Welcome to…

The Power of Presentations

Make Yours Informative, Persuasive, and Memorable

IEEE Robotics & Automation Society

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IEEE Professional Communication Society

The Power of Presentations

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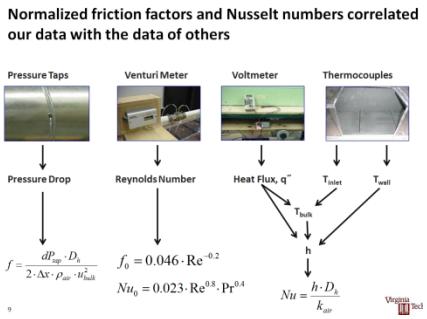
The Power of Presentations

Bad presentations and better advice

Unleashing the power of narrative



Designing powerful information

Unlocking your power as a presenter

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We have all seen bad presentations.

Using the Chat window, take a moment and reflect on a bad presentation you have seen recently.

Describe in one sentence what made it bad.

There is plenty of advice available on the web to help improve presentations.

PowerPoint Presentation Advice
Mike Splane – © 2006
Structuring Your Talk:

Some tips for preparing a research presentation

- Organizing your Presentation
- Designing your Slides
- Preparing and Practicing your Talk
- Links to other Oral Presentation Advice

Oral Presentation Advice
Mark D. Hill
Computer Sciences Department
University of Wisconsin-Madison
April 1992; Revised January 1997

Scott Stratten's Tips For Becoming A Presentation Sensation

BY SCOTT STRATTEN | AUGUST 13, 2012

How to please your organizer, your audience, your wallet, even the A/V guys.

Tips and advice address one level of problems with presentations but not the core issue.

- ✓ Human beings learn best through a few key strategies
- ✓ Narrative, or “telling the story,” is one of these strategies
- ✓ If a presenter does not employ the power of narrative, then he or she is less likely to reach the target audience, thus increasing the chances that the presentation is considered “bad.”

Here's one example of the power of narrative, using an example drawn from the field of biomedical engineering

The Nico Myriad Brain Surgery device was developed as a minimally invasive brain surgery tool.

It revolutionized brain surgery, increasing the ability of the doctor to remove the tumor completely and reducing patient recovery time significantly.

The power of narrative can be illustrated by comparing two very different presentations on the device that could be given to prospective investors.

In presentation 1, Dennis jumps immediately into describing the materials used to construct the device, then explains how a doctor holds the tool during surgery, and finally asks for money. This effort results in angry potential investors who leave the room unimpressed.

In presentation 2, Sonia begins by telling the story of David, a boy who suffered from a life-threatening brain tumor. She describes how the use of the Nico Myriad prototype device saved David's life. Throughout the technical discussion, Sonia reminds the investors about the impact of the device on the patient (recovery, side effects, etc.). At the conclusion, the investors are ready to write checks.

What constitutes “telling a story” with technical information?

- Identifying the problem and introducing the audience to its context
- Stating how the solution or technology solves the problem
- Arguing for the viability of the solution or technology through the presentation of compelling data
- Anticipating objections to the solution or technology

While “telling the story” is the way that audiences learn, they also require useful, understandable data in order to believe the story you tell.

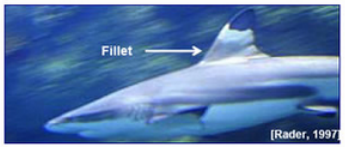
Excellent Example of a Presentation Slide

Sentence Headline

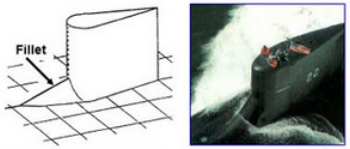
Fillets reduce leading edge vortices in nature and in engineering

Visual Evidence

Fillet on dorsal fin of shark



Fillet on Seawolf submarine



[Devenport et al., 1991]

