CD, or email a PPT in advance?
- How far is audience from screen?
- Can you point with your hand, or do you need a laser pointer?

Attitude. (Yours)

- Are you INTERESTED in your topic?
  - If no, get a different one!
  - If yes, ACT LIKE IT
- If YOU aren't excited…
  - Can't expect OTHER people to be!

- Don't talk down to audience
  - You know more than them about THIS…
  - They know more than you about other stuff

Dead Man Talking

- Are you hiding behind the podium?
- Are your hands/face motionless?
- Are you staring…
  - at your advisor/boss?
  - at your laptop?
  - at the screen?
  - at the ceiling?
- Is your back to the audience?

- IF SO… you're probably BORING!

I Drank A Case Of Mountain Dew!

- Sometimes nerves make for fast talking
- Calm down. E-nun-see-ate.
- It's not a race
  - People need time to absorb information
- Take a bottle of water if necessary
  - Bottles if you can work a cap (spillage)
  - Glass if you're using a laser pointer

Where are your hands?

- You have a set of "moves" that repeat during your talk
- Make sure they aren't silly looking
  - Don't point with your middle finger
- Can videotape yourself speaking
- Do a practice for friends
  - Make sure they're not too nice
  - You want real feedback!

Look Ma, I have a L-A-S-E-R!

source: en.wikipedia.org

- If necessary, get a laser pointer
  - Will depend on your talk
- Get it a few weeks before your talk
  - Play with it. Circle things. Make shapes.
  - Be comfortable
  - Get Borg impersonations out of the way
- Get a second one for backup, or make sure session chair/host has one

Common Laser Pointer Moves

- The circle
- The underline
- The back-handed flick
- The epileptic-seizure inducer

- DO NOT POINT AT EVERYTHING
  - Not everything is equally important
  - Your voice can provide emphasis too

Right Here. See?

- Don't point at your laptop screen
  - They can't see it

Ummmm… The… Uh… Yeah.

- Practice makes perfect
  - Caveat: OVER practicing can be bad…
- Do not read your slides like a script

- Most people lose 20 IQ points in front of an audience

Part 11
Slide Design

bottom line

- Goals:
  - Convey the necessary information
    - intuition of your work, not every single detail!
  - Be readable/understandable
  - Be interesting (enough)
- Avoid:
  - Over stimulation
  - Booooring

how many slides?

- it depends ...
- rule of thumb
  - 1-2 minutes per slide of content

Outline

- Title Slide
- Problem motivation
- Outline
- Approach
  - how we've done it
- Results
- Related work -- how others have done similar stuff and how ours is different
- Conclusions -- what conclusions can be drawn
- Summary

Outline Slides

- Previous slide didn't "help" audience
- If use outline slide, make it USEFUL
  - Everyone (hopefully) introduces their topic
  - Everyone explains their work, gives results
  - What is specific to YOUR talk?
- Talk length correlates to outline need
  - Talk is 45 minutes, maybe!
  - Talk is 5 minutes… probably not.

README.TXT

- Do not attempt to put all the text, code, or explanation of what you are talking about directly onto the slide, especially if it consists of full, long sentences. Or paragraphs. There's no place for paragraphs on slides. If you have complete sentences, you can probably take something out.
- If you do that, you will have too much stuff to read on the slide, which isn't always a good thing.
- Like the previous slide, people do not really read all the stuff on the slides.
  - That's why it's called a "presentation" and not "a reading" of your work
- Practice makes perfect, which is what gets you away from having to have all of you "notes" in textual form on the screen in front of you.
- Utilize the Notes function of PowerPoint, have them printed out for your reference.
  - The audience doesn't need to hear the exact same thing that you are reading to them.
  - The bullet points are simply talking points and should attempt to summarize the big ideas that you are trying to convey
- If you've reached anything less than 18 point font, for God's sake, please:
  - Remove some of the text
  - Split up the text and put it on separate slides
  - Perhaps you are trying to do much in this one slide?
- Reading a slide is annoying.
- You should not simply be a text-to-speech converter.

