

Advanced Traffic Flow Management Visualization and Interactions

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FAA MOIE



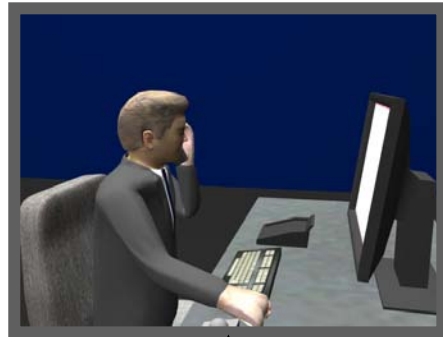
MITRE
Technology
Program

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Problem

- **Can National Airspace System efficiencies be gained through advanced visualization techniques and improved collaboration of traffic flow management?**
 - **Diverse information sources**
 - **Fragmented decision making**
 - **Cumbersome windows management**
 - **Limited collaboration options**

Background



*Terminal Radar Approach Control
Traffic Flow Management Unit*

A: Local Constraint



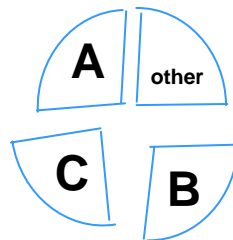
*Air Traffic Control
System Command Center*

**C: National Strategic
Plan of Operation**

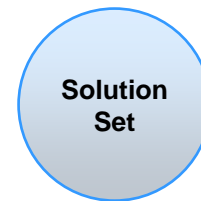


*Air Route Traffic Control Center
Traffic Flow Management Unit*

**B: Regional
Traffic Management Initiative**



A+B+C = Decision Making



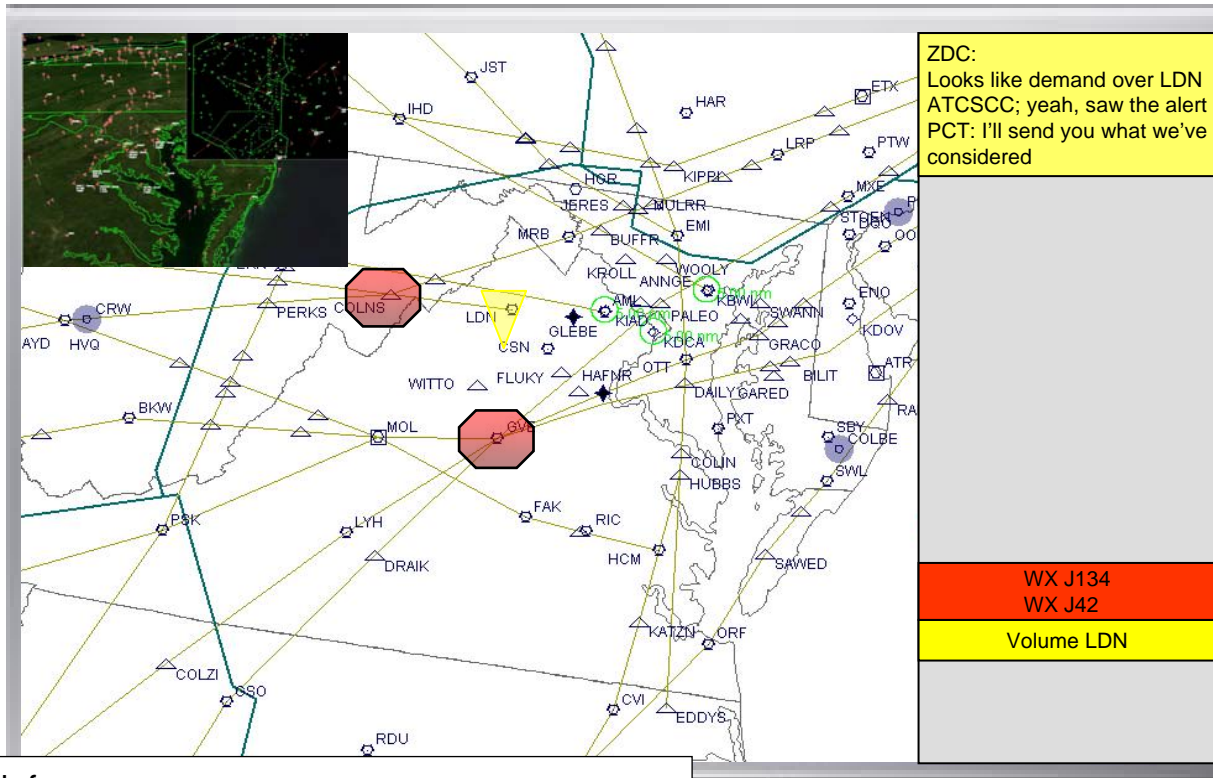
Objective

- **Integrate large amounts of information used in decision support and provide status monitoring in a shared stakeholder environment**
 - **Push information to decision makers**
 - **Coalesce fragments**
 - **Provide symbiotic display partnerships**
 - **Automate options generation**

Activities

- **Brainstorm traffic flow management operational needs**
- **Develop concept of operations**
 - **Develop use cases and scenarios**
- **Develop requirements**
- **Evaluate technology**

Highlight

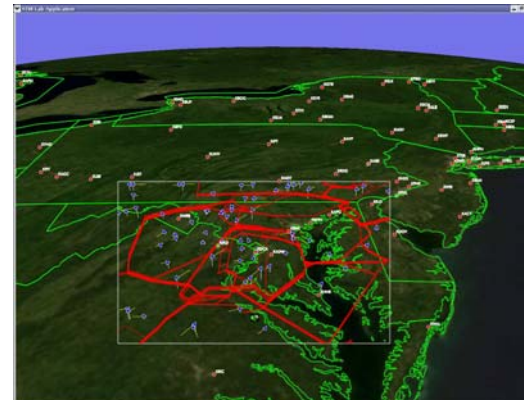
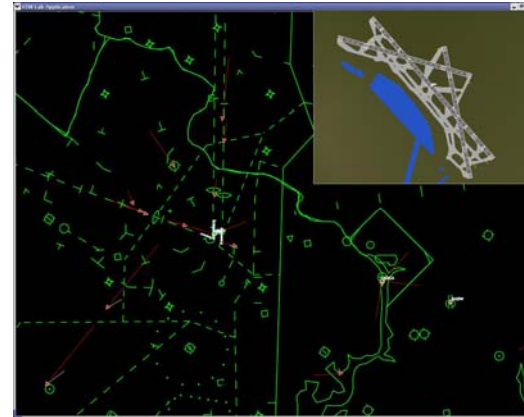


Research focus

- Traffic Management Workstation
- Awareness Through Altering and Monitoring Functions
- Intra-Facility Collaboration

Highlight

- Ability to Visualize Various Perspectives



Impacts

- **Change approach to traffic flow management decision making**
- **Standardize technologies across stakeholder environments**
- **Improve National Airspace System performance and efficiency**

Future Plans

- Proof of Concept
- Operational Verification
- Scalability
- Data Integration

