



Agenda FDM Workshop

January 7, 8, 9, 2007

Embry-Riddle Aeronautical University College of Aviation
Plenary Meetings - Hilton Garden Room



Sunday January 7, 2007

1400 – 1730	CAPACG Airborne Technology Demonstrator: Fly and see <i>your</i> FDM!	SheltAir (386) 255-0471
1800 – 2030	Registration and Reception <i>Sponsored by Cirrus Design</i>	Winston's Lounge, Hilton Hotel
2030 – 2130	Break Out Session Leaders Meeting	Hilton Hotel

Monday January 8, 2007

0700 – 0800	Hot Buffet Breakfast <i>Sponsored by Appareo Systems</i>	Hilton, Garden Room
0800 – 0830	Welcome, Introductions and Workshop Design Review Dr. Tim Brady and Dr. Doug Farrow	
0830 – 0845	FDM ERAU Research Project Dr. Thomas Weitzel & Dr. David Esser	
0845 – 0915	FDM airline practices Captain Bob Brown UPS	
0915 – 0945	Coffee Break <i>Sponsored by UHL Research</i>	Hilton, Winston's Lounge
0945 – 1015	FDM intro to general aviation Captains Larry McCarroll & Tony Koufoudakis - CAPACG	
1015 – 1200	FDM Equipment Overview Michael Jablon - Appareo; Mark Shoemaker - Teledyne Controls; Dr. Thom Mayer - Austin Digital; Dr. Urban Lynch - UHL Research; Geoff Hanshaw - Sagem Avionics	
1200 – 1300	Lunch <i>Sponsored by Teledyne Controls</i>	Hilton, The Grille
1300 – 1330	General Aviation Fleet "Plug and Play" FDM concepts Captains Kipp Lau & Scott Meacham - CAPACG	
1330 – 1500	Breakout sessions: Design/refine FDM concepts	Hilton Winston's, Board Room, Garden Room

Session	Flight Training Fleet	Institution Participants
A Garden Room Back	Collegiate	Collegiate, OEM, CAPACG, FDM Equipment Manufacturer
B Board Room Front	Commercial	Commercial, OEM, CAPACG, FDM Equipment Manufacturer

Deliverables from breakout sessions: address "Plug and Play" FDM design, consider such issues as:

- FDM hardware options and installation for different classes of operations, FDM and downloading procedures, ROM costs
- Concept; considers all constituencies:
 - Management, department heads, deans, provosts, presidents, university marketing, etc.
 - Finance; "safety is a given, but what does it take to provide an ROI (return on investment)?"
 - Labor; some organizations and institutions have unions. All want a process that drives to labor harmony. Designing MOUs with employee groups. Application of enforcement protections offered by Parts 13.401 and 193. FAA FOQA incentive provisions; do they apply for education institutions and other general aviation fleet operators?
 - What benefits accrue to individual owner/operators, and to the manufacturers of their airplanes?
 - Students, parents, sponsors, community at large, etc?
 - ATC, is there a local and regional impact, and how do we sell them?
 - Are there combinations of FITS/TAA/contracted operations that, by inspection, do not qualify?
- Administrative concepts and required labor to make FDM work, ROM costs, ROM benefits, calculating ROI
- Other ideas: asset protection, new FDM courses, FDM labs, Electronic Debrief, Instructor Standardization
- Topics for the Parking Lot: airborne hardware survivability, regulatory process, formalizing nomenclature. etc.

1500 – 1530	Coffee Break <i>Sponsored by Sagem Avionics</i>	Hilton, Winston's Lounge
1530 – 1600	FAA view FDM in General Aviation, incentives in collegiate fleets	Dr. Doug Farrow FAA AFS 230
1600 – 1630	Insurance panel - impact of FDM on insurability & costs	Bob Conyers, Global Aerospace
1630 – 1730	Military FOQA Programs	Dick Healing, R3 Consulting
1700 – 1730	Impact of FDM on piston engine operating economics.	Dr. John Barton, CTO TCM
1800 – 2000	Hosted reception with hors d'oeuvres <i>Sponsored by CAPACG</i>	Halifax River Yacht Club

Tuesday, January 9, 2007

0700 – 0800	Hot Buffet Breakfast <i>Sponsored by Diamond Aircraft</i>	Hilton, Garden Room
0800 – 0900	Report out from workshop sessions	All
0900 – 0945	FAA CGAR Grant Application for FDM introduction	Steve Hampton
0945 – 1015	Coffee Break <i>Sponsored by Embry-Riddle and CAPACG</i>	Hilton, Winston's Lounge
1015 – 1130	Next steps and homework, meet again, location, host?	All
1130 – 1300	Box Lunch <i>Sponsored by Guardian Mobility</i>	Hilton, The Grille
1300 – 1600	CAPACG Airborne Technology Demonstrator: fly and see <i>your</i> FDM!	SheltAir (386) 255-0471
1300 – 1600	Bazaar: FDM users and suppliers mingle and explore relationships, acquisition	Hilton Lobby
1600	Adjourn	

**Flight Data Monitoring (FDM) Workshop Breakout A
Hilton Garden Room Back Area
General Aviation Collegiate Fleets**

Listed as planned attendance, some variations occurred in the actual meetings

- Fleets are operated, maintained, and/or managed by academic institutions to provide flight training associated with baccalaureate and associate degree programs.
- Several business models exist, predominantly:
 - Directly owned and managed with Flight Manager reporting into academic organization.
 - Contractor provides the training services.
- Academic and training collaboration, fleet modernization and modification, flight curriculum evaluation occurs in coordination with academic organization.
- Students integrate flight training into their academic activity and graduate with a baccalaureate or associate degree as well as appropriate ratings.
- Some of these institutions have programs accredited by AABI.
- Insurance and regulatory oversight is managed directly by the department, the contractor, or the institution, and liability may be distributed among these entities or reside with one.
- The institution and/or contractor establishes flying costs for the students.
- The institution and/or contractor integrates training device and airplane training and utilization.
- FDM may be applied to the associated training device(s).

