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**Summary of Remarks: FAA/CGAR Sponsored GA Flight Data Monitoring Conference – August 18, 2009**
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Introduction – GAMA is an international trade association representing 67 airplane, engine, avionics, and component manufacturers from the across the world. We have offices in Washington, DC and Brussels, Belgium. I appreciate the opportunity to speak about the important issue of enhancing data availability in general aviation and the surrounding policy issues which need to be addressed. GA data recorder policy and flight data management are topics in which GAMA staff has worked actively during the past several years through various forums.

History – Over the past decade there has been a great deal of activities in the area of data recorders including the development of ED-112 (focused on transport category aircraft) as well as updating the ICAO Annex 6 Parts I, II, III requirements to address scope and legacy technology such as magnetic tapes. The ICAO proposal is currently being circulated to States and we expect it to go before the 182nd ANC in 2010.

In parallel to the work done on the existing requirements for transport category aircraft we've seen developments in the general aviation field. Through technology developments, the prior hurdles such as cost and weight are now being overcome. For light GA, the emergence of glass cockpits is also providing an interesting opportunity for new aircraft. In 2003, less than 20 percent of new delivery piston-engine powered airplanes had glass cockpits as an option while in 2008 the option was available on 90 percent of the new deliveries. Leveraging this technology as well as FADECs and similar electronic media on the aircraft is providing real opportunities for new production.

We've also seen the formation of EUROCAE Working Group 77 which is charged with development of a standard for *lightweight flight recording system* – better tailored for the general aviation sector. The standard includes flight data recorders, cockpit voice recorders, data link recording, and image recorders. The target is €3,000 (or about $5,000) and leverages low-cost solid state memory, the aircraft's avionics bus, and the installation of "webcam technology" in the cockpit. It also references the FRED format for data recovery. The ED-155 standard is for light aircraft data recorders and it is important to differentiate from other FDM initiatives. It should be noted that ED-155 standard is referenced in the ICAO proposal for some aircraft.

Policy Issues – It has been said several times this morning that technology is no longer the issue, but the policy and "how do we get these systems on aircraft" is what is facing us. This is where additional work and likely research is warranted. I came down here with half-a-dozen policy topics identified but have already heard some additional issues from other participants. The areas I think it is important that we continue to explore as a community include:

- Flight Data Recorders versus Flight Data Monitoring: Let's keep them separate in conversations and especially as we look at the accident investigation process.
- Fleet operators versus single aircraft: FDM, FOQA, and SMS are built around organizations, so we need to determine how / if / where to implement for operations without an organization.
- NTSB Recommendations: Data recorders are on the Board's "Top 10" and we've seen it mentioned in a number of individual accident reports. It is important our industry continues to progress.
- Regulatory versus voluntary: Voluntary opportunities (e.g. training, safety, fun) allow equipment to buy itself onto aircraft, while emphasis on regulations may slow technology development and decrease the voluntary equipage in the fleet.
- Survivability: Current survival rate of NVM is at 80-90 percent without any hardening. ED-155 looks at "ruggedizing" equipment. As we move forward, let's remember that without any recorders we get no data at all.
- Access to data: Repeating my earlier point – clearly separating FDM from FDR simplifies flow of data, but requires clear policy and guidance.
- Level of standardization of data: Investigators see need for standardization of data that in many cases (e.g. FADEC) serves other purposes.

Other policy topics raised by attendees this morning included policy at training institutions related to FERPA; FAA's view of FOQA versus FDM; and establishing protections, and the role of GA in ASIAS. Let's all work together to come up with the answers to these important questions.

I appreciate the opportunity to share these perspectives with the group.