Getting ahead of the safety curve

BY IAN BIRRELL

"Why don't they make the of that black box stuff?"

Star Navigation Systems Group Ltd. [SNA-TSXV] is headquartered in Toronto, Canada, has developed the In-Flight Safety Monitoring System – ISMS™ – the first system in the world to feature in-flight data-monitoring and -diagnostics with a real-time, secure connection between aircraft and ground, made possible through current technology and satellite transmission.

The ISMS™ (In-Flight Safety Monitoring System) collects real-time data from an aircraft's operating systems; it analyses the data checking for systems exceeding performance norms, and instantly transmits the data, via secure satellite connection, to the Star Navigation ground station, initiates alerts on any performance variances. Alerts are simultaneously relayed to the airline operator, flagged for urgency and directed to airline personnel, according to a pre-established urgency-protocol. In the event of an emergency alert, Star Navigation's ground station contacts designated airline personnel by – phone, email, SMS-text messaging and pager – to advise them of the alert and the need to log onto their ISMS™ link. Unlike a Black Box, this technology is proactive and monitors an aircraft's systems in flight.

The live ISMS™ connection enables the airline to give expert back-up to the pilot in command of the aircraft. On the ground, multiple systems-experts can have a virtual window into the aircraft operating systems which enables informed decision-making on what course of action is required. In critical, time-sensitive situations, any number of experts can be brought in to assess and advise, at anytime and from anywhere in the world.

The system has been tested and certified for airworthiness by world transport authorities including the FAA and Transport Canada. Star Navigation owns the world-wide license to the ISMS™ which is patented in the United Kingdom and has patents-pending in the United States, Canada, Germany, Japan, Hong Kong, Australia and India. Star Navigation's ISMS™ has several advantages over existing aircraft monitoring systems with significant safety-enhancing and cost-saving benefits for airlines. Its real time capability of tracking performance trends and predicting incident occurrence enhances aviation safety and improves fleet management while dramatically reducing operating and maintenance costs.

Star Navigation generates revenue through sales of its product, and ongoing satellite transmission and support services. SNA has already identified a number of additional revenue streams through secondary applications of its technology. The company is currently working on an in flight medical-monitoring module and has an agreement in process with Sunnybrook Air Ambulance of Toronto, with an expected roll-out date in first quarter 2006. Star Navigation is also developing an aircraft environment monitoring module which will detect viruses and bacteria, preventing the international spread of infectious diseases through aircraft and passenger quarantine.

Star Navigation closed Q3 2005 with its first contract, worth $9 million and six proposals worth a further $30 million. An independent valuation by Evans and Evans of Vancouver, BC in 2002, placed the value of the company's technology in excess of $50 million.

ISMS™ is new and proprietary technology. It is not an adaptation or refinement of existing aircraft monitoring systems which have reached their old technology limits. Star Navigation's system offers several advantages to the world's airlines. It is a proactive system that flags potential problem before situations escalate to incidents.

This system alerts engineers to the need for preventative maintenance, and keeps airlines fully informed with end of flight reports. The core technology has multiple applications; in flight operations safety, aircraft environment monitor-

whole plane out

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ing and in flight medical support.

With ISMS™ on board, every operating system on the aircraft is in "live" contact with ground control, from preflight to docking at the destination terminal. The in flight safety monitoring system is calibrated to detect performance variance from the manufacturer, the airline/operator compares them to the aircraft's prior flights. This capability means that ISMS™ acts as a yellow alert warning system, detecting the earliest signs of potential problems. Whereas existing aircraft monitoring systems operate on a red alert system – that is, signaling full-blown problems requiring immediate reaction, the ISMS™ system allows preventative maintenance on the ground. The critical value is that ISMS™ can pre-empt disaster.

Star Navigation CEO and Chairman Viraf Kapadia says that his system costs "pennies per passenger per flight" he goes on to highlight the cost savings of the system to airline operators. Currently Star Navigation is targeting the aging aircraft fleet as most likely to benefit from the system. The servicing of this fleet is a reported US $4.5 billion industry. Mr. Kapadia notes that it costs $250,000 to cancel a flight, costs that could be saved by maintaining and scheduling repairs in a more efficient manner.

Star Navigation has some proven experience on its board including Mr. Pierre J. Jeanniot, who was Director General and CEO of the International Air Transport Association (IATA) from 1993 to 2002. He is now Director General Emeritus in recognition of his outstanding contribution to international civil aviation. From 1984 to 1990 Mr. Jeanniot held the position of President and CEO of Air Canada. He is currently Chairman of the Advisory Board of Star Navigation.

Mr. Jeanniot, in speaking about the benefits of this system said, "The system will increase aircraft reliability, lower costs to airlines because they can target maintenance resources more effectively and provide a safer environment for passengers, crew and staff." Additionally he is optimistic about the potential market for Star Navigation in Asia.

The Asian airline industry is in a much stronger position than its North American counterpart.

As the aviation industry continues to struggle with rising costs, the ISMS™ system could go a long way towards making it more profitable, safer and efficient.

The airlines save money with efficiencies, passengers get a safer ride, insurance companies have better risk assessment capabilities, health departments and organizations can track virus and disease. For the Microcap investor, this is definitely a company that merits further research.

The company's latest press release dated March 29, 2006 states that it will be installing Star's flagship product, the ISMS™ – In-Flight Safety Monitoring System, on a Pakistan International Airlines (PIA) Airbus A-310.

SNA current share price is 0.34 as of (05/04/2006) □