



System and Method for Providing a Real Time Audible Message to a Pilot

NASA has patented a new technology that employs a unique audio twitter approach to a real time format that makes weather and environmental data observations available as they are observed. An aircraft pilot would prefer to receive information on weather patterns, obstructions, and other conditions that may interfere with a Flight Plan, formal or informal, as the pilots flight proceeds, with a latency of no more than a few minutes. Receipt of a Pilots Report (PIREP) often occurs off-line, before a pilot's own flight has begun, and with an associated latency of one to six hours. Learning of and reacting to a changing environment within minutes after the change is first observed and reported is not possible with PIREPs as presently provided. This invention removes the latency associated with a PIREP and allows expansion of, and selective filtering of information that is directly useful to the recipient pilot.

This patented technology is available for licensing from NASA's space program to benefit U.S. industry.

Technology Details

The invention provides receipt of text messages that are communicated by, or received by, aircraft that are within a selected distance from the inquiring pilots aircraft. This information is filtered by a Pilots Aircraft receiver using a list of Target Words and Phrases (TWP) for which the subject is of concern to the pilot. Messages containing one or more of the selected TWPs are presented in a selected order as text or, alternatively as a verbal message for review by the pilot. Upon receipt of the PWTs, the pilot determines if any action should be taken in order to avoid or minimize delay associated with the information. Communication between the inquiring pilot and any other pilot within the prescribed range, geographic sector, and/or time interval is implemented using a publish and subscribe approach to exchange relevant data. A pilot determines which information to share and with whom and from whom the pilot is interested in receiving information (subscribe). This approach will avoid the radio chatter that often accompanies a party line system. Each such message may be assigned a priority with messages having higher priority being given preference in a message queue. The messages can be filtered and received as coded or encrypted, depending upon a situation or security concerns.

Commercial Applications

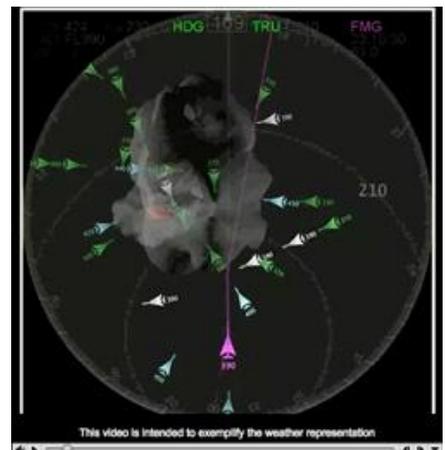
- Airline Industry
- Air transport services
- Civil and Military aviation
- Air Safety

Patent

This technology is protected by a pending U.S. Non-Provisional Patent Application. (Reference No. ARC-16478-1)

Benefits

- Real time weather and environmental data reporting
- Eliminates latency time associated with a PIREP
- Allows for expansion of and selective filtering of information that is directly useful to the recipient pilot
- Message can be coded or encrypted
- Can be presented as text message or verbal message
- Ability to adjust to a changing environment within minutes



Weather cockpit situational display