

Quarterly Report to Congress

Status of NY/NJ/PHL Metropolitan Airspace Redesign

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Funds Expended to Date

➤	FY99	\$3.0M	} Portion of funds used for enabling projects in neighboring regions. From FY01 forward, Congressional language has fenced funds for NY/NJ/PHL Redesign only.	} Approximately 30% of funds used to pay for environmental contracts
➤	FY00	\$6.6M		
➤	FY01	\$8.5M		
➤	FY02	\$12.5M		
➤	FY03	\$8.5M		
➤	FY04	\$6.5M		
➤	Total to date: \$42.7M		(\$3.9M budgeted through remainder of FY04)	



Background: Objectives of NY/NJ/PHL Redesign

- Increase Efficiency
 - Reduce Delays
 - Meet Projected Demands
 - Improve User Access to the System
 - Expedite Arrivals and Departures
 - Increase System Flexibility
 - Balance Workload
 - Accommodate Evolving Technologies
- Enhance Safety
 - Develop Operationally Viable Airspace
 - Reduce Complexity



Background: Purpose and Need

➤ Purpose

- Increase efficiency and reliability of the air traffic system through the adjustment of traffic flows in the New York/New Jersey and Philadelphia areas to accommodate new technologies and reduce delays

➤ Need

- Maintain Safety
- Respond to Increasing Aviation Growth
- Mitigate Mounting Delays



Background:

Commitment to Community

- As part of our commitment to neighboring communities, the following techniques to reduce aircraft noise and other potential environmental impacts are being considered:
 - Increase Altitudes
 - Disperse or Concentrate Tracks, where appropriate
 - Use Advanced Navigation
 - Reduce Flying Time
 - Overfly Less Noise-Sensitive Areas, where feasible



Progress to Date:

- Project charter and req'ts determination **Complete**
 - Problem definition
- Design process **Complete**
 - Concept development
 - Alternatives definition
- Scoping with communities **Complete**
- Operational analysis **Ongoing**
- Environmental analysis **Ongoing**
- Preparation and publication of DEIS **Delayed**
- Preparation and publication of FEIS
- Record of Decision
- Implementation



Issues Contributing to Delay of DEIS

- Changes in military activity, requiring review of traffic flows
- Formal input from the RTCA process
- Input from airport operators
- Internal agency concerns
 - RNAV moratorium
 - Airspace allocations



Progress to Date: Summary

- Design:
 - Design refinement is ongoing to address issues with Military airspace. Industry comments are expected in mid-April. Additional design work may be required.
- Analysis & Modeling:
 - Operational: The operational analyses for the currently designed alternatives are nearing completion. Additional modeling may be required.
 - Noise: Baseline and future no action preliminary noise analyses are complete. Noise analyses for other alternatives awaiting finalization of operational modeling.
 - Other environmental categories: Analysis of the other twenty environmental categories dependent upon noise analyses.



Timeline

Project Milestone	Schedule and Status	Remarks
Project charter and req'ts determination.	Mid 1998	Completed
Problem description, background data analysis and design teams formed	Mid 1998-Early 1999	Completed
Design process started, initial concepts developed, project prescoping	Early 1999 – Early 2000	Completed
Scoping with communities	Feb 2001 – Jun 2001	Completed. Scoping Report is available.
Operational analysis of the alternatives against the objectives identified in the Purpose and Need of the EIS.	Late 2000 – present	Ongoing; The operational analyses for the currently designed alternatives are nearing completion. Additional modeling will be required to evaluate feasibility of industry recommendations and to evaluate refinements of current/additional alternatives
Environmental analysis and preparation of the Draft Environmental Impact Statement (DEIS)	Mid 2001 – present	Ongoing; Baseline and future no action preliminary noise analyses are complete. Noise analyses for other alternatives awaiting finalization of operational modeling. Analysis of the other twenty environmental categories dependent upon noise analyses.
Publication of DEIS	Original targeted date: Nov 2003 Revised date: May 2004 New Date: TBD (14-16+ months after resolution of identified delay issues)	Final recommendations from the RTCA group are expected in mid-April. These recommendations may result in either design modifications to current alternatives or the development of an additional alternative that will be followed by operational and environmental modeling.
Publication of Final EIS (FEIS)	12-18 months after the DEIS, depending on the scope of comments	After incorporation of all comments received from the public, local, state and federal agencies, and industry stakeholders responding to the published DEIS, it is anticipated that the Final Environmental Impact Statement (FEIS) will be completed approximately one year after the release of the DEIS.
Record of Decision (ROD)	Approximately 2 months after the FEIS	Decision initiates the implementation phase