which type face

- don’t use serif typeface

- use sans-serif typeface instead

Font Size

- You are close to your monitor
- Your audience is far from the screen

Tahoma	Courier	Gill Sans	Lucida Sans
32 pt	32 pt	32 pt	32 pt
28 pt	28 pt	28 pt	28 pt
24 pt	24 pt	24 pt	24 pt
20 pt	20 pt	20 pt	20 pt
18 pt	18 pt	18 pt	18 pt
16 pt	16 pt	16 pt	16 pt
14 pt	14 pt	14 pt	14 pt
12 pt	12 pt	12 pt	12 pt
10 pt	10 pt	10 pt	10 pt

Squint City

- If you find yourself saying "you probably can't read/see this, but…"
  - Then you probably have a BAD SLIDE!
  - There are exceptions, but very few
- Test on real screen in conference room
  - Not just your computer screen 15" away.

This is a really long title for this single slide, I should have just summarized

- Hard to read
- Many people don't read the title anyway

- Should have been "Long Slide Titles"

Know Slide Boundaries

- People can't read text that runs off the side of the slide

Bullets Aren't Everything

- How many
  - Levels of
    - Hierarchy do
      - You think
        - » You need
          - * To express
            - Your point?

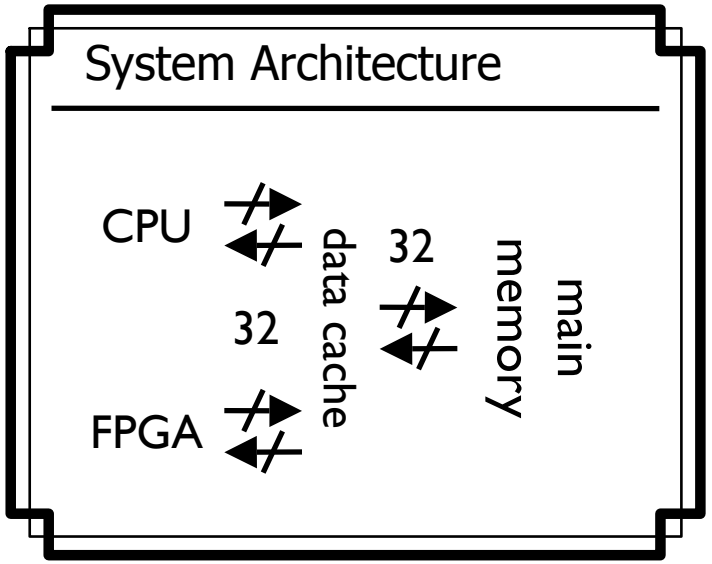
Speelchick

- How samrt will poeple thikn yuo are?

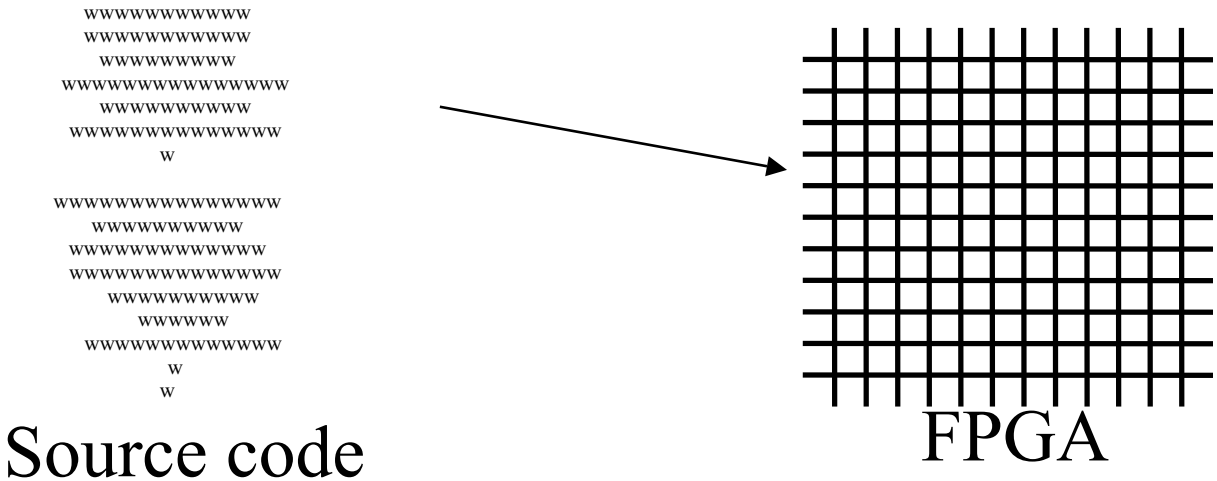
- Watch for:
  - there/their/they’re
  - too/to/two
  - its/it’s

