

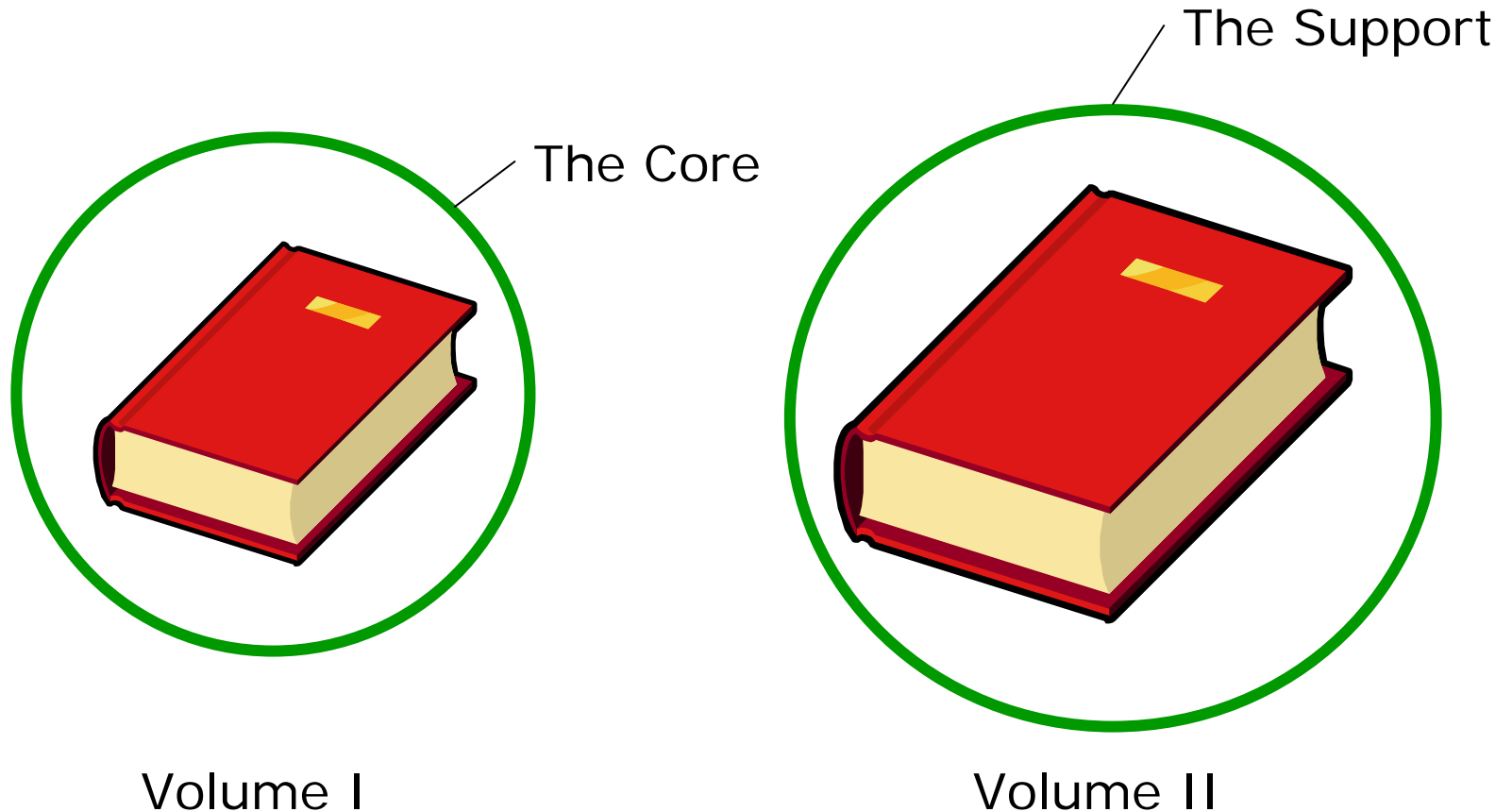
“Bad writing makes bright
people look dumb”

