



TABLE OF CONTENTS

I – INDUSTRY NEWS	1
ADACEL TECHNOLOGIES CANADA	1
AD OPT TECHNOLOGIES.....	1
AÉRO (ATELIER D'USINAGE).....	1
AVCORP INDUSTRIES.....	1
AVIANOR	2
BELL HELICOPTER TEXTRON.....	2
BOMBARDIER	2
CAE ÉLECTRONIQUE	2
DEN-O-TECH	3
HÉROUX.....	3
HONEYWELL AÉROSPATIALE	3
LOCKHEED MARTIN CANADA.....	3
MECAIR	3
SYSTÈMES BAE CANADA (MARCONI CANADA).....	4
ROLLS-ROYCE CANADA	4
SERMATI CANADA.....	4
SIMGRAPH	4
VIRTUAL PROTOTYPES.....	4
II – INDUSTRY DEVELOPMENT	4
QUALITY	4
MODIFICATION OF THE FAIRE PROGRAM.....	5
III – MANPOWER AND TRAINING	5
CENTRE TECHNOLOGIQUE EN AÉROSPATIALE.....	5
ACQUISITION OF A MACHINE TOOL (HIGH SPEED MACHINING)	5
IV - TECHNOLOGY	5
ELECTRONIC COMMERCE	5
LEAN MANUFACTURING.....	5
V – SHOWS, EXHIBITONS AND SYMPOSIA	6
GIFAS INDUSTRY MISSION	6
ILA 2000	6
FARNBOROUGH INTERNATIONAL.....	6
CLUB AÉROSPATIAL DINNER-MEETINGS.....	6
CONTACTING US	6

I – INDUSTRY NEWS

ADACEL TECHNOLOGIES CANADA

<http://www.adacel.com>

* *New contract*

NASA has awarded a contract to Adacel Technologies (Canada) for simulation software which will be used for the optimization of airport operations by its airline customers.

AD OPT TECHNOLOGIES

* *Resource scheduling software*

Ad Opt has developed human resource scheduling software for use by pilots and air traffic controllers. For an airline, the software develops a monthly schedule of pilot and cabin attendant work shifts which take account of personal preferences, collective agreements and country-specific regulations. For a pool of 2000 pilots, the software analyses 10⁷⁰ possibilities. The next release of the software is now under development and will be able to analyse organizations with more than 5000 employees. Founded in 1993, Ad Opt's 1999 sales were \$13 M.

AÉRO (ATELIER D'USINAGE)

* *D1-9000 certification*

Aéro (Atelier d'usinage) Itée has obtained Boeing's D1-9000 certification, which automatically qualifies the company to become a supplier to any Boeing factory, worldwide.

AVCORP INDUSTRIES

* *Appointment*

Mr. John H. Nicholson has been appointed president and chief operating officer, and a member of the Board of Directors of Avcorp Industries. A 44 year old native of the United Kingdom, Mr. Nicholson has a degree in mechanical engineering and has worked for several aerospace companies including Rolls-Royce. Avcorp's Integrated Products Division comprises two Québec sites: Laval and Granby.

L'AÉROSPATIAL

** New agreement*

Avcorp Industries has been awarded a \$3 M contract by Northrop Grumman Corporation Integrated Systems and Aerostructures for the manufacture of fuselage and tail components for the E-2C Hawkeye 2000. Avcorp's Laval, Québec Integrated Products facility will manufacture 21 structural assemblies.

AVIANOR

<http://www.avianor.com/janfeb2000/janfeb2000.htm>

** Agreement with Skyteller*

Dorval-based Avianor has developed a locking cash drawer for use with the Skyteller onboard currency exchange system. Avianor and Skyteller have also signed a marketing and customer support agreement.

