How to Create a Technical Poster

Adapted from Michigan Tech’s Engineering Problem Solving ENG1001
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Technical Posters

- **Objective**: Sell your idea/design/project to someone else (boss, customer, client)

- **Plan**:
  - Review and apply design principles
  - Promote your “News”
Posters Present a Challenge

• Posters must be lean and clean
• Posters must stand alone
• Audiences come and go
Why Technical Posters?

- Teaching enhances learning
- Improves communication skills
- Employers want engineers with good communication skills
Types of Posters

- **Explanatory:** explaining a technical, complex process to a group unfamiliar with it
- **Descriptive:** outlining actions taken, project completion to others
- **Persuasive:** "selling" an idea to others, can range from convincing people about the value and/or safety of a design/process to marketing a device your company manufactures to someone
What’s The News?

- What problem are you solving?
- What are your results/conclusions?
- What sets your work apart?
  - New theoretical approach/methods/data interpretation
- Why does your work matter?
- How can your work be applied?
Consider the Audience

- Why are they interested?
- What are their backgrounds?
- How will they benefit?
- What are their questions?
Support for “The News”

Rank report info: MUST / Good / nice

- Include the MUST
- Add some Good
- Save nice details for discussion
Make “The News” Accessible

- Include abstract or problem statement
- Use forecasting or summary statements
- Use specific headings
- Reduce jargon
Visualize “The News”
VISUALIZE “The News”

- Is it problem / solution?
- Is it an image?
- Is it a contrast? (old vs. new)
- Is it a demonstration?
Relate News to Layout

- Match visualization to layout
  - Left-to-right flow in vertical columns
  - Left-to-right flow in horizontal rows
  - Centered image with explanations
  - Two fields in contrast
L-to-R Flow in Vertical Columns

Title & Authors

Flows top to bottom, left to right
Centered Image & Explanations

Title & Authors

Abstract

PROCESS FLOW DIAGRAM

HYDROGEN

PROCESS WATER

STripper

FLASH TANK

COLUMN 1

COLUMN 2

RECIRC

WATER

COOLER

ACETONE
Guide the Reader

- Scale expresses relative importance
- Indenting shows subordination
- White space directs gaze
- Color adds emphasis or coherence

Font & Sizes

- **Title (6 – 8 words)**
  - Sans Serif
  - 90 - 120 pt

- **Headings (3 words)**
  - Sans Serif
  - 36 - 48 pt

- **Text**
  - Sans serif or Serif
  - 30 - 36 pt.
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.

**Ideal aesthetics:**
- Quick sedation
- Quick recovery
- Few side effects
- Safe to handle
Details Matter!

- Check for consistent formatting
- Check grammar & spelling
- Use a correct reference list
- Give credit to others (to establish your character and ethics)
- Include contact info
Tips for Poster Design

● How do people look at posters?
  ● Read from a distance of 4-6 feet
  ● Read content quickly and easily
  ● Get an overall sense of project/content

● Why do people look at posters?
  ● Identify the importance/relevance of topic

http://www.sfsu.edu/~cptsc06/Poster06tips.pdf
Viewer’s Needs

1. Give the viewer a “gist” of your information
   - What poster is about
   - Why it’s important
   - Title, author(s), date, contact information
2. Legible and Contrasts with Background
   - Simple backgrounds make the text easy to read
3. Legible text
   - Text is large enough to be read from 4-6 feet
   - Font is simple and easy to read
   - Headers are in a larger font than subordinate text

4. Choose visuals that are familiar to audience or easy to understand
   - If graph/table is difficult to understand:
     - Try simplifying it
     - Divide information into discrete parts
     - Provide text to describe information
5. Organize topics in a logical, sequential manner
   - Indicate flow of material (images, arrows, numbers, etc.)
   - Viewers will leave if information is not easy to follow/understand
   - Headings that are on the left side are easier to follow than centered text
   - Write a summary of major sections/ideas

6. Put Text on a Diet
   - Too much to read discourages the viewer
7. Make sure your poster can stand alone
8. Include acknowledgements and references
Poster Structure

- **Title**
- **Introduction** (important, connect with reader)
- **Body** (the "guts" of poster)
- **Conclusion** (quick summary, no new info)
Title Section

- Contains:
  - Title of Poster
  - Author(s) and Publisher(s)
  - Contact Information
  - Date
Introduction

- May contain abstract too
- Background information on topic
  - What does your audience need to know to understand the article
- Connect with audience
  - Why is your topic important to them?
Body (Discussion)

- **Guidelines:**
  - Use figures and charts whenever possible
  - Avoid extensive tables and text

- **Structure:**
  - State testing procedure
  - Show results - and explain what they mean
  - If you use picture, chart, graph, data from a source, cite source on poster (ie: in reference list & cited)
Conclusions

- Restate main points
- State conclusions based on information presented
- Short, bulleted items
- Include recommendations here
Review: Reference List

- Not a Bibliography
- References
  - Properly cited within text
  - Use library and internet
  - Personal communication references (if you talked to someone about this case study…)
- References are listed in order cited in text (e.g.: first reference is the first one cited in text)

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**REFERENCES**

6. Personal interview with Dr. Bill Fitzgerald, ECE Department, The University of Texas at Austin, November 18, 2007.
10. Email from Mark A. Carpenter, A2i-bit project manager, AMD, Austin, Texas, March 6, 2000

Beer, 3rd Ed., Pg. 261, 2009
Review: Lists

- Stand out from rest of text
- Contain short phrases, sentences or paragraphs
- Start with same format
- Organize information
- Can be numbered or bulleted
  - Sometimes have sub-bullets (like this)
Review: Tables & Figures

Tables
- Discuss and reference table before it appears in text
- Completely discuss Table before it appears in text
- Titled above Table
  
  **Table 1.** Effect of Fuel Rate and Road Grade on Car Speed. (Car model = XLR, tire pressure = 30 psig, air temperature = 70°F, and air pressure = 0.985 atm.)
- Organized to make it easier to read
- Labeled including units

Figures
- Discuss and reference Figure before it appears in text
- Completely discuss Figure before it appears in text
- Titled below Figure (must include figure #)
  
  **Figure 1.** Effect of Fuel Rate and Road Grade on Car Speed. (Car model = XLR, tire pressure = 30 psig, air temperature = 70°F, and air pressure = 0.985 atm.)
- Explained fully in text
- Used to visualize what is written
For more information visit Cain Project web site at:

http://www.owlnet.rice.edu/~cainproj

Thanks to the Cain Project for letting us use their materials....