Picture This

- There are exceptions, but in general
  - Don't have only text on most of your slides
  - Try to draw diagrams wherever applicable
- (Well-drawn) pictures easier to understand

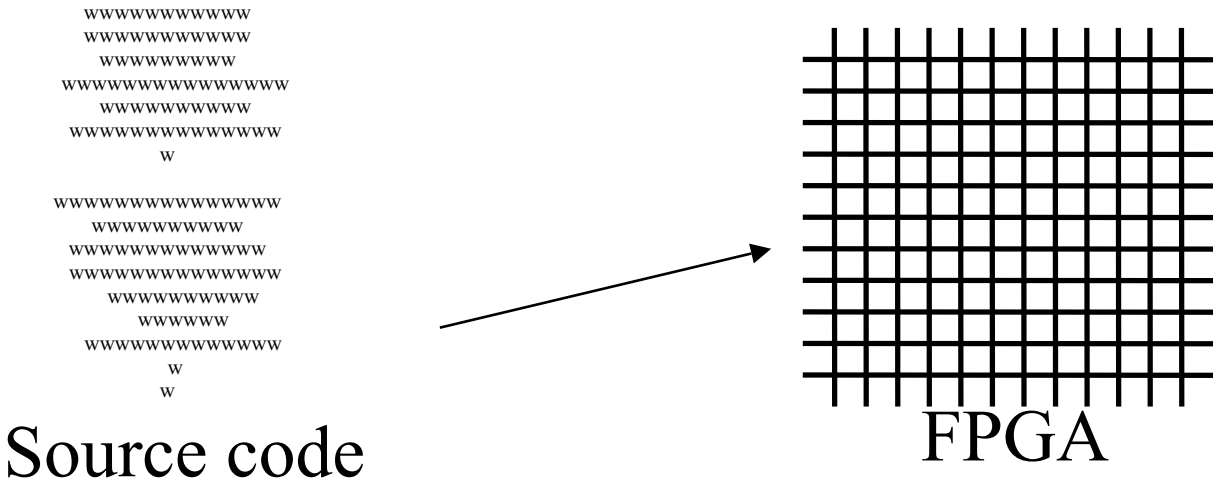


Example Diagrams



- Compute-intensive sections on hardware
- Hardware reconfigured for each

Example Diagrams



- Compute-intensive sections on hardware
- Hardware reconfigured for each

You are not Pixar Studios

- Previous slide(s) used "animation"…

Animation
Can
Be Very
Distracting

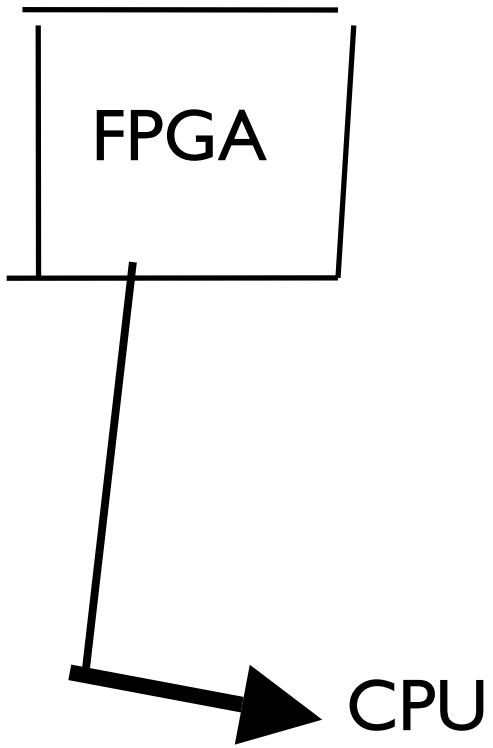
Use it sparingly

(it can be annoying)

- Use only where it is USEFUL
- Know if presentation system will handle
  - Different versions of PowerPoint, Macs, etc.
- Or use multiple slides to safely animate
  - Flip-book style

Line ‘Em Up

- This is a bad drawing
- Put in some effort



The Art of Suspense

The Art of Suspense

- Don't

The Art of Suspense

- Don't
- Be

The Art of Suspense

- Don't
- Be
- A

The Art of Suspense

- Don't
- Be
- A
- Tease

Anticipatory Lecturing

- Don't Be A Tease
- Let the audience think at their own pace
- It only provides benefit if there's a "surprise" result

Mommy, my eyes are burning!

