



L'ÉROSPATIAL

Newsletter

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I - INDUSTRY NEWS

ABB

<http://www.abb.ca>

Contract with ITT Industries

ABB has signed a \$US 30 million contract with ITT Industries to develop and manufacture a Fourier transform space interferometer, a core component of the Cross-track Infrared Sounder (CrIS). This device makes precise measurements of temperature and humidity profiles in the atmosphere. It will be one element of the payload of the U.S. National Polar-orbiting Operational Environmental Satellite System (NPOESS) satellites, which are scheduled to be launched beginning in 2006.

AVIANOR

<http://www.avianor.com>

Distribution agreement with Weber Aircraft LP

Avianor has signed an agreement for the distribution of aircraft seat replacement parts with Weber Aircraft LP (a division of Groupe Zodiac), and the leading manufacturer of aircraft seats in North America. The primary target market is North America but customers worldwide will be able to obtain after sales service and spare parts from Avianor.

Contract with Air Canada

Avianor has been selected by Air Canada to supply 16 Executive Class stowage cabinets for its Airbus widebody fleet and three galleys for its B747-400s.

BOMBARDIER AÉRONAUTIQUE

<http://www.bombardier.com>

Delivery of the first CRJ900 to Mesa Air Group

On February 3, Bombardier Aéronautique delivered the first Bombardier CRJ900 to Mesa Air Group of Phoenix, Arizona, the launch customer for this new 86-seat regional jet.

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Mesa will thus be the first airline to operate all three of Bombardier's regional jet models: the 50-seat CRJ200, the 70-seat CRJ700 and the 86-seat CRJ900.

The fifth Bombardier Challenger 300 makes a successful first flight

The fifth Bombardier Aéronautique Challenger 300 in the aircraft's certification program, which is fitted with a fully functional cabin interior, made a successful first flight on March 8 in Wichita, Kansas.

This fifth aircraft will validate the functionality and reliability of all the cabin systems, particularly water and waste management, lighting, air conditioning, cabin electronics, in-flight entertainment and ergonomics.

The Bombardier Global 5000 makes a successful first flight

On March 7, Bombardier Aéronautique's latest business jet, the Global 5000, completed a three hour and 44 minute first flight Northwest of Toronto. The aircraft reached a maximum altitude of 45,000 feet (13,716 metres) and a maximum Indicated Airspeed (IAS) of 340 knots (391 mph, 630 km/h.)

The purpose of the flight was to check out basic aircraft systems functionality and to evaluate the manoeuvrability and handling characteristics of the aircraft. Type certification is scheduled for early 2004 and the first delivery is scheduled for the end of 2004.

Selection of Alcoa as a long-term supplier

Under the terms of a multi-year agreement, Alcoa will supply Bombardier Aéronautique with the majority of its raw material needs for aircraft structural components and wing and fuselage skins for Bombardier's family of regional aircraft and business jets. Alcoa will establish a presence in Montréal to manage and execute the agreement.

CAE

<http://www.cae.com>

Simulator sales in France and China

CAE has announced the sale of two Airbus A320 Full Flight Simulators (FFS), one to Air France and one to China Eastern Airlines. The approximate total value of the two contracts is \$35 million.

The simulator for Air France will enter service by June 2003 in the airline's training centre at Charles de Gaulle airport. Two simulators for China Eastern Airlines, this one and another one which was ordered in December, will be installed at the airline's Pudong training centre between now and the end of 2003.

\$24 million contract for the C-130J

CAE has signed a \$24 million contract with Lockheed Martin Aeronautics for an additional order for training devices and training support services for use by United States Air Force (USAF) C-130J crews. CAE will design and manufacture a C-130J cockpit systems trainer under this contract. CAE will also provide training support services at the Little Rock Air Force Base.

The Royal Australian Navy selects the CAE Medallion-S visual system

CAE has announced that the simulator used by the Royal Australian Navy to train its S-70B-2 Seahawk crews will be fitted with CAE's Medallion-S visual system. This visual system upgrade will be performed under the terms of an existing on-site support contract at the Nowra Naval Air Station, near Sydney. Service entry is planned for early 2004 and personnel from CAE's Australian operation will perform associated database upgrades.

CAE adds ten simulators to its training network

CAE SimuFlite:

- CAE SimuFlite (Dallas/Fort Worth):
 - Hawker 800 XP
 - Falcon 2000
 - Sikorsky S-76C+
- Denver: CRJ100/200
- Phoenix: ERJ145
 - CRJ100/200/700/900
- Toronto: Dash 8-100/300
- Vancouver: Dash 8-100/300
- Maastricht: ATR 72-500
- Zhuhai: B737-800

These recent additions bring to 86 the number of Full Flight Simulators (FFS) in service with CAE's 17 training centres located on four continents.

\$28 million agreement with JetBlue and Airbus

JetBlue Airways has signed a three-year agreement with CAE and Airbus for training services and will also purchase three Flight Training Devices (FTD) from CAE. The total contract value is estimated to be \$28 million. JetBlue pilots will train on Airbus A320 Full Flight Simulators (FFS) at the Airbus Training Centre in Miami Florida, part of the CAE-Airbus global training network.

\$30 million of training devices for Airbus

CAE has signed an agreement with Airbus for the sale of 20 Simfinity Maintenance/Flight Training Devices (M/FTD), which Airbus will integrate into its aviation training program. CAE will also perform annual upgrades to its training equipment. The value of these training devices is nearly \$30 million.

CAE and Airbus are jointly developing course plans and training scenarios for pilot and technician training using

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the M/FTD. The M/FTD is available for the Airbus A320, A330 and A340 aircraft families. Airbus plans to deploy CAE Simfinity M/FTDs in its pilot and technician training centres in Toulouse, Miami and Beijing.

Contracts with the FAA and Lufthansa

CAE has been awarded a contract by the United States Federal Aviation Administration (FAA) for the supply of a Boeing B737-800 Full Flight Simulator (FFS) fitted with the CAE Tropos visual system. Lufthansa Flight Training has also contracted with CAE for the supply of an enhanced Airbus A330-300 Full Flight Simulator (FFS). The value of these contracts is approximately \$35 million.

The new B737-800 simulator will enter service in June 2004 at the Flight Operations Simulation Laboratory of the FAA's Mike Monroney Aeronautical Center in Oklahoma City. The Airbus A330-300 FFS is the 22nd flight simulator that Lufthansa has ordered from CAE since 1980, and it will enter service at the airline's training centre at Rhine-Main airport, near Frankfurt, in July 2003.

New customer: South African Airways

South African Airways (SAA) has awarded CAE a contract for the supply of an Airbus A320 Full Flight Simulator (FFS) fitted with a Tropos visual system. This \$17 million contract brings the number of flight simulators, which CAE has sold during the 2003 fiscal year to 11. The South African Airways A320 FFS will enter service at the end of August 2004 at the airline's training centre at Johannesburg International Airport.

CMC ÉLECTRONIQUE

<http://www.cmcelectronics.ca/>

1500th Satcom antenna

On January 31 2003 CMC Électronique delivered the 1500th CMA-2102 high gain satellite communications (Satcom) antenna to Lufthansa.

CMC has captured more than 75 % of the airline market with its Satcom antennas. The customer list now includes more than 65 airlines and several VIP/corporate and military operators.

Flight Management System for the U.S. Army UH-60M helicopters

Sikorsky has selected CMC Électronique to supply its CMA-2082M Flight Management System (two per aircraft) and its CMA-2088 Emergency Control Panel for the UH-60M Black Hawk helicopter. CMC expects to supply these systems for more than 1,200 helicopters that are to be upgraded. The total value may exceed \$US 110 million over the estimated 25 year life of the program.

Satcom antennas for the Swiss International Air Lines A340 fleet

CMC Électronique has received an order from Swiss International for the supply of its CMA-2102 high gain Satellite Communications (SATCOM) antenna system. It will be installed on the airline's fleet of twelve A340 aircraft. Deliveries will be completed by January 2004.

CS COMMUNICATION & SYSTÈMES CANADA

<http://www.c-s-canada.ca>

Contract from the Canadian Space Agency

CS Communication et Systèmes Canada has been awarded a \$565,000 contract by the Canadian Space Agency to develop a real-time operations simulator for the SCISAT-1 scientific satellite. The simulator will be used to validate satellite operations, train operational staff and, after launch, simulate operational scenarios in order to reproduce, analyze and correct potential in-service failures.

