Counting Ferrets

Presentation to the Southern California Chapter of the Association of Proposal Management Professionals

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I am not a Proposal Management Professional

- I have served as a writer, editor, section lead, volume captain, and proposal manager
- These briefings were developed while working on some large proposals at Northrop Grumman

It happens on every proposal

- Engineers and other technical personnel writing a proposal find the processes and instructions strange and difficult to understand
- Writers can get hung up on particular instructions, inhibiting progress
- As a volume captain I looked for ways to clarify instructions in a way that writers could understand and would likely remember

Partial inspiration came from US history

- Private SNAFU was a cartoon character used to teach simple lessons to troops in WWII
- Warner Brothers made SNAFU using the same humor they developed on Bugs Bunny and Porky Pig cartoons
- Lesson-learned: use humor to make simple instructions understandable and memorable

First implementation

- As volume captain on a large proposal, I encountered writers struggling with planning sheets
- I wanted to use an example to explain what was needed
  - I did not want to use an actual example from RFP
  - I wanted to make it something the writers would remember
- This first example was used on a proposal to JPL for a program called JIMO

How To Fill Out a Planning Sheet

Stewart Moses

Planning Sheets Must Show How We Are Going To Score Strengths in The Proposal

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- Key Planning Sheet Sections are 4, 7, and 15
- We may not know in detail how we are going to win each section of the proposal, but we need to have a general idea
- The following charts show a thought process for these sections

Section 4 Describes Your Approach to Answering the Proposal Instructions

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Proposal Instructions: Describe your approach to counting ferrets

↓

JPL's Concern: That NGST can verify that it counted all of the ferrets

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Ask yourself, "What is my approach to counting all of the ferrets?"

Think Through Your Approach

- We verify our ferret counts using an independent ferret counter
- We will involve JPL IPT leads in all ferret counts
- We will report to senior JPL management on the results of ferret counts
- We identified accurate ferret counting as a risk in Task 1 and track it using our risk management system
- We have counted ferrets successfully on a number of previous programs and we will use their system
  - Chandra, DSP

Describe Your Approach in Section 4

- We have a verifiable ferret counting approach which includes:
  - Independent ferret count verification
  - JPL IPT participation in all ferret counts
  - Senior review of ferret counts
  - Formal risk management of ferret counts
  - Successfully implemented on previous programs

You Can Now Identify the Features and Benefits of Your Approach In Section 7

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Feature	Benefit
Independent verification	Ensures accurate count
JPL IPT participation	Provides insight to JPL at the lowest level
Senior review	Enables effective response to inaccurate ferret counts
Formal risk management tracking	Ensures that ferret counting processes are reviewed regularly
Successfully performed on previous programs	Shows that NGST has the right experience to perform ferret counting successfully

The Section 15 Outline Follows Easily

Subsection	Subsection Title	Contents
5.1	Ferret Counts	•Introductory paragraph •Success of ferret counting on DSP and Chandra
5.1.1	Verification	•Independent verification process •JPL IPT participation
5.1.2	Reviews	•Senior Management reviews
5.1.3	Risk Management	•Formal RMB tracking process •Identified risks

It seemed to work

- Proposal team seemed to enjoy the ferrets and planning sheets improved
- More briefings were given at each stage of the proposal
- The next is also from JIMO

How To Tighten Up Text

Stewart Moses

When Worried About Page Count Remember Good Editing Can Save Much Space

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- Good proposal text is brief and clear
- Initial drafts tend to be verbose
- It is possible to preserve the meaning of text, while being ruthless in editing
- The PPMs will be editing your text to get to the required page count

Following Paragraph Typifies Early Proposal Drafts

Risk reduction in ferret counting is important to the success of JIMO. We have designed our ferret counting approach to incorporate three key features for risk reduction. First, our plan is designed to accommodate the employment of independent ferret counters to perform cross checks. Second, we plan to perform four full-up ferret counts to update the ferret count total at key points during ATLO. Third, Safety and Mission Assurance will conduct comprehensive audits of the ferret counting process. All of these approaches were successfully implemented on Chandra and DSP.

Identify the Real Meat of the Paragraph

Risk reduction in ferret counting is important to the success of JIMO. We have designed our ferret counting approach to incorporate three key features for risk reduction. First, our plan is designed to accommodate the employment of **independent ferret counters to perform cross checks**. Second, we plan to perform **four full-up ferret counts** to update the ferret count total **at key points during ATLO**. Third, **Safety and Mission Assurance will conduct comprehensive audits** of the ferret counting process. All of these approaches were successfully implemented on **Chandra and DSP**.

