Effective Presentations in Research

Ramon Canal CDT – Master CANS



- Popular Myth: A technical audience requires a lot of technical details in order to evaluate the speaker's ideas
 - In 1989 HP conducted a survey to determine what technical presenters want to hear from other technical presenters.
- Result: Listeners want talks easy to follow and well organized; they want simplified message "less is more"
 - Studies showed that simplifying and repeating the main idea will result in increased attentiveness and retention

- Popular Myth: Content is everything. Style is unimportant and enthusiasm is offensive
 - HP study indicated that technical audience wanted more enthusiasm and effective style, which included better visual assistance.
 - Often unenthusiastic delivery will ruin a speaker's effectiveness
- Mehrabian, a communication theorist, showed that
 - Body language and tone of voice together supply 93% of the overall message impact
 - Actual words only supply 7% of the overall impact

- Popular Myth: The text on the visuals is more important than the speaker.
 - Technical presenters traditionally rely too much on slides
 - Often, technical audiences find the slides distracting and boring
- Remember, the speaker is always the focal point of presentation, visual assistance helps
 - Pace of the presentation
 - Flow of the information presented

- Popular Myth: Strategic organization is not necessary for technical talks.
 - Presenters often think that as long as they supply all the details, the audience is capable of drawing the appropriate conclusions.
 - Speakers often jump into the body of the presentation and start discussing data
 - Often the objective of the talk is not stated until the end of the talk
- Technical speaker must not rely on the audience to fill in gaps and reach appropriate conclusions.
- Technical speaker must understand different types of presentations, organization, and strategies for a particular type of speech.

Departament d'Arquitectura

Overview

- Comparing posters and oral presentations
- Effective poster design
- Effective design of an oral presentation and slides
- Other kinds of Technical Talks

Resources

Poster or Presentation?

Poster

- Oral component is less structured, more interactive, depending on viewer's questions and comments
- Viewers come and go
 - Some will happen by
 - Some will seek out your poster
 - More opportunity for extensive discussion with genuinely interested, informed people
- Can be displayed when you're not there to explain it

Oral Presentation

- Oral component is structured, not interactive
 - Brief question period
- Audience is captive
 - Not necessarily there to hear you
- Handouts can be used like a poster, to remind the audience of your points or to inform those who could not attend

What Do I Cover?

Both posters and oral presentations should contain the same basics as a research paper:

- Background
- Purpose
- Methods
- Results
- Interpretation
- Conclusions



Schowen, K. B. In *The ACS Style Guide. A Manual for Authors and Editors.*; 2nd ed.; Dodd, J. S., Ed.; American Chemical Society: Washington, D.C., 1997; pp 27-38.

Posters: Text + Visuals

Posters combine textual and visual elements to get a message clearly and concisely to a viewer.

- Create them in Power Point and save as a pdf file.
- Use a process of drafting, revising, and editing just as you do to write a paper.

An award winning poster

The poster that follows, "Southern Flounder Exhibit Temperature-Dependent Sex Determination Behavior," won an award. Still, it's not perfect. What do you think? What are its strengths and weaknesses?



Southern Flounder Exhibit Temperature-Dependent Sex Determination

J. Adam Luckenbach*, John Godwin und Russell Borski. Demirtment v. Zoodogy, Box 2517, North Curolina State University, Buleigh, NC 27695.



Introduction

Senther's floracies (Paratic Enfrys Arthonogens) support valuable finhances and show good promise for aquaculatic. Female florader are known to grow faster and mode happer adult rises than makes. Therefore, inhumation on sex determination than night increase the ratio of locade florance is augustant for aquaculative.

Objective

This study was conducted to determine whether so when it founds: exhibit imposition-dependent set determination (TSE), and if growth is affected by reading too position.

