

Civil Simulation and Training news



one step ahead

Issue no.23 Fall 2010

MRJ Exclusive

CAE is Mitsubishi Regional Jet Exclusive Training Provider

CAE will develop and deliver a comprehensive training solution for the new Mitsubishi Regional Jet (MRJ) -- including a 10-year Exclusive Training Provider program and establishment of two training centres initially in the Tokyo, Japan area and the central United States -- under an agreement with Mitsubishi Aircraft Corporation (MJET).

In support of the agreement, CAE is expanding its training network and developing the world's first two MRJ full-flight simulators (FFS) as well as CAE Simfinity™ integrated procedures trainers. CAE will also design curriculum and courseware, and provide CAE training for pilots, maintenance technicians, cabin crew, dispatchers and ground support personnel.

"The comprehensive scope of the MRJ Exclusive Training Provider program showcases the unique breadth of CAE's simulation and training capabilities," said Jeff Roberts, CAE's Group President, Civil Simulation Products, Training and Services. "The MRJ training program includes a complete courseware solution, a suite of high-fidelity flight simulation training devices, training for the full complement of aviation professionals who will operate and service the aircraft, and CAE's demonstrated ability to collaborate successfully with OEMs and training partners."

The MRJ is a family of 70- to 90-seat next-generation jets which will offer top-class operational economy and outstanding cabin comfort. The 70-90 seat MRJ is planned to enter service in 2014 with launch customer All Nippon Airways (ANA).

Hideo Egawa, President of MJET, stated, "We concluded that CAE, with its vast experience, human resources and proven capabilities, would be our best partner for training. We're confident that working in collaboration with CAE, we will be able to provide our customers with the best training one could ask for."

ATR and CAE Sign Master Agreement

CAE developing world's first ATR42/72-600 full-flight simulator



Jean-Pierre Cousserans, ATR's Senior Vice President of Customer Services (left) and Jeff Roberts, CAE Group President, Civil Simulation Products, Training and Services

CAE and regional aircraft manufacturer ATR, the world leader in the 50- to 74-seat turboprop market, have signed a master agreement as a framework for providing a range of simulation equipment, training programs and support services to operators of ATR aircraft. CAE will now become ATR's primary training partner moving forward.

CAE will also develop the world's first ATR42/72-600 full-flight simulator (FFS) and associated training devices for the newest ATR aircraft.

ATR has also partnered with CAE Flightscape to offer flight data analysis (FDA) and flight data monitoring (FDM) services to all operators of ATR aircraft.



Marc Parent, CAE President and Chief Executive Officer (left) and Hideo Egawa, President of MJET



Flexible Solutions for Dynamic Airline Business Models

*Jeff Roberts, Group President
Civil Simulation Products, Training and Services*

There are many paths to becoming a professional airline pilot.

The primary route for many years had been through the military, where a pilot received highly focused, immersive training and practical experience. But the number of ex-military pilots available to the commercial air transport industry continues to diminish.

Another route has been to gradually accumulate licenses, type ratings and flight hours over several years – often at multiple flight schools with varying teaching techniques – then hopefully get hired at an airline. The new-hire pilot then goes through the airline’s own training program to become familiar with operating procedures. In some regions, airlines have undertaken their own dedicated ab initio and type rating pilot pipelines.

At CAE, we believe structured, integrated training which applies instructional best practices will produce highly qualified professional airline pilots through an efficient end-to-end process. That’s why we have built global networks of ab initio flight schools and type rating training centres.

Together with CAE’s world-leading simulation technology, our comprehensive portfolio enables our customers to tailor training programs to their unique business model ... and adapt as they grow to address the dynamic air travel market.