Detailed Discussion of Components

- Four alternatives
 - Future No Action
 - Modifications to Existing Flows
 - Ocean Routing
 - Integrated Design



Baseline and Future No Action Alternative

- Baseline: Used to compare all alternatives against current conditions
 - Status
 - Complete
- Future No Action Alternative
 - Status
 - Operational modeling complete
 - Validation complete
 - Noise analysis complete
 - Undergoing required additional environmental analyses



Modifications to Existing System

- Based on existing airspace boundaries
- Minor adjustments to current route structure
- Limited flexibility in use of airspace
- Status
 - Initial design complete
 - Design adjustments on-going due to modifications of military agreements
 - Undergoing operational modeling – completion required prior to validation and environmental modeling



Ocean Routing

- Based on proposal from New Jersey Citizens Against Aircraft Noise (NJCAAN) utilizing existing airspace boundaries
- Moves Newark (EWR) southbound departures over water
- Little or no change to other routes
- Status
 - Design complete
 - Operational modeling complete
 - Validation complete
 - Undergoing environmental modeling



Integrated Airspace

- Based on expanded and integrated airspace
- Significant changes to routes into and out of NY, NJ, and PHL
- Simplified arrival routes and increased departure routes
- Flexible and adaptable
- Status
 - Undergoing operational modeling – required prior to validation and environmental modeling
 - Design in development (awaiting input from RTCA. Final comments expected in Mid-April 2004)
 - Recommendations could require development of an additional alternative or changes to current alternatives



NEPA Process

- Environmental Impact Statement (EIS)
PART 1502.14
 - Presentation of the alternatives is the heart of the EIS.
 - The alternatives must be submitted in comparative format and include an alternative of no action.
 - The agency shall devote substantial treatment to each alternative, in detail, so that reviewers may evaluate their comparative merits.
 - No detailed information can be reported until the DEIS is published.



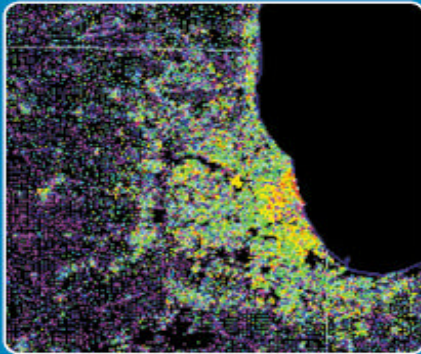
Noise Impact Modeling



Noise Impact Routing System (NIRS)

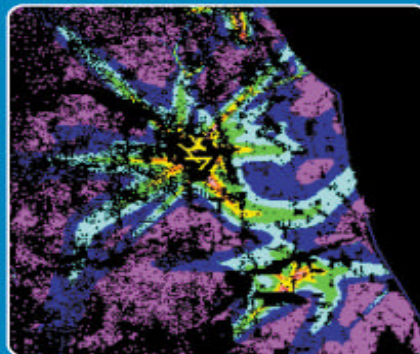


Population Maps



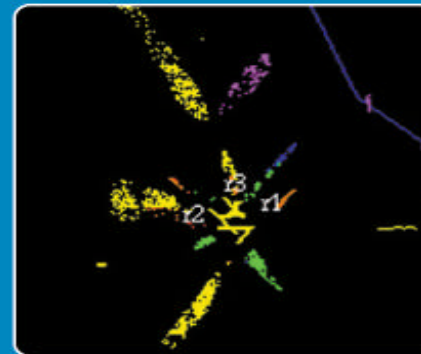
Depict locations of population in census data and special grids.

Noise Maps



Day-Night Average Sound Level colored for each population centroid.

Change Maps



Show where changes of exposure occur when one scenario is compared to another.