Methods

- Southern flounder bloodsrack, even serip sparsed to collect aggs and spens for in curu furtilization.
- Habited loves were owned from a satural dief derifers/artewart to high proving pellenel finel and hal orall establish at least wave daily.
- Upon concluing a mean total length of 40 mm. the parentle fluoration were specied at equal describes table one of fates temperatures 1 K 23, or 28°C for 245 days.
- Grotads were gresserved and later sectioned at 2-6 microses.
- See distinguishing markers were used to destugated entire (spectrotogenesis) from females (responsiso)

Histological Analysis

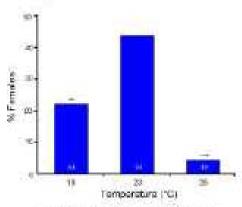




Male Differentiation

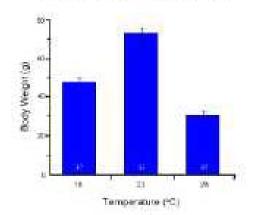
Francis Differentiation

Temperature Affects Sex Determination

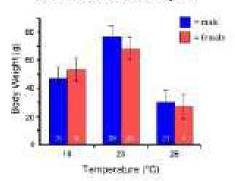


CTP = 0.01 and TTV = 0.001 represent significant developed from a 1.1 make/persis out reflect

Rearing Temperature Affects Growth



Growth Does Not Differ by Sex



Results

- See was discernible in nort list; greater than 120 temlong.
- High (28°C) temperature produced #1/4 formates.
- Low (1885) temperature produced 22% Benaks.
- Mid-targe (23%) tumperature produced 44% females.
- Fish pained at high or low impurators showed reduced growth compared to those at the mill range temperature.
- Upote 245 days, no differences in growth existed factories serves.

Conclusions

- These findings industs that sex descrimation is written flounder to temperature-scapitist and temperature has a procount effect on growth.
- A read energy recently empore and (2000) appears to maximize the number of fernates and premise before growth is vousigrowthem flounder.
- Although white females are known to grow larger than make, no difference in growth between coses occurred in ago-04s 4 train southern florands;

Acknowledgements

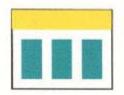
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Visuals Are Key to Posters

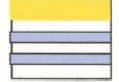
- Visual elements should be:
 - Legible from a distance
 - Numbered, titled, and referenced in the text
 - Designed to get the gist of your message across
- Use Color with a purpose.
 - To show connections
 - To guide the audience through the poster
 - To highlight

Poster Design

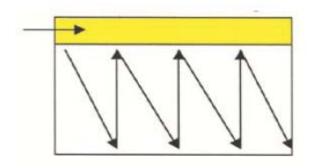
- Use a layout that is easy to follow.
 - -left-to-right flow in vertical columns
 - -two fields in contrast
 - —left-to-right flow in horizontal rows
 - -a centered image with explanations











- Blank space
 - -Frames the area it surrounds
- Graphic hierarchies (font sizes, line widths)
 - -BIG=important; small=less important
- Indenting
 - -Creates blanks space & hierarchy

Text

- Write for the audience: e.g., scholarly, popular, technical, lay.
- Use bullets, white space, italics, bold, underlining, and headings to guide the eye. Use them consistently.
- Make paragraphs and sentences short.
- Rewrite for the poster (don't recycle from a paper).
- Watch for typos and errors.

Keep it concise and use parallel structure for lists.

<u>Original</u>

The ideal anesthetic should quickly make the patient unconscious but allow a quick return to consciousness, have few side effects, and be safe to handle.

Revised

Ideal anesthetics

- Quick sedation
- Quick recovery
- Few side effects
- Safe to handle

Posters Need Legible Fonts with Concise Wording

- All labels should be legible from at least 3 feet away.
- Keep headings of same level of importance: same size and type of font.

Title (96)

Headings (36)

Text (32)

Consider the strengths and weaknesses the following posters

- Do they contain long chunks of text?
- Are the colors consistent, pleasant, meaningful?
- Are they too busy or too plain (too much white space)?
- Do you know immediately what they investigate and why it is significant?

What makes your CELLS tick?

Coordination of cell proliferation and cell-type specification in vertebrate embryos: the role of dynamic regulation of the cdc25 phosphatases.

Mercedes Barrutia, Damian Nogare, Mary Ellen Lane, Ph.D.







