Path-based Wind Shear Detection Tool for Air Traffic Control
Technology #11642

Applications

A primary application for this technology is found in wind shear detection for air traffic control.

Problem Addressed

Wind shear is a major safety hazard for airplanes, in which wind speed or direction changes dramatically over a short distance. Detecting wind shear is essential in order to select safe paths for aircraft during takeoff and landing.

Technology

The Path-Based Shear Detection Tool (PSD) addresses the issue of compression/expansion and enroute turbulence by giving controllers the information they need to make arrival and departure decisions. PSD computes headwind and tailwind along the path of all arrival corridors into an airport, and indicates the points along that path at which excessive wind shear is present. PSD is unique in that there are no current operational tools available that provide path-specific wind-shear information. This path-based display is intuitive and highlights information in a way that is easy for air traffic controllers to use.

Advantages

- Provides specific wind information, helping traffic controllers to make better decisions
- Path-based display is intuitive and easy to use

Categories For This Invention:

Lincoln Laboratory
Software (Copyright)
Other (Software)
Transportation
Other (Transportation)

Intellectual Property:

Copyright Software
Inventors:
Richard DeLaura
Brian Martin
Russell Todd
Nicolas Yaros

Publications:
Advanced Weather Products Demonstration in New York
Proceedings of the 11th Conference on Aviation, Range and Aerospace Meteorology
2004

External Links:
Lincoln Laboratory
http://www.ll.mit.edu/

Image Gallery: