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Technology update

ISS seeking greater penetration in transport aircraft sector

Already equipped on Boeing 757 and 767 airliners, **Innovative Solutions and Support** (ISS) flat-panel display products are slated to find homes in additional commercial transport aircraft.

That, of course, is the company's intention, and it is Mike Glover's job to bring the intention to reality. That has been his task since joining the company in early 2005.

panels in the same architecture as the aircraft's, said Glover. Thus installation of the ISS panels can be done in fewer than four days. Glover explained that the electronic flight information system (EFIS) of the two aircraft "is built around three-symbol generator boxes which feed the EFIS components on the flight deck. Our architecture replaces the symbol generators with a box called the

display that can include and display an optional class-3 electronic flight bag capability.

Another benefit for the buyer of the ISS product, which resulted in the elimination of 25 components and about 200 lb from the original system on the 757 and 767, is reduced pilot training, according to Glover. "The formats that we have developed and certified are



The Innovative Solutions and Support primary flight/navigation display for operators of Boeing 757 and 767 aircraft features a pilot and co-pilot suite, each containing two 6 x 8-in integrated flat-panel displays.

"Pretty simple" is how he described the priorities regarding application of the company's products to the commercial air transport market: no degradation of safety; improved reliability; minimized out-of-service time; and a manageable pilot training program.

Regarding the out-of-service priority, Glover said, "One of the things I used to do in my former life was write very extensive financial justification and business cases for technology upgrades, and what I realized very shortly into the assignment with ISS is that if you have a 20-day or 25-day out-of-service event to modify an airplane for a new flight deck, it's pretty much going to kill the business case with \$70,000 or more a day in lost revenue allocated against the business stream."

The trick to avoiding that nightmare with the 757 and 767 was crafting the

Data Concentrator Unit. It's a converter box that takes all the incoming analog and digital aircraft signals, converts them to Ethernet, and then drives our four 10-in diagonal display units. The display control panel is a form-fit function replacement to the display control panel that already existed in the airplane. And it has the same baseline, underlying features that the existing airplane has, with features that are common with the latest production airplanes, such as Flight Path Vector, Meters Altimetry, and a patented feature we have at ISS called 'ZOOM,' where you change certain features on either the auto flight mode control panel on the airplane, or on our display control panel, and it will zoom that feature to 2.5 times its normal size."

With the ISS solution, the navigation display also serves as a multifunction

primary flight display, navigation display formats that offer commonality with other large OEM production-type aircraft, so that customers that operate either those types of airplanes or start to work toward acquiring those types of airplanes can secure benefits in the form of reduced pilot training footprints."

Developed in-house, the product uses proprietary ISS coding and language. The product has been on the market for some time but has been improved, Glover said. The company is working on enhancements to the product in the areas of communication, navigation, surveillance, and air-traffic management.

New products and aircraft programs are also in the works, but Glover said he was not at liberty to discuss them.

Patrick Ponticel