Write New Sentence With Only the Meat

As used successfully on Chandra and DSP our ferret counting approach reduces risk by employing independent ferret counters for cross checks, performing four full-up counts at key points during ATLO, and conducting comprehensive Safety and Mission Assurance audits.

Ferrets continued into the next proposal

- Ferret briefings became more sophisticated
- Briefings addressed new issues
- Next example is from a proposal to NASA for the CEV program

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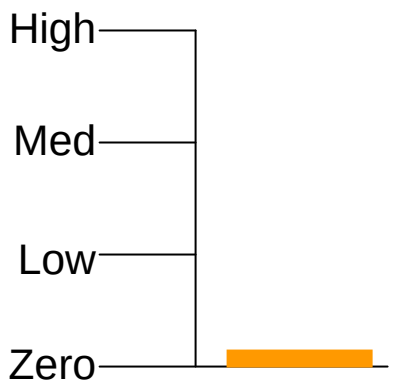
How To Increase The Information Content of Your Figure

Stewart Moses

Figures Need To Be Content Rich

- Proposals are always page constrained
- Figures that do not have much information content are wasting valuable space
- Figures with a lot of information content can actually save space
  - Figures can get away with smaller fonts, incomplete sentences, and other devices to save space over text
- Our goal should be to tell as much of the story with figures as is practicable
  - The text provides the reason to look at the figure

Watch The Increasing Information Content



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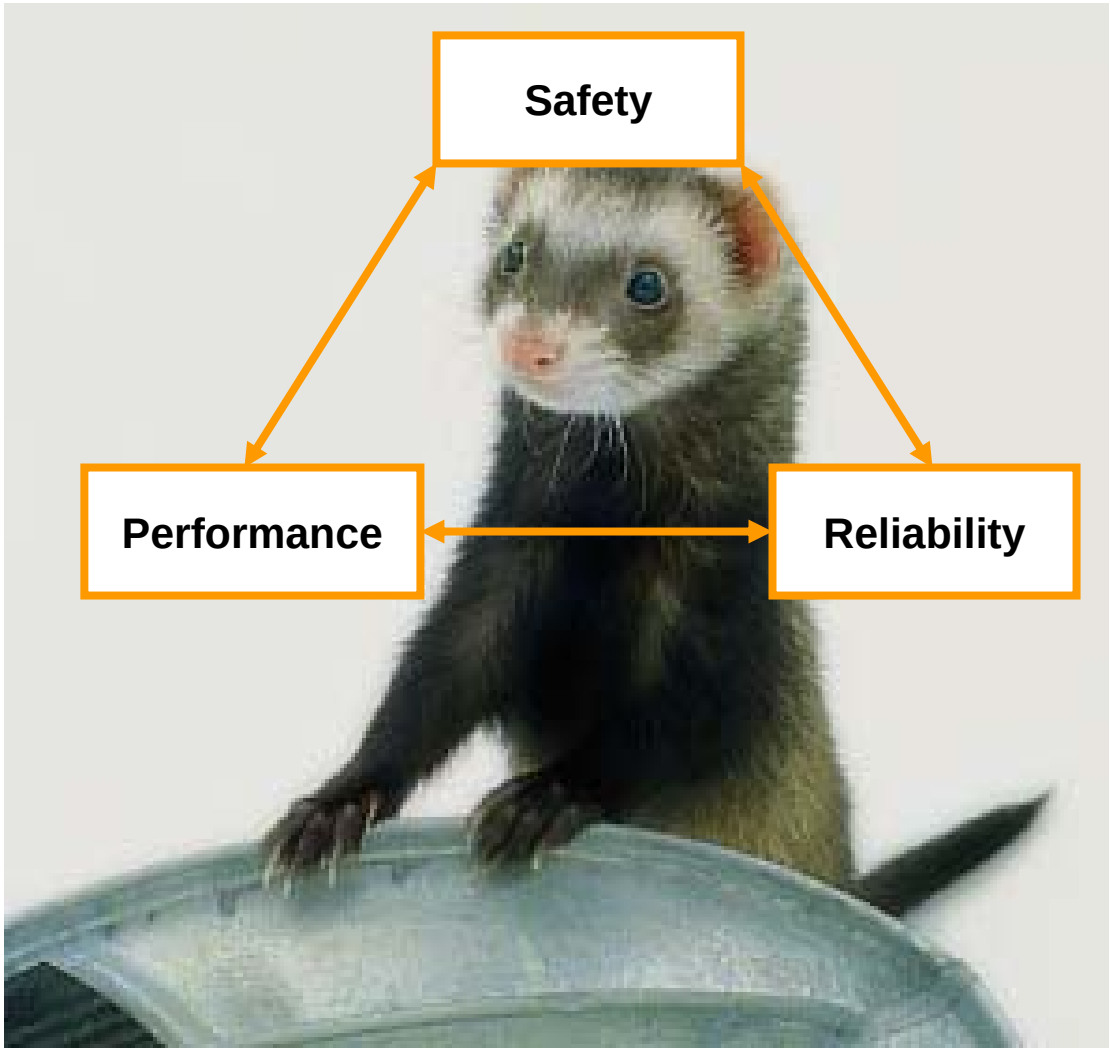

