

HUMAN FACTORS ACCOMPLISHMENTS

Question #31: Please describe 3 recent accomplishments of the FAA's human factors research program. Who were the customers for this research, and what agency outputs were delivered to those customers as a result of this research?

Answer:

Updated CHI Chapter. The FAA Human Factors Design Guide was developed in 1995 but since then further scientific and industry guidance on computer-human interface (CHI) design has been published. Recently, the CHI chapter has undergone extensive revision, grown in size, and has been published as a separate report. This updated chapter is used by the IPTs and human factors practitioners, as part of their design and evaluation work for mitigating risks to usability and user acceptance.

Air Carrier Training Rapidly Reconfigurable Event Sets. Researchers completed a system that will allow the air carrier industry to develop unique training scenarios. In the past, development of scenarios was complex, expensive and time-consuming. As a result, the number of scenarios used by any particular training organization was very limited. Because of the limited number of scenarios, it is suspected that the validity of the pilot assessment was compromised. The new system allows for rapidly reconfiguring event sets used in air carrier training. This system will also be used to specifically target a deficiency in a particular crew and allow for additional training in the specific area of weakness. All events are rated for difficulty, and for specific content. The system allows the air carriers to assess pilots in a more standardized way.

Maintenance Resource Management Handbook. This handbook provides guidance and background information on maintenance resource management (MRM). MRM is a "general process for improving communication, effectiveness and safety in aircraft maintenance operations." Attention is given specifically to the implementation and evaluation of MRM training. Much as crew resource management (CRM) was created to address safety and teamwork issues in the cockpit, FAA researchers, in conjunction with industry partners, developed MRM to address teamwork deficiencies within the aviation maintenance environment. By doing so, it is hoped that MRM will foster a culture of safety in all maintenance operations.