ABSTRACT

The generation of a multicellular embryo from a single-celled zygote requires coordinating cell proliferation with mechanisms that regulate cell-type specification and cell movement. It is therefore essential that the rate of cell proliferation is variable for different populations of embryonic cells and different developmental stages. Following early, rapid, synchronous cell divisions, dynamic spatiotemporal regulation of cell proliferation is observed. We are interested in the molecular mechanisms that produce this spatiotemporal control in the embryo of a vertebrate, the zebrafish Danio rerio. Due to its rapid development, large transparent embryos, and genetic tractability, zebrafish is the ideal vertebrate model for these studies. In all eukaryotic organisms, the cdc25 tyrosine phosphatase plays a major role in cell cycle progression via activation of Mitosis Promoting Factor (MPF). Most higher metazoan genomes contain more than one gene encoding cdc25 phosphatases. To determine whether dynamic transcription of cdc25 is an important mechanism for spatiotemporal control of cell proliferation, as is the case in the Drosophila embryos, we are isolating the zebrafish genes encoding cdc25 by PCR. We have identified the zebrafish cdc25A gene and examined its spatiotemporal expression in developing embryos by in situ hybridization. Expression of cdc25A is observed in only a subset of proliferating cells of the developing nervous system and mesoderm. In some of these cells, namely the precursors of primary motor neurons (PMN) and retinal ganglion cell (RGC), expression appears to be restricted to the terminal mitosis. Future work will focus on analyzing the coordination of cdc25A transcription with the mechanisms that control differentiation of these cells, and on isolation and expression analysis of additional cdc25 genes.

INTRODUCTION

With knowledge of the cell cycle and its' regulators in other experimented organisms, we may be able to discern how certain aspects of processes, morphogenesis and pattern formation, are regulated at a molecular level in the zebrafish. In early embryonic cells, the cell cycle is synchronous and consists of two phases: mitosis (M) and synthesis (S). A two-subunit phosphoprotein of Cdk and cyclin, known as Mitosis Promoting Factor (MPF), is responsible for the entry to Mitosis. At later stages, the cell cycle experiences a transition (mid-blastula stage) from maternal mRNA control to zygotic mRNA control, synchronous to asynchronous cell division, and entrance of G1 and G2 phase. According to research on *Drosophila* flies, the MPF for the progression through G2 phase is activated through steps of phosphorylation/dephosphorylation on the Cdk subunit: (1) phosphorylation at residues Threonine-161, Tyrosine-15, and Threonine-14 by a particular set of enzymes, and (2) dephosphorylation of Thr 14 and Tyr 15 by an Cdc25 enzyme (called *string*) (Voet & Voet, 1995). Identifying Cdc25 in zebrafish will allow us to understand the cell-to-cell interaction occurring at the cell cycle for most higher metazoan genomes.

METHODS:

to isolate cdc25, I made primer pairs from an expressed sequence tag (EST), which is homologous to cdc25. Then I was able to clone Cdc25 from cDNA library (of zebrafish) through PCR reaction and expression vectors. After isolation, I determined when and where the gene is expressed through *in-situ* hybridization.

RESULTS



Figure 1: Expression of the CDC25 in the Retinal Ganglion Cells at the Terminal Mitosis Stage.

Figure 2: Expression of the CDC25 in the Primary Motor Neurons at the Terminal Mitosis Stage.

Selected Sources:

Gilbert, S. F. (1997). <u>Developmental Biology</u> (5th ed.). Sunderland: Simauer Associates.

Kimmel et al. (1995). Developmental Dynamics 103:253-310. New York: Wiley & Sons. http://zfin.org

Lehner, C., and Lane, M.E. (1997) *Journal of Cell Science* 110, 523-528. Great Britain: The Company of Biologists Limited.

Voet, D., & Voet, J. G. (1995). <u>Biochemistry</u> (2nd ed.). New York: John Wiley & Sons.

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Practical Robust Localization over Large-Scale 802.11 Wireless Networks

Andreas Haeberlen

Eliot Flannery

Andrew M. Ladd

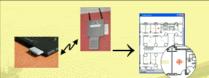
Algis Rudys

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1 What does it do?



