# A Lesson in Effective Technical Presentations

Dr. Aprille J Ericsson - NASA Goddard Space Flight Center, Engineer/Technologist/Manager 11/18/2016

## **General Tips:**

- Engage your audience
  - Eg: Start off with something that can connect everyone (Thanksgiving Break)
- Make a Plan
  - Calculate timeline/schedule
  - Set aside plenty of time so you are not rushed
- Communicate Results
  - Technical Reporting
    - Paper, poster, presentation, oral presentation
- Medium
  - o Paper, slides, audio, video, computer interlink, poster board
  - HAVE A BACKUP

## **Technical Writing:**

- Generally non-opinionated
- Content = make sure it is worth reading
- Organization = user-friendly, subheadings
- Style = clear and concise, use shorter wording
- Format = accessibility is key
- Visuals = A MUST
- Audience
  - Primary audience = those who request the document for decision or action
    - Address them with the longer document
  - Secondary audience = those who carry out or continue on with project
    - Address them in supplement with appendices and/or glossary
  - Level of Technology of Audience Members
    - Highly Technical = do not need any definitions
    - Semi Technical = some definitions needed
    - Non-Technical = clear but not long definitions

- Practice disseminating =
  - Practice explaining it to other people who are not in your profession
    - Helps impact more people and get funding
    - If you can describe your topic to kindergarteners = you really understand your stuff

#### Drafting

- Brainstorm
- Narrow it down to the BEST information = the stuff that provides strongest impact/support
- Purpose = ask yourself this

#### Rough Draft

- Abstract = brief overview
  - Why is your topic important, objectives, briefly explain methods, succinctly state results/conclusions/recommendations
  - NO "We present the results and recommendations here" etc
  - Abstract is important for getting conferences and papers accepted
- o Intro, body, results, conclusion
- Part often forgotten = suggestions section
  - Analyze problem, what can be improved, what is the next step, lessons learned
- Title page = name of project, name, supervisor, code, date
- Table of contents
- References
- Definitions:
  - Parenthetical, sentence, expanded, acronyms
- Visual aids =
  - Depict relationships, LABEL, condense info
- Appendices
  - Instrument specifications (eg calibration of instruments used)
  - Computer programs
  - Glossary

### **Posters:**

- Keys:
  - Start conversations, graphic, ordered, focused = a single message, advertisement of your work, summary of your work, essentially an "elevator conversation" = don't have three hours to explain information
- Use plain language, no jargon or acronyms

- Interpret your findings for your audience = answer "what does that really mean?"
- An abstract can HELP
  - DO NOT put it on your poster though
  - Use it as an outline
  - Have copies of abstract with contact info near poster as takeaways
- Title = be able to read from 15-20 ft away = STANDOUT
- Do not need to include your whole name = use initials
- Sequencing of information = can number and letter sections to make this clear
- Normal text = readable from 6ft away
- Use only 2-3 colors = pastels and grays are easy to look at for long time
- BALANCE WHITE SPACE
- REVISE MULTIPLE TIMES (at least twice)
- o Bar charts = can make relatively smaller since data easy to get when look at
- Prepare 30 sec, 2 min, and 5 min tours of your poster for different people
- Get feedback from members
- Cue cards (notes on phone even)
- Leave a pen and paper pad next to poster to invite comments from viewers
- On handouts = include miniature of the poster
- QR codes can be used on posters and handouts

#### Oral

- Seminars, tech presentations, speeches
- Impromptu, memorized, reading, extemporaneous
- 10 min plus 3 min for questions
- Eye contact
- Read audience feedback
  - If losing them = tell a joke
  - If someone asks a question you do not know the answer to =
    - "Let me get back to you on that"
    - "Can we take it offline?"
- Dress professionally = people take you more seriously, wear something that makes you feel good about yourself too
- Do not be afraid to admit ignorance = do not bullcrap the audience
- Anticipate audience questions (you can even plant a question asker to start the Q&A off)
- Use moderate volume, just pause versus saying "umm"
- Appear relaxed
- Use a conversational tone = realize that people in the audience are just that:
  people, just like you

- o Connect to audience on high level versus nitty gritty
  - Focus on the end product
  - Try to depict the nitty gritty visually
- o Ask audience members name, where from, discipline etc at the start

## Random:

• Check out <a href="https://www.youtube.com/watch?v=ZDvizNvaOzY">https://www.youtube.com/watch?v=ZDvizNvaOzY</a>

# **Quotes:**

- "When you get your foot in the door, SHINE."
- "Have a great day growing your brains."