

On Presentations

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SSSG Commandments

- Thou shalt honor thy audience
 - Thou shalt spill the beans early
 - Thou shalt motivate thy talk
 - Thou shalt structure thy talk
 - Thou shalt use animation sparingly
 - Thou shalt frame thy argument
 - Thou shalt leave time for discussion
 - Thou shalt admit thy weaknesses
 - Thou shalt not take thy advisor's name in vain
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- Even though I've phrased these like laws
 - These represent **my success path**
 - Other paths work, maybe even better

Honor Thy Audience

- They are being **respectful** by
 - Showing up
 - Not reading email
- They might learn something – that is up to you
- Your job: **Communication**
 - Analogy: cleaning
 - The process does not imply the goal
- 1st year: SSSG is a burden
- Nth year: SSSG is an opportunity

Questions

- When the audience asks **one** question, answer **three**:
 1. The question itself
 2. The one-level-up question to contextualize
 3. The meta-question
- The **meta-question**
 - Generally “interesting idea” comments are at end
 - So, why did they ask this now?
 - Does the audience have different assumptions?
 - Did I mis-speak?
 - Did I go too fast over something?
 - Did I miss a step in my explanation?
 - Did I help them conflate A with B?
- Consider the meta-question
- Answer to the audience the second, then the first

More on Questions

- Always be respectful
 - Avoid saying “that’s a good question”
- **Emulate your role model**
 - Don’t have one? Be grandfatherly.
 - Give credit to co-authors, others
 - You rarely regret being polite
- “I’ll answer that in 2 slides”
 - **Answer it anyway**, briefly
 - Be sure it is answered in 2 slides
- Goal: Be **clear** and **succinct** exposition
 - Use questions to find bugs

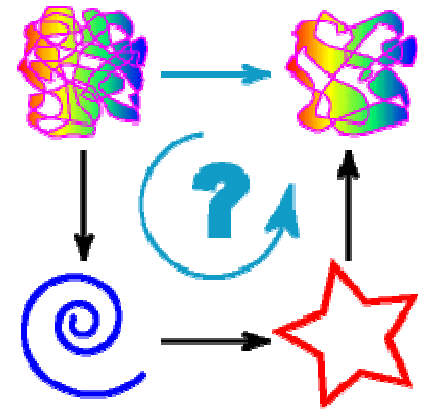
Spill the Beans Early

- This is the **thesis** of your talk
- A “**scaffolding**” of thoughts for your audience
- Avoids “I thought you were going to go this direction...”

- Forces you away from the “distinguished lecture” garden path

Motivate Thy Talk

- Are you ...
 - A complete solution to a small problem?
 - A partial solution to a big problem?
- Remember: **Mary's commuting diagram**
 - Success criteria inferred or declared
- 90% of the time
 - Use a concrete example
 - Real is good, as is source code
- Option 1: Retain the example
 - Best if you can add wrinkles of complexity incrementally
- Option 2: Jettison the example
 - Best if you spend your time at the "top" of the commuting diagram



Structure Thy Talk

- Spill the beans early
- Slide titles = topic sentences
 - **Content outline**, not topic outline
 - A goal, not always possible
- Signpost slides
 - Necessary in longer presentations
 - Forces clarity (for you)
 - Boon for latecomers
- Your argument should be clear from just these

Making Your Argument

- Articulate your {experiment | study | research} process
 - Avoids surprises
 - Fewer missed steps

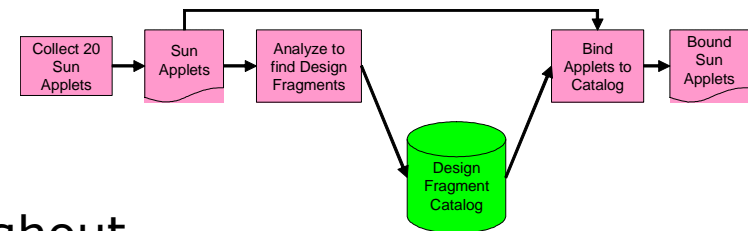
- Define your “variables”

- Early motivating example; weave throughout

- Obvious but necessary steps
 - Don't skip them; don't belabor them

- Arguments on purely abstract concepts are hard to follow
 - David is good at this
 - Use only when necessary
 - Instead, weave concrete and abstract