HÉROUX-DEVTEK

<http://www.herouxdevtek.com>

New orders from the U.S. military

The Landing Gear division of Héroux-Devtek has received \$40.7 million in new orders from the U.S. Air Force and the U.S. Navy. These orders include the manufacture of landing gear components for the C-5, KC-135, P-3, and C-130 programs.

INFOLUTION

<http://www.infolution.ca>

Appointment

Mr. Pierre J. Jeannot, Director General Emeritus of the International Air Transport Association (IATA), has accepted the position of Chairman of the Board of Directors of Infolution.

New software system

Infolution is now marketing its new Windows-based PANS-OPS software, which has been developed to improve the accuracy and safety of instrument procedures use in air transport operations, especially during the approach and take off phases of flight.

MESOTEC

Strategic alliance with Halberg Design

Mesotec has formed a strategic alliance with Halberg Design and has acquired 40 % of its capital. Halberg Design specializes in the design of tooling and custom

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machinery while Mesotec manufactures aircraft and engine structural components, tooling and custom machinery.

MESSIER-DOWTY

<http://www.messier-dowty.com>

Appointment

On March 1, Messier-Dowty announced the appointment of Mr. Bernard Laplante, formerly production director, to the position of general manager of the Mirabel factory. He replaces Mr. Émile Rodriguez who has been promoted to the position of director of programs at the Bidos factory in France. The Mirabel factory specializes in the manufacture of landing gear components for the Airbus A320, A321, A340, and A380.

OMF AVIATION

Factory at Trois-Rivières

German company OMF GmbH is establishing a new factory for the manufacture of its Symphony 160 two-seat general aviation aircraft at Trois-Rivières airport. This \$33 million investment should contribute to the creation of 300 jobs over a five-year period. The Société générale de financement (SGF) has taken a 24.9 % equity position in the parent company and a 33.3 % position in the new subsidiary, OMF Aviation. Investissement Québec has contributed an equity loan of \$3 million together with a non-reimbursable contribution of up to \$9.75 million over a period of five years.

The Symphony 160 has been certificated by the Airworthiness Authorities of several countries including the United States, Germany and Chile. The process of obtaining Canadian Type certification is underway.

PRATT & WHITNEY CANADA

<http://www.pwc.ca>

Selected for the Eclipse 500 jet

Pratt & Whitney Canada (P&WC) has announced that Eclipse Aviation Corp. has selected the new generation PW610F engine for its Eclipse 500 twinjet aircraft. The PW610F develops 900 lb (4 kN) of take-off thrust at Sea Level. The engine is controlled by a dual channel Full Authority Digital Engine Control (FADEC) system. Type Certification of the engine is scheduled for the first quarter of 2006.

The PW610F is a member of a new family of engines designated PW600F and covering the thrust range of 900 to 3,000 lb (4 kN to 13,35 kN). The PW600F is the smallest member of the P&WC turbofan family. This new family has already made its mark; this is the second time it has been selected for a new aircraft program in less than two months.

ROLLS-ROYCE

<http://www.rolls-royce.com>

Contract from BP

Rolls-Royce plc has obtained an additional \$100 million contract for generators which will be used in BP's Azeri project in the Caspian Sea. Under the terms of this contract, Rolls-Royce Canada will manufacture and deliver nine RB-211 6562 industrial gas turbines during the next two years. These units are derivatives of aero-engines.

SIMGRAPH

<http://www.simgraph.com>

Contract from the Department of National Defence

Simgraph has been awarded a contract of more than \$1.4 million by the Department of National Defence (DND) to create interactive courseware for the CF-18 tactical fighter ground-based training system. Under this contract Simgraph will develop computer-based training programs for pilots and instructors of 410 Tactical Fighter Squadron at 4 Wing, Cold Lake, Alberta.

This substantial contract represents the continuation of a long-established business relationship between Simgraph and the Department of National Defence. Earlier mandates included the design and production of simulation-based training aids for the Hercules CC-130, Aurora CP-140 (P-3C Orion) and CC-144 Challenger aircraft.