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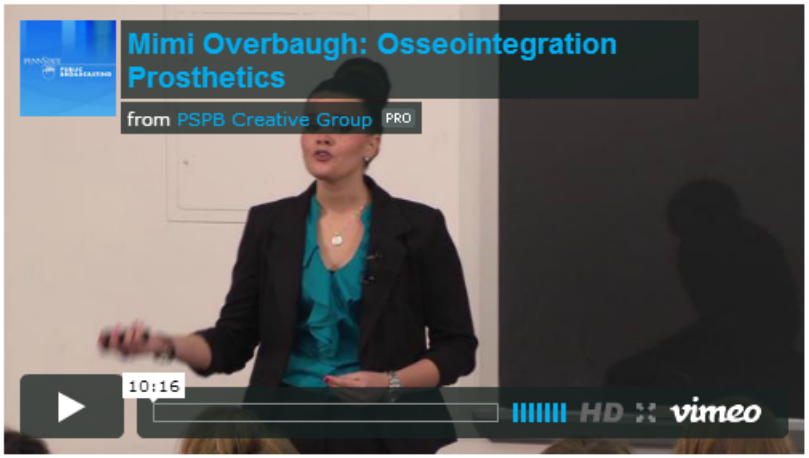
Source: Gary Zess and Karen Thole, “Computational Design and Experimental Evaluation of Using a Leading Edge Fillet on a Gas Turbine Vane,” *Proceedings of the ASME Turbo Exposition*, 2001-GT-404 (New Orleans: IGTI, 5 June 2001).

To increase the understandability of your data, please set aside your use of PowerPoint default formats and consider using instead the **Assertion/Evidence** format as advocated by Mr. Michael Alley, Penn State University, USA

Rethinking the Design of Presentation Slides: The Assertion-Evidence Structure

Recently, much criticism has been levied at PowerPoint's default structure of a topic-phrase headline supported by a bullet list of subtopics. This web page advocates an assertion-evidence structure, in which a sentence headline states the main assertion of the slide. That headline assertion is then supported *not* by a bullet list, but by visual evidence: photos, drawings, diagrams, graphs, films, or equations.

One assumption of the assertion-evidence structure is that slides are, in fact, an appropriate visual aid for the talk. Too often, slides are projected when no visual aid would better serve the audience. Another assumption is that the primary purpose of the slides is to help the audience understand and remember the content, rather than to provide talking points for the speaker. More details about the assertion-evidence structure can be found in The Craft of Scientific Presentations.



Mimi Overbaugh, Penn State: Osseointegration Prosthetics.

Supporting Research | Models and Templates | Workshops | Links and References

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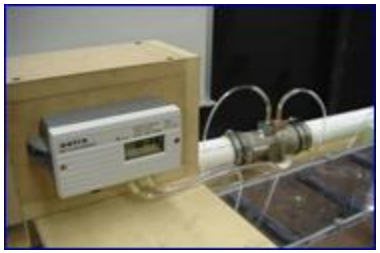
www.writing.engr.psu.edu/slides.html
Contact: Michael Alley at malley@engr.psu.edu
Web Editor: Adrienne Crivaro

http://www.writing.engr.psu.edu/slides.html

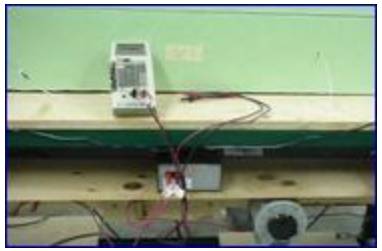
Normalized friction factors and Nusselt numbers correlated our data with the data of others

Pressure Taps

Venturi Meter



Voltmeter



Thermocouples

Pressure Drop

$$f = \frac{dP_{tap} \cdot D_h}{2 \cdot \Delta x \cdot \rho_{air} \cdot u_{bulk}^2}$$

Reynolds Number

$$f_0 = 0.046 \cdot \mathrm{Re}^{-0.2}$$

$$Nu_0 = 0.023 \cdot \mathrm{Re}^{0.8} \cdot \mathrm{Pr}^{0.4}$$

Heat Flux, q″ + **T_{inlet}** + **T_{wall}** → **T_{bulk}** → **h**

$$Nu = \frac{h \cdot D_h}{k_{air}}$$

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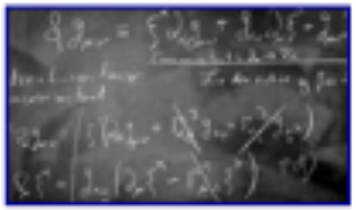
Operator splitting gives a sequence of PDEs—and one ODE per spatial point



$$\frac{\partial c_i(x,t)}{\partial t} = -\frac{\partial}{\partial x}[f_i(x,t)] \quad \text{for } x \in \Omega$$

$$f_i(x,t) = -D_i(x,t)\frac{\partial c_i(x,t)}{\partial x} - K_i(x,t)c_i(x,t),$$

$$K_i(x,t) = -D_i(x,t)z_i\frac{F}{RT}E(x,t)$$

$$\varepsilon\frac{\partial E(x,t)}{\partial t} = I - F\sum_{i=1}^{n_{\text{ion}}} z_i f_i(x,t) \quad \text{for } x \in \Omega$$