Our technique uses Wireless Ethernet to determine the location of a mobile device (PDA, Notebook...) in a building

2 Why use it?

- Navigation: Visitor/tourist guides
- Advertising: Location-aware ads
- Robotics: Helps a robot navigate
- Security: Finds 'wireless' hackers
 Asset tracking: Warehouses etc.
- opo della servicio della servicio

GPS does not work indoors!
Wireless Ethernet is widely available!

3 How good is it?

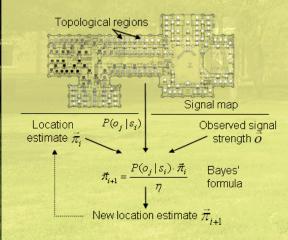
- Accurate: Finds the correct room in more than 95% of all attempts!
- Good failure modes: Incorrect results are almost always in adjacent rooms
- Robust: Works with different hardware and in changing environments
- Fast: Result available in seconds; can even track moving users!

4 What's new?

- Much lower training time than previous techniques (hours, not days!)
- Calibration technique to compensate for hardware/environment changes
- Better robustness due to Gaussian signal model
- Topological localization combined with Markov localization

5 How does localization work?

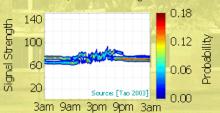
Training: Collect signal strength measurements in the entire building. This needs to be done only once!



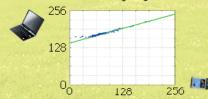
Localization: Device measures signal strength of all base stations in range and uses Markov localization to update its location estimate

How does calibration work?

Problem: Reported signal strength values are different for different hardware, and can change over time:



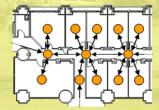
Solution: Approximate the mapping from 'old' values to 'new' values by a linear function; apply inverse function to each observation before giving it to the localizer



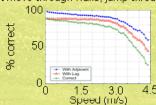
Parameters can be estimated automatically, or by collecting a few measurements at a known location

7 How does tracking work?

Use Markov chain to model user movement, and update location estimate after each iteration



Markov chain encodes knowledge about topology: Cannot move through walls, jump through ceilings, ...



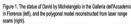
Result: Excellent accuracy up to speeds of 3-4 m/s, with one location update every 1.6 seconds

Robust Repair of Polygonal Models

ao Ju (jutao@rice.edu), Department of Computer Science, Rice University, Houston, TX

Polygonal Models





Polygonal models are most popular for representing 3D objects in computers. They are created from:

- 3D laser range scans (e.g., Michelangelo's David, the Bunny, the Dragon)
- Computer-aided design softwares (e.g., Maya, Autocad, 3DMAX, Lightwave)
- Other representations (e.g., industrial CAD models, medical MRI data, geological data)

Polygonal models have wide applications:

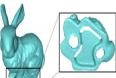
- Industrial design and manufacturing
- Medical visualization and analysis
- Scientific computation and simulation

■ Games, animated movies, movie CG, ...

Closed Models

Many applications (e.g., rapid prototyping) require a closed model with well-defined inside and outside:

- The model partitions the space into distinct external and internal volumes
- Each polygon face lies on the boundary between an external volume and an internal volume



Holes



Self-intersection

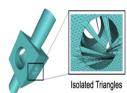


Figure 3. Non-closed polygonal models (left) with closeup looks at the various types of mesh errors (right).

Figure 2. A closed polygonal model of the Utah teapor (left) and the resulting plastic teapor created by rapid prototyping (right). Model Repair

Goal: given an arbitrary polygonal model, generate a closed model that approximates the original geometry

Why so hard

- Today's polygonal models are often gigantic - over millions of triangles
- Errors in models can be very complex:
 gaps and complex holes
 self-intersections
 isolated polygons, etc.
- Repair should not lose geometry features:
 sharp edges and corners in CAD models

What has been done?