William Zinsser

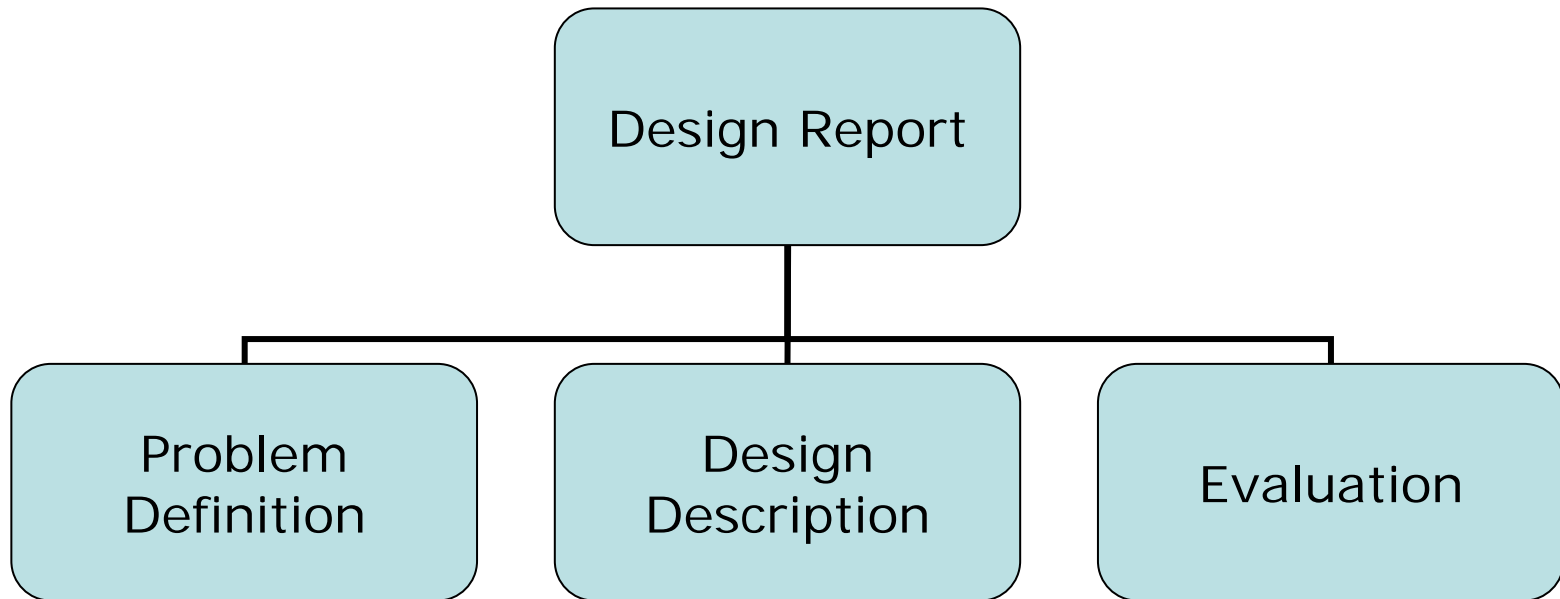
Engineering Writing

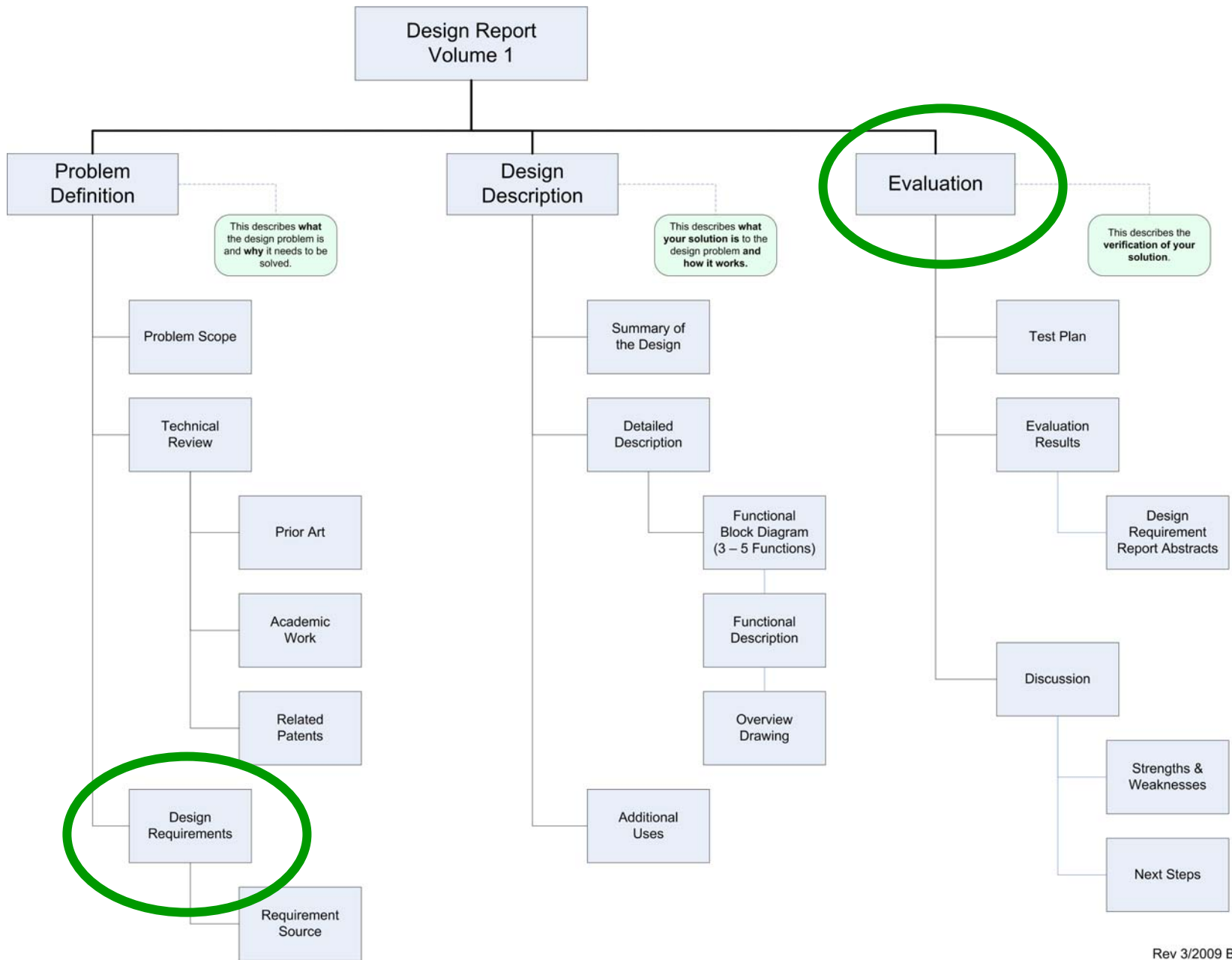
Sit with your team
Access your Google site

Project Report

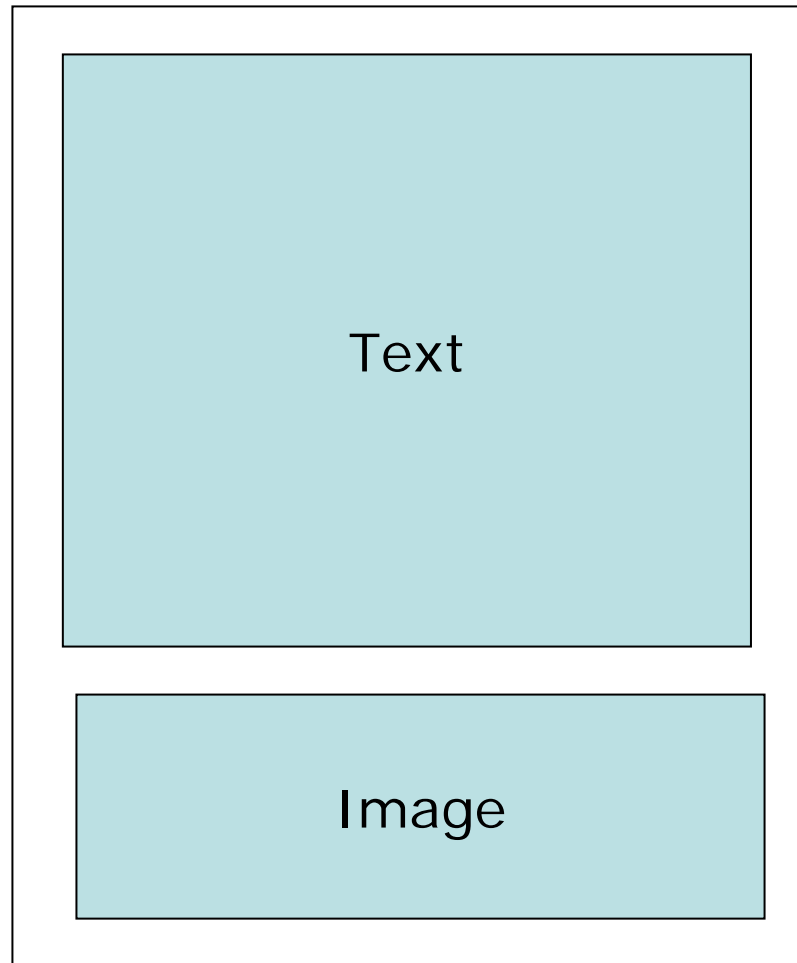


The Core (Vol. I)