NEW YORK/NEW JERSEY/PHILADELPHIA METROPOLITAN AIRSPACE REDESIGN PROJECT





Example:

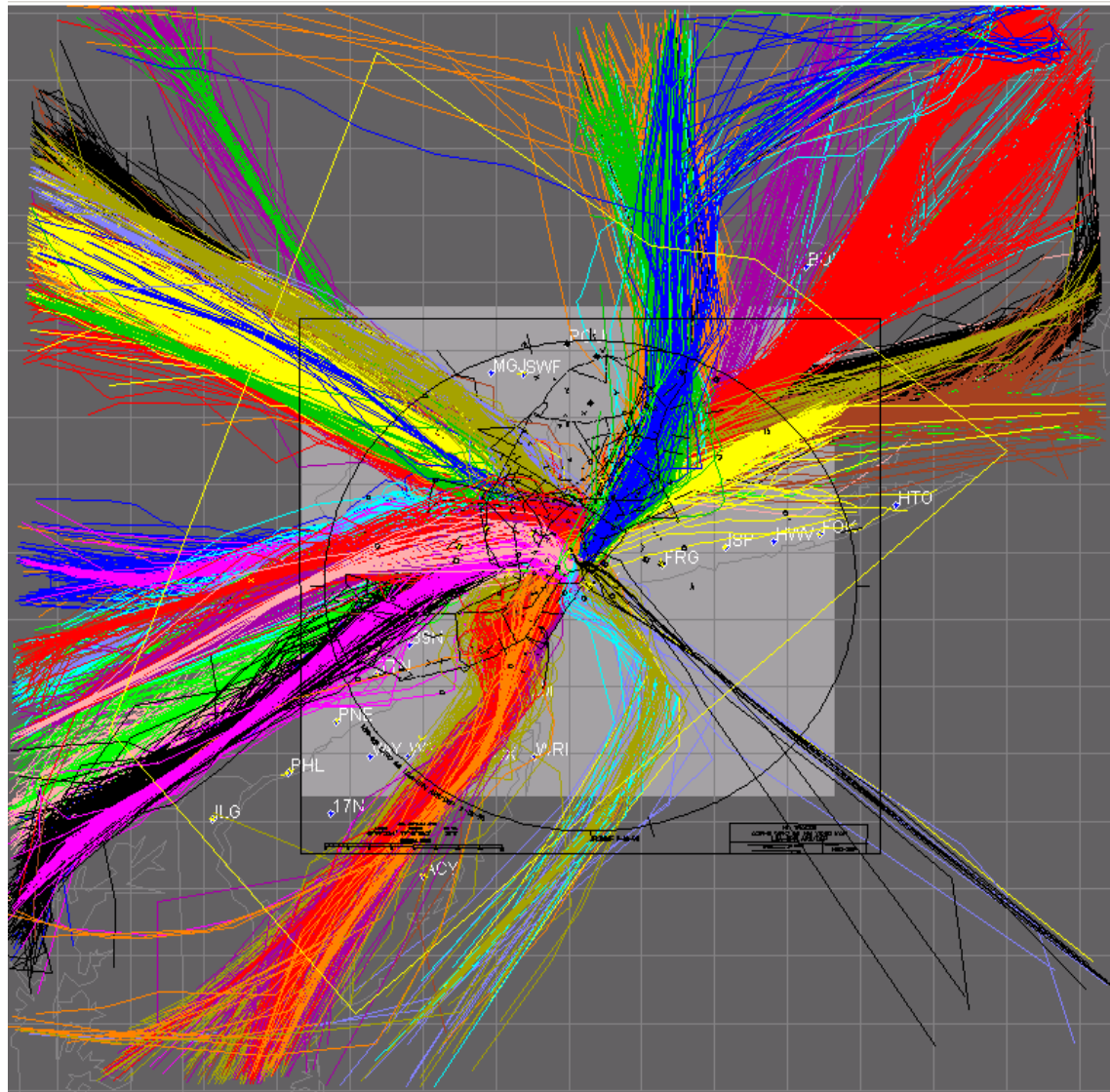
LGA-Rwy 13 Departures

- 77-day sample of ARTS & ETMS data spliced.
- 14,384 radar tracks.
- 11 Bundles starting on outer edge.

