Flight Test Safety Workshop
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Savannah
FLIGHT TEST SAFETY DATABASE

An Online Resource for Flight Test Safety Planning

Presented to: Flight Test Safety Workshop
Savannah, GA

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Normal people ... believe that if it ain't broke, don't fix it.

Engineers believe... if it ain't broke, it doesn't have enough features yet!
Outline

• Description/Goal
• Background
• Demo
• Status
• Summary & Conclusion
Description/Goal

• To develop an interactive web site where we could consolidate flight test safety info in one central location.
  – Allow testers easy access to a wide range of safety info
    • Allows user to pick and choose what safety items to use.
  – Help ‘spread the knowledge’ of flight test safety techniques.
    • There should be no safety secrets out there
    • Safety should not be “proprietary”
Database Background

• **Challenges in Flight Test Safety:**
  – Lots of different kinds of flight tests!
  – By definition, many are quite hazardous.
    • Nobody wants to see friends get injured or killed.
  – Test assets are getting too expensive.
  – Many different test organizations all over the world.
  – Everyone does safety a little bit differently.
  – Great deal of ‘corporate knowledge’ out there but not documented and thus often ‘dies’ with the owner.
Database Background

- 1997 - FAA Order 4040.26A required implementation of a risk management process that:
  - Identifies hazards
  - Assess the risks
  - Identifies/implements mitigating actions
  - Accept risk at appropriate level
- We still found every office did safety differently
Database Background

• **Solution:**
  – NASA began work on “Flight Test Safety Handbook” with eye towards internet also.
  – Teamed together to develop an online database.
  – National Test Pilot School contracted to gather FAA data.
  – Other groups formed to gather military, development and other data (e.g. Icing, high AOA, propulsion…).
Flight Test Safety Database

http://ftsdb.grc.nasa.gov/

On-line Demo
Database Status & Update

- Complete with FAA data input (Contract).
- Last changes: ‘data submission’ and ‘output builder”
- Slow trickle of data coming in:
  - FAA updates, Military and R&D data
  - Almost no non-THA data submitted
- Debugging when required.
- Future (when funding acquired!):
  - Incorporate lessons learned.
  - Populate non-THA data
  - Improve user friendliness
  - More tutorials
  - FT Safety Committee discussing funding and improvements
Disclaimer

• The database **IS**:  
  – a wide array of flight test safety ideas and suggestions  
  – A great starting point for your risk assessment process  

• It is **NOT**:  
  – an FAA-mandated solution.  
  – an auto-safety planning device.  
    • The hazards/causes /mitigations are necessarily generic.  
    • Your test will have unique problems and will require unique solutions.
Conclusion

- Flight testing presents many unique safety challenges.
- To meet these challenges we must apply proven safety practices.
- Past experience has demonstrated that we are vulnerable to the same safety risks/hazards over and over again (we constantly ‘re-learn old lessons’).
- To increase safety, we **MUST** share safety data.
  - Workshops, Symposia
  - FTSDb
WE NEED YOUR HELP!

• PLEASE GO AND USE THE SITE!
  http://ftsdb.grc.nasa.gov

• Please Register
  - So we can track usage and send you updates.
  - So you can submit data and save output layouts, data sets and searches.

• PLEASE give us feedback.
  - The good and the bad!
  - Suggestions for improvements.
    - Bart Henwood, (barton.e.henwood@nasa.gov), 661-276-5746
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    - “Contact” link on the header of the web site
Thank You!

Questions?
Home Page

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