
Scientific presentations

after M. Alley – The craft of scientific presentations

Talks that never ends

vs. talks that we do not want to end

- For every exceptional scientific presenter ten weak presenters make their way to the podium to bore, confuse, or exasperate their audiences !
 - Question: **what is needed to become an excellent scientific presenter?**
 - Given the diversity of audiences, occasions, and topics, establishing a set of rules for how to give a strong scientific presentation is difficult !!!
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Rule 1

- *tell them what you're going to tell them,*
 - *tell them,*
 - *and then tell them what you told them,*
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Scientific presentations

- are costly
 - in time to built,
 - in moneys for travel or attend
 - are important
 - are essential to find the latest news
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Be careful

- Audiences often assign credit for the work to the person who makes the presentation, even if that person presents on behalf of a team
 - The stronger the presenter is, the more the credit that the audience assigns to that presenter.
 - On average, people remember only about ten percent of what they hear.
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Why not a paper (1/2)

- a presentation offers someone on stage to answer questions for the audience.
 - answers to questions can provide the audience both with more depth about an aspect of the topic and with additional information outside the topic's original scope.
 - In a document, the author imagines the audience and, based on that imagination, presents the topics that he or she thinks that audience needs at the levels that the audience needs.
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Why not a paper (1/2)

- In a presentation, though, the audience can essentially revise the original presentation by requesting more depth or a broader scope.
 - Comment: therefore post-proceedings
 - A presentation allows the speaker the opportunity to observe the reactions of the audience and revise the presentation on the spot for that audience.
 - presentation offers more ways of emphasizing key points than a document does
 - More options for delivery: pause before an important point, more loudly, gesturing
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Other advantages

- a presentation can incorporate not only the still images of a document, but also the sequential images of a film
 - the audience has witnessed the information
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Disadvantages over documents

- one chance to say things correctly in a presentation
 - If the presentation triggers an idea for someone in the audience and that someone contemplates that idea for a moment during the presentation, then that person misses what the speaker has said
 - audience has no chance to look up background information.
 - audience is captive to the pace of the speaker.
 - the success of the presentation depends upon the delivery of the speaker
 - E.g. if it is nervous
 - timing: how to gather everyone at a particular time to attend the presentation.
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Four perspectives

- **Speech**
 - the words
 - **Structure**
 - organization, depth, emphasis, and transition between major points
 - **Visual aids**
 - projected slides, posters, models, and writing boards, films and demos
 - **Delivery**
 - interaction
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Speech

- Bad habits:
 - did not target the speech towards the audience (specific or multiple)
 - failure to understand the purpose of the presentation (inform – instruct , persuade – purchase, inspire - conference)
 - pace too fast for the audience
 - Avoid dry manner: flavor the speech by
 - incorporation of analogies, examples, and stories
 - serve as mnemonics when the audience tries to recount the presentation
 - achieving a personal connection with the audience
 - engage the audience
 - bring in humor
 - allows the audience to relax and participate.
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Supporting arguments in a speech

- appeals to logic,
 - appeals to the emotion of the audience
 - significantly influenced decisions: protecting endangered wildlife, protecting forests and rivers, and increasing the research funds to fight a disease.
 - appeals to your own character
 - Character includes your reputation with audiences.
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Speaking from Points

- points that you have memorized or have placed onto slides or written down as notes.
 - because the presenter is producing most of the words from within himself or herself, the audience perceives that the speaker owns this information, as opposed to having been given this information
 - Adequate for:
 - Conference presentation
 - Presentation at business meeting
 - University lecture
 - Alternatives:
 - Memorizing (adequate for first few words of presentation or short introduction of a speaker)
 - Reading (Press conference, Quotation within a presentation, Complex wording within presentatio)
 - Speaking off the cuff (Answering a question, Asking a question)
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Structure

- comprises
 - the organization of the major points
 - big picture, focuses on the work in the middle, and comes back out to the big picture in the ending.
 - the transitions between those points
 - Use key transition points
 - the depth that the presenter achieves
 - how much depth should the speaker go into? Depends on the audience
 - the emphasis of details.
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Checklist for Scientific Presentations