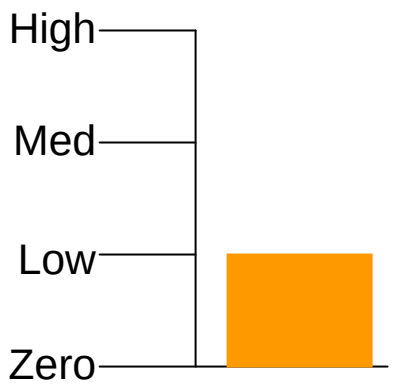

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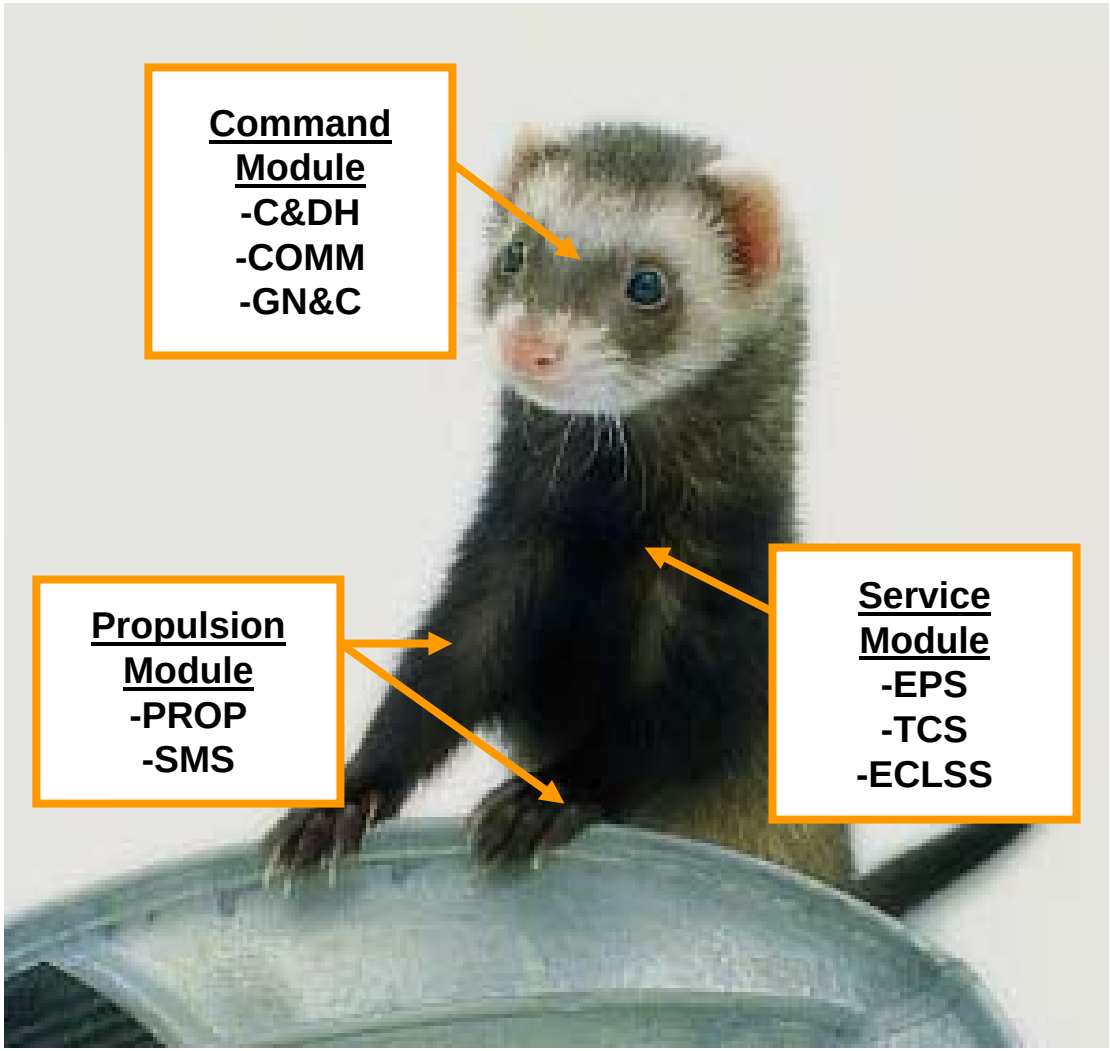