- Point-based method
 polygon information is lost
- Polygon-based method

 can not guarantee closedness
- Volumetric method - hard with large mesh and comples errors

Volumetric Approach

1. Scan conversion

- Embed the model in an octree grid and detect grid edges that intersect the polygons.
- Top-down octree construction with no need to store the original mesh.
- Use separating axis with integer operations for numerically stable and fast intersection tests.

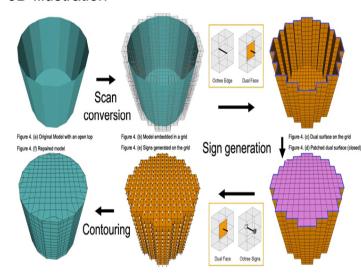
2. Sign generation

- Construct a dual surface on the octree by building one face for each grid edge that intersects the original model.
- Detect edges on the dual surface shared by odd number of faces, and remove them by adding patches. The patched dual surface is closed.
- Build signs on the grid indicating inside/outside of the dual surface.

3. Contouring

- Contouring is the process of generating polygons that approximate the zero-surface of a signed volume.
- Marching Cubes can be used for generating closed, manifold model.
- For CAD models, dual contouring can be used for generating a closed model while preserving sharp edges and corners.

3D Illustration



Examples

1. Repairing gigantic laser-scanned models (56 Million triangles, with holes, took 53 min/ 420 MB)

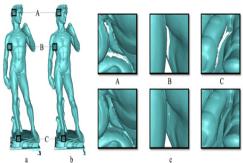


Figure 5. Repairing David: the original model at 1mm resolution (a), the repaired model at the same resolution (b), and close-ups on the model before renair (find now in (c)) and after renair (find now in (c)).

2. Repairing CAD models (with isolated triangles)

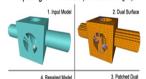




Figure 6. Removing isolated triangles from CAD models

Repairing random models

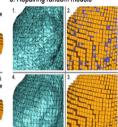


Figure 7. Removing self-intersections from a random bag of polygons

Highlights

Robust Closes arbitrary polygonal models

Efficient Repairs gigantic models on PCs

Accurate Preserves geometry features

Model	Triangles	Grid	Time	Memory
Bunny	69,451	64	3.6 sec	< 10 MB
Horse	80,805	128	6.0 sec	< 10 MB
Dragon	871,414	256	45.2 sec	16 MB
Buddha	1,087,716	1024	1.3 min	28 MB
David (2mm)	8,254,150	4096	8.4 min	92 MB
David (1mm)	56,230,343	8192	53.2 min	417 MB

Acknowledgements

Special thanks to the Stanford Graphics Laboratory for the various models including the bunny, the horse, and the David model. Thanks Chen Shen for providing the teach pictures. Finally, I want to give heartful thank to my advisor, Joe Warren, for his continuous support and insightful comments.

VITAMIN C: THE MULTIFUNCTIONAL ANTIOXIDANT

Rice University

BACKGROUND

Vitamin C (Ascorbic Acid) is an essential nutrient discovered in 1932 by Albert Szent-Györgyi, who isolated the antiscorbutic factor as pure crystalline material from lemon juice. In the past 25 years, much of the vitamin's biochemical functions have been elucidated, inducting vitamin C to the treatment of viral infections, diabetes, and even cancer prevention. Today, scientists' growing knowledge of ascorbic acid uncovers the significance of its antioxidant property. making its organic synthesis one of high demand for research and public consumption.

ANTIOXIDANT PROTECTION

- Stability of antioxidant free radicals
- Resonance delocalization
- Further oxidation of antioxidant radicals
- Reduction of radical species

REACTION MECHANISMS

Antioxidant Radical Formation

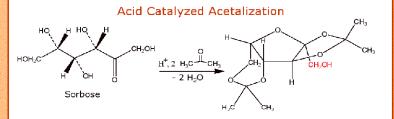
+ AH → RH + A · RO· + AH → ROH + A · $ROO \cdot + AH \longrightarrow ROOH + A.$

