FAA
Bonded Structures Workshop

June 16-18, 2004

Embassy Suites Hotel

Seattle, WA

Welcome

- Thank you for taking time from your normal duties and activities to support this effort
- We appreciate the time each of you has spent on filling out the survey and other preparations for the workshop
- Collectively, the industry and regulatory agencies can combine their bonding experiences and technical insights to the mutual benefits of improved safety and efficiency in development & certification

Registration

- Please check in for this workshop
  - it is separate registration from MIL-HDBK-17
- This will allow us to provide you with continuing information on this Workshop
- Please see MJ Schnabel at desk in outside door to meeting room

Agenda for Bonded Structures Workshop

	Wednesday, June 16	Thursday, June 17	Friday, June 18
1st Hour		**Session 2** Four Technical Breakout Sessions *Groups in 4 separate rooms (8 AM - Noon)* *All participants will attend each session, which are run by technical experts* *(Intro by leaders, 45 minutes discussion)*	**Session 5** Manufacturing Implementation & Exp.
2nd Hour			**Session 6** Repair Implementation & Experience
Break (15 min.)			
3rd Hour		1) M&P qualification and control 2) Design development & substantiation 3) Manufacturing implementation 4) Repair implementation	**Session 7** Summary from Day 2 Breakout Teams Recap/Actions/Closure/Adjourn
4th Hour			
Lunch (1 Hour)			
5th Hour	FAA Welcome/Overview	**Session 3** Material & Process Qualification and Control	
6th Hour	FAA Survey/Continued Data Collection		
Break (15 min.)			
7th Hour	**Session 1** Applications & Service Experiences *Perspectives on critical safety issues, lessons learned and best engineering practice*	**Session 4** Design Development and Structural Substantiation	
8th Hour			

Breakout Sessions Intent

- Purpose to create a more casual situation for gathering your input on the four subject areas on which the workshop is focused
- Focus on the following bonded structures areas:
  - M&P Qualification and Control
  - Design Development and Structural Substantiation
  - Manufacturing Implementation & Experience
  - Repair Implementation & Experience
- Format of sessions
  - Introduction of Focus by discussion leaders
  - Followed by 45 minutes of group discussion
  - Each group will consist of approximately 30 participants

