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# Wearable computers aid air traffic controllers

***by Francis L. Crumb, Information Directorate***

*ROME, N.Y.* — Air Force Research Laboratory (AFRL) engineers are directing research to develop small, powerful computers that can be worn by military and civilian air traffic controllers to enhance their ability to monitor crucial information.

The work will be performed by Information in Place, Inc., of Bloomington, Ind., under a nine-month contract: "Military and Civilian Air Traffic Management Information Exchange and Visualization." The agreement is funded under the federal government's Small Business Innovative Research (SBIR) program.

"This research is intended to develop and apply augmented reality and wearable computer technology to the problems of air traffic control," said Alexander C. Sarnacki III, program manager at the AFRL Information Directorate.

The technology will center on relatively powerful computers about the size of two decks of playing cards stacked together. The hardware is currently being used by shipbuilders who require access to voluminous blueprints.

"Augmented reality technology will allow a tower controller to look through a lens such as goggles or eyeglasses and get information on aircraft they are observing — such as the type of plane and flight number," said Mr. Sarnacki. "The lens could annotate what the controller is looking at by adding information such as weather conditions. The technology could potentially enhance a controller's ability to operate in low-visibility situations."

Wearable computer and augmented reality technology is envisioned to help integrate and assimilate the large amounts of information presented to air traffic controllers. This will provide controllers with an effective tool with which they can maintain situational awareness and make rapid, accurate decisions.

The SBIR program funds early-stage research and development at small, high-technology companies. It is designed to stimulate technological innovation; increase private sector commercialization of federal research and development; increase small business participation in federally funded research and development; and foster participation by minority and disadvantaged firms in technological innovation. **@**