BELL HELICOPTER TEXTRON

<http://www.bellhelicopter.textron.com/index.html>

** Agreement with Team Cormorant*

Bell Helicopter Textron has announced a partnership agreement with Team Cormorant to respond to the upcoming Request for Proposal for the Maritime Helicopter Program, the winner of which will supply helicopters to replace the Canadian Forces Sea King fleet. Should the Canadian Government select Team Cormorant as the supplier of the new maritime helicopters, final assembly of the Cormorant will take place at Bell Helicopter Textron facilities in Mirabel, Québec. This would result in 1000 person-years of work for integration of sub-assemblies at Mirabel.

The founding partners of Team Cormorant are Agusta SpA (Italy) and GKN Westland (United Kingdom). The Boeing Company is also associated with Team Cormorant as the supplier of the maritime patrol mission system which integrates the sensors, weapon systems and other systems on the helicopter.

BOMBARDIER

<http://www.bombardier.com>

** Sales*

- **Shangai Airlines** has announced the purchase of three CRJ-200s. It thus becomes the third customer from China in less than a year.
- **Air Nostrum**, of Spain, has signed a long term agreement with Bombardier for the purchase of regional aircraft. Air Nostrum has placed an initial order for 29 Dash-8 Q300s and 15 CRJ200s with an option for 40 additional aircraft.
- **Delta Airlines** has signed an agreement covering the purchase of 94 CRJ 50 and 70 seat aircrafts for delivery between 2001 and 2004. The agreement also provides for additional options on 406 aircrafts.

The CRJ order book now stands at 1536 aircrafts, 381 of which have been delivered.

CAE ÉLECTRONIQUE

<http://www.cae.ca>

Schreiner Aviation Training

CAE Électronique has announced the sale of two flight simulators to the Dutch company Schreiner Aviation Training. The first is a Boeing 737-800 NG which will be certificated to FAA Level "D" and installed at Schreiner's Amsterdam training centre towards the end of this Summer. The second is a 767-300 simulator. Both are fitted with the MaxVue Plus visual system.

** Singapore Airlines*

CAE has also sold a Boeing 777-200ER Full Flight Simulator to Singapore Airlines, which is convertible to 777-300 configuration. The contract includes a MaxVue Plus visual system and the simulation of the onboard ground manoeuvring camera system which are located on the underside of the aircraft and provide an enhanced field of view to the flight crew. This camera simulation system uses CAE's PC-based image generation system.

** Pilot training in Brazil*

CAE intends to become a major player in the worldwide pilot training services market. The company will build and operate a flight training centre near Sao Paulo, Brazil. The centre will be capable of accommodating up to 12 simulator bays, the first four of which will be ready for use in 2001. CAE is studying the possibility of creating additional such centres in other parts of the world.

CAE has signed a long term pilot training agreement with the Brazilian airline Transportes Aéreos Regionais (TAM). The agreement includes training for the Fokker 100 and Airbus A320 which will be delivered at the centre described above.

** Military contracts*

CAE has announced the following equipment and service contracts:

- \$5.5 M, over three years, for maintenance and servicing of all the Royal Navy's (UK) flight simulators including those which were not manufactured by CAE;
- A three-year contract (with an option for two additional years) for the maintenance of the Canadian Department of National Defence's flight simulators and procedures trainers. They are located at five military bases. Total contract value is \$13.5 M;
- A third T-6A procedures trainer to be delivered to Bombardier together with an option to upgrade the visual system. Total contract value is more than \$10 M. This contract is part of the NATO Flying Training in Canada (NFTC) pilot training program;
- Maintenance, repair and upgrade of all the procedures simulators used by Bombardier in the NFTC program. This contract has a total value of \$11.5 M over five years;
- The upgrade of a Royal Dutch Navy P-3C Operational Flight Trainer (OFT). The contract value is \$11.7 M.

L'AÉROSPATIAL

* *Miscellaneous contracts*

Air New Zealand: a Boeing 737-300 simulator fitted with an Evans & Sutherland ESIG-3800 visual system, to be delivered in early 2001.

Continental Airlines: a Boeing 767-400 simulator with MaxVue visual system.

