



Delivering Comprehensive Solutions  
**Designed for Your Requirements**

*Engineering | Certification | Manufacturing*

*Ian Stewart & Udaya Silva*

# EMTEQ Worldwide

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- A grayscale world map showing the global presence of EMTEQ. Stars indicate specific office locations in North America, South America, and Europe. Dots indicate sales offices in various regions including Africa, Asia, and the Middle East.
- **EMTEQ<sup>®</sup>, Inc.**  
New Berlin, WI USA
  - **EMTEQ Engineering, Inc.**  
Miramar, FL USA
  - **EMTEQ do Brasil Ltda.**  
Taubaté, Brazil
  - **EMTEQ Canada / ACS-NAI, Ltd.**  
Winnipeg, MB Canada  
Montreal, QC Canada
  - **EMTEQ Europe GmbH**  
Bachenbülach, Switzerland
  - **EMTEQ Montana**  
Great Falls, MT USA
  - **Sales Offices Worldwide:**  
Brazil, China, India, Sub Saharan Africa, Israel, Pakistan,  
Singapore

# About Us

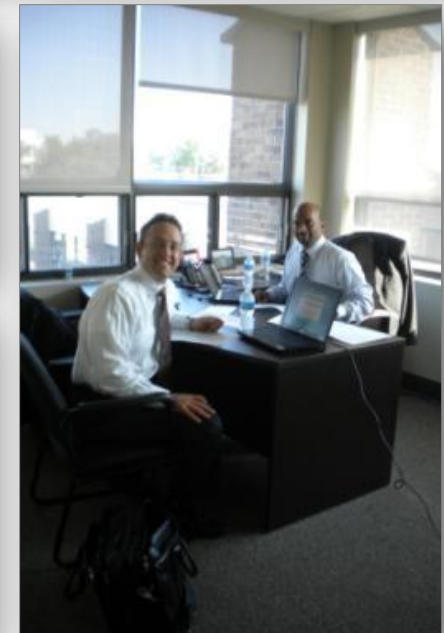
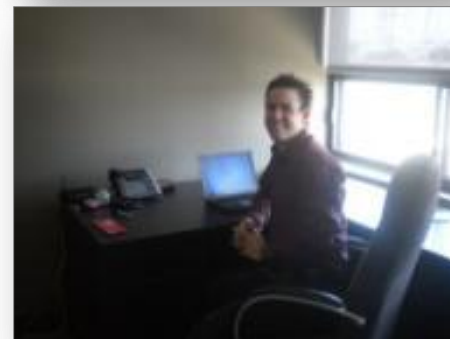
## EMTEQ Winnipeg facility

- ▶ 39,000 sq. ft of engineering & production space
- ▶ AS9100 certified
- ▶ Canadian Controlled Goods registered
- ▶ 70 employees



## EMTEQ Montreal facility

- ▶ Engineering, Customer Liaison/service
- ▶ Close proximity to Bombardier
- ▶ 10 employees



# Key Customers

**BOMBARDIER**

**PILATUS**



Gulfstream®

**THALES**



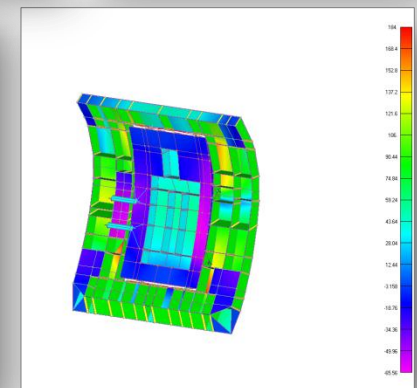
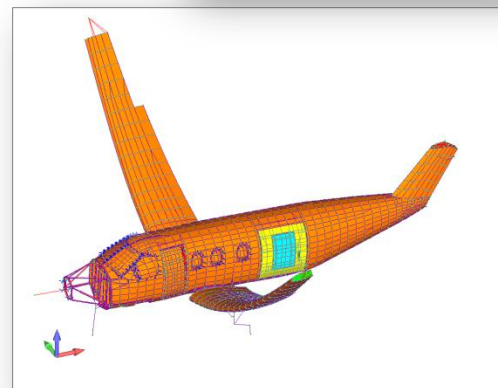
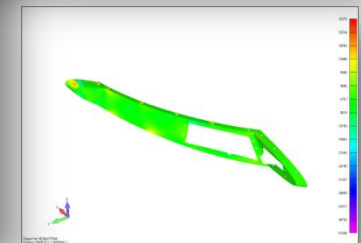
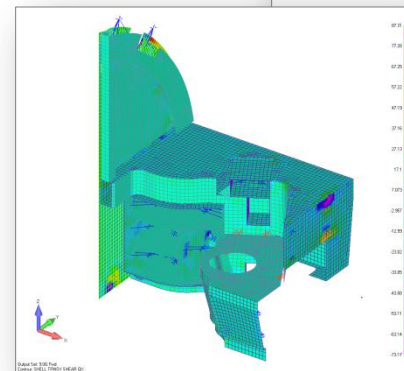
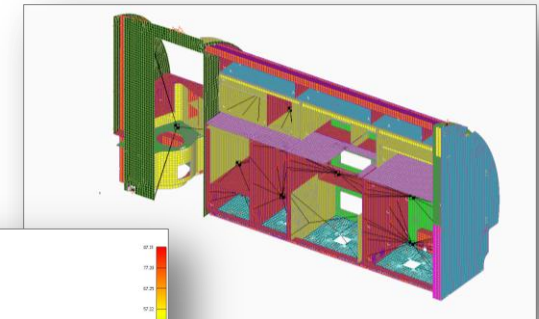
**SkyWest**  
AIRLINES®





