Subcommittee on Human Factors |MINUTES

Meeting date | time *2/26-2/28 |*

Meeting location *JMA Headquarters, Washington, DC*

Purpose: Human Factors Guidance review for FY 2015 R&D Budget

February 26, 2013

Dr. Tom Prevot, Acting Subcommittee Chair welcomed the Subcommittee. Dr. Paul Krois introduced Dr. Rachel Seely, a new staff member with the Human Factors Division and provided a summary of the recent Human Factors Coordinating Committee meeting. Dr. Michelle Yeh reviewed the list of action items.

Dr. Cathy Bigelow reviewed the Subcommittee roles and responsibilities to set the tone and framework for the meeting. She then provided information and advice on how to write findings and recommendations.

Presentation Welcome | **Presenter** *Paul Fontaine*

- Sequestration will have impacts on the workforce and slow down activity. Different scenarios are playing out including if the continuing resolution (CR) expires at the end of the March. Budget pressures will have impacts across the board to all projects, but it will also force prioritization (which is good) and examination of how resources are being used and applied.

- FAA is coordinating with the Office of Management and Budget (OMB) to define the budget picture. The OMB analyst has asked the FAA to address three questions on human factors:

  1. What is the total size of the FAA investments across all human factors across the agency?

  2. Who is in charge of human factors? Through a series of reorganizations, there has been loss of focus of having a single person in charge of human factors at the Agency.

  3. How can we show we are applying best practices and standards across all these investments? Do we have a good holistic view of human factors and how do we apply that across all the programs?

 These questions will help the FAA make better informed decisions.

Presentation Budget Update | **Presenter** *Mike Gallivan*

Mike Gallivan reviewed the RE&D FY 2013 budget status and future budget requests. The FAA is operating on a CR through March 27, 2013. The current FAA authorization runs through FY 2015.

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Presentation REDAC Vision | **Presenter** *John Wiley*

- The Administrator plans to attend the April REDAC meeting. Each Chair and DFO are asked to coordinate with the Subcommittee to questions for the Administrator by April 1.
- Sequestration – there is a cut coming, but we do not know how deep or for how long. The FAA needs guidance from this Subcommittee regarding what the areas of focus should be when we get to human factors. This is not the time to look at percent reductions across programs, but rather what programs may need to be cut. The focus is to make sure that the FAA is conducting the appropriate research to support implementation and to define where the research should be going.

Action items	Person responsible	Deadline
Submit questions for the Administrator for the REDAC meeting	HF Subcommittee Chair and DFO	April 1, 2013

Presentation FY 2015 ATC/Technical Operations Core Research Directions | **Presenter** Dr. Paul Krois and Mr. Dino Piccione

Dr. Krois and Mr. Piccione reviewed the FY 2015 plan for the ATC/Technical Operations Core Research Program and discussed the implications of the recent guidance provided by OMB for that program. Mr. Jason Demagalski provided an update on efforts to apply human factors during the in-service management phase. Mr. Eddie Sierra described efforts to align human systems engineering into the Acquisition Management System (AMS) life cycle.

The Subcommittee discussed the following:

- There is concern about the reduction in personnel selection and training. This is a fundamental core capability that needs to be maintained. For existing jobs, good analysis has been done that identifies the particular expertise that is needed. Additionally, this research provides a scientific basis as a legal defense of the selection process. In light of budget constraints, it would be important to understand for how long this core competency needs to be maintained.
- UAS activity is upcoming and should be an important part of the portfolio
- Human-systems engineering is a valid concept
- How to prioritize the work to get it done. Human Factors has made significant strides, but the kind and extent of reducing the program scale is detrimental to satisfying the needs of the ATO. Prioritization of projects should be based on need and criticality.

Action items	Person responsible	Deadline
Reprioritize research by needs to ensure as many key needs can be met as possible	ANG-C1	July 2013 meeting of HF Subcommittee

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Presentation FY 2015 NextGen ATC Controller Efficiency Research Directions| **Presenter** Dino Piccione/ Rachel Seely

Dr. Rachel Seely provided a briefing on the NextGen Human Factors ATC program that reviewed the primary areas of research in FY 2013 and FY 2014 and the emerging research areas for FY 2015. Dr. Seely also provided an update on the HSI Roadmap. The HSI Roadmap captures the planned implementation, but it is hoped that this roadmap can be used to identify additional areas that need to be accounted for. The Subcommittee discussed the following:

- Connectivity and overarching leadership across organizations needs to be strengthened. The subcommittee indicated that there was a shortfall in crosscutting human factors and further effort is needed to assess where disconnects exist.

