

Problem Statement

- Concisely describe problem
 - economic issues
 - safety concerns
 - etc
- Describe issues which must be addressed
 - boundary conditions
 - time frame
 - what's wrong with current approach

Objective Slide

- Concisely describe the goals of the paper in the context of the problem statement
- List specific, concrete goals
 - use action words
 - don't mix “what” with “how”
- Quantify goals so you know if/when they are met

Objective and Approach Statements

- Clear, concise statements of what you want to accomplish, and how you plan to do it.
- Distinguish between “objective” and “approach”
 - Look at object of the action word.
 - Does it say what you hope to achieve (an objective)?
 - Or does it tell you how to get there? (An approach)
- Don't muddle the “what” with the “how”

Reference: Dr. F. Kelley, USAF Materials Laboratory, circa 1975

Objective Statement

- **Objective** should provide direction to a specific end-point
- **Not** a statement of an activity
- **good**: develop, define, establish, construct, select, produce, provide, demonstrate, determine
- **poor**: conduct, test, study, examine, investigate, improve, reduce, increase

Objective Statement (cont)

- Look for the **product**
 - Can you measure how close you came to achieving it?
- Objectives should be possible of attainment within a stated time period
 - show when you expect to get there
- Accomplishments are measurable if objective is quantified
 - numerical values
 - passed a minimum-or stayed under a maximum
 - can be go/no-go (you did it or you didn't)

Approach Statement

- Tell how you plan to meet the stated objectives
 - experimental
 - analytical
 - numerical
 - literature search
- Mention details of approach and selection of various parameters
 - pulse-echo ultrasonics
 - ANSYS finite element program
- Indicate plan to meet stated objectives
 - test matrix
 - parametric study
 - reference cases

Sample Objective/Approach

- Objective: lose ___ lbs by _____
- Approach:
 - conduct ___ calorie diet
 - conduct exercise program
 - » run ___ miles/week
 - » lift weights
 - » aerobics
 - » etc
 - follow weight watcher's program
 - wire jaws shut
 - staple stomach
 - etc.

Summary

- Final slide should summarize key points
 - Brief summary of objective/approach
 - Summary of current status of technology
 - What remains to be done in future
- Any key conclusions should be listed
- Summary slide should only take about minute or so to wrap up

Vu-graph Guidelines

- Keep words to a minimum on chart
 - only use key words/phrases
 - don't use complete sentences
 - don't read chart word for word -- use as outline for your comments
- Make liberal use of graphs, diagrams, etc.
- Break up complex charts into smaller units
- Make sure everything is legible to back row
- Color/highlight individual curves on graphs
 - magic marker ok if don't have color printer

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