

# Flight Test Safety Workshop

12-15 May, 2014

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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Federal Aviation  
Administration



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

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



# Description/Goal

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- **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

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- **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

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- **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

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- **Solution:**

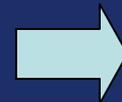
- FAA began to develop internal database (2001).
- NASA began work on “Flight Test Safety Handbook” with eye towards internet also.
- Teamed together to develop an online database.
- National Test Pilot School contracted to gather FAA data.
- Other groups formed to gather military, development and other data (e.g. Icing, high AOA, propulsion...).



# Flight Test Safety Database

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

On-line Demo



# Database Status & Update

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- **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

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- **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

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- 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](mailto:barton.e.henwood@nasa.gov)), 661-276-5746
  - John Hed, ([john.hed@faa.gov](mailto:john.hed@faa.gov)), 425-917-6518
  - “Contact” link on the header of the web site



***Thank You !***

**Questions ?**



# Home Page

Flight Test Safety Database - Windows Internet Explorer

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

File Edit View Favorites Tools Help

Home | Contact | Account

Search Database:

Home | Contact | Account

THA

Application Data

Centers of Test Expertise

Reference Data

Output Builder

THA

REFERENCE DATA

APPLICATION DATA

CENTERS OF TEST EXPERTISE

For years the international Flight Test community has had a need for easy access to flight test maneuver descriptions, test hazards and hazard mitigation techniques.

This database is a step in that direction and builds on similar efforts by the Flight Test Safety Committee, The Society of Experimental Test Pilots, The Society of Flight Test Engineers and other professional organizations. Our object is to identify and document hazards and mitigations associated with flight testing and provide a compilation of the flight test industry's corporate knowledge regarding flight test safety risk assessment. Where applicable, the database cross-references FAR guidance from Parts 23, 25 and other flight-test related sections. It also discusses typical industry risk levels assigned to specific types of tests. All data has been reviewed by at least 2 persons with extensive Flight Test and/or Aviation Safety Experience. We hope you find this tool useful, and solicit your feedback and contributions as we work to keep it up to date.

Data Items were last added or updated on 2/28/2013

Done Internet | Protected Mode: On 100%

Basic Features

Hot Links Too



# Home Page if Registered

The screenshot shows a web browser window titled "Flight Test Safety Database - Windows Internet Explorer" with the URL "https://ftsdb.grc.nasa.gov/". The browser's address bar shows the URL, and the menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The browser's toolbar includes navigation buttons, a search bar, and various icons. The page content includes the "FLIGHT TEST SAFETY DATABASE" logo, a navigation menu with "Home", "Contact", and "Account", and a personalized greeting: "Hello, John A Hed (Logout)". A search bar is labeled "Search Database:" with a "Go" button. A sidebar on the left lists user options: "THA", "Application Data", "Centers of Test Expertise", "Reference Data", "Output Builder", "Messages (13)", "Data Submission", and "Data Review". The main content area features a "Welcome" message, a circular diagram with "THA" in the center and segments for "REFERENCE DATA", "APPLICATION DATA", and "CENTERS OF TEST EXPERTISE", and a paragraph of text explaining the database's purpose. A status bar at the bottom indicates "Data Items were last added or updated on 2/28/2013".

Registered  
User  
Options