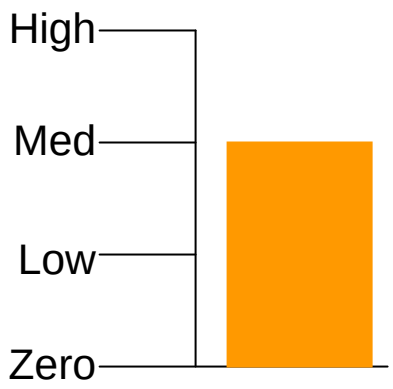

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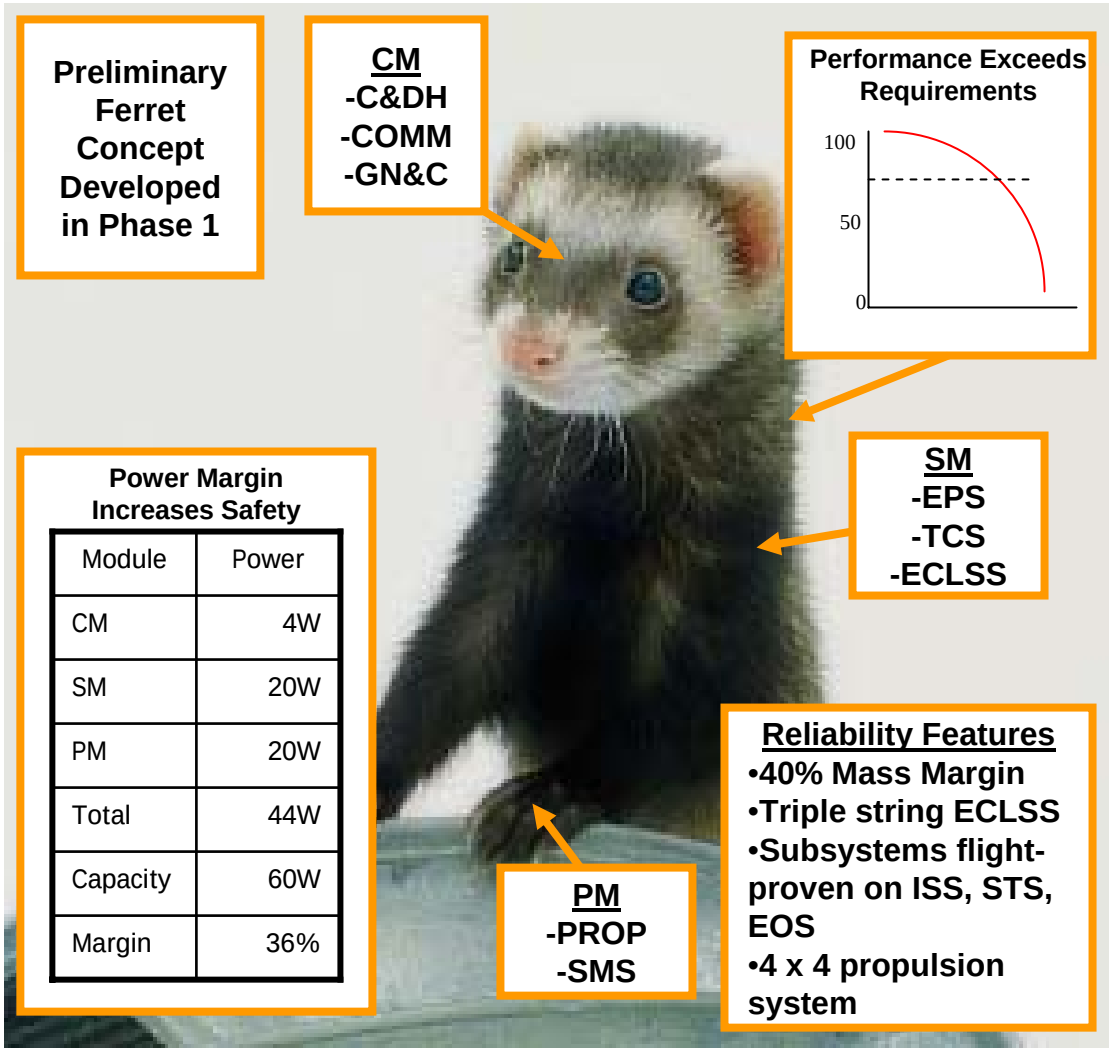