Executive Summary



Volume II

- Test results (physical experiments, computer simulations, hand analysis) in the IMRD format of a lab report.
- Other concepts, including list of what was considered and why one solution was chosen. Include concept selection matrix
- Regulatory and safety considerations
- Environmental impact statement
- Bill of Materials
- Cost analysis
- Manufacturing plan (one-off or production)

Exercise

- In two, tight (but possibly long) sentences, state the problem you are trying to solve. Sentence 1 is the problem. Sentence 2 is why it is important.
- Present tense
- Copy edit
- Post to site

Timer

Exercise

- In two, tight (but possibly long) sentences, state how you solved the problem. Sentence 1 describes your design. Sentence 2 tells why the solution is a good one.
- Present tense
- Copy edit
- Post to site

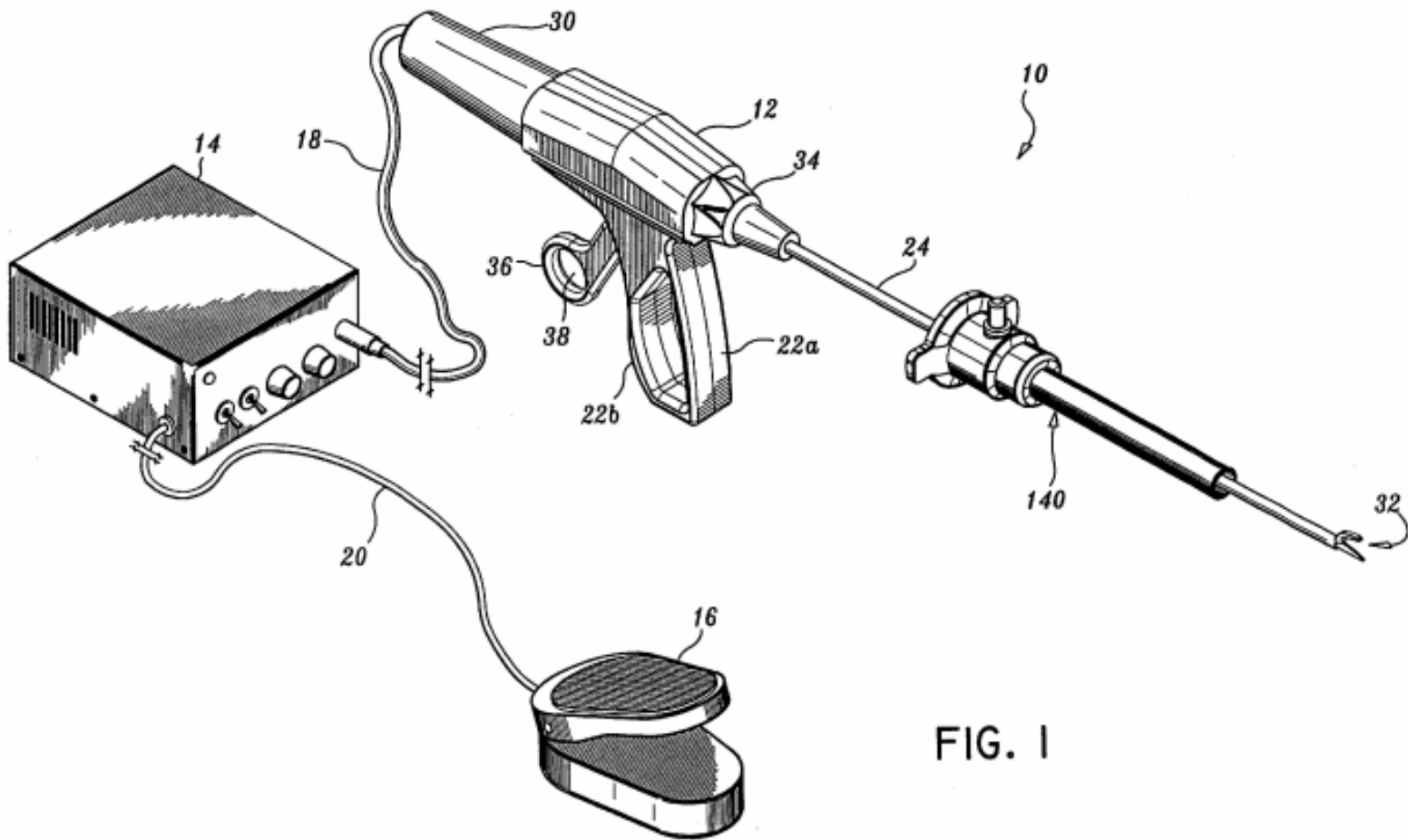
Timer

Exercise

- Create a 3-column design evaluation table with five rows plus headings
- Fill with your top five requirements and test plan
- Post to site