Table A-1. Checklist for scientific presentations.*

Speech	
Necessary information conveyed?	Assertions supported?
Audience targeted?	Tone controlled?
Terms defined?	Examples given?
Structure	
Organization of Beginning	Transitions
Scope defined?	Beginning→middle?
Topic justified?	Between main points of middle?
Proper background given?	Middle→ending?
Talk memorably mapped?	
Organization of Middle	Emphasis
Divisions of middle logical?	Repetition used effectively?
Arguments methodically made?	Placement used effectively?
Organization of Conclusion	
Main points summarized?	
Closure achieved?	
Presentation Slides	
Slides orient the audience?	Slides show key images?
Slides are clear to read?	Slides show key results?
Slides have proper level of detail?	Slides show talk's organization?
Delivery	
Speaker controls nervousness?	Eye contact made?
Speaker shows energy?	Movements contribute?
Speaker exudes confidence?	Equipment handled smoothly?
Voice engages?	Questions handled convincingly?
Speed is appropriate?	Questions handled succinctly?
Filler phrases ("uh") are avoided?	Time is appropriate?

*Not every item on this list applies to every presentation.

Designing posters – guidelines

Typography

Use a typeface such as Arial that is thick enough to read

Boldface the title and headings

Use type sizes of 18 points or higher (14 points okay for references and footnotes)

Avoid blocks of all capital letters

Layout

Arrange sections such that the order of what to read is clear

Be generous with white space

Keep lists to two, three, or four items

Keep text blocks to just a few lines

Style

Include an orienting image near the title or in the background

Opt for vertical lists rather than long paragraphs

Where possible, opt for graphical presentations rather than lists or paragraphs

Accept the fact that a poster cannot present as much detail as a journal article can



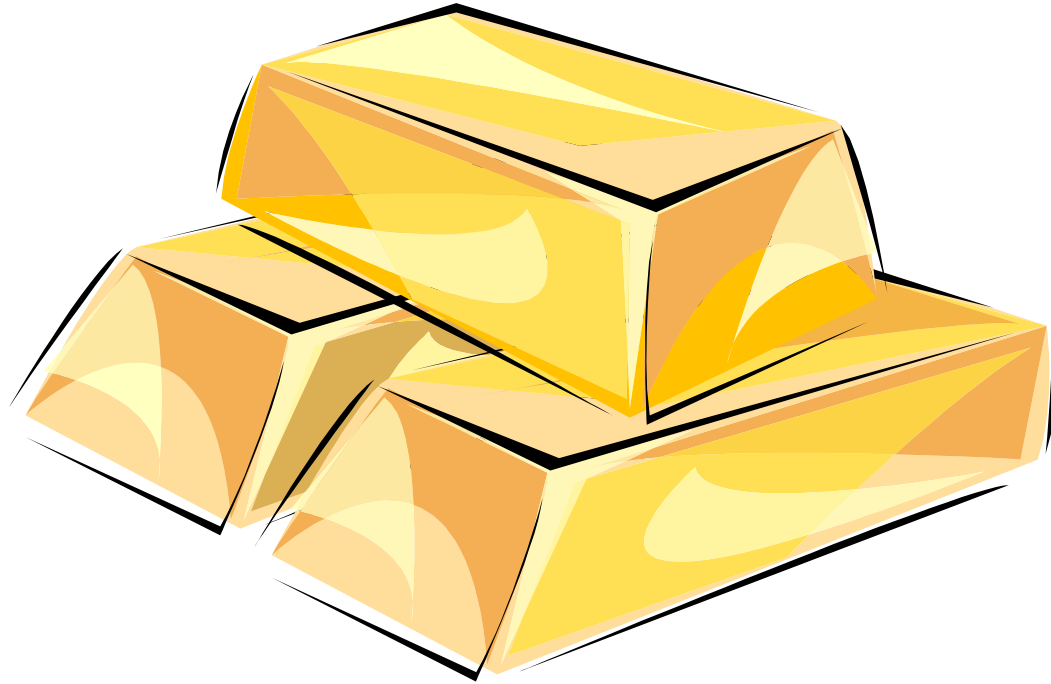
On How to Talk

Mihai Budiu

mihaib@cs.cmu.edu

Monday seminar, Apr 12, 2004

The Golden Rule



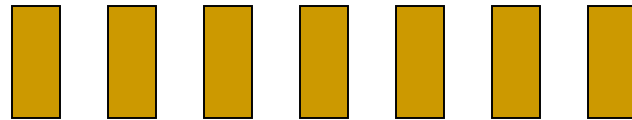
Human attention is the scarcest resource
-- Herbert Simon [Nobel 1972, Turing 1975]

