ATA avionics announced

Allied-Signal Aerospace is to supply a liquid-crystal tactical-situation display for the US Navy's General Dynamics/McDonnell Douglas A-12 advanced tactical aircraft (ATA), under development to replace the A-6.

The 8in-square full-colour flat-panel display will employ active-matrix liquid-crystal technology developed by Ovonic Imaging Systems. This is the latest ATA subcontract to be announced by the General Dynamics/McDonnell Douglas team. A Texas Instruments/Norden Systems team is to develop the multifunction radar.

Westinghouse is to develop the A-12's navigation and targeting forward-looking infrared sensor. Litton Amecon will supply the electronic surveillance measurement equipment, and General Electric will provide the missile warning set.

A Litton-Honeywell team will co-develop the A-12's integrated inertial navigation system. Allied-Signal will provide the conventional air data computer. Harris will supply a multifunction antenna.

IBM will develop the A-12's central mission computer. This will be based on very-high-speed-integrated-circuit (Vhisc) common modules.

There seems little sign of the desired avionics commonality between the Navy's ATA and the Air Force's ATF, however. Suppliers selected for the Lockheed/Boeing/General Dynamics YF-23 include Westinghouse/Texas Instruments for the radar; General Electric/Martin Marietta for the infrared search and track set; Sanders Associates/General Electric for the integrated electronic warfare system; Lear Astronics/GEC Avionics for the digital flight control computer; Texas Instruments for the Vhisc 1750A computer modules and mission processor; and Hughes Aircraft for the common integrated processor.

The Northrop/McDonnell Douglas YF-23 team has announced few subcontracts yet, but has chosen the Westinghouse/TI team to develop the radar, Hamilton Standard/General Electric to supply the digital flight control computer, and AT&T/TRW the common digital processor.

Propfan acoustic tests completed

A programme to test cabin noise-reduction techniques for propfan-powered aircraft has been completed by Lockheed/Georgia.

Although propfan engines offer fuel savings of from 15 to 30 per cent, they can generate external noise levels up to 150dB—20dB higher than most turboprops. Noise levels inside the cabin are lower, but still unacceptable unless further noise reduction measures are included, says Lockheed.

The NASA/Lockheed propfan test assessment (PTA) programme used a Gulfstream II aircraft with an eight-blade single-rotation propfan mounted on its left wing. A 10ft section of interior wall, trim, and floor in the mid-section of the cabin was replaced by a new test section. This contained acoustic mufflers and low-frequency sound-absorbing materials that are claimed to provide more isolation per pound than current sound-deadening systems.

The acoustic mufflers, called Helmholtz resonators, are 5in-diameter alloy domes with small nozzle inserts that tune them to a tone of 225Hz (the fundamental frequency emitted by the propfan at a cruising speed of Mach 0-8). Some 600 resonators were mounted on the exterior of the test section. Arrays of 31 microphones inside and 20 outside the aircraft monitored relative noise levels.

The PTA project cost $56 million, and the GII logged some 133 hours flying at a range of heights and speeds. Data is now being analysed to assess the effectiveness of this form of damping.

Flight trials of the cabin test section comprised seven GII flights totalling 12½ hours, during which resonator performance was examined over a range of propeller r.p.m.s.

EFA control teams form

A second consortium has been formed to bid for European Fighter Aircraft (EFA) flight control system contracts.

Led by West Germany's Nord-Micro, the team comprises Celsa of Spain, Microtechnica of Italy, and Smiths Industries of the UK. The consortium faces competition for EFA flight-control contracts from a team led by GEC Avionics, comprising Bodenseewerk Geratechnic (BGT) of Germany, Aeritalia of Italy, and Inset of Spain.

With German Government funding, Nord-Micro has developed a quadruplex digital fly-by-wire flight control computer. Two teams have also formed to bid for the EFA engine control system contracts. Dornier leads a consortium comprising Technost of Italy, Celsa of Spain, and Dowty Smiths Industries Controls (DSIC) of the UK. BGT leads a team comprising Magnetti Marelli Avio of Italy, Inset of Spain, and Lucas Aerospace of the UK.

The Eurojet EJ.200 engine for EFA requires a full-authority digital engine control system.

Pan Am pleads with unions

Pan American has pleaded poor first-quarter results in an attempt to gain wage concessions from its unions.

The airline reports a net loss of $83-3 million in the first quarter of this year. Both the Pan American Shuttle and World Services showed improved operating results for the first quarter, Pan Am reported. But operating losses at Pan American World Airways itself widened to $62 million from $51 million a year earlier, the company said. Total company revenue rose 18 per cent to $900-8 million from $763-1 million in the first quarter of last year.

Despite the company's continual financial troubles, the flight attendants' union has rejected a work practices and wages concessions package which it had been expected to accept.