- Can you look at this for 45 minutes?
- Colors look different on every LCD projector
- Colors look different between transparencies and projector

- Side note: if printing slides, may want to choose white background to save ink!

I See A Ghost

- More contrast on monitor than projector
- Different projectors == different results
- Colors to avoid with white are:
  - Light Green
  - Light Blue
  - Pale Yellow

Usually can't read this…

- Your slides should have good contrast

Equations

$$
\begin{aligned}
X' &= A * B \\
&= (A - (2^p - 1)) * (B - (2^q - 1)) \\
&= AB - B(2^p - 1) - A(2^q - 1) + (2^p - 1)(2^q - 1) \\
X'' &= (A - E_p)(B + Eq) \\
&= AB + AE_q - BE_p - E_pE_q \\
&= AB + AE_q - (BE_p + E_pE_q) \\
&= AB + AE_q - \frac{E_pE_q}{2} - \left(BE_p + \frac{E_pE_q}{2}\right)
\end{aligned}
$$

$$
f(X', X'') = \frac{\Gamma}{2} \sum \frac{\frac{X'^{\delta\alpha \max(\phi^2)}}{X''_{\Gamma^{3/2}}} \sum \epsilon \sqrt{AB + AE_q - \frac{E_pE_q}{2} - \left(BE_p + \frac{E_pE_q}{2}\right)}}{\int_R \phi\rho f(\vec{X}|S_k) \frac{1}{(2\pi)^{d/2}\sigma^d} * \frac{1}{P_k} \sum_{i=1}^{P_k} \exp\left[-\frac{(\vec{X} - \vec{W_{ki}})^T (\vec{X} - \vec{W_{ki}})}{2\sigma^2}\right]}
$$