Preliminary Ferret Concept Developed in Phase 1

CM
-C&DH
-COMM
-GN&C

Performance Exceeds Requirements

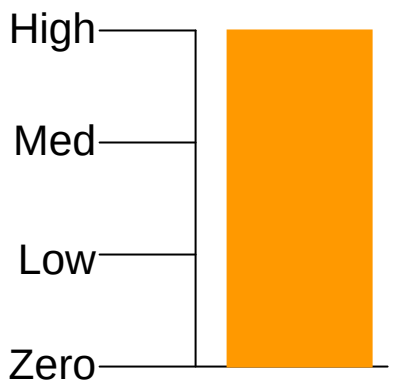
SM
-EPS
-TCS
-ECLSS

Power Margin Increases Safety

Module	Power
CM	4W
SM	20W
PM	20W
Total	44W
Capacity	60W
Margin	36%

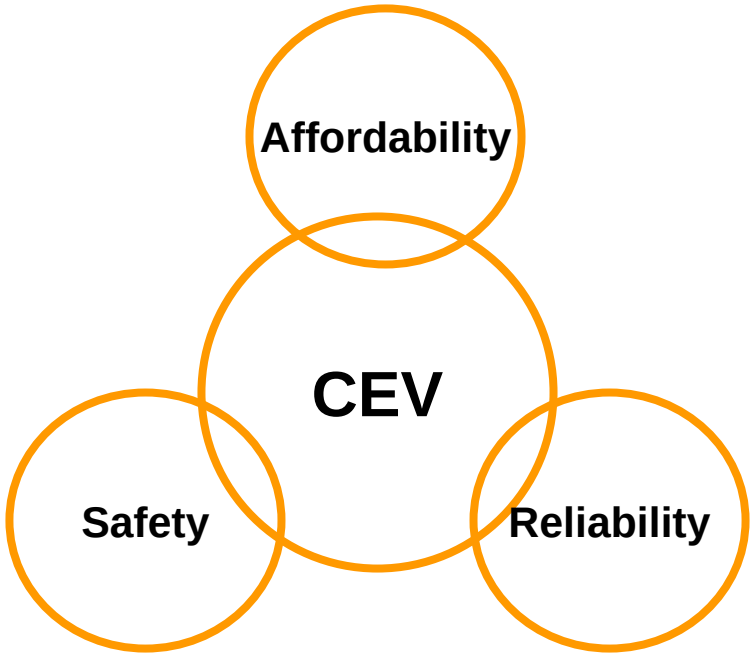
PM
-PROP
-SMS

Reliability Features
- **40% Mass Margin**
- **Triple string ECLSS**
- **Subsystems flight-proven on ISS, STS, EOS**
- **4 x 4 propulsion system**



