



INTERNATIONAL NEWS AND REGULATORY UPDATES

FROM RIC PERI
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The Aircraft Electronics Association's international membership continues to grow. Currently, the AEA represents avionics businesses in more than 35 countries throughout the world. To better serve the needs of the AEA's international membership, the "International News and Regulatory Updates" section of Avionics News offers a greater focus on international regulatory activity, international industry news, and an international "Frequently Asked Questions" column to help promote standardization. If you have comments about this section, send e-mails to avionicsnews@aea.net.

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Past, Present or Future: The Only Thing That Remains Constant is Change

The aviation industry is continually undergoing change, and we, as participants in this industry, are asked to adapt to the changes. Change often is initiated by advances in technology and, in most cases, we embrace this type of change, as it is beneficial and allows us to extend our boundaries.

However, the change we fear most is regulatory change. Currently, Australia is in the midst of the biggest regulatory change in the country's history of aviation. CASA has undertaken to completely re-write all of our regulations to gain worldwide acceptance of our goods and services, which will be beneficial to many of us in the long-term, but it comes with a cost.

Don't be fooled by CASA's sales

pitch about the simplicity of compliance to the new regulations; it's not going to be that easy. Most avionics companies have developed not only their compliance procedures, but also their total business processes around

any aviation regulation, and by design CASA has included the word in its name: Civil Aviation Safety Authority. So, it bothers me when CASA, or any other aviation regulatory body, writes a regulation that bears no re-

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the existing (old) rules and regulations. To change to the new EASA-based system undoubtedly will require a complete overhaul of existing business practices.

We all agree safety is paramount in

relationship to safety and serves to increase the cost to the industry. These are the matters we should be vigilant about when commenting on notices of proposed rulemaking.

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trary to popular belief. It has never been easier to do business. Primarily, this is because of advances in technology, and partly because of the efforts of previous generations.

Newcomers and new business owners in the avionics industry might find it interesting to read about the history and difficulties of carrying out avionics business in Australia in the past.

The Past

Try to visualize life in the 1960s. For the most part, the world had not heard of credit cards, fax machines, e-mail, the Internet or mobile phones and overseas telephone calls were difficult to set up with the operator. Many other things we now take for granted did not exist.

For instance, to purchase a product from America, it required the use of a Telex machine. A Telex is a device a trained operator would type a message into and it would produce a strip of paper with coded holes punched into it. Then, the paper would be inserted into the transmitter portion of the machine and, as it fed through, it would read the codes and send the corresponding signal down the phone line to the receiver, which would produce a duplicate

punched tape of the message. The opposite process is carried out at the other end to produce a typed message.

This was a very slow process and, in time, you would receive a Telex reply regarding price and availability of the product you wanted to purchase. Then, it was off to the bank with the Telex message in hand to carry out the arduous task of conducting a telegraphic transfer of sufficient funds (no credit accounts in those days) to cover your purchase and freight — and again, another Telex-type device was involved and another time delay while your funds were secured and cleared at the other end.

The process to purchase one pentode electron valve could take an entire month, as well as an additional week or two tied up in shipping.

Phew! How easy is it today?

The Present

Today, you can send a purchase order by fax or e-mail and receive the shipping details by return fax or e-mail. The goods arrive in a couple of days, and because you have a credit account with your supplier, you pay at the end of the month, likely by credit card.

The Past

The industry went through the next decade or so with only about three distributors of avionics equipment in the country; so, if you needed to purchase equipment, you would have to purchase from one of the three.

The Present

Most avionics shops are distributors for a number of products, and for those products they do not carry, they often can be purchased from a wider selection of suppliers.

The Past

Believe it or not, in Australia, there was a time when there was no interaction between individual avionics businesses — everyone knew of the other guy, but they didn't talk with each other.

The basic logic behind this was simple: If you did want to purchase a part from him, he most definitely would say, "No." So, for years, everyone with an avionics business struggled doing their own thing with callous disregard for anyone else in the industry.

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Everyone's stock level was excessive, as each company had to be self-sufficient, even though the company down the road stocked a surplus of what you held.

No one wanted to ask another company for information, ideas or contract of personnel when we had those tough jobs.

This individual attitude did more to drive business costs up than any regulation, and something had to be done. In the 1980s, action was taken, when a group of about 10 individual avionics shop owners met in Alice Springs, Australia, to see if their differences could be put aside to establish a more cost-effective working relationship. From this meeting, a network of avionics shops was formed.

While the concept was revolutionary in this country and the effectiveness was measurable, with those 10

shops succeeding in gaining a wider spread of OEM distributorships in Australia, it still was an exclusive membership. In time, there developed an "us" and "them" attitude between those in the group and those left outside the group. So, the great avionics war of the 1990s now was in full swing. Once again it was time for, dare I say it, change.

Two key players — one from the "them" and one from the "us" factions — contacted the Aircraft Electronics Association in United States and invited them to open a regional branch in Australia.

The inaugural meeting, which took place in Darwin, attracted all the major players in the "us" and "them" groups. After the meeting and some social interaction, it soon was evident everyone seemed to be experiencing the same difficulties doing business and everyone could offer assistance to each other; thus, the AEA South Pacific region was born.

The Present

Today, all of our stock levels are reduced, and when we're chasing parts or assistance, we call another avionics shop. To top it off, we have expanded our contact base to include other countries when searching out those difficult answers.

The Future

I would love to tell you what is in the future for the avionics industry in this region; unfortunately, my crystal ball is not working (probably just a wire off somewhere). I can tell you this: I know most of the key avionics people in this country and, without exception, I believe the industry is in good hands.

The past is the past, not something on which to dwell. I, and people like me, have already lived that era; it will be your dedication to the future that will create the shape of things to come.

And remember: The harder you work, the luckier you get.

UNITED STATES News & Regulatory Updates

FAA Finalizes ADS-B Technical Standard Orders

The Federal Aviation Administration had revised technical standard orders TSO-C166, "1090 MHz Extended Squitter Automatic Dependent Surveillance-Broadcast and Traffic Information Services-Broadcast," and TSO-C154, "Universal Access Transceiver Automatic Dependent Surveillance Broadcast."

The ADS-B system is a crucial component of the Next Generation Air Transportation System. It provides surveillance and improved situational awareness simultaneously to pilots and air traffic controllers.

ADS-B is designed to improve the safety, capacity and efficiency of the national airspace system, while providing a flexible, expandable platform to accommodate future air traffic growth.

According to TSO-C166b, new models of 1090 MHz ADS-B and TIS-B equipment identified and manufactured after Dec. 2, 2009, must meet the MPS qualification and documentation requirements for the applicable equipment class in RTCA document RTCA/DO-260B, "Minimum Operational Performance Standards for 1090 MHz Extended Squitter Automatic Dependent Surveillance-Broadcast and Traffic Information Services-Broadcast," Section 2, dated Dec. 2, 2009.

According to TSO-C154c, new models of UAT ADS-B equipment

and/or UAT duplexers identified and manufactured after Dec. 2, 2009, must meet the MPS qualification and documentation requirements in RTCA document RTCA/DO-282B, "Minimum Operational Performance Standards for Universal Access Transceiver Automatic Dependent Surveillance Broadcast," Section 2, dated Dec. 2, 2009.

Rule Would Restrict Employment of Former Flight Standards Service ASIs

In November, the FAA proposed a rule that would prohibit any person who holds a certificate from knowingly employing or making a contractual arrangement with certain individuals to act as an agent or a representative of the certificate holder in any matter before the FAA under certain conditions.

These restrictions would apply if the individual, in the preceding two-year period, served as a Flight Standards Service aviation safety inspector or was directly responsible for oversight of an ASI, and had direct responsibility of inspecting or overseeing the inspection of the operations of the certificate holder.

This proposed rule also would apply to persons who own or manage fractional ownership aircraft used to conduct operations under specific regulations described in the document.

This proposed rule would establish these restrictions to prevent potential organizational conflicts of interests that could adversely affect aviation safety.

The proposal for repair stations includes:

* Sec. 145.160, "Employment of former FAA employees:"

(a) Except as specified in para-

graph (c) of this section, no holder of a repair station certificate may knowingly employ or make a contractual arrangement which permits an individual to act as an agent or representative of the certificate holder in any matter before the Federal Aviation Administration if the individual, in the preceding two years:

1) Served as, or was directly responsible for the oversight of, a Flight Standards Service aviation safety inspector; and

2) Had direct responsibility to inspect or oversee the inspection of the operations of the certificate holder.

(b) For the purpose of this section, an individual shall be considered to be acting as an agent or representative of a certificate holder in a matter before the agency if the individual makes any written or oral communication on behalf of the certificate holder to the agency (or any of its officers or employees) in connection with a

particular matter, whether or not involving a specific party and without regard to whether the individual has participated in or had responsibility for the particular matter while serving as a Flight Standards Service aviation safety inspector.

(c) The provisions of this section do not prohibit a holder of a repair station certificate from knowingly employing or making a contractual arrangement which permits an individual to act as an agent or representative of the certificate holder in any matter before the Federal Aviation Administration if the individual was employed by the certificate holder before (effective date of the rule).

Comments on this notice of proposed rulemaking are due to the FAA no later than Feb. 18, 2010.

For more regulatory updates, visit the AEA website at www.aea.net/governmentaffairs/regulatoryupdates.asp.

FREQUENTLY ASKED QUESTIONS

United States

Data Approval for Avionics Installations on Canadian-Registered Aircraft by U.S. Repair Stations

The following information is from the implementation procedures for the U.S./Canadian Bilateral Aviation Safety Agreement and from FAA Order 8110.53.

QUESTION:

Is it true, in the U.S./Canadian Bilateral Aviation Safety Agreement, the U.S./FAA-approved data as addressed in the regulations and maintenance implementation plan (MIP) is for repairs, and that alterations, such as the

installation of avionics, require specific Canadian-approved data?

ANSWER:

Yes. The MIP states, "All repairs and alterations as defined by TCCA requirements must be accomplished in accordance with data approved by or acceptable to the TCCA." It further requires that "procedures to ensure major repairs and major alterations, as defined in CAR I, are accomplished in accordance with data approved by the TCCA."

Therefore, all major repairs must be made in accordance with TCCA-approved data.

QUESTION:

But isn't there also something that says FAA DER data is accept-

able for repairs, although it doesn't address alterations, and therefore, would default to standard TCCA-approved data?

ANSWER:

Yes. This is in the implementation procedures for the BASA, and also in FAA Order 8110.53. The IP states:

* 4.2.0 Repair Design Approval of Civil Aeronautical Products—

1) The FAA and TCCA agree that data generated in the design approval of repairs shall be considered approved by both the FAA and TCCA, regardless of the state of design of the aeronautical product that has been approved in Canada or the United States, without further

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showing, provided that:

a) The data is found to comply with the regulations of both authorities, and

b) The approval was granted in accordance with the procedures outlined in paragraph 4.2.0.1.

2) The FAA or FAA designee holding the appropriate authorization may approve repair designs or any portion of the data used to support a Canadian repair. Findings of compliance or approvals issued by an FAA designee shall be performed in accordance with the designee's scope of authority

and the appropriate FAA orders, rules and regulations.

3) The TCCA or TCCA delegate holding the appropriate authorization may approve repair designs or any portion of the data used to support a U.S. repair. Findings of compliance or approvals issued by a TCCA delegate shall be performed in accordance with the delegate's scope of authority and the delegate's TCCA-approved procedures manual.

4) Instructions on how to implement the acceptance of repair design data is documented in

FAA Order 8110.53, "Reciprocal Acceptance of Repair Design Data Approvals Between FAA and TCCA," and in corresponding TCCA-published staff instructions (refer to Appendix B, B.2, Item 21).

For U.S. repair stations working on (or anticipating working on) Canadian-registered aircraft, the AEA is offering a Fast Trak training session, "Canadian Civil Aviation Regulations for U.S. Repair Stations," on Wednesday, April 6, in conjunction with the AEA International Convention & Trade Show in Orlando, Fla.

CANADA News & Regulatory Updates

Transport Canada SMS Information Presentations Now Available

Presentations from the TCCA Safety Management Systems Information Session, which took place in November, in Vancouver, now are available on the Transport Canada Civil Aviation website at www.tc.gc.ca/civilaviation/sms/info/menu.htm.