American Airlines: a fourth Boeing 737-800 Full Flight Simulator.

Brit Air: a CRJ-200/700 simulator fitted with a MaxVue visual system which will be operational by this November.

China Airlines (Taiwan): two flight simulators. One is for the Airbus 340/330 and the second for the Boeing 747-400. Both will be fitted with a MaxVue Plus visual system.

Emirates: an Airbus A330-200 simulator to be delivered in November.

Flight Safety Services: a Lockheed C-5B Weapon System Trainer which will be delivered in 2001.

Jet Airways of India: a Boeing 737-800 simulator which will be delivered to Mumbai (Bombay) in 2001.

Lufthansa: an Airbus A319-100 simulator, fitted with a MaxVue visual system which will be delivered to Frankfurt in June 2001.

Raytheon: a MaxVue Medallion, a high performance system based on the Sogitec Apogee-3 visual system.

DEN-O-TECH

* *Agreement with Opera Software*

Den-O-Tech International (DTI) and Opera Software have announced a partnership agreement under the terms of which In-Flight Entertainment (IFE) systems and various Internet-related ground-based systems such as interactive television, kiosks, digital assistants and wireless communications equipment will be integrated with Opera's web browser. The Opera browser has won several awards and is renowned for its modest disk storage requirements and for its speed.

* *Agreement with Sextant*

Den-O-Tech has signed an agreement with Sextant In-Flight Systems for the development of software which will allow the integration of Intranet networks and Internet services with Sextant's IFE systems. Passengers will be able to browse pre-loaded Web sites and send email. As available bandwidth increases, the service will include real-time in-flight Web browsing just like in the office or at home.

HÉROUX

<http://www.herouxinc.com>

* *Contracts from the United States Air Force and Navy*

Héroux has been awarded new contracts with a total value of \$9 M from the U.S. Navy, Certified Aircraft Parts Inc. and the U.S. Air Force for the manufacture of landing gear components for the P-3, KC 135R and C-130 aircraft.

The company's Landing Gear Division has also won \$11.4 M in new contracts. They are also primarily with the U.S. Air Force and Certified Aircraft Parts Inc., and cover the manufacture of landing gear components for the C-130, KC-135 and B1B aircraft.

* *Bombardier contract*

The company "Corporation d'usinage Métro", which Héroux acquired last June, has won a series of contracts from Bombardier Aerospace with a total value of \$12.8 M. They cover the supply of structural components for Bombardier's business and regional aircraft, and for Airbus subassemblies.

* *Héroux purchase of Devtek*

Héroux, a specialist in landing gears, has purchased its Ontario competitor Devtek, which specializes in aircraft landing gear components and hydraulic systems. The resulting company, named Héroux-Devtek, will have annual sales of \$220 M and around 1150 employees.

HONEYWELL AÉROSPATIALE

<http://www.honeywell.com/>

* *Appointment*

Earlier this year Mr. Thomas Sharkey was appointed general manager of Honeywell's Québec facility which is now known as Honeywell Aérospatiale Inc. Mr. Sharkey previously held several management positions with AlliedSignal's aero-engine division in Arizona.

LOCKHEED MARTIN CANADA

<http://www.lmco.com/>

* *Agreement with Sikorsky*

Lockheed has teamed with Sikorsky in anticipation of the Request for Proposals for the Maritime Helicopter Program (MHP). The Montréal facility would be responsible for the supply of the mission system.

MECAIR

* *Appointment*

Mr. Loris Propetts has been appointed Chief Executive Officer of Mecair, a subsidiary of SPS Technologies and a specialist in high performance fasteners.

L'AÉROSPATIAL

SYSTÈMES BAE CANADA (MARCONI CANADA)

<http://www.marconi.ca>

*** CMA-806B**

The German Navy has selected the CMA-806B Doppler navigation system made by Systèmes BAE Canada as part of its modernization program for 23 MK41 Sea King search and rescue helicopters. Deliveries will begin by the middle of this year and will extend over a period of 18 months. The systems will be installed at Eurocopter's facility in Donauwörth, Germany.