II - TECHNOLOGY

Aerospace Manufacturing Technology Centre (AMTC)

The mission of this National Research Council of Canada (NRC) Centre is to develop low cost manufacturing techniques and help companies transition to, and acquire expertise in, these new technologies. AMTC is currently located in temporary premises at 3385, Griffith Street in Saint-Laurent but in 2003 will move to a new building adjacent to the École Polytechnique de Montréal.

The Centre is working with the following technologies:

- Welding technologies; robotic welding as a replacement for rivets, friction stir welding for metals and polymers, electron beam welding;
- Composite materials technologies: a range of tools for resin transfer moulding, a high temperature autoclave;
- Material removal technologies;
- Non-destructive testing technologies for inspection during the manufacturing process.

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Repair of metallic structures using composite materials

The Boucherville-based Industrial Materials Institute has developed a method for the repair of cracks in metallic structures using composite materials. This type of repair is less costly than the conventional method of covering the area in question with a metal doubler. Based on various repairs performed on F-18 and C-130 aircraft, the Centre has accumulated data on the mechanical properties of composite repairs, which will be applicable to civil aircraft.

III – INDUSTRY DEVELOPMENT

Aircraft development methodology

Adam Aircraft, using its own management methods and internal resources working four shifts (24 hours), has, within a period of six months, succeeded in developing, manufacturing and testing a new small aircraft which it claims incorporates enhanced safety characteristics. In recognition of this achievement, which will have a positive impact on the cost of the aircraft, Aviation Week & Space Technology has honoured Mr. George F. Adam, the president of Adam Aircraft.

New benchmarking tool

The Industry and Commerce mission of MFER, in collaboration with the "Laboratoire de recherche sur la performance des entreprises" of the Université du Québec à Trois-Rivières, recently launched *BALISE*, an online benchmarking tool. This tool, which is easy to use, allows small and medium sized manufacturing companies to evaluate their performance by comparing various parameters (production management, financial management, market development, human resources) against similar companies.

Data entered on the secure Internet site are treated as confidential and an evaluation report is quickly prepared. The whole process can be completed in less than 30 minutes. The tool is available free of charge at www.balise.gouv.qc.ca and on the MFER site.

Computerization of the supply chain

In February and March MFER held breakfast information sessions on the subject of computerization of the supply chain. The following topics were addressed:

- exchange of 3D drawings
- kitting and configuration control

During these sessions participants identify best practices to introduce into their companies. Summaries of these best practices are available from Mr. Normand Raymond, of MFER, at (514) 499-6535.

QUALITY

6 AS 9100 accredited companies

Aéro-Mecachrome - Harrington - Howmet Laval Casting - Mecair - Meyer Canada - Quéloz

19 ISO 9001:2000 (version 2000) accredited companies

Airborne - Arell - CAE (génie logiciel) - CEL - CMC Électronique - GGI International - ICT Ltée - Ksatria - Lockheed Martin - Oerlikon Contraves - Quéloz - Rasakti - SNC Technologies - Sido - TMH Canada - Techspace Aero Canada - Terminal & Câble TC - Thermetco - Ultraspec

