"Voice over IP for air traffic communications"

Technology #m10-043

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Air traffic controller system using voice over IP replaces analog hardware:
The Federal Aviation Administration (FAA) is an administration of the U.S. Department of Transportation with the authority to regulate and oversee all aspects of civil aviation in the U.S. Current communication systems in use by the FAA for both training and real-world air traffic control rely on a dedicated infrastructure composed of custom-built analog hardware. These systems allow for a complex mix of simultaneous communication protocols required for air traffic control, but are expensive to maintain, reconfigure and upgrade for handling of new scenarios and new communication protocols.

VoIP for air traffic communications comparable to analog systems with advantage of upgradability and ease of monitoring and control:
This technology represents a voice over IP (VoIP)-based air traffic controller system that is capable of running on the FAA's existing data network backbone. VoIP reproduces the functionality of complex analog communication systems with the added advantages of upgradability and ease of monitoring and control especially for training purposes. It has already been implemented by the FAA in a number of training environments and has the potential for incorporation into future air traffic control systems. This technology could also be implemented in other complex communication environments such as for public transit, police, or military applications.

Applications:
• Training systems for flight schools
• Training of call center operators
• Future real-world FAA systems
• Complex communication systems for public infrastructure, transportation system, military installations, and large corporate entities

Advantages:
• Treats voice as real-time data that can be transmitted with low-latency across an internal data network (VoIP)
• Simulates all components of air traffic communications
• Incorporates instructor monitoring/broadcasting and classroom recording for effective conduct of training sessions
• Uses commercial off-the-shelf technology rather than hardware switching gear
• Scalable and extendable
• Inexpensive to maintain and upgrade

Patent Status: Copyright/Software

Licensing Status: Available for Licensing and Sponsored Research Support

telephony network, WO/2002/102031


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