*** CMA-4024**

Systèmes BAE Canada has rounded off its GPS family with a new 24 channel navigation receiver. The CMA-4024 has been designed to meet FAA Primary Means Navigation standard and can be used for flight guidance up to Category I precision approaches which will be available when the FAA's Wide Area Augmentation System (WAAS), which complements GPS, enters service in 2001. Ultimately the CMA-4024 system will be capable of Category IIIB precision approaches when used in conjunction with the Local Area Augmentation System (LAAS).

*** CMA-2102**

An increasing number of airlines are choosing the CMA-2102 high gain Satcom antenna from Systèmes BAE Canada for their new B747-400F cargo aircraft. They include Asian airlines such as Atlas Air, Cathay Pacific, China Airlines, EVA Airways and Singapore Airlines. This antenna, which is practically interference free, is capable of providing in-flight telephone and fax services as well as having the ability to transmit operations and navigation data.

*** BAE SYSTEMS HUD on the Global Express**

Tudor Investments (Oxford, Connecticut) has elected to install BAE SYSTEMS' Head-Up-Display (HUD) on its Global Express aircraft. This system, called a "Visual Guidance System (VGS)" by BAE SYSTEMS, and initially developed for American Airlines' 737-800 fleet, is now available to Global Express operators as an alternative to the factory "option" available from Bombardier. Systèmes BAE Canada will provide technical services and customer support for the system.

*** Contract with BAE for Coast Guard stations**

Systèmes BAE Canada will supply the Canadian Coast Guard with equipment related to the Global Maritime Distress and Safety System, which will be installed at Coast Guard stations at Resolute Bay and Iqaluit in the Canadian Arctic. As prime contractor, BAE will be responsible for systems integration and technical support while its partner ICS of Sussex (England), will supply the system elements (digital selective calling, radio telex and radio telephone).

ROLLS-ROYCE CANADA

*** New investment**

In anticipation of future growth in the industrial gas turbine market, Rolls-Royce will, in the course of this

year, construct a test facility near the Atwater water treatment plant in Montréal. This test facility will allow production systems to be qualified under realistic operational conditions while connected to an electrical grid. It will also allow the development of new variants of the Industrial Trent gas turbine. The baseline version of this engine generates 53 MW. This project will result in the creation of 200 jobs. The Industrial Trent will also act as the backup energy source for the City of Montréal electricity grid in case of emergency.

SERMATI CANADA

Sermati Canada is a French company which has recently established a presence in Montréal. Sermati specializes in the design and manufacture of assembly tooling for the aerospace industry.

SIMGRAPH

<http://www.simgraph.com>

*** A new module in the C-130 SBTA (Simulation Based Training Aids) family**

Since 1998, SIMGRAPH has developed seven simulation-based training modules for the C-130 Hercules. To achieve this, the company has worked closely with instructors and specialists from the Canadian Department of National Defence.

Since product launch last October at the Hercules Operators Conference '99 in Atlanta, several operators and industry representatives have expressed an interest in a training module for the Allison/Rolls-Royce T56-A-15 engine. Simgraph is now about to begin production of the eighth module in the C-130 SBTA series, originally developed for the Canadian Department of National Defence. It will be available in the Fall.

VIRTUAL PROTOTYPES

<http://www.virtualprototypes.ca>

*** Frost & Sullivan award**

Virtual Prototypes was the recipient of the 1999 Market Engineering Leadership Award for its innovation in development of the VAPS product. One of the major VAPS applications is aircraft cockpit design and development. It comprises a suite of software tools used in the specification, test, simulation and deployment of two-dimensional graphic interfaces. These interfaces can be activated either by sensors, or by inputs from the system operator. Frost & Sullivan is an internationally renowned marketing consulting company.