Vietnam Airlines is a prime example of how one customer is leveraging CAE’s range of capabilities. For several years, Vietnam Airlines has sent pilots to CAE training centres in Zhuhai and Singapore for initial

and recurrent type ratings. Recently, the airline undertook a rigorous process for developing their own training centre in Ho Chi Minh City. They analyzed their overall training needs in detail, determined which components made the most sense to bring in-house and which to secure through qualified partners, and then toured facilities around the world for conversations with training experts. We are very pleased that Vietnam chose CAE to build their first full-flight simulator. Until their centre is ready and operational, Vietnam Airlines pilots will continue to train with CAE in Zhuhai and Singapore, and soon in Kuala Lumpur as well. And in addition, they are sending ab initio cadets to the CAE Global Academy.

China Southern Airlines has been CAE’s joint venture partner at our type rating training centre in Zhuhai. In addition to supplying the airline’s needs, the centre offers third-party training to other operators of various Airbus, Boeing and Embraer aircraft. Earlier this year, the airline and CAE announced another JV – the China Southern Western Australia Flying College in Perth, the 11th member of the CAE Global Academy. Cadets who graduate from Perth will proceed to the Zhuhai training centre for type rating training, then become eligible to be hired as line pilots.

Structured ... focused ... integrated ... end-to-end. Only CAE can provide any or all of an airline’s pilot recruitment and training needs from a single, capable and credible company.

Let’s have a conversation about your airline’s pilot development and training needs.

Jeff

Accelerating Prototype Aircraft Development – C Series

A “virtual aircraft” developed in CAE’s Augmented Engineering Environment (AEE) will help Bombardier Aerospace to reduce its development schedule and risk for the new C Series 100- to 149-seat class aircraft, expected to enter service in 2013.

CAE is providing a comprehensive suite of products, engineering services and simulation-based technology tools to support the design, testing and certification of the C Series platform as part of Bombardier’s Complete Integrated Aircraft Systems Test Aircraft (CIASTA) program.

CAE has already delivered a host networking computer system designed to run the systems simulation models.

An engineering development simulator is to be delivered next spring, including a complete flightdeck environment with a visual system similar to a full-flight simulator. The engineering simulator will provide a “synthetic aircraft” interface that will help validate physical aircraft systems between the design freeze and prototype aircraft phases.

“CAE’s AEE provides a complete migration path from virtual aircraft to actual aircraft. It

starts at the concept stage, facilitates the design, verifies performance, shortens the testing, and supports the operation,” said Marc St-Hilaire, CAE Vice President of Core Technologies.

CAE will also design and deliver the prototype CAE 7000 Series full-flight simulator for the C Series, as well as a full suite of CAE Simfinity™ training devices to support the aircraft entry-into-service and Bombardier flight and technical training. CAE will also provide Bombardier with engineering design and support services throughout the development phase of the aircraft program.

CAE's civil aviation training presence in Asia and Australia



Bangalore

- CAE Training Centre
- Helicopter Academy to Train by Simulation of Flying (HATSOFF), JV between CAE and Hindustan Aeronautics Limited

Gondia

CAE Global Academy, partnership with Airports Authority of India

Kuala Lumpur

CAE Training Centre, partnership with AirAsia

Langkawi

CAE Global Academy, partnership with HM Aerospace

Perth

CAE Global Academy, JV with China Southern Airlines

Rae Bareilly

CAE Global Academy, CAE-managed for the Ministry of Civil Aviation

Singapore

CAE Training Centre

Sydney

CAE Training Services

Tokyo

Future MRJ Training Centre

Zhuhai

JV between CAE and China Southern Airlines

CAE Developing Training Suites for Boeing 787

As global airlines finalize their Boeing 787 Dreamliner aircraft delivery schedules and plan their training requirements, CAE is developing a comprehensive suite of training solutions. CAE 7000 Series full-flight simulators and other integrated training devices for the new aircraft are in production for Air New Zealand, Continental Airlines, Japan Airlines, and Qantas.

To date, CAE has won every Boeing 787 full-flight simulator contract directly competed by airlines. The CAE training solutions suite for the Boeing 787 also includes a CAE Simfinity™ desktop virtual simulator / virtual maintenance trainer (VSIM / VMT) and three types of CAE Simfinity™ flight training devices (FTDs): a Level 4 FTD based on the CAE Simfinity™ integrated procedures trainer, a Level 4-plus FTD with extended product package, and a Level 5 FTD. Customers have ordered more than 30 simulation devices.



