Tech Writing Quick Review
BME/CMPE/EE 123A

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Label all documents

All documents should have title page (or title block) with

- Title of document
- Name of project (and class)
- Names of authors
- Date

Write as you go

- Don't leave documentation to the end!

- Write every time you do something.

- Keep lab notebook current.

- Update draft of final report every 2 weeks.

The 4 C's

Tech writing should be

Clear   Concise

Complete   Correct

Who are you talking to?

- What do they need to know?
- What do they know already?
- What do they want to know?
- What do **you** want them to know?

Audience Example

From an invitation by a sociology professor to science and engineering grad students:

create a space to explore how more reflective understandings of the social and cultural embeddedness of science, technology and engineering might enable changes to epistemological and governing practices that might engender social justice (or other desired ends).

Structure your writing

- Divide document into sections, sections into paragraphs
  - Sections are like blocks of block diagram
  - Can't have just one subsection—split into 2 or more, or don't subdivide.
- Topic paragraph for each section
- Topic sentence for each paragraph
  - Most important first
  - Subsequent sentences support topic sentence
  - No new topics introduced in paragraph

Order of reading

- Title

- Abstract (or Executive Summary)

- Figures and captions

- Conclusions

- Sections that look interesting

- Whole report

Flow

- How can you make reading easier?
- Avoid very long sentences
- Avoid short, choppy sentences
- Old, known info $\rightarrow$ New info

Flow example

From *Style: Ten Lessons in Clarity and Grace*,
by Joseph M. Williams:

Some astonishing questions about the nature of the universe have been raised by scientists studying black holes in space. The collapse of a dead star into a point perhaps no larger than a marble creates a black hole.

Some astonishing questions about the nature of the universe have been raised by scientists studying black holes in space. A black hole is created by the collapse of a dead star into a point perhaps no larger than a marble.

Flow exercise

From *Achieving Flow in Your Writing*, by Paul Dudenhefer.

`http://lupus.econ.duke.edu/ecoteach/undergrad/forms/`

`achieving%20flow.pdf`

The three areas studied are oceanography, geophysics, and geology. Geophysical theory and methods to investigate the oceans and lands beneath them are central to oceanography; the study of the earth, using the basic principles of physics, is the concern of geophysics; and the formation of the earth, its composition, history, and changes, is the focus of geology. The specialties of mineralogy, petrology, stratigraphy, sedimentation, paleontology, structural geology (tectonics), and geomorphology are included in geology in this study.

Flow solution

Real paragraph (from an unspecified 1991 article in *American Economics Review*):

> The three areas studied are oceanography, geophysics, and geology. Oceanography relies heavily on geophysical theory and methods to investigate the oceans and lands beneath them; geophysics is the study of the earth, using the basic principles of physics; and geology focuses on the formation of the earth, its composition, history, and changes. In this study, geology includes the specialties of mineralogy, petrology, stratigraphy, sedimentation, paleontology, structural geology (tectonics), and geomorphology.

Pronouns

- Be sure referents of pronouns are unambiguous.
- "We" can mean "We, the authors," or "You and I".
- Single author is "I" not "we".
- Avoid "this" as pronoun. Use as article ("this project", "this approach", ...)

Bad referent (and spelling)

From an otherwise well-written article by Karen Solomon (*San Francisco Chronicle*, 26 Sept 2007, page F3) comes the lovely paragraph

"The whole point is to enhance the parenting experience," agrees Pri Pri co-owner Kei Cano-Katsunuma, mother of a 4-year-old expecting her second child in December. "I wanted a place where I could feel comfortable if the baby started whaling."

I don't think I'd ever be comfortable if a baby had a harpoon gun. And when did the 4-year-old have her first child?

Noun clusters

- static RAM control input voltage level tester

- communications navigation surveillance/air traffic management (CNS/ATM)

- soda bottle rocket launcher plans

- United States Department of Health and Human Services Substance Abuse and Mental Health Services Administration

- The Center for Mental Health Services Knowledge Exchange Network

- Requirements Definition Process Faculty Liaison Plan

- mouse stem cell gene expression kinetics

Web sites

These slides: `http://users.soe.ucsc.edu/~karplus/papers/`

`writing-2009-nov-20.screen.pdf`

Tech writing class:

`http://www.soe.ucsc.edu/courses/course?cmpe185`

Noun clusters:

`http://users.soe.ucsc.edu/~karplus/185/noun-cluster.html`

Writing humor:

`http://users.soe.ucsc.edu/~karplus/185/humor-page.html`