II – INDUSTRY DEVELOPMENT

QUALITY

*** Eighty five ISO registered companies**

L'AÉROSPATIAL

ABB Bomem - Abipa - Aéronav - Aérosystème International - Aérotech Tubetronics- Agence Mécanique Paré - Airborne - Air Data - Air LB Canada - Air Terre Équipement - Alphacasting - Alta Précision - Arell - Atelier d'usinage Aéro - Aviation Lemex - Bell Helicopter Textron - Bombardier Aéronautique - CAE Aviation - CAE Électronique - CAH - CEL Equipements d'Essai - CRIQ Essais - CPS Industries - CRL Technologies - Deburex - Delastek - EG&G Optoélectronique - EMS Technologies Canada - Farsound Canada - Finecast - Flexibulb - Fonderies Shellcast - Générale Électrique du Canada - GFI - Godfrey Aérospatiale - Harbour - Harrington - Hemmingford Aérospatiale - Héroux - Hochelaga Aérospatiale - Honeywell Aérospatiale - Howmet Aluminium Casting - James Dawson - Kvaerner QTC - JLM Précision - Les industries Profab - Les outillages K&K - Les trempesurs d'acier du Québec - Les trempesurs Thermetco - Lockheed Martin Canada - Mag-Chem - Marquez Transtech - Meloche - Mechtronix Systems - Mésotec - Messier-Dowty - Mil-Quip - Mittec Électronique - MDS Aero Support - Oerlikon Aérospatiale - Optimus - Outils Diacarb - PAM Électronique - Placeteco - Pratt & Whitney Canada - Primetech Électronique - Pôle Air Aviation - Robert Mitchell - Rolls-Royce Canada - RPM Tech - Sablage au jet 2000 - Sider-Tech - Sido - SNC TEC - Soudure Aérospatiale - Systèmes BAE Canada - TEAM - Technique Design - Technimeca International - Terminal & Câble TC - Tribospec - TRW Systèmes Aéronautiques - Ultraspec - Usinage P.L.

ISO 9000 registered companies generate more than 90% of Quebec's aerospace output. If your company is ISO registered, but is not on our list, please let us know.

MODIFICATION OF THE FAIRE PROGRAM

As originally announced on March 4 in the Québec 2000-2001 budget, the Industrie-Québec's FAIRE program will be modified to facilitate financial support to investment projects and acquisitions of more than \$2 M. This broadened program scope is aimed particularly at aerospace manufacturing SMEs. The government support can be in the form of a reimbursable loan or a loan guarantee. For more information, please contact the Aerospace and Defence Branch of MIC at (514) 499-6535.

III – MANPOWER AND TRAINING

CENTRE TECHNOLOGIQUE EN AÉROSPATIALE

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

ACQUISITION OF A MACHINE TOOL (HIGH SPEED MACHINING)

Thanks to a \$300,000 grant from the ministère de la Recherche, de la Science et de la Technologie, the CTA will now possess a machine tool capable of high speed machining. Its spindle speed is between 25,000 and 50,000 revolutions per minute, and has the capability

to manufacture a component from solid with a single setup. The CTA will therefore be able to offer SMEs the opportunity to experiment with this technology and to apply it to develop markets and train their employees.

IV - TECHNOLOGY

ELECTRONIC COMMERCE

Several industrial sectors are trying to penetrate the new electronic commerce market: telecommunications companies, information system companies and the banks.

In response, four major aerospace groupings have announced their intention to create portals this year. These portals are effectively virtual purchasing centres with transaction-enabled sites and supply chain management capabilities:

- MyAircraft.com (United Technologies and Honeywell)
- The Boeing, Raytheon, BAE SYSTEMS and Lockheed Martin group
- Airbus.space.com
- Aerospace.com (SITA and AAR)

These groupings are hoping to reduce their transaction costs by 5% to 10%.

