

Market Mechanisms for Airspace Flow Program Slots

Metron Aviation, Inc.**Technical Abstract**

Metron Aviation, Inc. proposes to design a system to support a marketplace in which flight operators can exchange arrival slots in traffic flow management (TFM) initiatives such as airspace flow programs (AFPs) and ground delay programs (GDPs) while requiring no changes in FAA automation or procedures. The advent of AFPs in 2006 has generated many more potentially exchangeable resources that would be valued sufficiently differently by their owners to make a trade desirable. We believe that NAS users and the FAA would embrace such a marketplace and that it would enable users to collectively reduce their operating costs resulting from NAS congestion. Both FAA and NASA research has highlighted the need for efficient and equitable allocation of NAS resources and increased operational flexibility. Market-based mechanisms have been suggested for transferring system-imposed delay from more critical to less critical flights. No such capability is available to NAS users today. In this SBIR, we will show how the advent of AFPs changes the forces at work in a slot-trading marketplace, making its functions much more valuable to flight operators.

Company Contact

Michael Brennan
(703) 234-0743
Michael.Brennan@
metronaviation.com

Unmanned Aerial Vehicle Integration into the NAS

Metron Aviation, Inc.**Technical Abstract**

Technological innovations have enabled a wide range of aerial vehicles that can be remotely operated. Viable applications include military missions, law enforcement, border patrol, weather data collection, telecommunications, land use imaging, and cargo transport. NASA and other organizations have invested heavily in this unmanned aerial vehicle (UAV) research. UAVs can be flown in the National Airspace System (NAS) today, but only with special permission from the FAA a process that often takes 60 to 90 days. Moreover, permission is often contingent on heavy restrictions, such as accompanying the UAV with a manned chase plane, thereby nullifying the cost savings of a UAV. Full fruition of UAV technology will require incorporation of UAVs into mainstream air traffic management (ATM) practices, including traffic flow management flow control programs and possible creation of special use airspace (SUA). In this SBIR, we propose a UAV-to-traffic flow management (AIM-UAS) interface. This allows traffic managers to anticipate and track UAVs. In turn, this allows UAV operators to understand their impact on commercial air traffic and their involvement in traffic management activities.

Company Contact

Robert Hoffman
(703) 234-0760
Robert.Hoffman@metronaviation.com