It's True ...

- **The first CAE 3000 Series helicopter mission simulator** (an AS350 B2) has been FAA qualified for Level 7 training. It is located near Sky Harbor International Airport in Phoenix, Arizona.
- **A CAE Bell 412 full-mission simulator in Bangalore, India** has been certified to Level D by India's DGCA and EASA.
- **Saudi Arabia Airlines has ordered a CAE 7000 Series Airbus A330/340** convertible full-flight simulator and an enhanced CAE Simfinity™ Airbus Pilot Transition trainer.
- **CAE has recently won orders for full-flight simulators in Asia** from Korean Air, Lion Air, Malaysia Airlines, Mount Cook Airlines, Shanghai Eastern Flight Training Company (China Eastern Airlines), Skymark Airlines, and Vietnam Airlines.

Cadet-to-Captain

Candidate selection ... ab initio training ... and type-rating training – all in a seamless, one-source, turnkey process for airline pilot provisioning

As air traffic growth resumes, where will airlines get the well-qualified pilots to safely and efficiently fly expanding aircraft fleets and routes? Many airlines are turning to the extensive resources and experience of CAE to help address both near-term and future pilot requirements.

CAE's pilot provisioning program is a one-company solution that assists airlines in recruiting and identifying the best candidates, provides entry-level flight training focused on airline operating procedures, and delivers type-rating training at conveniently located centres around the globe. In addition, CAE maintains a database of thousands of qualified captains and first officers who are prepared to quickly fill current flight deck needs.

Start with the 'right stuff' – Identifying the best candidates from hundreds or thousands of aspiring pilots is an essential first step toward successfully developing excellent airline crew members. The CAE Aircrew Selection System (CASS) uses advanced aviation-specific psychological and physical skills tests, as well as a structured interview process with trained observers, to help evaluators determine which candidates have the "thinking and doing" capabilities to perform under stressful conditions.

Global-standard entry-level training – With the recent addition of the China Southern West Australian Flying College in Perth, the CAE Global Academy network of ab initio flight schools now has the capacity to train 1,800 cadets a year. The CAE Global Academy has schools in Malaysia, India, Cameroon, Portugal, Belgium, the Netherlands, Canada, and the United States. The member flight schools are able to leverage CAE's experience in training professional pilots across the spectrum –

commercial, business and general aviation, as well as the military. This translates into standardized best practices and a consistently high-quality graduate.

A truly global type rating network – CAE's international network of 24 civil aviation training centres (and growing) enables training on more than 140 different aircraft models. In addition to the finest Level D full-flight simulators, expert instructional staff, and curricula tailored to each customer's requirements, CAE training centres are renowned for their culture of service excellence.

The end-to-end trend – The CAE Multi-crew Pilot License (MPL) program uses each of these CAE cadet-to-captain capabilities – CASS candidate screening, the CAE Global Academy for core and basic phases, and CAE training centres for intermediate and advanced phases. The 56-week beta program for sponsoring airline AirAsia recently passed its midway point, and the 12 cadets are all meeting or exceeding expectations.

Graduates of the CAE Global Academy in Perth will continue on for type rating at the joint venture training centre operated by China Southern Airlines and CAE in Zhuhai, China. Vietnam Airlines recently announced they are sending cadets to the CAE Global Academy in Phoenix; the airline also trains pilots at CAE centres in Zhuhai and Singapore, and soon in Kuala Lumpur. (Plus they recently ordered a CAE Level D A320 full-flight simulator for their own new training centre.)

To date, more than 2000 CAE-trained pilots have been provisioned for IndiGo, Kingfisher, Jazzera, Wizz, Xiamen and other airlines.

Chris Stellwag, Rick Adams, Heather Dane, *Editors*
Jimmy Tigani, *Graphic Design*

Reader feedback welcome: flightnews@cae.com