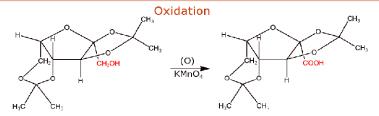
Radical Chain Termination

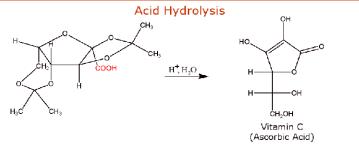
+ A · → RA $RO \cdot + A \cdot \longrightarrow RA$ ROO ·+ A · → R A

ANTIOXIDANT RADICAL STABILITY

ORGANIC SYNTHESIS OF VITAMIN C







CHEMICAL FUNCTIONS

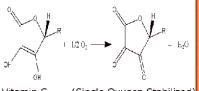
Antioxidant

- Hydrogen donation to lipid radicals
- Removal of molecular O
- Quenching of singlet O Regeneration of tocopherol
- radicals

Prooxidant

• Reduction of Fe+3 to Fe+2

OXYGEN SCAVENGER

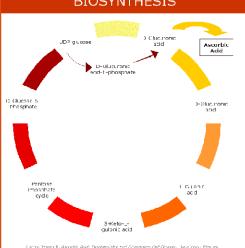


(Single Oxygen Stabilized)

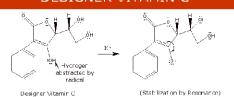
BIOLOGICAL BENEFITS

- Defense against common cold
- Collagen formation
- Absorption of inorganic iron
- Metabolism of folic acid, amino acids, and hormones
- Protection of DNA, cell membranes, and critical molecules from radicals

BIOSYNTHESIS



DESIGNER VITAMIN C



Oral Presentations

- Use the same basic visual techniques.
 - Descriptive headings, white space, italics, bold, underline, and lists to guide material and organize
 - Pictures that supplement text
 - Color that creates a theme or is visually pleasing.
- Text should be concise.
 - In lists, using parallel structure
 - No telegraphic style: use phrases or complete sentences
- Make it legible from 2m away (unprojected).
- Be professional!
 - No cute, but irrelevant clip art
 - No distracting backgrounds, animations, borders
 - No misspellings, typos

Creating Your Visuals

- 14 lines per visual (max)
 - Do not put too much information within a single visual
- A title for each visual
 - Title must be meaningful
- Simple readable labels
 - Labels on charts or graphs should be specific and precise (balance with simplicity)
 - Labels must be meaningful yet simple
- Readable from the rear
 - Print size at least 20 points
- No more than 3-5 major points
 - Each point must be easily identifiable
 - Use highlights, colors, bullets, different text size

Creating Your Visuals

- Consistency is a must
 - Consistency of graphic layout of your visuals is a must
 - You should limit yourself to one or two type styles, type sizes and colors all within one presentation
 - You should limit yourself to one or two type styles and three type sizes at most
- Use colors appropriately
 - Never use the color red for your main text, title or labels, red color is difficult to read from distance
 - Use red as a highlight color, indicating problem area
 - Use green as a highlight color
 - Two of the most common and readable colors are blue and black
 - Blue color (especially light blue) is the most soothing color on an eye.
- Visuals Must be organized
 - Your visuals must have introduction, body and closing

3-Part Structure

- **Introduction**--Tell the audience your topic, the points you will cover, and the reason your topic is important to them.
- Body--Discuss each point. Accentuate each point.
- Conclusion--Repeat the key ideas you want your audience to remember.

Introduction includes topic, motivation, and organization

- State the main purpose of your presentation.
- Motivate the topic why should anyone care about this research?
- Forecast your organization.

STYLE:

- •Thank the person who introduced you
- •Begin your talk decisively, not with "um," "OK," or "let's see"
- •Establish eye contact, rapport immediately with the audience
- •Make them get interested in your topic.

Main Section

- Present only the main ideas.
- Present one idea per slide.
 - The slide title should state the topic or main idea
- Do not include information you won't have time to discuss.

STYLE:

- •Keep your talk simple by avoiding excessive jargon and details
- •Talk to the audience, not the screen or your notes
- Speak slowly, clearly, and loudly
- •Resist filler words like "um" or "uh;" instead, don't be afraid to pause

Conclusion

- Leave the audience with a take-home message.
- Leave time for question/answer.
 - Always listen carefully to the questions and answer
 ONLY what was asked.
 - Don't get defensive.
- Thank your host and your audience.

