LORAN-C Decommissioned After 52 Years

In January, the U.S. Coast Guard announced it will begin decommissioning the Long Range Aide to Navigation (LORAN)-C system. Transmission of the LORAN-C signal was terminated effective February 8, 2010 while the shutdown of all 24 LORAN-C stations is expected to continue through October of this year.

According to the announcement, high costs of maintaining the system can no longer be justified for a small segment of the population using LORAN-C. The signal is no longer required by the armed forces, the transportation sector (air, land and maritime users), or the nation’s security interests as the availability of GPS navigation has replaced the LORAN-C in most applications. Operators are encouraged to upgrade to the GPS navigational system.

New Product News

FANS 1/A-Compliant UniLink: NextGen Ready

Universal Avionics next generation UniLink® Communication Management Unit (CMU) supports several functionalities that enhance the efficiency and safety of flight:

- FANS 1/A compliance
- Automatic Dependent Surveillance – Contract (ADS-C)
- Controller-Pilot Data Link Communications (CPDLC)
- VHF Data Link (VDL) Mode 2 capabilities

UniLink’s simple communication interface allows the flight crew and ATC to make informed decisions about routing that leads to fuel economies and shorter flight times.

Model variants will consist of the UL-801 with internal VHF Digital Radio (VDR) and the UL-800, for use with the aircraft’s onboard VDR. Both models will be available 4th quarter of this year.

Datalink equipage mandates requiring operators to upgrade to higher-level Aeronautical Telecommunications Network (ATN) services and applications (such as advanced CPDLC) are emerging. Mandates for forward fit application begin as early as 2011 in Europe, with retrofit mandates in 2013 under EUROCONTROL’s Link 2000+ Programme. For more information about UniLink UL-800/801, visit: www.uasc.com/news.

Navigation Data Now Offered by Navtech

Universal Avionics partnered with Navtech (formerly European Aeronautical Group) to provide navigation databases. The move offers an alternate supplier for navigation data, as well as the opportunity for chart database harmonization for customers already utilizing Navtech charts.

Effective April 1, 2010, navigation databases for Universal Avionics FMSs operating SCN 802/902, SCN 803/903 and SCN 1000/1100 will be offered by Navtech.

Operators interested in Navtech navigation databases should contact the company directly for pricing and package information. On the web at www.navtech.aero or email: sales@navtech.aero.
EGNOS European SBAS to be Online Soon

One year ago, ownership of the European Geostationary Navigation Overlay Service (EGNOS) was handed over to the European Commission. It was a signal that full development of the Satellite-Based Augmentation System (SBAS) covering European airspace had been completed. Now in just a few short months, EGNOS will be available and certified for aircraft use and operators worldwide can take advantage of European SBAS operations.

EGNOS: Defined
The EGNOS is a regional SBAS with coverage in European Airspace. Other worldwide SBAS commissioned for aircraft use are the North American Wide Area Augmentation System (WAAS) and Japan’s Multi-functional Satellite Augmentation System (MSAS).

EGNOS was developed as a joint project between the European Space Agency (ESA), European Commission and EUROCONTROL, and the European Organisation for the Safety of Air Navigation. On April 1, 2009, EGNOS was handed over to the European Commission who contracted an external organization to manage maintenance and operational responsibilities. This group, the European Satellite Services Provider (ESSP), is a multi-lateral organization founded by air navigation service providers from Spain (Aena), Germany (DFS), France (DSNA), Italy (ENAV), UK (NATS), NAV Portugal and Switzerland (Skyguide).

EGNOS provides three levels of service: Open Service (for common user applications like handheld GPS), Commercial Data Distribution Service and Safety of Life (SoL) service. The EGNOS SoL service is for safety-critical applications such as aviation, maritime and rail transport purposes.

Like the FAA’s Wide Area Augmentation System (WAAS), EGNOS will be certified against all applicable performance measures and International Civil Aviation Organization (ICAO) standards. Because the regional systems conform to the same standards, operators already equipped with an SBAS receiver can take advantage of EGNOS SoL immediately upon its availability.

EGNOS: Structure and Operation
Much like WAAS, EGNOS consists of a network of ground stations that process GPS signal data, measure any errors contained in the signal and transmit corrected data to Geostationary Earth Orbit (GEO) communication satellites. The GEOs broadcast the message to SBAS-capable receivers onboard aircraft which, when combined with onboard flight management computers, provide geometric lateral and vertical guidance that can be used for approach operations.