120 ISO 9000:1994 (version 1994) accredited companies

ABB Bomem - Abipa - ADS Marquez - Advantech - Aéro Technique - Aéro-Mecachrome - Aéronav - Aérosystème International - Agence Mécanique Paré - Air Data - Air Terre - Almaho - Alphacasting - Alta Précision - Amphenol Air LB America - Apex Précision - Apollo Micro-Ondes - Aquacoupe - Automatech - Aviation Lemex - Avior - Bedco - Bell Helicopter - Bombardier Aéronautique - CAE - Claro Précision - CMR Circuits - Communications Multidev - Composites Atlantic - C.P.S. Industries - CP Tech - CRIQ Essais - CVDS - DCM - Deburex - Decatron - Delastek - Drummond - Élimétal - EMS Technologies - Farsound - Filetage International - Finecast - FJ - Flexibulb - Focam - GE Elano Canada - Générale Électrique du Canada - Gentner - GFI - Guérette - Goodrich - Harbour - Harrington - Hemmingford - Héroux-Devtek - Honeywell - Howmet - James Dawson - JLM Précision - Lego - Liné - LSI Luminescent - Lyre - Lyster - MagChem - MDS Aero Support - Mecair - Mécanique industrielle B. Courteau - Mechtronix Systèmes - Mésotec - Messier-Dowty - Metcor - Mil-Quip - Minicut - Moody - Nétur - NMF - Nutech - Optimus - Outillages K&K - Outils Diacarb - Pega Précision - Performance L.T. - Perkin Elmer Optoélectronique - Placeteco - Pôle Air Aviation - Pratt & Whitney Canada - Précicast - Protec - Pyradia - RDC Contrôle - R/D Tech - Robert Mitchell - Rolls-Royce - Rousseau Contrôles - Sablage au Jet 2000 - Sermatech - Sermati - Shellcast - Sico - Sicotte - Sider-Tech - Simtran - Soudure Aérospatiale - Techniméca - Technique Design de l'Estrie - Tecnickrome - Teco Précision - Tecsuit Eduplus - Tiger-Vac - TNM - TQF - Tribospec - Tuboquip - Usinage Meloche - Usinage Profab Lemex - Usinage P.L. - Werner Metals - Wilson Machinerie.

If your company has received ISO or AS accreditation but is not on our list, please let us know.

IV – MANPOWER AND TRAINING

CAMAQ

<http://www.camaq.org>

Continuous improvement – May 20 session

CAMAQ's continuous improvement program continues. A group of 12 companies has been established for training on May 20. Of the twelve tools available, 5S+1 has to date been the most popular, followed by reduction in set-up times. Participants in every session have said that they have realized significant and recurring benefits in utilised space and cycle times.

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ÉCOLE NATIONALE D'AÉROTECHNIQUE (ÉNA)

<http://www.collegeem.qc.ca>

Human factors training in aviation maintenance

This 16-hour course is aimed primarily at aircraft maintenance technicians, people responsible for quality control of aerospace products and managers of Approved Maintenance Organizations (AMO). People interested in this course can now register for one of the two-day sessions which will be delivered at ÉNA from 8.00 am to Midday and from 1.00 pm to 5.00 pm on the following dates: May 12 and 13, June 9 and 10 and August 11 and 12 of this year.

It should be noted that this training complies with the requirements of Transport Canada Airworthiness Notice B058.

V - SHOWS, EXHIBITIONS AND SYMPOSIA

AQA dinner meeting

On February 19, the Québec Aerospace Association (AQA) held its third dinner meeting of the 2002-2003 season. More than 175 people listened to presentations by Mr. Robin Wohnsigl, president of Air Canada Technical Services and Mr. Keith Lawless, assistant to the president of Air Transat. The next dinner meeting will be on April 30 2003.

AEROSPACE CONGRESS AND EXHIBITION (ACE) 2003 (8 - 12 September 2003)

<http://www.aerospace-na.com>

<http://www.sae.org>

This event, organized jointly by Aerospace North America (ANA) and the Society of Automotive Engineers (SAE) Aerospace, will take place at the Montréal Palais des Congrès between September 8 and 12, 2003. Bombardier Aerospace is the host company. 500 exhibitors are expected from the aviation and aerospace industries including several large international prime contractors including Pratt & Whitney, Bell Helicopter, Air Canada, EADS, Snecma, GE Aircraft Engines and Lockheed Martin. 5000 visitors are expected to attend the event.

During the event SAE will hold four important conferences: the World Aviation Congress, the Aerospace Manufacturing Technology Conference, the Aerospace Automated Fastening Conference and the Advances in Aviation Safety Conference. The Québec Aerospace Association (AQA) will host a pavilion for Québec SMEs.

LE BOURGET 2003 (15 - 22 June 2003)

The 45th Paris Air Show will be held at le Bourget between June 15 and 22. Québec will have a stand and representatives from the Ministry of Finance, the Economy and Research, Investissement Québec, the Mirabel International Trade Zone, the Société générale de financement (SGF) and Montréal International will be in attendance. The Québec Aerospace Association (AQA) will also attend with 15 SMEs.

CONTACTING US

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<http://www.mic.gouv.qc.ca/aerospatiale>