Voice Technologies

**UFA** Inc. is a leader in Air Traffic Control (ATC) simulation technology providing simulation products to air traffic control organizations worldwide with installations today in:

- **North America**
- **South America**
- **Europe**
- **Asia**
- **New Zealand**
- **Africa**
- **Australia**

UFA’s high fidelity standalone and embedded turnkey solutions are used to support various ATC applications:

- **Research and Development**
- **Test and Certification**
- **Prototyping**
- **Training**

Our full complement of ATC simulation products cover all phases of control:

- **En Route**
- **Terminal**
- **Precision Approach**
- **Tower**

The company is headquartered in Boston, MA, with offices in Washington, DC. UFA’s wholly owned subsidiary, **ATCSIM GmbH**, has offices located in Mainz, Germany and in Kaufbeuren, Germany. Our highly experienced technical staff includes individuals with ATC automation systems experience including system engineers, software engineers, air traffic controllers and air traffic technicians.

**ATCoach®** provides high fidelity standalone or embedded simulation of En Route, Terminal and Precision Approach ATC environments. ATCoach consists of five main modules: Data Preparation, Data Generation, Data Recording and Playback, Pseudo Pilot, and Supervisor. These modules can be utilized in various combinations, configurations and distributed on multiple platforms to meet the specific needs of a training, testing and research and development environment.

ATCoach supports a wide variety of ICAO, FAA and international radar and flight data formats.

Current applications of ATCoach range from a test, training and research tool at the DFS Deutsche Flugsicherung in Germany, embedded test and training support for the Lockheed Martin Skyline System, test support for the FAA URET program, embedded test and training support for the FAA STARS and ERAM programs, standalone trainer for University of North Dakota, standalone Precision Approach Radar (PAR) Simulation trainer for the US Military, to standalone and embedded training for NAV CANADA.

**ATTower®** The ATTower Product Line is designed to provide high fidelity stand-alone training for Tower, Apron, Approach, Precision Approach and En Route Control. Whether individual or team training is required, the ATTower product can provide a wide range of training scenarios. ATTower provides integrated out of the window views, binocular view, airport lighting, airport weather information display, en route radar, approach control radar and ground control radar simulation.

The system can be configured with 2D visuals for lower fidelity training or with high fidelity 3D views ranging up to 360 degree field of view. The viewpoint can be changed to any position in the 3D visualization space including various tower cab and cockpit views.

Using full physical models of aircraft, ATTower achieves the highest fidelity to satisfy correct visual detection, recognition and identification of aircraft by experienced controllers. Exercise and aircraft model editors are easy to use and allow configuration of the most complex exercises in an easy and intuitive manner. Full control of weather and ambient conditions enables the most realistic training scenarios. Aircraft
behavior is fully responsive to weather impacts. The Pseudo Pilot controls allow for full control of aircraft on the ground and in the air. Toolsets are included for development of site and scenario data. As an option a surround sound system can be added to provide sound simulation of aircraft and ambient noise conditions. The sound is fully integrated with the simulation scenario so that movement of aircraft in relation to the viewpoint causes the generated sound to track with the aircraft position.

ATTower is currently in use by the US Army, DGAC/ADP at Charles De Gaulle Airport and Orly Airport, DFS Langen Training Academy, FINAVIA Finland, AAI CATC in India, EUROCONTROL, NAV CANADA in multiple locations, Pudong International Airport, Shanghai, China, Chek Lap Kok International Airport, Hong, Kong, and LVNL at Schiphol/Amsterdam Airport.

ATVoice® ATVoice is a robust voice control system that allows the user to control a simulation system through voice commands. Used in the ATCoach or ATTower environment, ATVoice can take the place of pseudo pilot simulation control. It accepts and implements controller voice clearances as well as generating the appropriate “pilot” responses to these commands. ATVoice is based on BBN Technologies HARK Avoke voice recognition system, a continuous speech, speaker independent system that does not require each user to “train” the system in order to have it recognize his or her own voice.

In addition to use with ATCoach and ATTower installations, ATVoice may also be used in other simulation applications where a defined and structured vocabulary is used. ATVoice is currently in use in the US and a number of international locations. These include US Army, US Army National Guard, US Air Force, colleges and universities, NAV CANADA, and Civil Aviation Authority China.

ATRadio® is a software application that utilizes Voice Over IP technology to simulate a Voice Communication System (VCS) in Air Traffic simulation environments. It is designed to model pilot and controller radio and ground based intra facility and inter-facility communication. In combination with UFA’s headset interface unit, commercial off the shelf workstations, and LCD touch screen displays, ATRadio provides an authentic replication of the ATC communications environment while offering a wide range of functions that enhance the quality of ATC simulations.

ATSpeak™ is a software application that utilizes Voice Recognition and Response to provide ATC Phraseology and Language training for controllers. Use of Voice Recognition and support of laptop hardware allows for cost effective individualized training capability.

Additional Information & Demonstrations
To obtain additional information or arrange for a demonstration please contact any of the following:

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