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idea per slide

Memory Limitations

- Short-term memory: ~ 7 simple things



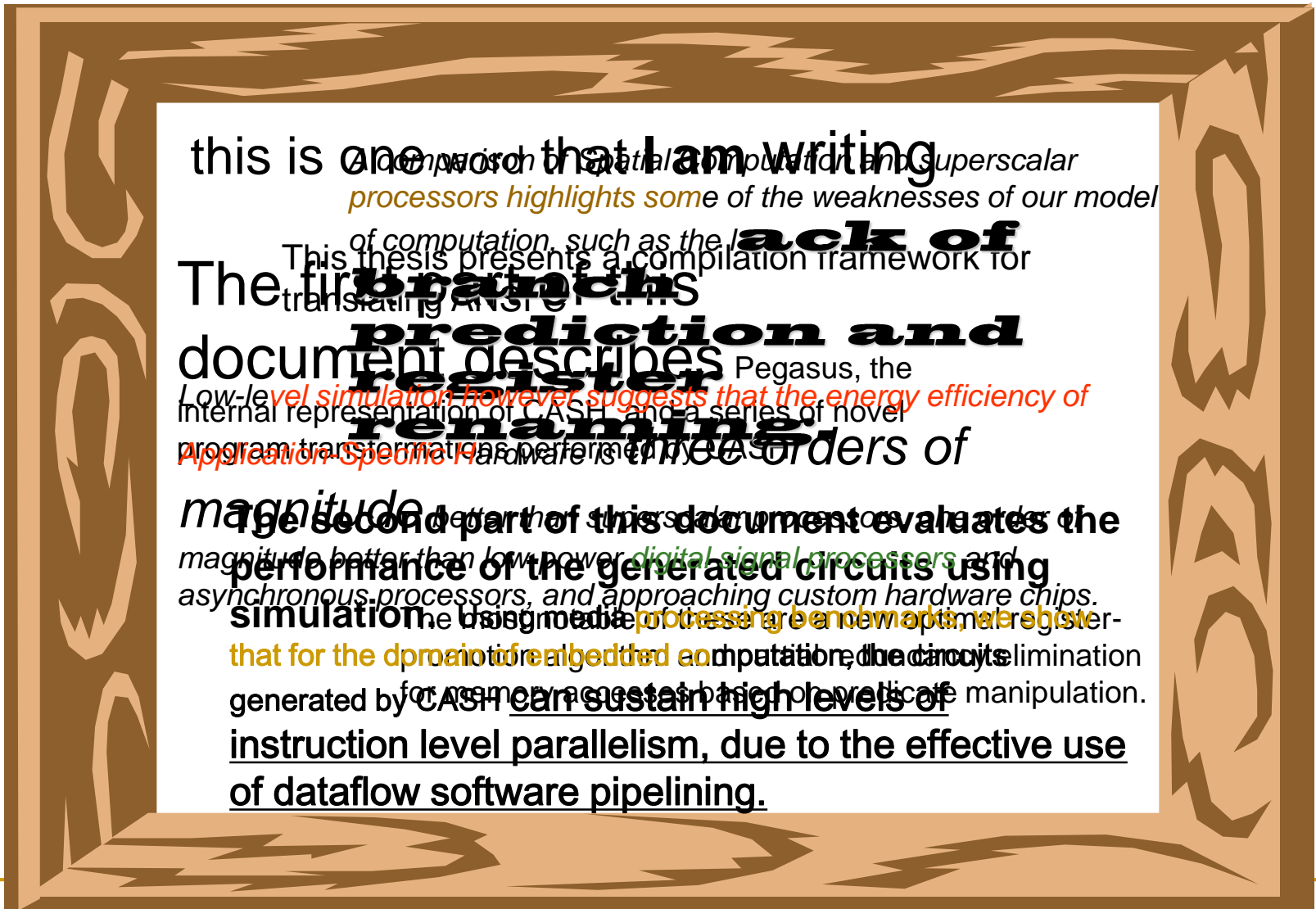
- Audience may get 1 or 2 from your talk
reinforce the core message, not details