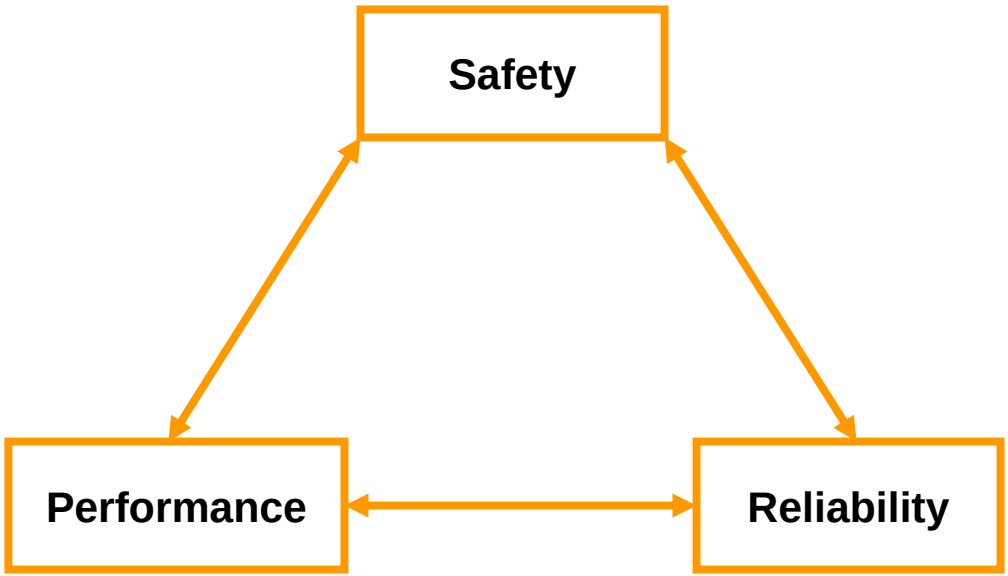
How Can I Tell If My Graphic Needs More Content?