Transport Canada and industry managers gave the SMS presentations, which included:

- Proactive Hazard Identification Workshop
- Getting an Incident Reporting System Up and Running
- A Practical and Integrated Risk Management Solution
- Incident Analysis Panel
- Business Strategies to Manage Safety and Quality

- How to Develop a Proactive SMS
- Hazard Identification in a Small Operator
- Target Zero: A Culture of Safety
- SMS Manual Development: Customizing for Large, Medium and Small Organizations
- Fatigue Risk Management Systems
- Applying a Risk Engineering Framework to Fatigue Safe Systems
- Small Operator Guidance: How Do I Use It to Develop an SMS?

EUROPE News & Regulatory Updates

EASA Issues New Revisions for TCAS and LEDs

The European Safety Agency recently issued a new revision to the ETSO used for ACAS/TCAS II systems introducing the new software Change 7.1. The current issue of ETSO C119c provides the

minimum performance standards for such equipment.

The amended ETSO contains a failure condition classification of the change, which EASA describes as hazardous severe-major failure.

In December, the European Commission provided a consultation document with the goal of gathering suggestions for the preparation of an implementing rule concerning fines and periodic penalty payments in case of non-compliance with the provisions of the basic regulation EC 216/2008.

In addition, a new NPA 2009-12, "Avionics," was issued to highlight and address the need to update the current acceptable means of compliance — AMC25-11 "Electronic Display Systems" — to address the fact the latest technology is using liquid crystal displays instead of cathode ray tube as indicated and limited in the related current version of this AMC.

The proposed AMC25-11 update is based on the published FAA AC25-11A and differs only in respect to the European regulatory and guidance material.

CS-25.1322 addresses visual alerts only in the form of colored lights installed on the flight deck. No specifications are stipulated to cover new technologies or the use of alternate media, such as aural tones/voice. This will require a further rework of CS-25. Comments on the

NPA will be accepted via the comment response tool prior to March 3, 2010.

Also, EASA recently issued Opinion 04/2009, which is based on the comments received and documented in CRD 2008-03. The opinion, which forms a draft amendment to Commission Regulation 2042/2003, represents the outcome of discussions from stakeholders concerned about the fact the current licensing system was not adapted to the lower

complexity of small general aviation aircraft.

The current proposal includes a new type B3 license similar to B1.2; however with simplified requirements adapted to the lower complexity of light GA piston aircraft. Related Part 147 requirements and minimum standards for training also were reviewed. The new basic knowledge training course duration is now down to 1,000 hours compared to the B1.2 requirement of 2,000 hours. □

FREQUENTLY ASKED QUESTIONS

International

Field-Loadable Software

The following information is from an FAQ from the EASA website.

QUESTION:

Can “field-loadable software” be delivered with an EASA Form 1, and is an EASA Form 1 required for installation?

ANSWER:

First of all, the definition of “parts and appliances” (refer to Article 3 of Regulation EC No 216/2008, Feb. 20, 2008) does not exclude software from being a part or appliance. Even without using the term “software” in this definition, there is software that meets the definition. This is software installed in an aircraft and used in operating or controlling an aircraft. The rest of this response only refers to this type of software.

Secondly, Subpart K, “Parts

and Appliances,” from Part 21, addressing installation, approval and release is applicable to this software and therefore:

This software must be part of the design data.

The installation of this software in a type-certified aircraft is only accepted when it is accompanied by an EASA Form 1.

It must be properly marked, and the installation approved. (Refer to 21A.303).

To achieve these first two requirements, the organization manufacturing and releasing the software must meet the requirements of Subpart F or G from Part 21. In particular, this means the software must be part of the scope of the production organization and there must be a link between the design organization and the production organization.

Therefore, field-loadable software can be delivered with an EASA Form 1 when it is part of design data for which approval has been applied or granted, and it is produced by and within the scope of a production organiza-

tion that meets the requirements of Subpart F or G.

Marking of field-loadable software must be in accordance with Subpart Q of Part 21. For practical reasons, the marking could be on the software “container” such as the CD carrying the software.

Note: The AEA offers “Frequently Asked Questions” to foster greater understanding of the aviation regulations and the rules governing the industry. The AEA strives to ensure FAQs are as accurate as possible at the time of publication; however, rules change. Therefore information received from an AEA FAQ should be verified before being relied upon. This information is not meant to serve as legal advice. If you have particular legal questions, they should be directed to an attorney. The AEA disclaims any warranty for the accuracy of the information provided.