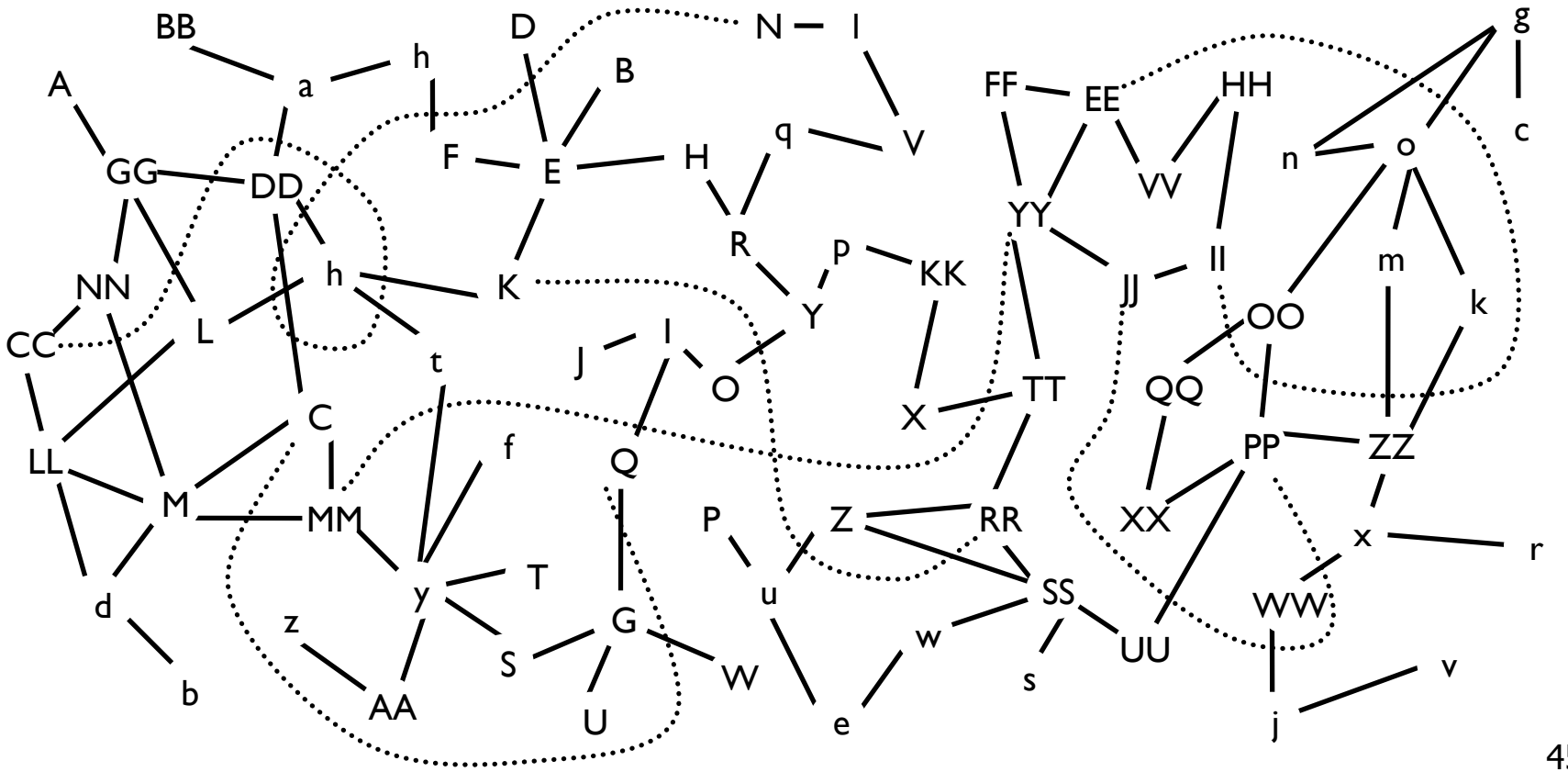
- Ummm… okay…

Keep It Simple

- Do you really need all those equations?
  - This is very instance-dependent!
  - Depends on what you're discussing
  - Depends on your audience
- Sometimes you may need them
  - Explain the variables and what they mean
  - Give a "plain-text" description of it
- If you don't need them, don't use them!

Use Simple Examples

This isn't one. It doesn't help.