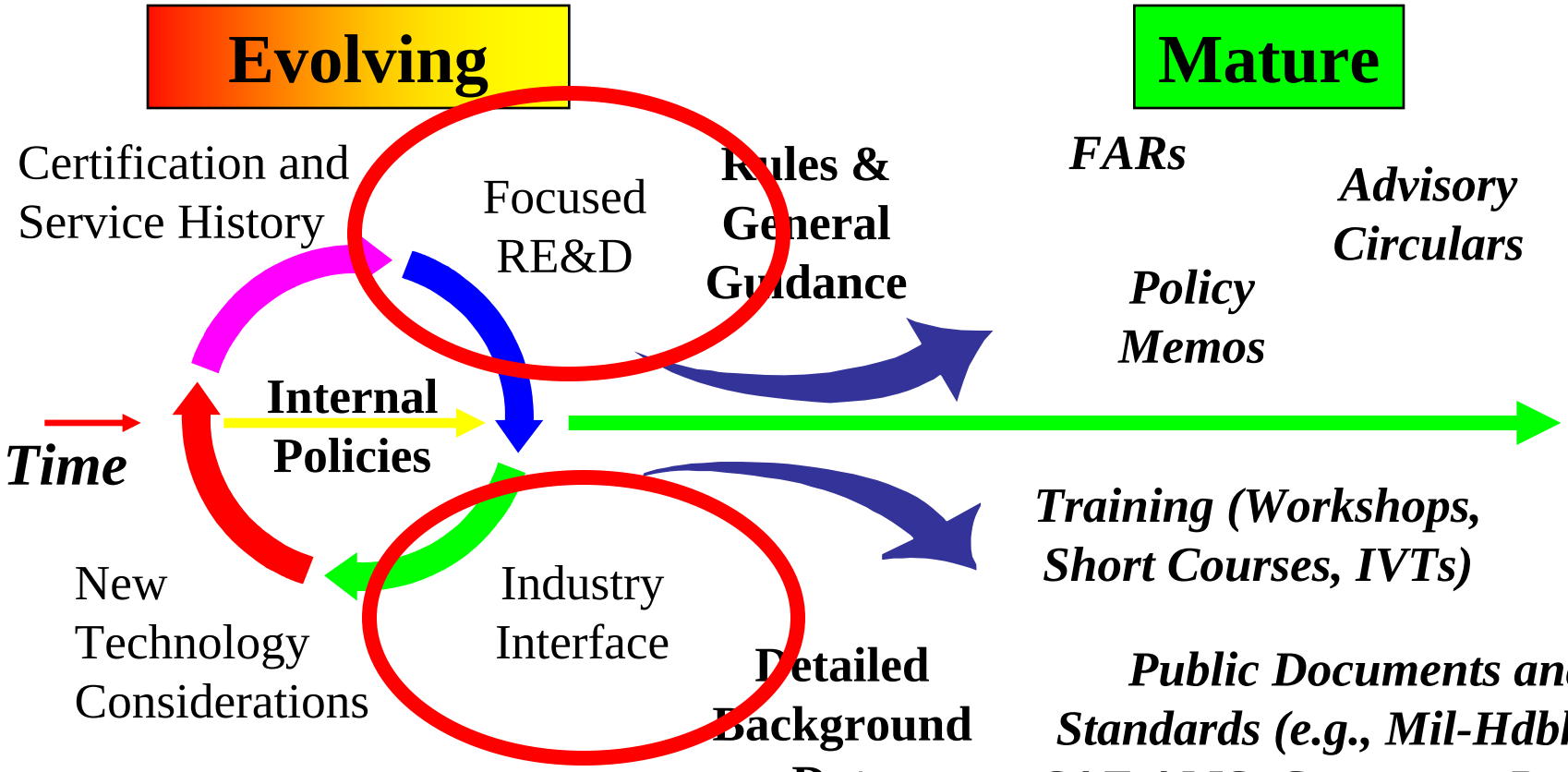
Breakout Sessions

- This group will be divided into four groups
- Group Assignments are posted outside this room
- Each group has been assigned a room
- Report to your assigned room tomorrow morning
- Once in your designated rooms the discussion leaders will switch from room to room to minimize disruption

Refreshment Breaks

- Each morning and afternoon there will be a refreshment break.
  - Wednesday Afternoon
    - 3:00 - 3:15 PM
  - Thursday
    - 9:50 - 10:10 AM
    - 3:30 – 3:45 PM
  - Friday
    - 9:10 - 9:30 AM
- Refreshments served outside doors to this room

FAA Approach to Composite Safety and Certification Initiatives



Benchmark Bonded Structures

Objectives for Report(s) and Workshop

- Primary objective:
  Document the technical details that need to be addressed for bonded structures, including critical safety issues and certification considerations

  Report(s) Title: "Survey and Evaluation of Bonded Structure Engineering Practices"

Benchmark Bonded Structures

Objectives for Report(s) and Workshop

- Secondary objectives

  1) Give examples of proven engineering practices

  2) Provide directions for research and developments

Benchmark Bonded Structures
Primary Deliverables

- Survey industry to benchmark critical technical issues and engineering practices for existing applications
- Develop FAA Technical Center Report(s) on critical technical issues and existing engineering practices
- Bonded Structure Workshops in 2004 to review the survey and draft FAA Technical Center Report(s)
  - June MIL-HDBK-17 meeting
  - Follow-on workshop in Europe (TBD)
- Late 2004 FAA policy covering the different engineering aspects of bonded structure

Today's Schedule

- Introduction
  Curtis Davies (15 min.)
- Bonded Structures Overview
  Larry Ilcewicz (45 min.)
- FAA Survey/Continued Data Collection:
  John Tomblin/Curt Davies (60 min.)
- Break 3:00 to 3:15 PM
- A Rigorous Approach to Certification of Adhesive Bonded Structures & Repairs
  Max Davis, Australian RAAF (60 min.)
- Cessna Bonding Experience
  Andrew Kasowski, Cessna (30 min.)
- Propeller continued airworthiness & service issues
  Jay Turnberg (20 min.)
- Critical Factors Controlling the Durability of Bonded Composite Joints - Surface Preparation & the Presence or Absence of Pre-Bond Moisture
  John Hart-Smith, Boeing (40 min.)

Communications following the workshop

- Public website will post workshop presentations
  www.niar.wichita.edu/faa
- Please send your thoughts and notes to WSU
- All inputs will be considered in drafting FAA Report(s), which will be written and reviewed by selected experts

Information

- Workshop Website
  - http://www.niar.wichita.edu/faa
- FAA Technical Center Library
  - http://actlibrary.tc.faa.gov
  - Click on the banner "Search the Library's Catalog" on the home page to get to the document search function. You must search for the entire document number to find the reports.
  - All FAA AR reports from1996 are available in PDF.
- Comment Return
  - John Tomblin
    - Attn: FAA Workshop
    - 1845 N. Fairmount
    - Wichita, KS 67260-0093
  - Email Comments to:
    - john.tomblin@wichita.edu
    - Subject: Bonded Structures Workshop