If Your Graphic is a Venn Diagram



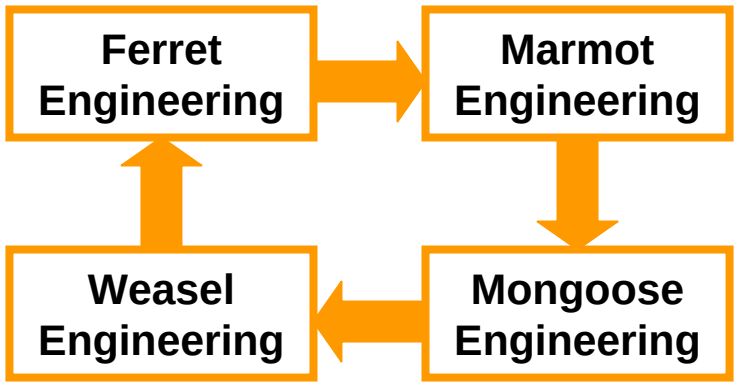
It Needs More Content

If Your Graphic Has Boxes With Arrows Going to Every Other Box



It Needs More Content

If Your Graphic Is A Flow Diagram With No Discernible Start Or Finish

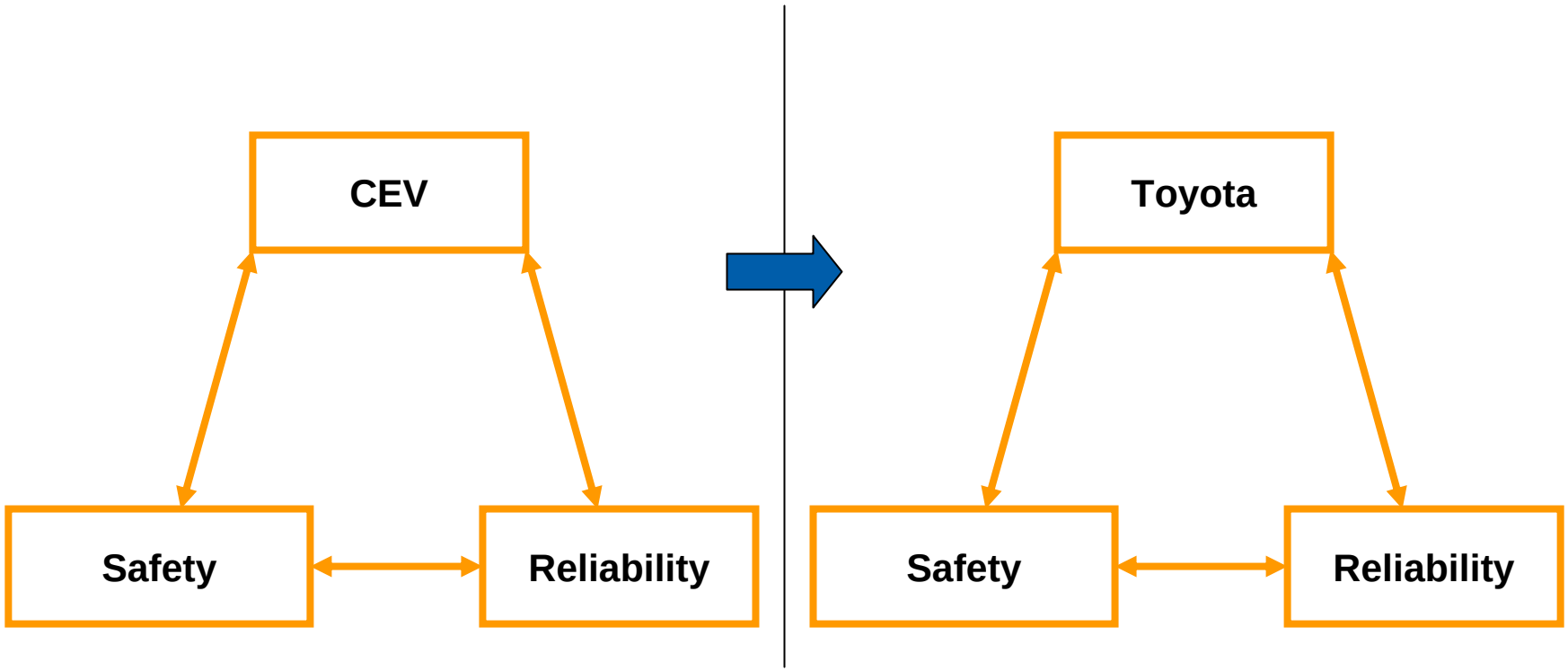


It Needs More Content

If Your Graphic Relies on Making a Cute Shape Out of the Words

It Needs More Content

If You Can Replace “CEV” With “Toyota” and Your Graphic Still Makes Sense



It Needs More Content

Ferrets continue

- The following briefing has not yet been used in a proposal

How To Write Convincing Proposal Text

Stewart Moses

NASA Reviewers are Experts

- In your text you must convince them that you:
  - Know what you are talking about
  - Can be trusted to do the job
  - Have thought deeply about what NASA is asking you to do and have gained some insight
- You have to give NASA the reasons to pick your team
- But you usually do not have enough space to tell them all you know
- Say to yourself, “If someone was talking to me on this subject, what could they say to convince me that they were an expert?”

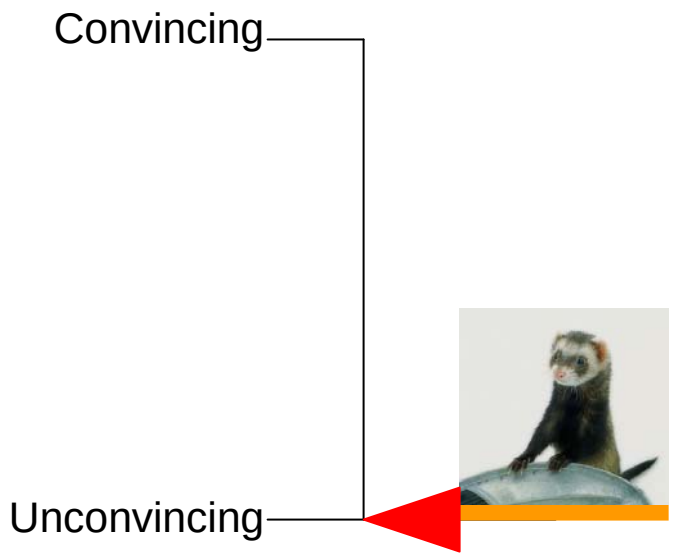
Watch the Discussion Get More Convincing

- Use our typical proposal example
  - “Describe your approach to counting ferrets.”

The Cheerleader

Sample Text

We are the team to count your ferrets. Go team, go!

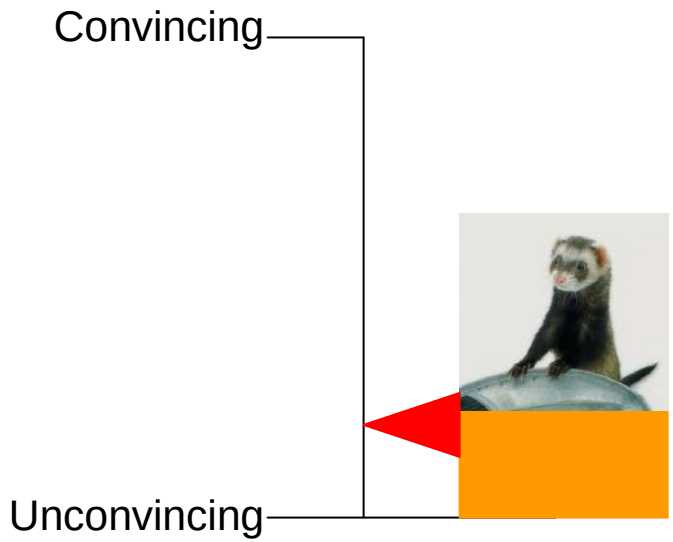


All this author can offer is enthusiasm.

The Reader

Sample Text

We have read the SOW, SRD, and NPG 7120.5F and will comply with all ferret counting requirements.

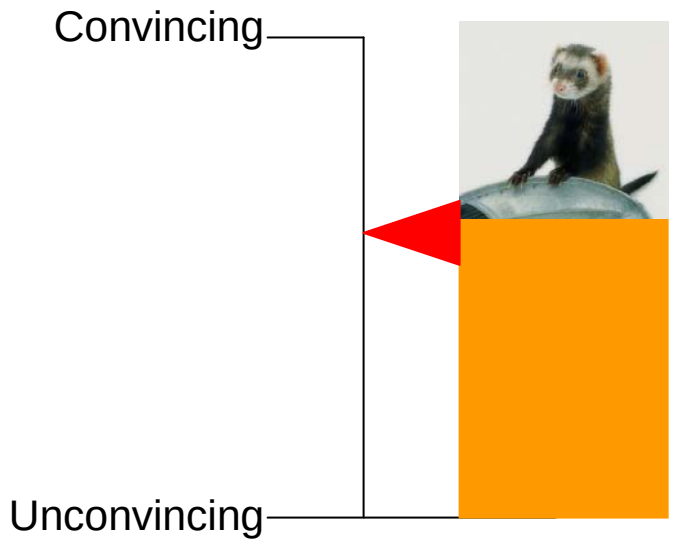


This author has at least read the relevant documents.

The Trader

Sample Text

We will evaluate ferret counting methods to determine the most accurate, including counting ferret noses, counting ferret tails, and counting ferret feet and dividing by 4.00.

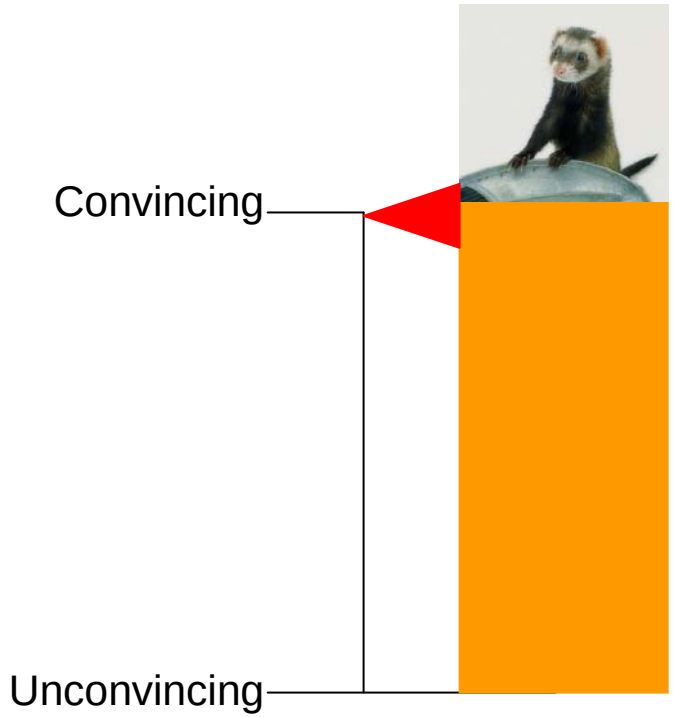


This author has some good ideas, but is still not sure what to do.

The Expert

Sample Text

In counting ferrets, errors arise from animals missing either feet or tails. On DSP, Chandra, and EOS we have achieved counting accuracies of better than 1 in 1000 by counting ferret noses, which will provide a factor of 10 margin against the requirement of 1 in 100 on CEV.



This author knows the subject, is experienced, and has a good plan.

Bottom line

- Injecting a little humor can sometimes be a good thing on proposals

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