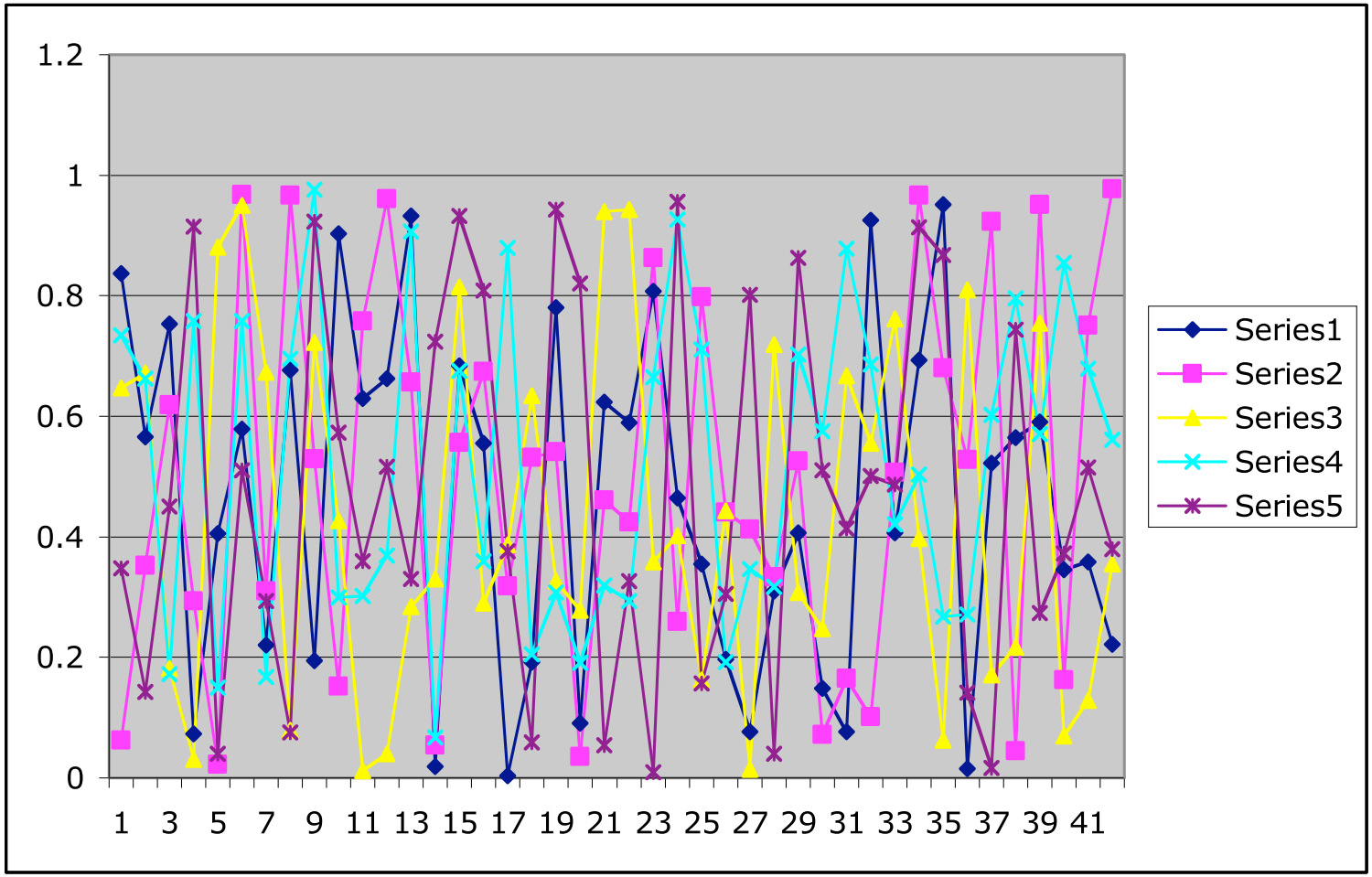


Results

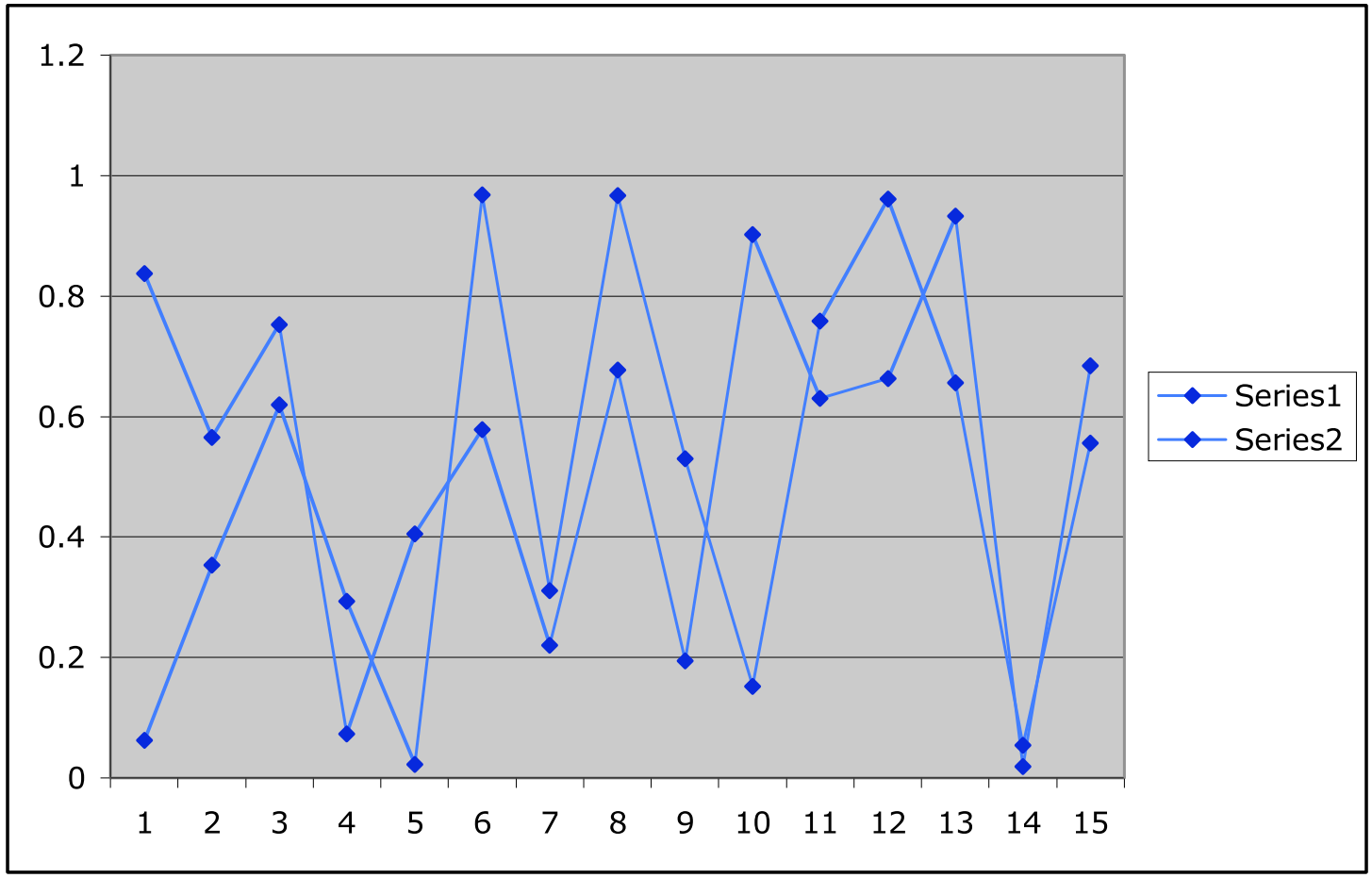
- You have lots of cool results
  - No one can read this
  - No one can understand this
- Graphs are your friend…