- Integration: Further effort is needed to define how human factors is being integrated across programs, organizations, and capabilities.

- Off-Nominal Conditions: The majority of programs in development focus on desirable state scenarios or "perfect world" conditions when evaluating new functionality, systems, or procedures. Further effort may be to develop specific artifacts by phases that include off-nominal conditions throughout development.

- Technical Operations: Research supporting Technical Operations is difficult to associate with operational improvements.

- Air-ground integration. There is a great need for this research, particularly on the airport surface, and it will be important to think about how this fits in with the rest of the system.

February 27, 2013

Review of Homework Assignments from Previous Day – Findings and Recommendations Discussion

The Subcommittee reviewed the Air Traffic/Technical Operations Human Factors Strategic Research Plan. The Subcommittee felt that the plan sets forth a good strategy and should guide the implementation for FY 2015. However, it is clear some of the proposals in the strategic plan are not being implemented in FY 2015, in particular, personnel selection, which is an important element of the plan, due to the reduced scale of the program.

Presentation FY 15 Flight Deck Requirements Briefing: Core Program | **Presenter** Tom Chidester and Paul Krois

Dr. Paul Krois and Dr. Tom Chidester reviewed the Core Human Factors Flight Deck Program research requirements identified for FY 2015. Note that the FY 2014 portfolio has not yet been finalized. The discussion after the presentation addressed the following:

- Subcommittee members were pleased that Part 91 issues were being considered in the loss of control research.

- The Subcommittee discussed whether there is a need for a flight deck human factors strategic plan.

- The human factors research proposed under the core flight deck program is important. The Subcommittee would like to ensure that key personnel are available.

Action items	Person responsible	Deadline
Provide the Subcommittee with the details of the research execution/program plan when they become available. This may be accomplished through program reviews (e.g., Deep Dives)	ANG-C1	Ongoing…July 2013 meeting of HF Subcommittee

Comment [CAB1]: What program plan are they referring to? And need a deadline.

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Presentation FY 2015 Flight Deck Requirements Briefing: NextGen Air-Ground Interaction Human Factors | **Presenter** Dr. Tom Chidester with AVS sponsors (Mr. Doug Farrow, Ms. Terry King/Mr. Sean Flack, Mr. Cathy Swider, Mr. Mark Steinbicker)

Dr. Chidester reviewed the NextGen Air-Ground Interaction Human Factors research requirements proposed for FY 2015 with input from several AVS sponsors, including Dr. Doug Farrow, Mr. Mark Steinbicker, Ms. Cathy Swider, and Mr. Sean Flack.

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- Some NextGen research requirements address similar themes as the flight deck core program. Further clarity is needed to show the relationships between the deliverables defined for the core and NextGen programs.
- For Datacomm, there is a need to connect between the ground and flight deck side and to characterize the changes in the controller's information requirements.
- HF-15-01: Research requirement is focused on changes but to procedures, but the tasks, as presented so far, are focused only on information automation.

Action items	Person responsible	Deadline
Better delineate difference between core and NextGen research requirements	ANG-C1	July 2013 meeting of HF Subcommittee
The Subcommittee would like an update on the execution of HF-15-01 (NextGen: Roles, Responsibilities, Airworthiness, and Operational Requirements for the Integration of Automated Systems and Functions in NextGen Aircraft Systems) to ensure that the research conducted addresses the entire scope of the changing roles and responsibilities in human-system coordination, flight deck-ATC negotiation, and potential skill loss in NextGen.	ANG-C1	Ongoing research requirement. Update of current project to be provided at the July 2013 meeting of HF Subcommittee
The Subcommittee would like more detail on the execution of HF-15-04 NextGen Flight deck systems: flight crew interfaces, installation, integration, and operations.	ANG-C1	Ongoing research requirement. Update of current project to be provided at the July 2013 meeting of HF Subcommittee

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Action items	Person responsible	Deadline
The Subcommittee requests a briefing at the next REDAC HF meeting on the execution plan for HF-15-06, HF Considerations for Complex Systems, if the requirement moves forward.	ANG-C1	Status update of the research requirement to be provided at July 2013 meeting of HF Subcommittee

February 28, 2013

Presentation Overview of ASIAS | **Presenter** Mike Basehore

Dr. Mike Basehore discussed the process governing the ASIAS program, the types of data collected, the participants, and the types of analysis conducted. He provided a brief overview of the ASIAS portal and discussed the data mining techniques used. Dr. Basehore noted that there have been several inquiries to use ASIAS data to answer different questions (e.g., design of new procedures, fuel efficiency) and stressed that the ASIAS agreement with stakeholders is for safety purposes only. The ASIAS board reviews each request in the following way:

- Do we have the information,
- What will the information be used for,
- What is the level of risk?