Concentration c_i of specie #i, i=1,…,n_{ion}

Unknowns c_i and E

Electrical field E

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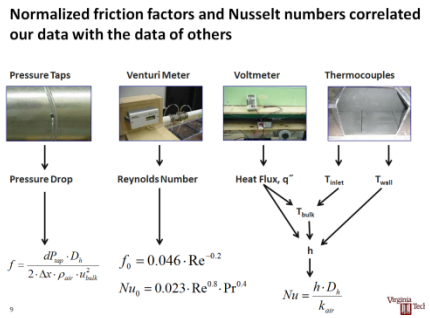
There are a number of distinct advantages to using the Assertion/Evidence format for slide design

- Each slide begins with a complete sentence reflecting a complete thought, not a fragment of a thought.
- The use of data-rich visuals compels you to explain what those visuals mean.
- You are less likely to read the bullet points on the slide.
- Instead, you are more likely to engage your audience in a discussion about the data you present.
- The end result is a session that “teaches” the audience about the topic, rather than “reminds” the presenter what he or she wished to say.

In this webinar, I have focused on three strategies that can help you create and deliver presentations with power

Unleashing the power of narrative



Designing powerful information

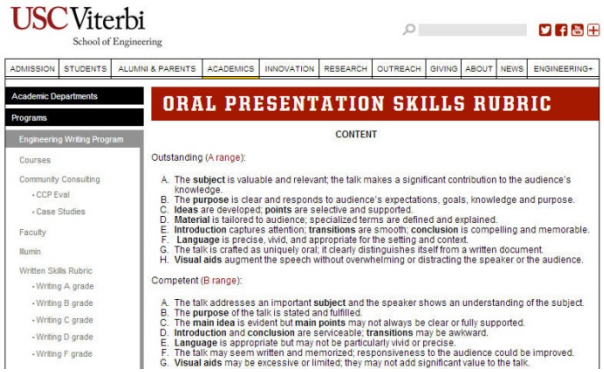
Unlocking your power as a presenter

Here's how to unlock your power as a presenter.

1. Record your next presentation and watch yourself giving it. There is nothing that will help you break bad habits than seeing yourself present. Try watching this on fast forward!

2. Watch other presenters and keep notes about what they do that you think is effective—imitate and model their behaviors. TED Talks are great sources for effective role models.

Here's how to unlock your power as a presenter.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ADMISSION | STUDENTS | ALUMNI & PARENTS | ACADEMICS | INNOVATION | RESEARCH | OUTREACH | GIVING | ABOUT | NEWS | ENGINEERING+

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Programs
Engineering Writing Program
Courses
Community Consulting
- CCP Eval
- Case Studies
Faculty
Illumin
Written Skills Rubric
- Writing A grade
- Writing B grade
- Writing C grade
- Writing D grade
- Writing F grade

ORAL PRESENTATION SKILLS RUBRIC

CONTENT

Outstanding (A range):

A. The **subject** is valuable and relevant; the talk makes a significant contribution to the audience's knowledge.
B. The **purpose** is clear and responds to audience's expectations, goals, knowledge and purpose.
C. **Ideas** are developed; **points** are selective and supported.
D. **Material** is tailored to audience; specialized terms are defined and explained.
E. **Introduction** captures attention; **transitions** are smooth; **conclusion** is compelling and memorable.
F. **Language** is precise, vivid, and appropriate for the setting and context.
G. The talk is crafted as uniquely oral; it clearly distinguishes itself from a written document.
H. **Visual aids** augment the speech without overwhelming or distracting the speaker or the audience.

Competent (B range):

A. The talk addresses an important **subject** and the speaker shows an understanding of the subject.
B. The **purpose** of the talk is stated and fulfilled.
C. The **main idea** is evident but **main points** may not always be clear or fully supported.
D. **Introduction** and **conclusion** are serviceable; **transitions** may be awkward.
E. **Language** is appropriate but may not be particularly vivid or precise.
F. The talk may seem written and memorized; responsiveness to the audience could be improved.
G. **Visual aids** may be excessive or limited; they may not add significant value to the talk.

3. Use presentation evaluation rubrics to guide your development and evaluation of a presentation

   USC Viterbi College of Engineering: http://viterbi.usc.edu/academics/programs/ewp/presentation/

4. Take every opportunity to make a presentation. You get better by giving **more** presentations.

Here's how to unlock your power as a presenter.

5. Take a class, join a club, and find other opportunities to make presentations in low-stakes situations.

6. Take advantage of learning modules like this one to continue to develop and refine your skills.

I'd like to hear from you!

Use the Chat function to make other suggestions that you believe I should add to the previous list.

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