A	B	C	D	E
0.78799174	0.87677244	0.99348605	0.23781547	0.24437526
0.24910355	0.79708654	0.39825661	0.4894876	0.22079456
0.65729261	0.46901063	0.36471191	0.04697233	0.63468059
0.48205396	0.52657506	0.70503426	0.35280176	0.40935313
0.46328137	0.0774365	0.71517444	0.9394662	0.46843638
0.09762717	0.70884867	0.81407539	0.24571711	0.72497819
0.00773315	0.39906447	0.42344939	0.90776976	0.22209006
0.15857663	0.4181197	0.56488165	0.91405841	0.3578349
0.59242455	0.17894389	0.61926672	0.02978346	0.50789172
0.41285757	0.71470398	0.31906988	0.79658426	0.21587647
0.8855586	0.46534556	0.3701164	0.12452538	0.33415497
0.28231467	0.17509894	0.85801024	0.72984635	0.94731238
0.82370951	0.03235362	0.95622299	0.27726297	0.76619879
0.86245578	0.21094811	0.93272287	0.48265505	0.04960646
0.38953201	0.3665743	0.33754918	0.28178635	0.39637009
0.80522838	0.63509032	0.43333321	0.97677807	0.96198172
0.35928212	0.14878634	0.44201417	0.23251612	0.83375154
0.72099806	0.75212293	0.81061259	0.23756284	0.48518996
0.13329065	0.31602317	0.87489249	0.5304632	0.26191565
0.2588109	0.89039838	0.81380512	0.59139955	0.48488759
0.99314419	0.34635186	0.73292414	0.25933239	0.29230491
0.88041055	0.11473455	0.01934078	0.15717245	0.93780676
0.72332226	0.80195173	0.1792961	0.07832254	0.41154579
0.95925002	0.41696749	0.24905812	0.2111233	0.00256536
0.00580885	0.65322119	0.49666074	0.91641276	0.40573275
0.26004883	0.3010126	0.45604195	0.99935168	0.91271048
0.1508427	0.84418604	0.96241158	0.05548096	0.94093154
0.63750743	0.08979734	0.11100042	0.34646613	0.09994533
0.17176871	0.85518113	0.94522781	0.29368901	0.77444161
0.15186964	0.53105474	0.69991523	0.07876247	0.0023978
0.72306385	0.73755246	0.71402806	0.68090612	0.76015636
0.42140074	0.39036871	0.02247591	0.94725973	0.70692042

