

ADGA

CASE STUDY

**CH-146 MRTT: Cost-effective
simulation for tactical aviation**



CH-146 MRTT: COST-EFFECTIVE SIMULATION FOR TACTICAL AVIATION

Customer Challenge

The Bell CH-146 Griffon is a multi-role utility helicopter that first entered service with the Canadian Armed Forces in 1995. Its varied roles include aerial firepower, reconnaissance, search and rescue and aero-mobility tasks.

Given the Griffon's multi-purpose role, mission rehearsal and tactical training is crucial for flight personnel, which typically consists of two pilots and a flight engineer. But in-flight training is costly – conservative estimates put the rate per flying hour for the Griffon at more than \$12,000.

The need for fiscal prudence and accountability to the Canadian taxpayer has fueled the adoption of Modelling and Simulation (M&S) in defence system life cycles across the CAF to reduce training costs. The first M&S systems for the Griffon were developed in the 1990s. The cost of employing the complex, full-motion M&S systems typical of commercial aircraft can be prohibitive for a budget-conscious military.

Approach

DND issued a call for simulation technical investigation and engineering services (SIM-TIES) to deliver a unified and web-based M&S platform for the Griffon that would follow recognized interoperability standards and encourage adoption and sharing of best practices and information.

In 2017, ADGA won the competitive SIM-TIES bid. ADGA now employs a multi-disciplinary team of developers, designers, instructors and engineers to provide simulation services, on an “as-and-when requested basis.”

Services provided by ADGA encompass:

- Distributed Simulation Engineering and Execution Process (DSEEP) services
- Exercise Control (EXCON) Services to assist DND ops teams in defining and being able to fill the applicable roles
- Distributed Mission Training (DMT) development
- Exercise management, development and execution services
- Ongoing in-service support for simulation infrastructure
- Providing simulation-based and simulation-centered learning content
- Assessing effectiveness of simulation practices and developing simulation performance metrics
- Providing network engineering services

Outcome

ADGA continues to support and maintain, an effective and reliable training platform for the Griffon that reduces training time and cost.

To date, six of the Mission Rehearsal and Tactics Trainers (MRTTs) have been deployed at CFB Gagetown, Valcartier and Edmonton. These MRTTs include a variety of mission kits that allow for each simulator to be quickly customized for different mission parameters.

Under the terms of the current contract, ADGA supports and sustains the MRTTs to ensure they continue to serve the evolving needs of the CAF. This includes the development of portable MRTTs. These units distill the functionality of the full-sized units into a much smaller footprint, to dramatically expand the flexibility of simulator training for Griffon crews, wherever in the world they may operate.

During deployments overseas, CAF personnel often encounter situations that are unique to each theatre of operation. ADGA can quickly configure portable MRTTs with custom electronic warfare mission kits to simulate local conditions for optimal training by Griffon crews on-site. Threats can be simulated in a way that is simply not possible on an actual ship in the air. This mitigates the risks of loss of life, damaged equipment and mission failure.

ADGA's proven expertise in custom M&S development for the Griffon and other defence systems instills strength, confidence and expertise into Canada's Armed Forces, to prepare military personnel for the modern battlefield and ensure mission success.





Founded in 1967, ADGA is a leading Canadian provider of technology solutions, consulting and professional services. Headquartered in Ottawa, with offices across Canada, we are a privately owned and operated company with over 800 technical consultants and subject matter experts delivering strategic insight, world-class capabilities and service excellence to clients within the following industries:

- Defence
- Education
- Energy & Utilities
- Health Care
- Media & Telecommunication
- Mining
- Public Safety
- Public Sector & Government
- Real Estate; and
- Transportation & Aviation

Our services are organised internally through industry-focused Business Services teams as well as capability-driven Consulting Practices, which ensures that clients benefit from robust service delivery frameworks as well as specialist technical knowledge and expertise.



MEMBER OF THE ADGA GROUP

Presidia Security Consulting (Presidia) provides security, intelligence and investigation services with related marketing and communications strategies to support them. With extensive executive experience within the Canadian security and law enforcement communities, Presidia principals have led the development of strategic research and policy documents and have implemented innovative security solutions that are now cornerstones of key business processes. Our team members have developed best practices – both at home and abroad – to protect their people, assets, operations and reputations.



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Extravision specializes in the development, design and integration of security technologies. However, our expertise in this field goes beyond security equipment. Our integrated security management approach relies on our extensive expertise, capitalizing on our knowledge, analytical skills and knowhow to provide the most effective and optimized means of security. As a security system integrator, Extravision responds precisely to customers' distinctive needs with a personalized solution, regardless of the scale of the project, within allotted budgets and timeframes.

ADGA's CONVERGED SECURITY SOLUTIONS

ADGA's Converged Security Solutions offering is unique in Canada, providing a peerless combination of **ADGA**, **Presidia** and **Extravision** capabilities to address your unique security challenges. These areas of expertise include Personnel Security, Cyber Security, Electronic Security Systems and Physical Security, all supported by a robust security program and enterprise risk management framework. This framework ensures a holistic approach to security and identifies risk relative to organizational objectives, producing cost-effective response strategies and tangible, validated results. This full-stack approach provides "one-stop shopping" for custom-made security solutions for both large and small organizations and delivers world-class security expertise and services – enriched by a global network of trusted industry partners – to government, corporate, private and non-profit organizations. Employing a discreet, confidential and consultative approach, we work closely with our clients to protect their people, information, assets, facilities and reputation in today's dynamic and complex threat and risk landscape.