

Some Thoughts on the NAR Research and Development Event

Mark Wise, NAR Trustee
NARCON 2014

The Next Hour

- ▶ One judge's thoughts
- ▶ Discussion with competitors
 - All viewpoints are welcome!
 - The only stupid question is the one you don't ask

A Judge's Life at NARAM

- ▶ Sunday
 - Turn-in
- ▶ Monday
 - Read, read, read!
- ▶ Tuesday
 - Read some more
 - Afternoon judges' meeting
 - Who will present in C and T Divisions?
 - Post the schedule
 - A and B Divisions
 - Everybody presents
 - A Division: Youngest to oldest
 - C and T Divisions
 - Top four or five in each

A Judge's Life at NARAM

▶ Wednesday

- A and B Division presentations
- Judges' meeting

▶ Thursday

- C and T Division presentations
- Judges' meeting
- Deliver all results to Contest Director or designee

▶ Friday

- Banquet

▶ Post-NARAM

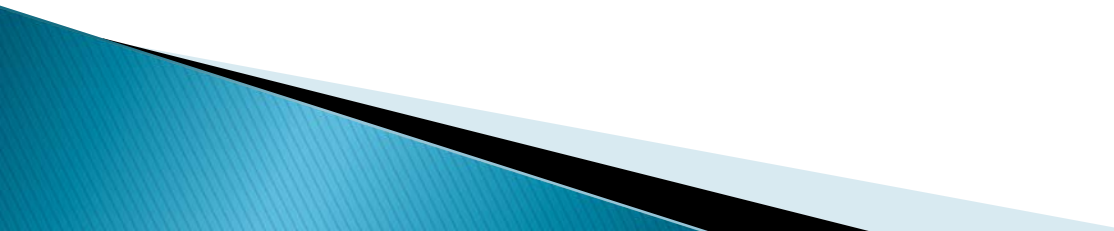
- Chief judge sends reports to NARTS

Finding a Topic

- ▶ You see an unexplained anomaly in a flight
- ▶ You see a problem that needs to be solved
- ▶ You find out about a new technology/gadget
 - What happens when you try it out?
 - Is it an improvement over the current way of doing things?
- ▶ You decide to settle an argument
 - What are people talking about at the range and on the fora?
 - Altimeters, anyone?
- ▶ How about history?

Helpful Hint #1: It doesn't have to be groundbreaking!

*Helpful Hint #2: **Start early!***



A Strong Written Report: 1

- ▶ Pre-research – Did you do your homework?
 - NARTS, *Sport Rocketry*, online
 - Has the project been done before?
 - If so, can you improve on it?
- ▶ Make sure you comply with the Pink Book!
 - Is all required information present?
 - To my mind, it doesn't have to be as rigid as a science fair project or contract proposal


A Strong Written Report: 2

- ▶ Assume you know something the judges don't
 - You may need to provide a bit of 101-level background
- ▶ Do your own work
 - Some help is fine, but A division should not be P division
- ▶ Use statistics wisely
 - Just because you can calculate a statistic doesn't necessarily mean it's useful
 - See Jay Apt's *Basic Statistics for R&D*

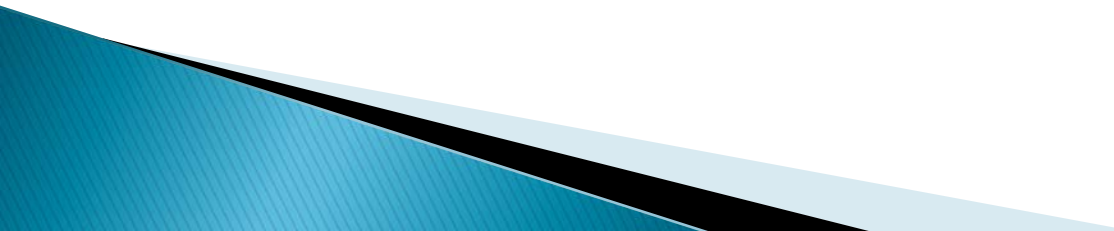
Helpful Hints

- ▶ BLUF – Bottom Line Up Front
 - The one-page summary required by the Pink Book should cover this, but I'd like to see a BLUF in the full report, too
- ▶ ROLAF – Read Out Loud And Fix
 - Writing doesn't have to be conversational, but it does have to be comprehensible


A Strong Oral Presentation

- ▶ BLUF
 - ▶ Practice
 - Few people can “brief without a net”
 - Get off the script
 - ▶ Keep the PowerPoint simple
 - ▶ A and B Division: Answer questions yourself
 - Parent/Mentor: Give them the opportunity to answer
 - Judges try to make it a safe environment
 - ▶ Be careful about using humor
 - You want to make a good impression
 - ▶ Controversy is okay; insults aren't
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In the Judging Room

- ▶ Different judges bring different skills and backgrounds to the panel
 - Scientists, engineers, mathematicians, educators
 - We balance each other out quite well
 - ▶ Disqualification
 - Haven't seen it happen, but we reserve the right
 - ▶ Judging rubrics
 - We've kept it pretty flexible
 - Different philosophies on the subject
 - ▶ We take our responsibility seriously
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Final Thoughts from Mark

- ▶ A mentor can help
 - Make use of people who know something you don't
 - But don't ask them to do the work for you
 - ▶ “Wow” factor
 - ▶ We can't all be Einstein
 - Most researchers fill in the gaps between the great leaps
 - ▶ Sportsmanship – not everyone can win!
 - Competition is steep, and your ranking can slide from year to year – it doesn't mean you've gotten worse
 - ▶ More trials!
 - ▶ I'm happy to meet with competitors after the banquet
 - I answer e-mail, too – mark.wise@nar.org
 - Keep it respectful, please!
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Discussion