Graphs Can Also Be The Enemy



Pick A Line, Any Line



summary of your presentation

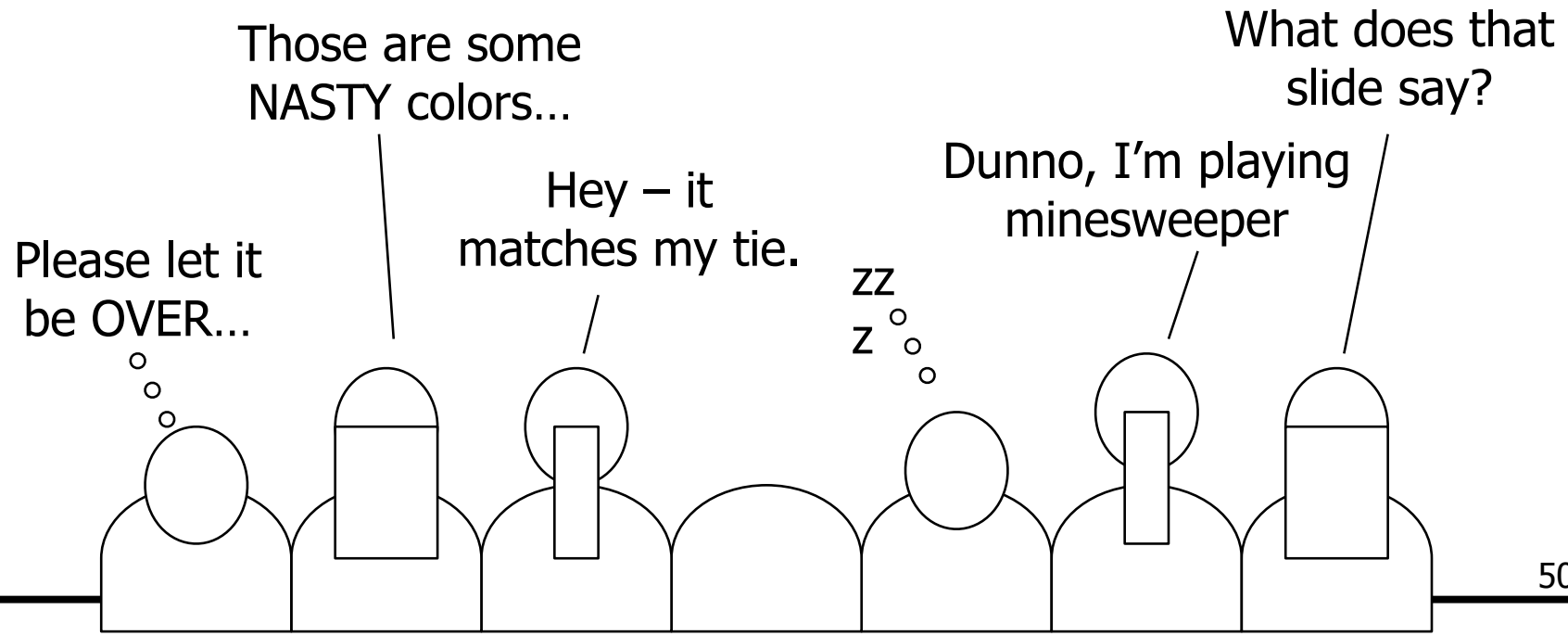
- If your talk is more than 5 minutes, nice to summarize work & results
  - Bring people back if they zoned out
  - Remind them why you're great
- Give "selling" points here
  - 30x performance increase with only 10% area penalty
  - Described novel method to create clean fuel from used cat litter

summary of this talk

- 412 specifics -- 15+5 mins
- technical talk specifics
  - motivation, approach, results, conclusions
- general advice
  - your talk -- attitude, voice, mannerisms
  - your slides -- understandable, interesting

Bad Presentations

- Audience won't see your work is great
- But will make fun of you from back row



Good Presentations

- Interesting topic, explained at audience's level
- Slides are understandable and easy to see
- Good presentations reflect well on speaker!