



FEDERAL AVIATION ADMINISTRATION  
AAR-100 (Room 907)  
800 Independence Avenue, S.W.  
Washington, D.C. 20591

Tel: 202-267-8758  
Fax: 202-267-5797  
william.krebs@faa.gov

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From: Dr. William K. Krebs, (AAR-100), General Aviation Human Factors Program  
Manager

To: Mr. Michael Henry (AFS-800)

Subj: Credit for Instrument Rating in a Flight Training Device or Personal Computer  
Aviation Training Devices Execution Plan

Ref: (a) General Aviation TCRG February 21, 2002 meeting minutes  
(b) General Aviation requirement entitled "Credit for Instrument Rating in a  
Flight Training Device or Personal Computer Aviation Training Device"

- 1) Per reference (a), the General Aviation TCRG ranked the "Credit for Instrument Rating in a Flight Training Device or Personal Computer Aviation Training Device" (ref: b) as the number one FY02 general aviation human factors requirement. The requirement's objective is to "provide guidance to Aviation Safety program on the revision of FAR 61-141, by specifying the number of credit hours for which various Flight Training Devices (FTDs) and Personal Computer Aviation Training Devices (PCATDs) may be used in lieu of actual flight.
- 2) The project will be executed as follows:

Phase I tasks:

- i. Survey University Aviation Association (UAA), Part 141, and Part 61 aviation institutions to determine what type and how many FTDs and PCATDs are used in the aviation-training curriculum?
  - In FY02, ERAU partially completed the UAA survey but the Part 141 and 61 survey will be completed in FY02 and FY03.
- ii. Quarterly (December, March, July, and September) research progress status reports
  - Informal e-mail reports from the AAR-100 general aviation human factors program manager to Michael Henry (AFS-800)

- iii. FY03 annual report summarizing year's activities by grantee. This annual report including other human factors general aviation projects sponsored by general aviation TCRG will be electronically submitted to the committee.
  - Grantee will submit an annual report using AAR-100's Productivity Report website (<http://www.hf.faa.gov/report/>) to the AAR-100 general aviation human factors program manager.

Phase II tasks:

- i. From the Phase I survey results, each FTD and PCATD capabilities will be defined. This capabilities study will evaluate:
  - How is each FTD and PCATD used in the aviation-training curriculum?
  - What hardware and software features are installed for each FTD and PCATD?
  - What maneuvers are used for each FTD and PCATD?
  - Is the aviation institution using the FTD and PCATD to enhance student pilots' knowledge-based and skill-based performance?

For each question, a matrix will be developed to allow the sponsor to compare and contrast FTD and PCATD performance.

- ii. Defined milestones (if possible, milestones will be determined)
  - Note: a grantee is not responsible to adhere to defined milestones.
- iii. Quarterly (December, March, July, and September) research progress status reports
  - Informal e-mail reports from the AAR-100 general aviation human factors program manager to Michael Henry (AFS-800)
- iv. FY04 annual report summarizing year's activities by grantee. This annual report including other human factors general aviation projects sponsored by general aviation TCRG will be electronically submitted to the committee.
  - Grantee will submit an annual report using AAR-100's Productivity Report website (<http://www.hf.faa.gov/report/>) to the AAR-100 general aviation human factors program manager.

Phase III tasks:

- i. Evaluate the transfer of training effectiveness of a FTD and PCATD.
  - What maneuvers transfer from the FTD/PCATD and aircraft?
  - Are there differences between FTDs?
  - Are FTDs equal in instruction between private training and instrument training?
  - Can FTDs/PCATDs be used for re-current training?
  - Can FTDs/PCATDs be used for instrument proficiency checks?

- ii. Defined milestones (if possible, milestones will be determined)
  - Note: a grantee is not responsible to adhere to defined milestones.
  
- iv. Quarterly (December, March, July, and September) research progress status reports
  - Informal e-mail reports from the AAR-100 general aviation human factors program manager to Michael Henry (AFS-800)
  
- v. FY05 annual report summarizing year's activities by grantee. This annual report including other human factors general aviation projects sponsored by general aviation TCRG will be electronically submitted to the committee.
  - Grantee will submit an annual report using AAR-100's Productivity Report website (<http://www.hf.faa.gov/report/>) to the AAR-100 general aviation human factors program manager.

Deliverables:

- i. Final report containing
  - Guidance as to what specific maneuvers (initial private and initial instrument training) can be completed in the FTD and/or PCATD in lieu of flight time.
  - Guidance as to whether FTD and/or PCATD can be used for recurrent training and instrument proficiency checks in lieu of flight time.
  
- ii. Final Report formatted to permit development of appropriate guidance material by AFS-800
  - AFS-800 is responsible in submitting defined format to the program manager for aviation maintenance human factors by January 2005.

Schedule:

Phase I Tasks: FY02/FY03  
Phase II Tasks: FY02/FY03  
Phase III Tasks: FY02-FY05  
Final Report: FY06 (December 2006)