- Build a thread to help comprehension



Use Pictures as Visual Metaphors



A picture is worth 1000 words

Introduction

- Is **strategic** and not technical



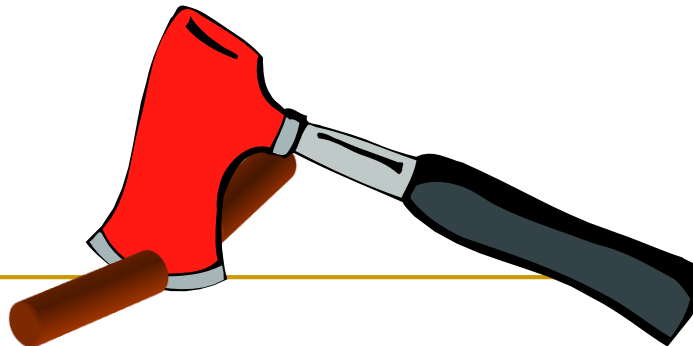
- Explain why the problem is important
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Time

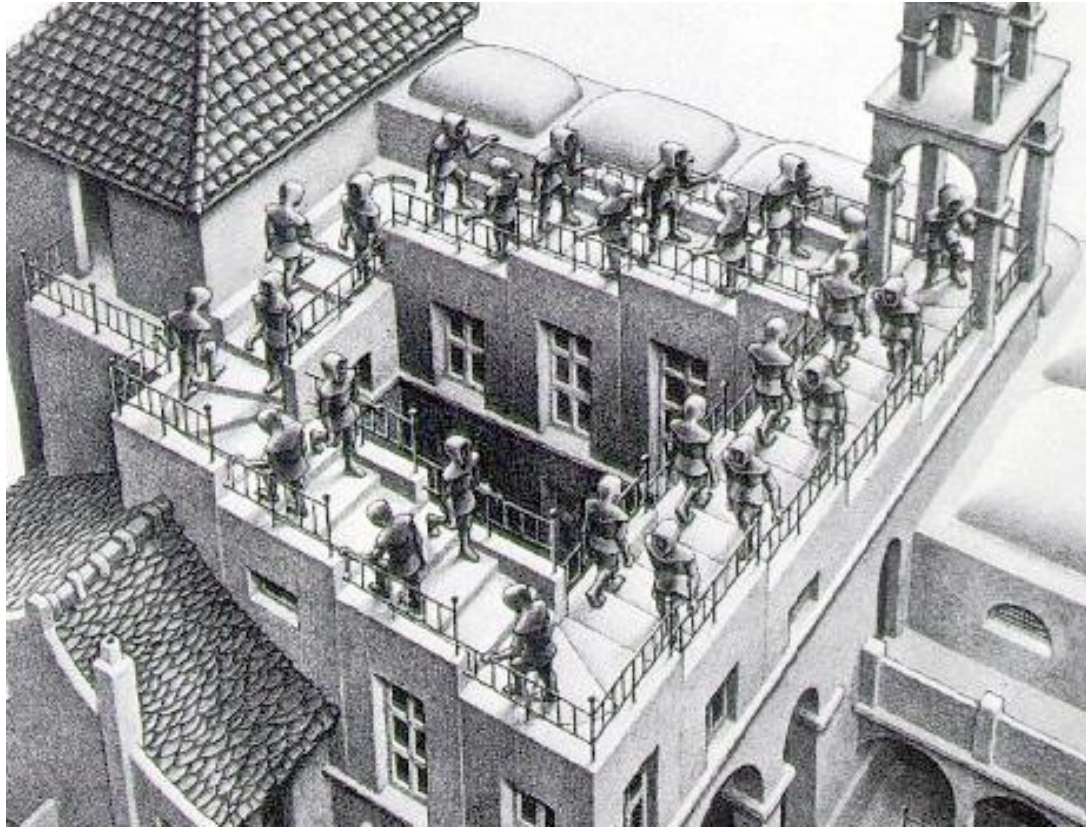
ALWAYS end on time



Even if you have to cut



Rehearse and Repeat



The talk will only get better

Questions



- Listen very carefully
- Repeat the question and make sure you got it right
- Answer succinctly and clearly



Most people answer different questions than asked!

Conclusions

- Are not the same as a summary
 - What one should remember
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- Optimize your talk for the audience
 - You can always improve a talk
 - Someday your career may hinge on a talk