STYLE:

- End your talk decisively with "thank you" not with "that's all" or "that's about it"
- •Do not end with "Are there any questions?" because proper protocol is for the audience to clap before questions are asked

Other Details

- Bring your own computer and projection equipment.
- Otherwise, have always a Power Point or similar + a PDF file.
- Check your presentation beforehand (projector definition or colors might change!!).
- Check the room before you go.

Are slides the key to success?

Visual Assistance

- Studies show that people store and access information in three primary ways:
 - Visually, auditorially, kinesthetically
- Adults absorb, retain and learn:
 - 10% of what they read
 - 20% what they hear
 - 30% what they read and hear
 - 50% what they hear and see
 - 90% what they do

Visual Medium for Presentations

- Visuals support the speech, they are NOT the primary message
- Visuals are only used to dramatize and clarify the message
- You must practice your main points of the presentation without relying on the visuals
- Visuals should assist you in controlling
 - Pace of the presentation
 - Flow of the information
- Important! When you transition from one visual to the next, introduce the topic area of the next visual before it is revealed.

Presentation Delivery

Albert Mehrabian, a well-known communication theorist, specifies that message impact can be divided into three factors:

- Body language
 - Contributes 55% toward message impact
- Tone of voice
 - Contributes 38% toward message impact
- Actual words
 - Contributes 7% toward message impact

Body Language

Eye Contact

- In United States, eye contact is a primary and vital part of interpersonal communication
- By gazing directly into another's eyes we establish link/closeness
- When speaking to audience, maintain eye contact with audience members
- In fact, studies show perception of distrust are created when eye contact is NOT maintained.

Facial Expression

 Speaker must be certain that her words and her face are communicating the same message. If not, she will leave the audience confused and uncertain of the true message.

Gestures

- Most expressive part of body language
- Speaker uses his hands and arms to illustrate his words
- Basic gestures show things such as: weight, shape, direction, importance, comparison, contrast

Tone of Voice

Volume in speech

- Speaker should express excitement and enthusiasm for the topic
- Volume should be varied in strength and intensity to add emphasis and dramatic impact to your presentations
- Through volume control, the audience can infer the speaker's message
- Many speakers control voice to "sound professional", but professionals do just the opposite!!

Consistent loudness – tendency to talk too loudly or softly

- Common problem is 'fading voice'. Make certain to maintain a consistent loudness.
- Mostly deliver presentation in a clear voice at a conversational level
- Consider the room where you are speaking

Convey life, color and melody

- Voice should not sound flat or wooden, beginners tend to speak on too high a pitch.
- A thin high-pitched tone lacks authority and appeal; it is harsh and unpleasant.
- Cultivate deeper tones.
- "one-note" pitch is also a problem boring.

Tone of Voice

- A good speaker will use as many as 25 different levels of pitch to convey variety and meaning.
- Rate of Delivery
 - Is often linked with your personality and/or cultural origin
 - Relates to how you think and behave
- Variety of rate reflects changes in emotion and mood and can greatly enhance your presentations
 - Plan rate intentionally
 - Fast rate sense of excitement; rapid sequence of events
 - Avoid extremes (too slow or too quickly)
 - In case of slow speakers, listeners start daydreaming
 - In case of fast speakers, listeners become frustrated and "tune out".
- Most effective speaking rate falls within the range of 120-160 words per minute.

Technical Talk Types (Technical Paper)

- Purpose at conference
 - to present technical paper orally to peers and colleagues
- Challenge
 - Convert paper into speech
 - Reduce number of main points into a manageable number
 - 15-20 minutes presentation
 - No more than 4-5 main points could be covered adequately
 - Audience expects only highlights
- Oral Presentation should include
 - Statement of research problem
 - Research methodology
 - Review of results
 - Conclusions
 - Future applications

Goal:

Provide highlights of your research to stimulate intellectual thought and discussion



Technical Briefing

- Purpose for briefing (most common in industry)
 - To provide pertinent facts in such a way that the audience can grasp them quickly, understand their application, use them as a basis for making important decision
 - To convey technical information to a critical audience
- Challenge
 - Analyze audience
 - Determine the result you want your presentation to achieve
 - Reduce main points to a manageable number
- Purpose must be stated in a single sentence
 - Serves as the focal point for the entire presentation
- Conclusion should summarize the main message and primary points

Goal:

Don't waste others time, make your points simply, clearly and quickly.