- Conclude, not just stop
 - Reprise motivating example



Types of Slides

- Papa bear: **Paragraphs**
 - Almost never good
 - Perhaps for “leave behind” slides
- Mama bear: **Three word sentences**
 - Surprisingly good
 - Encourages clarity
 - Assets: parsimony and metaphor
- Baby bear: **Only pictures**
 - Impressive
 - Useless as “leave behind”

Clarity and Zoom

- Good presentations are **clear at multiple levels**
 - If you must fail, fail in the details
- If your argument is clear in your head
 - You can deliver an impromptu elevator talk
 - You can give an SSSG presentation
 - You can write a paper
- **Audience will track, in parallel:**
 - **Your progress in the overall argument**
 - **The details of the current point**
- Do you have
 - A clear presentation?
 - Or a partially ordered pile of facts?
- Advanced: Consider deliberately losing the audience, once

Clarity vs. Successful Obfuscation

I conclude that there are **two ways** of constructing a software design:

One way is to make it

so **simple** that there are **obviously no deficiencies**

and the other way is to make it

so **complicated** that there are **no obvious deficiencies.**

-- C.A.R. Hoare, 1980 Turing Award Lecture

Warning: A turn of phrase is not truth.

People are more likely to **complain** if they

- Understand and disagree

than if they

- Don't completely understand, or ignore you

- Advice: **You're too good to take the low road**

Types of SSSG talks

- Experience report
 - With theme (argument)
 - Path strewn with candy (journey)
- Conference practice (argument)
- Research update (argument)
- Antipattern: Distinguished lecture (journey)

Colors

Brains are amazing

They will find patterns where they don't exist

Use colors to highlight, but be consistent

Test your color scheme on a projector,
... or reuse a template ☺

Use Animation Sparingly

- **JUST DON'T DO IT**
- If you must, do it sparingly
 - Don't animate bullets
 - NO CUTE ANIMATIONS
 - E.g.: Fly, dissolve, slide
 - Appear only
 - Good use: focus attention / highlight
 - Example: Bradley's DiscoTect ICSE presentation
- Implementation: Animation vs. multiple slides
 - Will you be moving forward/backwards?

Frame Thy Argument

- Example frames
 - Good guy vs. bad guy
 - The trek; the frontier
 - Sequential roadblocks
 - Idealism vs. pragmatism
 - Man against nature
- Anthropomorphize!
- Metaphorical connection to storylines audience already knows
- Not a replacement for Mary's SE argument structures
- If all else fails, use Shakespeare pictures



Leave Time for Discussion

- You don't need slide 38
- You don't need slides at all
- You DO need to **make your argument**

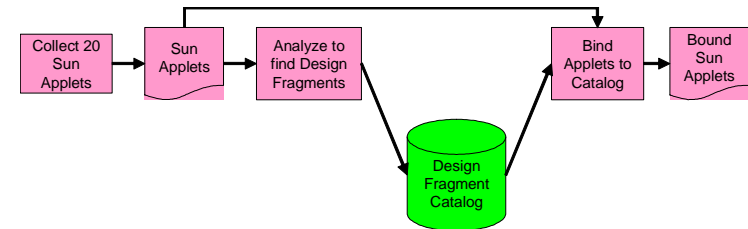
- In advance
 - **Estimate** where you'll be at $\frac{1}{2}$, $\frac{3}{4}$
 - Decide what you can **jettison / shrink**
 - Structure helps enormously here

- If you're running long
 - Don't just stop
 - Don't run over
 - Do **leave time for discussion**

Timing Advice

- Long presentations
 - Mandatory internal signposting

- Short presentations
 - Dependent on graphics
 - Focus attention
 - Word economy
 - This slide is here for exactly one reason
 - Aaron Greenhouse
 - Anticipatory transitions
 - Use process pictures
 - Give the presentation MANY times



Admit Thy Weaknesses

- Option 1: They don't notice
 - But they will notice eventually
 - Leads to bad choices
 - "Did he hide it?"
 - "Was he ignorant?"
- Option 2: You admit weaknesses / limitations
 - All techniques have limitations (except for ML)
 - Respectable researchers will respect you

Do Not Take Thy Advisor's Name in Vain

- Pay particular attention to the faculty's "secret weapons"
 - Psst! You've got secret weapons too
- Mary
 - Succinct, reflective
- Bill
 - Graphics, metaphor
- David
 - Contextualizing idea, selective formalization

... I wish I knew the secret weapons of all of the faculty

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