# Structural/Stress Engineering

- ▶ Stress Analysis – classical hand analysis
- ▶ Fatigue & Damage Tolerance Analysis
- ▶ Finite Element Meshing/Modeling & Analysis
- ▶ Decompression Analysis
- ▶ Composite Structural Analysis
- ▶ Tools: NASTRAN/PATRAN/FEMAP





# Aerospace Review

Developing SMEs in Manitoba

# Recommendation 1

## Aerospace as a Strategic Area of National Interest

- The report identifies this step as critical to set policy for government agencies that administer funding programs.

- It must also serve as a message to Transport Canada.

- Transport Canada's current Mission Statement:

*“Transport Canada's mission is to serve the public interest through the promotion of a **safe and secure, efficient and environmentally responsible** transportation system in Canada.”*

- source: [www.tc.gc.ca](http://www.tc.gc.ca)

- The lack of emphasis on supporting the growth of the Canadian aerospace industry is evident in our day-to-day interactions with TCCA.



## Recommendation 2

### List of Technology Priorities

- Efficient and environmentally sound technologies are clearly a requirement for the future.
- We cannot ignore the ultimate paying customer – the passenger.
- Both the owner of a private jet and the fare-conscious paying passenger are demanding the same luxuries and convenience items of everyday life.



## Recommendation 2

### List of Technology Priorities

- In addition, the airworthiness standards for interior features change significantly over the years as compared to other areas.
  - Lessons learned from history
  - Keeping up with technology implementation
  
- Therefore, we see Aircraft Interiors as a key area which should be listed as a Technology Priority. This would include:
  - Composites (light-weight cabin structures)
  - Cabin Monuments and Decorative materials
  - Passenger communication and entertainment systems
  - Seating systems

## Recommendation 3 Technology Demonstration Program

- We have experienced the Valley of Death.
- New product development can be too costly for small businesses, as in many cases, on-aircraft testing/demonstration is required before certification.
- Without the partnership of OEMs or airlines willing to share risk, product development can become financially impossible.
- We recommend that proposed Technology Demonstration Program not be limited to large-scale opportunities.



## Recommendation 8 More Bilateral Agreements

- Successful bilateral agreements are critical for us to recognize market opportunities around the world.
- However, the report failed to address that the implementation of our current bilateral agreement with our largest trading partner, the US.

Average STC Validation Time with EASA: 3 – 4 weeks

Average STC Validation Time, TCCA to FAA: 9 – 12 months

Average STC Validation Time, FAA to TCCA: In many cases,  
instantaneous

- Not only does this impact our ability to bring products to the US market, it negatively affects our ability to sell our design and certification expertise south of the border.

## **Recommendation 11**

### **Cost Recovery for Certification**

- We believe this single recommendation will have the most long term benefit to the future of the Canadian aerospace industry.
- Enabling a civil-service organization to function as a regular business entity will drive a culture change that we can all benefit from
- We have seen such a transition occur with EASA, where numerous tax-funded CAA's were amalgamated into a self-funded organization.
- We don't believe Transport Canada will have the desire or stamina to make such a change without pressure and support from industry.