Requirement	Reason	Evaluation Method

Timer



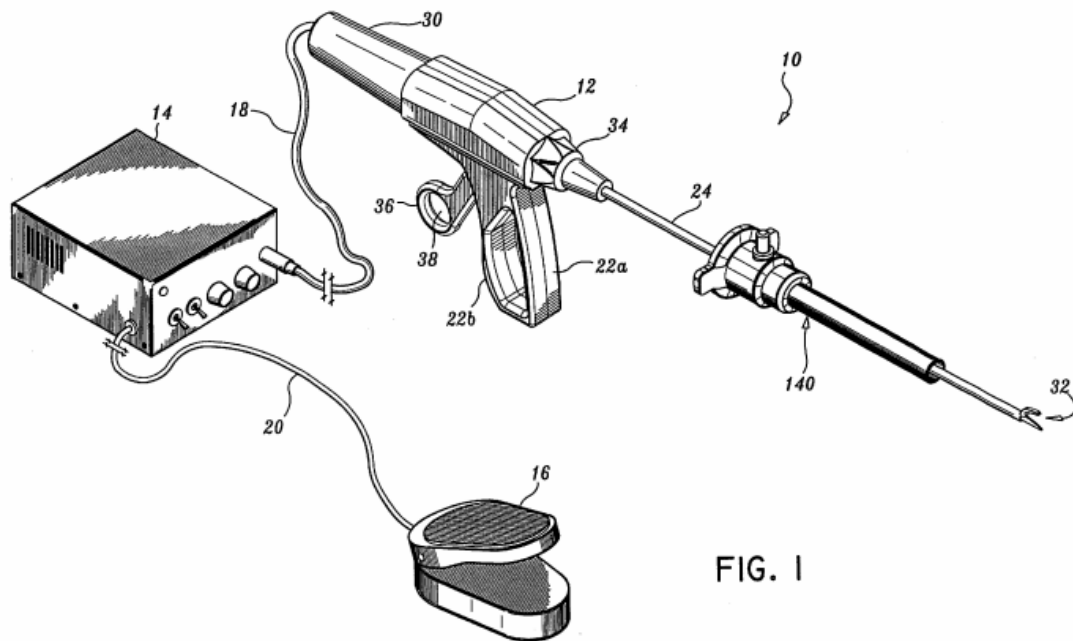


FIG. 1

FIG. 1 illustrates the ultrasonic dissection and coagulation system shown generally as 10. Briefly, dissection and coagulation system 10 includes ultrasonic instrument 12, control module 14, and remote actuator 16. Control module 14 is operatively connected to ultrasonic instrument 12 by electrically conductive cable 18 and functions to control the power and frequency of current supplied to ultrasonic instrument 12. Any suitable controller capable of delivering power to ultrasonic instrument 12 can be used. Control module 14 does not form part of the invention and will not be further discussed herein. Remote actuator 16, e.g., pedal actuator, is operatively connected to control module 14 by electrically conductive cable 20 and can be actuated to initiate the supply of power to ultrasonic instrument 12 via control module 14 to effect vibratory motion of ultrasonic instrument 12 to cut and coagulate tissue.

Some Tips

- Editor starts now
 - Define format
 - Assign writing tasks
 - Review and comment on drafts
- Establish common terms
 - Glossary or figure calling out parts
- Consistent features and specifications

Editing Tips

- Consistent tense
- Third person
- For writing with equations, consult engineering text
- For figure and tables, consult a book
- For citations, consult an ASME or IEEE
- Read out loud

Resources

- Hacker, A Writer's Reference
 - A writing handbook; useful for checking rules like how to punctuate a list and when to use who versus whom
- Strunk and White, The Elements of Style
 - A classic book on how to write directly and clearly. A short paperback that belongs on every writers bookshelf
- Zinsser, On Writing Well
 - Another classic on writing without clutter
- UMN Student Writing Support
 - Free, walk-in writing help for UMN students, <http://writing.umn.edu/sws/>
- Wilbers columns on writing
 - Monthly column in the Star Tribune on business writing. Check out <http://www.wilbers.com/CBR%20Article.htm>
- RefWorks citation manager
 - Web-based application to manage the logistics of citations and reference lists. Available for free to UMN students, <http://www.lib.umn.edu/site/refworks.phtml>

ME4054 Writing Schedule

- March 31: Outline, summary problem statement, summary solution, summary evaluation plan
- April 7: Problem Definition section
- April 14: Design Description section
- April 21: Evaluation section
- April 30: Completed report (Vol I and Vol II) delivered