Fleets may be owned or leased or contracted.

Institution/Function	Participant	Title
CAPACG Co-Host	Captain Scott Meacham	President CAPACG
ERAU Co-Host	David Esser, Ph.D.	Professor and Associate Chair Aeronautical Science
FDM Manufacturer	Michael Jablon, Appareo	Director Marketing & Research
FDM Manufacturer	Han Wu, Sagem	Support Manager FDM
OEM	John Gauch, Cirrus	Director Fleet Sales
OEM	Seth Buttner, Cessna	Air Safety Investigator
OEM	Chuck Glass, Diamond	Director Fleet Sales
Regulatory	Doug Farrow, Ph.D. , FAA	Volunteer Safety Programs Branch AFS 230
Industry	Bob Conyers, Global Aerospace (Insurance)	Vice President
Industry	Captain Bob Brown, UPS Pilots' Association	Safety Committee Chair
Industry	John Barton, TCM	VP Chief Technical Officer
Industry	Captain Larry D McCarroll	CEO CAPACG
Academic	Steve Jones, Western Michigan	Professor Western Michigan
Academic	Steve Gossett, MTSU	Aerospace Professor
Academic	Paul Mosey MTSU	Flight Program Manager
Academic	Brian Dillman, Purdue	Professor
Academic	Beshara Sholy, SLU	Professor
Academic	Kyle Mitchell, SLU	Professor
Academic	Bruce Chase, LeTourneau	Professor

Flight Data Monitoring (FDM) Workshop Breakout B
Hilton Garden Room Front Area
General Aviation Commercial Fleets and Individual Owner Operated Airplanes
Listed as planned attendance, some variations occurred in the actual meetings

- **Two types of fleets:**
 - Fleets are operated, maintained, and managed for commercial purposes to serve aviation training, Part 135 transportation, or shared/fractional ownership businesses.
 - Owner operated aircraft may be used solely for personal transportation, on full or part time leaseback to FBOs/flying clubs, or operated in shared ownership models. These airplanes are aggregated and treated as a “virtual” fleet for the purposes of flight data monitoring. Individual owners benefit from the virtual fleet affiliation.
- FDM training benefits accrue to curricula focused on flight skills development; there are no academic degrees granted.
- Fleets and individual airplanes may be owned or leased.
- Multiple business operating models exist.
- Airplane acquisition, maintenance, upgrading and modification models vary.
- Flight data monitoring confers a fleet management, training, and individual cost of ownership benefit.
- Liability, airplane financing, airplane maintenance, airplane modification and acquisition authority are organization-specific and should all benefit from FDM.
- Manufacturers, operating companies, fractional management, FBOs, etc. may have an interest in owning and using FDM data and information for liability mitigation.

Institution/Function	Participant	Title
ERAU Co-Host	Thomas Weitzel, Ed.D.	Associate Professor
CAPACG Co-Host	Captain Stuart (Kipp) Lau	Vice President FDM Services
Academic/Mod Shop	Peter Pierpont, Eagle Works	Executive Director
FDM Manufacturer	Geoff H Hanshaw, Sagem	Support Manager, FDM
FDM Manufacturer	Mark Shoemaker, Teledyne	Director Sales FDM
FDM Manufacturer	Dr. Urban Lynch, UHL Research & Associates	President
FDM Manufacturer	David Batcheller, Appareo	Program Manager
FDM Manufacturer	Brian Morrison, Alaka’I	President Alaka’I Technologies
OEM	David Thompson, Adam Aircraft	Training Director
OEM	Bill Settles, Cirrus Design	Manager Demonstration Flights
Regulatory	Dan Diggins, FAA	Air Safety Investigator AAI-100
Association	J.J. Greenway, AOPA Air Safety Foundation	Chief Flight Instructor
Industry	Loren Rosenthal, Battelle	Manager
Industry	Captain Tony Koufoudakis	Executive Vice President, CAPACG
Industry	Neil Roberts, MS, CAPACG	Safety Program Consultant
Industry	Dr. Thom Mayer, Austin Digital	President
Industry	Bob Conyers, Global Aerospace (Insurance)	Vice President
Industry	John Barton, TCM	VP Chief Technical Officer
Operator/Fleet Manager	John McGann, Delta Connection Academy	Director Business Development
Operator/Fleet Manager	Mike Huffman, Our Plane	Vice President Operations
Operator/Fleet Manager	Morgan Delashmutt, Executive Flight	Safety Department
Operator/Fleet Manager	Steve Hanvey, SATSAir	CEO
Operator/Fleet Manager	Doug Shaw, Air Logistics	Director of Operations
Operator/Fleet Manager	Robert Phillips, Air Logistics	Chief Pilot