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SAGEM has for many years globally marketed one of the most advanced suites of flight data analysis tools available in the world for use by the aviation industry in analyzing aircraft flight data.

During the past three years we have had the pleasure of working with the NASA/Battelle APMS development program in our mutual association with our common airline customers/partners in the United States. Thru this association we have become aware of the work that the NASA/Battelle team has accomplished in upgrading existing flight data analysis capabilities thru new technology that they have developed.

The APMS suite of tools is very powerful and incorporates a new approach in statistical analysis of flight data thru the development of the Morning Report tool. This tool works differently than any other COTS tools currently available to the aviation community for extracting information from very large databases containing aircraft flight data. The Morning Report tool, which is based on multivariate statistical analysis techniques, finds previously unexpected flight performance events that may have occurred before the user knew to look for them. The primary technology for this new capability was developed by a team of scientists at Battelle's Pacific Northwest National Laboratory in Richland, Washington, headed by Dr. Tom Ferryman.

It is also our understanding that Dr. Ferryman and his team have been nominated by R & D magazine for their R & D100 award for development of this new technology.

This capability surpasses the current analysis capabilities of any other COTS analysis software. The R & D effort funded by NASA and executed by Battelle goes beyond the in-house resource capabilities of most commercial software vendors' R & D budgets.

We are well aware of the significant potential this new technology has for our customers in extracting new information from their FOQA databases. We have worked with NASA and Battelle to help facilitate this development work and following the successful testing of this technology on actual airline flight data at our mutual airline customers, SAGEM entered into a licensing agreement with NASA in August, 2004, to implement and market the Morning Report tool.

Additionally, SAGEM has entered to a licensing agreement with NASA for commercialization of the APMS Aviation Data Integration System (ADIS) tool that, for the first time in the history of commercial flight data analysis, disparate data sources are integrated directly into the flight data analysis process. The first implementation of this

technology is for the integration of actual weather reports and conditions that existed at the time of any flight event that is selected for analysis.

Also of great interest to SAGEM is the new APMS Aircraft Energy State indicators that have been developed by the NASA/Battelle team and are now undergoing testing. This new technology calculates the Kinetic, Potential and Total Energy values for every second of any selected flight. This information is then used to identify flights that begin to accumulate excessive levels of energy prior to landing that could cause the flight to become unstable, thus greatly elevating the risk of an incident or accident.

The implementation of this new technology in flight operations safety programs is expected to provide significant insight into the causal factors of high-energy related aircraft approach and landing mishaps. And, again, much of the underlying algorithms of this program were provided by Dr. Ferryman's team at Battelle - Pacific Northwest National Laboratory.

We are very proud of our association with the NASA/Battelle development team and wish to thank the NASA Aviation Safety & Security Program (AvSSP) for its support of these very worthwhile projects, the result of which benefits the worldwide aviation industry. We look forward to continuing our work with NASA and Battelle to further the development of other new technologies.

We also strongly support the Battelle - Pacific Northwest National Laboratory and the development team headed by Dr. Tom Ferryman for the R & D100 award for the work accomplished on this project.

Sincerely,



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