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1: Background: One is safer flying on a Part-121 aircraft than walking out of one's door down the street or driving one's car. This is due to the "proactive" safety efforts of the NTSB and enforcement/oversight efforts of the FAA. Unfortunately, the FAA enforcement at the Part-121level (such as digital flight recorders and the "proactive" safety technologies they allow … like FOQA) , are based on traditional technologies that are very expensive to apply to the aviation world below Part-121. When lives are an issue in flight operations, there is something about "big brother watching" that causes system/flight operations "to behave". History shows that about 85% of aircraft accidents are flight-operations oriented … not aircraft "falling apart".
2: The Need: There is a world of General Aviation(GA) below Part-121 where most lives lost in aviation occur every year with consistancy. EMS is just one glaring example. And the overwhelming problem in GA is not aircraft "falling apart", but flight operations "falling apart". Now, why not apply what has been successful in Part-121?
3: Hinderances: The hinderances are likely the following:
3.1: Cost of safety hardware/processes
3.2: Cost to install hardware … especially on to legacy aircraft
3.3: Cost to proactively analyze/manage system operational data
3.4: The politics of giving "big brother" an opportunity to be a "watchdog".
4: Operational Flight Reconstruction: To be a "watchdog" on operational flight, one must have a system/hardware(flight-recorder) that collects data for the "watchdog" to do operational flight reconstruction. So, immediately hinderances of 3.1 and 3.2 must be overcome. Part of the reason that traditional technology for 3.1 and 3.2 is so expensive is that they were created to find out if the "aircraft was falling apart". To do this, the technology has to be very invasive into aircraft systems that makes installation and associated certification a very expensive process. System/hardware(flight-recorder) to allow operational flight reconstruction can be much less complicated, self contained, much easier to install and affordable … especially with new technologies of today as world-wide GPS. These new technologies are not "perfect", but they provide so much to flight-safety for so little. Hinderance 3.3 is also a challenge. UHL knows of a Part-135 operator whose Hawker jet has a $170,000 digital flight recorder and that Part-135 operator can not afford the tradition periodic cost to analyze the data the recorder provides! With the help of others, UHL has also attempted to make hinderance 3.3 less a problem and more affordable.
5: EMS: No doubt, the flight-safety needs for EMS are associated with improved flight planning for timely, emergency operations. But even if improved flight planning is done, how does one affordably "watchdog" the flight operations for actuality? UHL does not presume to know the best answer for the EMS safety need … we are convinced however, based on history, that a "watchdog process" is essential. And that gets into hinderance 3.4 that only the NTSB and FAA can bring about. As regards new safety technology, UHL offers the following two items of information on new "watchdog" technology that is light-weight, lost-cost, easily installed, dual-powered and "survivable":
1: UHL-FRS primary features
2: April-2008 article(pg-41) FLYING magazine.
We offer these items of information with the prime purpose to inform.

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