Non-technical Audience

Purpose

- To interpret the world of high technology to a non-technical audience
- To persuade, to inform, to build support for an idea or to generate action
- Different from previous talks
 - How you present the information is more important than the content!
- Organization of Speech
 - Begin this speech by capturing audience attention and interest;
 - Speaker very early on must specifically state how this topic is related to audiences interests.
 - Use every day language, avoid jargon
 - If you use jargon, make sure to introduce/define it.
 - Use short crisp sentences with active verbs
 - Make heavy use of examples, analogies, metaphors, and comparisons to clarify and support your main points
 - Gain audience attention, win their interest and finally build understanding



Goal:

unravel "high-tech" mysteries for your audience

Team Presentation

- Purpose
 - Similar to technical briefing
 - Large team involved to present larger projects, crossing many functional areas involving higher stakes
 - Need multiple presenters
- Challenge
 - Besides challenges for the speaker in a briefing, the coordination of successful team is a challenge
- All aspects of presentation must be coordinated
 - Members must establish unified objectives, strategy, organization and visual assistance
 - Practice is critical for the team presentation!!!

Goal:

the team leader must be certain that members of the team do present overlapping information and the flow of the presentation is cohesive and unified.



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Summary

- Pay very much attention to oral communication in every technical communication
 - Fmail
 - 5 minute presentation of your research (on the way to the train station or in the elevator)
 - 15 minute presentation of your research (in conference)
 - 45-50 minute presentation of your research (in job talk, invited talk, keynote)
 - 55-100 minute presentation of your research (in classroom)
- Asking good questions is also oral and memorable communication
- Approach: Practice, Practice, Practice

ULTIMATE GOAL:

Be effective Communicator in every situation

Speaker Introductions

- Purpose of speaker introductions
 - Establish rapport and speaker credibility with the audience
 - Well done introduction will warm up and ready the audience for this particular speaker
 - Weak introductions are a disservice to the audience and the speaker.
 - Successful introductions consider
 - Content, timing and delivery

Speaker Introductions (Content)

- Speaker should always prepare her own introduction
- As a moderator you should request a speaker introduction from the speaker well in advance of the program
- If the speaker does not provide bio, prepare the introductions from the biographical material on the web
- Present
 - Speaker's full name (at least twice, perhaps more)
 - Source of credibility (e.g., current job, experience)
 - Education/background
 - Speech title



Speaker Introductions (Delivery)

- It is speaker's responsibility to check with the moderator concerning name, dates, pronunciation
- If you have difficult name, put the phonetic spelling of your name in parentheses
- Preserve proper form

Speaker Introduction (Timing)

- An introduction should be proportionate to the speech being introduced
- Most professional speakers apply the "one-tenth maximum" rule of thumb of introduction
- For 10 minutes speech 1 minute introduction
- Never go over 12 minutes of introduction even for a 1 day seminar

Resources

- http://www.principiae.be Jean-Luc Doumont is a trainner on effective oral presentations and written documents.
- http://www.ncsu.edu/project/posters/NewSite/ Online hints and tips on poster design.
- http://www.io.com/~hcexres/textbook/oral.html Part of an online technical writing textbook, this site provides step-by-step instructions as well as numerous helpful examples.
- http://www.kumc.edu/SAH/OTEd/jradel/Poster_Presentat ions/110.html - Maintained by the Kansas University Medical Center, this tutorial focuses on how to design a poster for an oral presentation and includes helpful tips grouped under appropriate menus.
- http://www.tamu.edu/ode/graduatewritingproject/ A Texas A&M site, it includes poster presentations as well as oral presentations, with plenty of tips, advice, and examples.