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What Will the New Year Bring to the Avionics Community?

As 2009 approaches, we look forward to a new year, a new economy, a new presidential administration, and a new set of priorities and policies for the FAA.

It seems likely the Flight Standards Service either will withdraw the current proposed repair station rule (ratings and quality systems) or issue a supplemental notice of proposed rulemaking to refocus this rulemaking effort. For many in the avionics repair station community, the FSS is the “devil you know.” The “devil” who many do not know is the one to watch in 2009: the Aircraft Certification Service.

The FAA’s Aircraft Certification Service is becoming more and more important to the repair station community. Traditionally, the ACS has been known for its work in the oversight of design and production approvals for manufacturing. For some repair stations, the recent trend of involvement from the ACS in maintenance and alteration decisions might seem uncomfortable. However, the ACS always has been involved in major changes to type design (supplemental type certificates) and, in many ways, the ACS has the potential to become an important partner with the avionics maintenance and installation community in the future.

This rising ACS importance is being implemented in many ways. Field approv-

als represent one example. In the past, field approvals often were issued based on the personal experience and knowledge of the aviation safety inspector who issued the field approval. It was not unusual to find an ASI who had seen the sort of work being field-approved before; therefore, he could recognize the correct installation or other implementation.

With the rise in complexity and the

provide the engineering services of the latter in support of the safety mission of the former.

Along with greater reliance on the data analysis services of the ACS comes greater reliance on the policies of this service. The ACS has worked on a draft advisory circular that provides templates for certain types of repairs — indicating the sort of data the service will expect to

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increase in the FAA workload, it has become more important for the FAA to be able to work on repeatable data analysis and approval.

Today, however, field approvals often are issued based on data. At the FAA, analysis of technical data for compliance with the airworthiness standards of the regulations usually falls within the province of engineers.

While the FAA employees from the FSS are experts in maintenance oversight, most of the FAA’s engineers are employed by the Aircraft Certification Service. This has resulted in FAA guidance directing a greater level of cooperation between the FSS and the ACS to

be provided in support of such repairs.

In some cases, guidance sources from the ACS can contradict guidance from the FSS, and it can be based in part on the manufacturing background of the average ACS employee, rather than on the maintenance background, which is found more commonly among employees of the FSS.

What this means for the repair station community is, it is even more important to be aware of the policies the ACS develops and to keep watch over the draft policies being published and offered for public comment (as well as those offered for “informal comment” to trade associations).

**EXPECT ONE OF THE MOST IMPORTANT REGULATORY ISSUES FACING
THE AVIONICS COMMUNITY IN 2009 TO BE THE FAA'S EFFORTS TO GATHER INFORMATION
ABOUT WHAT THE INDUSTRY SEES IN A SAFETY MANAGEMENT SYSTEMS DOCTRINE.**

What to Watch for from ACS

What exactly is the ACS developing that could affect the avionics community?

The Part 21 rulemaking is primarily a change in the manufacturing rules concerning production approval, but it also includes a number of elements likely to affect the maintenance community. Avionics shops wanting to ship new parts to customers overseas will be interested in the changes to the export airworthiness approval rules (for one thing, the new rule likely would eliminate the distinctions between Class I, II and III export approvals).

Originally planned for release this year, the Part 21 rule now should be issued in mid-2009.

The ACS also has toyed with the idea of repair templates. While the templates with which they have worked are engine repairs, an engine repair template likely would give way to future templates for avionics repairs and installations.

There is nothing intrinsically good or bad about such templates. To the extent templates provide helpful direction on how to formulate applications for engineering approvals, they can represent useful guidance to applicants. But it is important the guidance provided be useful and lead applicants in a positive direction, rather than imposing meaningless testing and supporting documentation requirements that do not support the ultimate safety analysis to be performed.

With these requirements in mind, it becomes important for the avionics community to carefully watch the manner in which other communities with-

in the aviation industry are regulated — the manner in which another sector is regulated can serve as a precedent to the manner in which avionics will be regulated someday.

Avionics shops interested in the draft guidance the ACS is promulgating can find the drafts, which are made available for public comment, online at www.faa.gov/aircraft/draft_docs.

In addition to orders and advisory circulars, the ACS also makes available draft policies and draft technical standard orders. For example, TSO-C112 is being updated to align it with the corollary version of the European TSO.

Even with the current economic issues facing the world, there is nevertheless a great deal of growth expected in the aviation industry during the coming decade. AeroStrategy has predicted the MRO market for civil helicopters, business aviation and general aviation will grow from roughly \$10 billion annually in 2007 to nearly \$20 billion by the year 2017. This is great news for the AEA community, as it represents a near doubling of the general aviation MRO marketplace, and the avionics community should see its share from this increase.

AeroStrategy also predicts the next 10 years will bring significant growth in the use of aircraft monitoring systems and engine monitoring systems designed to assess the "health" of aircrafts and engines. This will impose new obligations on the avionics community to keep these systems running.

The increased use of self-diagnostics, however, could mean a decrease in the amount of time avionics shops spend

on performing diagnostics themselves, if predictive and diagnostic software becomes effective in telling mechanics on the ground what the problems are before the aircraft comes in for service. This could be a mixed blessing for avionics shops, especially those focusing on diagnostics and troubleshooting.

The FAA is well aware of this expected growth. The agency is equally aware it likely will not see personnel growth to match industry growth. With headline-grabbing shortages in air traffic control, the safety oversight services of the FAA must find ways to do more with less, which means creating and implementing new oversight paradigms.

One paradigm likely to receive a good deal of press in 2009 is safety management systems. The International Civil Aviation Organization, which is part of the United Nations, has mandated all aviation authorities to have SMS programs in place by the start of 2009. Although the FAA does not plan to meet this deadline, the agency nevertheless is working hard on an SMS doctrine to meet ICAO requirements and also support the FAA's safety goals by streamlining the agency and permitting it to better oversee the industry.

Expect one of the most important regulatory issues facing the avionics community in 2009 to be the FAA's efforts to gather information about what the industry sees in an SMS doctrine. The FAA likely will issue an advance notice of proposed rulemaking in 2009. □

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