Electronic Commerce is destined to profoundly change the supply process and stimulate more aggressive competition. Companies which can master lean manufacturing principles and implement management information systems (rapid quoting/standard pricing, inventory, capacity available, subcontract management) should be well placed to retain and grow their market share.

LEAN MANUFACTURING

Are you familiar with the hare race and kanban? During a lean manufacturing workshop, held on March 3, a lean manufacturing consultant showed us simple and impressive ways to double production and also free up resources to take on other tasks. A short overview of this meeting is available from the Aerospace and Defence Branch. You can request a copy by contacting Denise Coussa at (514) 499-6535.

In another initiative, the Ministry of Industry and Commerce regularly organises visits to factories in various regions which have adopted lean manufacturing techniques. This allows companies to see first hand the impact of lean manufacturing initiatives. A list of upcoming visits is available at: <http://www.mic.gouv.qc.ca/formation-entreprise> under the heading "ateliers-visites en entreprises".

The MIC also organizes, upon request, a one day workshop, including simulations which provides a basic understanding of the techniques involved. Group size is 15 and a minimum of three people per company is required (\$300 per person). For further information, please contact Mr. Normand Raymond at (514) 499-6535.

Should the need arise, the MIC can assist (Impact-PME program) by contributing to consulting fees

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associated with the integration of lean manufacturing into your company.

V – SHOWS, EXHIBITONS AND SYMPOSIA

GIFAS INDUSTRY MISSION

Between April 9 and 12, Québec hosted an industry mission comprising 30 company representatives from 24 French aerospace companies. The mission was the result of a joint initiative between the Groupement des industries françaises aéronautiques et spatiales (GIFAS) and the Aerospace Industries Association of Canada (AIAC). The Québec segment of the mission was organized by MIC. Around 170 people participated in the daytime activities on April 10, which included presentations by French and Québec prime contractors, a cocktail reception in the presence of Mr. Bernard Landry, Vice-premier ministre of Québec, and individual meetings between company representatives. More than 300 meetings resulted, with a common theme of partnering. April 11 was reserved exclusively for visits to specific Québec companies by the French visitors and on April 12 they visited the Pratt & Whitney Canada factory in Longueuil.

ILA 2000

Québec will attend the upcoming ILA 2000 aerospace exhibition, which will take place in Berlin between June 6 and 12. For further information, please contact Mr. René Parent of Investissement Québec at (514) 873-7305.

FARNBOROUGH INTERNATIONAL

The next Farnborough international will be held near London between July 24 and 30, 2000. The Ministry of Industry and Commerce will participate in this event, to promote Québec companies and Québec as an aerospace centre of excellence.

Québec will have its own stand within the Canadian pavilion. In addition, the Délégation générale du Québec in London will host a cocktail event on Wednesday 26 July, 2000 at the London Royal Automobile Club.

CLUB AÉROSPATIAL DINNER-MEETINGS

At the dinner-meeting held on February 9, 2000, nearly 200 people listened to presentations by Mr. Michael Graff, president of Bombardier Aerospace and Mr. Serge Francoeur, chief executive officer of Placeteco. This was the last Club aérospatial dinner-meeting organized by the MIC. As of May 10, the Québec Aerospace Association (AQA) will organize these events. The MIC will obviously continue to participate in the dinner-meetings and strongly encourages you to attend. For further information on upcoming dinner-meetings, please contact the AQA at (514) 596-2388.

CONTACTING US

* *Newsletter coordinator: Pierre Doré*

Aerospace and Defence Branch
Ministry of Industry and Commerce,
380 rue St-Antoine West, 4th floor
Montréal (Québec) H2Y 3X7

Telephone: (514) 499-2199 # 5901

Facsimile: (514) 864-3755

E-mail: pierre.dore@mic.gouv.qc.ca

* *"L'Aérospatial" is now also available on the MIC web site at:*

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

You can also obtain a copy at:

Fax-MICST: (514) 873-8335 or 1 800 565-6428

- French version of newsletter: no. 1110
- English version of newsletter: no. 1261