RNAV SBAS instrument procedures use GPS/GNSS lateral guidance and either SBAS or barometric altimeter for vertical guidance to create a straight glide path from the Final Approach Point to the Decision Height. The minima listed on the approach plate for these approaches will include Localizer Performance with Vertical guidance (LPV), Lateral and Vertical (LNAV/VNAV) and Lateral-only (LNAV).

To date, no SBAS procedures are available for use in European airspace. Development of the procedures continues, as the individual European states work to define and publish standards. The EGNOS signal is expected to be certified and available for aviation in June 2010. For more information about EGNOS, visit: www.esa.int/egnos.
Notes from Product Support

Export Regulations Require Notification Prior to Sending Unit for Service

Due to ever changing export regulations, Universal Avionics has implemented a new return process for serviceable parts and equipment. Effective March 29, 2010, anyone requesting support for a serviceable product must contact the Repair Station with the product name, part number, airframe type and customer information BEFORE shipping the unit.

Universal Avionics Repair Station
Phone: (520) 547-3313 / (800) 862-6977
AOG Hotline: (520) 295-2399
Fax: (520) 547-3323
Email: repairs@uasc.com

Why do I have to contact you before sending my unit in for service?

Any company that manufactures and sells products that could be considered a national security concern are regulated under the International Traffic and Arms Regulations (ITAR), U.S. Department of Commerce and other worldwide export regulating agencies. Based on the definition of national security concern set forth by these regulating agencies, some of Universal Avionics products categorically qualify.

Universal Avionics must obtain an export license to ship these units outside the U.S. This applies to the final destination address, so the same process will apply whether directly shipping to the final address or through an intermediary.

Contacting Universal Avionics with the necessary information BEFORE shipping the unit allows Universal to determine if it is required to obtain a license or take additional action required by the export regulations in order to return the equipment to you.

If it is determined that the unit falls under the export regulations, Universal Avionics will contact the customer within one working day of the request with the appropriate export paperwork, which must be completed by the persons requesting the service. In some circumstances, it is possible for Universal Avionics to obtain an exemption to an export license that will allow the unit to be shipped, serviced and returned to you expeditiously.

What happens if I don’t contact you before I ship the unit?

If Universal Avionics receives a piece of equipment without first processing the appropriate paperwork, it will be placed on export hold until Universal can obtain the necessary export license. Export licenses can take as little as 6-8 weeks, but could take up to several months. The unit cannot be serviced and returned until the paperwork is completed.

What prompted this change in procedure?

Even though ITAR was issued nearly 35 years ago, changes in the regulation and increased attention to national security issues around the world has caused Universal Avionics to reevaluate its internal processes and procedures to ensure it is compliant with current laws. This process change is the result of that effort.

Software and Hardware Updates

**FMS**
SCN 1000.4/1100.4 expected in 2nd quarter. Minor change supports FMS and TAWS feature enhancements and UniLink FANS.

**UFP**
SCN 25.4 released 2/25/10. This minor change identifies relocated reference waypoint for resolution, and adds Revision and Special Text to the navigation database Info window.

**DTU-100**
Mod 3 was released 2/18/10. This minor hardware change installs new internal hardware preventing the processor ribbon connector from loosening, rendering the DTU intermittent or inoperative.

**TAWS**
SCN 12.0 expected in April. This major change adds support for man-made obstacle depiction and alerting functionality.
Marinvent Corporation, a company specializing in certification and flight services, operates a Piper Super Cheyenne (C-GTMM) recently upgraded with dual EFI-890R Flat Panel Displays, Vision-1® Synthetic Vision System and Terrain Awareness and Warning System (TAWS). The majority of flight hours for the extensively-modified Cheyenne are spent as the primary avionics test-bed for Marinvent’s research and development activities, including systems flight test and human factors evaluations.

The aircraft is also used as the main training platform for classes at the newly opened Aerospace Flight Test Training Centre (AFTTC) at Carp Airport, outside Ottawa, Canada. Marinvent President John Maris recently taught the “Introduction to Avionics Flight Testing” module for the Canadian Department of National Defence.

Marinvent’s Piper Super Cheyenne featuring Universal Avionics EFI-890R, Vision-1® Synthetic Vision and TAWS. Installation and design completed by Kitchener Aero Avionics (KAAV)