The Subcommittee discussed access to ASIAS data and analysis. To date, most ASIAS analyses have been conducted within the context of FAR Part 121 operations and results released to the Commercial Aviation Safety Team (CAST) for the development of Safety Enhancements. Researchers may also request access to the data through the FAA for development of computational algorithms and analytical methodologies. Non-proprietary data and results from the analyses of such data may be released to FAA entities after the request and results are reviewed by the ASIAS Issue Analysis Team.

Presentation Integrating HF into Operations Concept Validation Program | **Presenter** John Marksteiner

Mr. John Marksteiner provided an overview of how human factors has been integrated into the development of operations concepts and reviewed the FY 2012/13 initiatives.

Presentation NextGen Human Factors | **Presenter** Bill Kaliardos

Dr. Bill Kaliardos addressed two questions:

(1) Who has the overall authority on human factors integration in NextGen?

(2) How is the role of human factors addressed within the reorganization?

The discussion noted that advocacy for human factors includes through the FAA Human Factors Coordinating Committee and the Human Factors Division and its programs.

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Subcommittee Discussion of Open Recommendations: The Subcommittee reviewed the findings and recommendations from the Spring 2012 meeting. The following recommendations have been closed: Spring_2012_13, Spring_2012_14, Spring_2012_18, Spring_2012_19.

The next meeting of the HF REDAC Subcommittee will be held from July 30-August 1, 2013.

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Attendance

Members

Tom Prevot (Acting Subcommittee Chair)	Bill Rankin
Chris DeSenti	Bill Rogers
Bill Edmunds	Phil Smith
Alan Jacobsen	

Other Attendees

Eddie Austrian, Fort Hill Group	Scott LeMay, FAA
Mike Basehore, FAA	Maura Lohrenz, Volpe
Cathy Bigelow, FAA	John Marksteiner, FAA
Sherry Chappell, NTSB	Tom McCloy, FAA
Jason Demagalski, FAA	Rob Pappas, FAA
Colleen Donovan, FAA	Dino Piccione, FAA
Gloria Dunderman, FAA	Stephen Plishka, FAA
Doug Farrow, FAA	Rachel Seely, FAA
Paul Fontaine, FAA	Gary Serfoss, JMA
Sean Flack, SAIC	Eddie Sierra, FAA
Mike Gallivan, FAA	Mark Steinbicker, FAA
Dan Herschler, FAA	Cathy Swider, FAA
Bill Kaliardos, FAA	John Wiley, FAA
Jim Knight, FAA	Barbara Wilper, FAA
Paul Krois, FAA	Michelle Yeh, FAA

Via Telcon

Amy Pritchett (Subcommittee member)
Jack Blackhurst (Subcommittee member)
Tom Chidester

1:00 – 2:15	FY 15 Flight Deck Requirements Briefing: NextGen Air-Ground Interaction Human Factors	Tom Chidester with AVS sponsors (Doug Farrow, Terry King/Sean Flack, Cathy Swider, Mark Steinbicker)
2:15 – 2:30	Break	
2:30 – 3:30	Findings and Recommendations Discussion	All
3:30 – 4:00	Review of Findings and Recommendations & Action Items from previous meetings Wrap up – Homework Assignments - Review of Action Items	All

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Federal Aviation Administration¶
REDAC Human Factors Subcommittee¶
JMA Solutions 600 Maryland Avenue, SW, Suite 400E, Washington, DC ¶
Meeting Agenda, February 26 – 28, 2013¶
Call-in number: 1-866-527-1265, passcode: 33 99 302#¶
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Day 1 (Tuesday, February 26)¶
8:30 – 8:45

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Day 3 (Thursday, February 28)

8:30 – 9:00	Review of Homework Assignments from Previous Day – Findings and Recommendations Discussion	All
9:00 – 10:00	Overview of ASIAS	Mike Basehore
10:00 – 10:15	Break	
10:15 – 10:45	Integrating HF into Ops Concept Development	John Marksteiner/ Cynthia Morris
10:45 – 11:00	NextGen Human Factors	Bill Kaliardos
11:00 – 11:30	Findings and Recommendations Discussion	
11:30 – 12:45	Working lunch: Continue Findings and Recommendations Discussion	All
12:45 – 1:00	Wrap-up	

12:45 – 1:00   Wrap-up

- Review of Action Items from the meeting
- Agenda – date/location, what will be included for the next meeting

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