➤ **71 Final Bundles**

Legend

-  Radar Track Bundles
-  Study Area

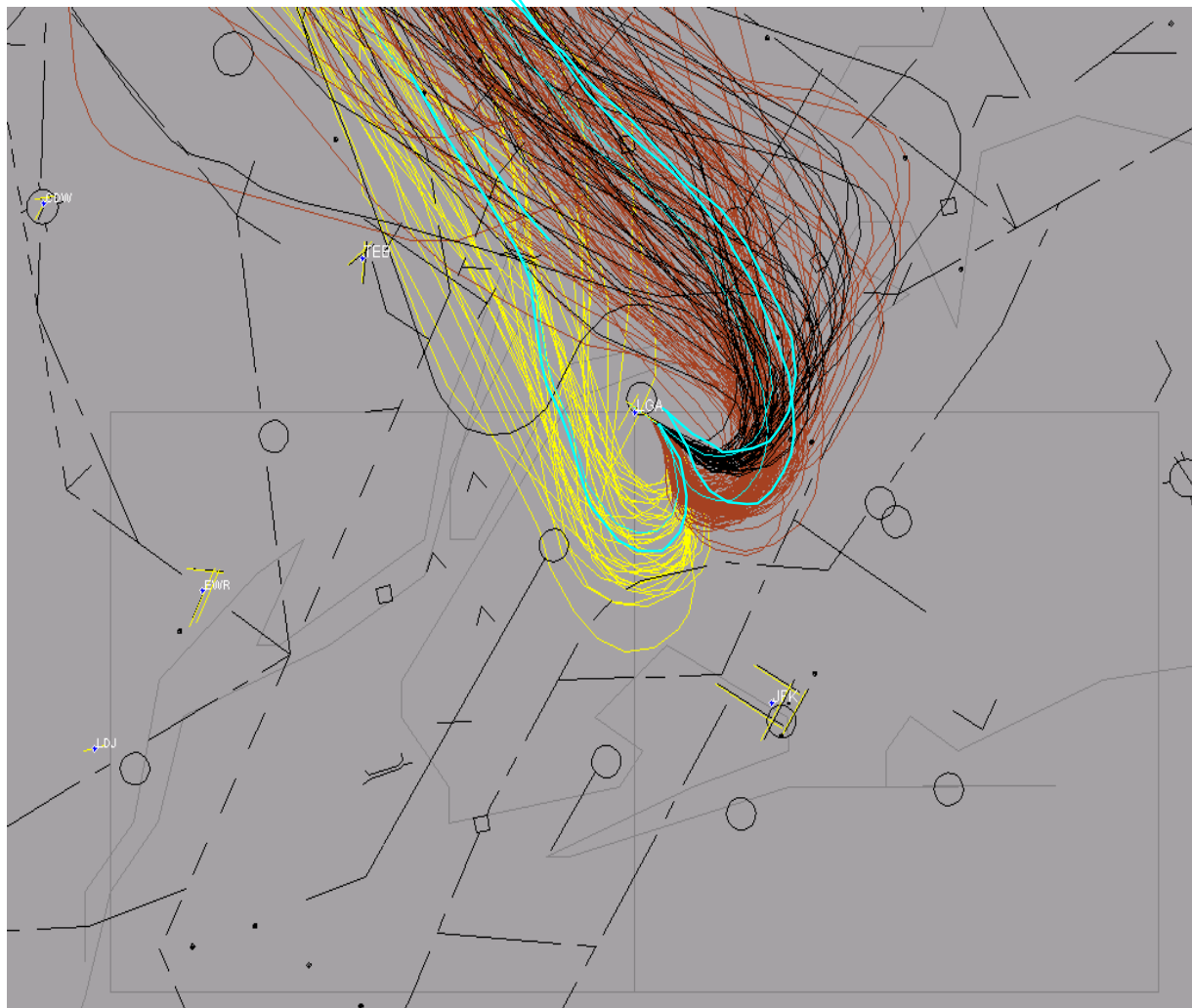


Example:



LGA-Rwy 13 Departures

➤ 2-D Procedure
Variation

➤ 3-Bundles



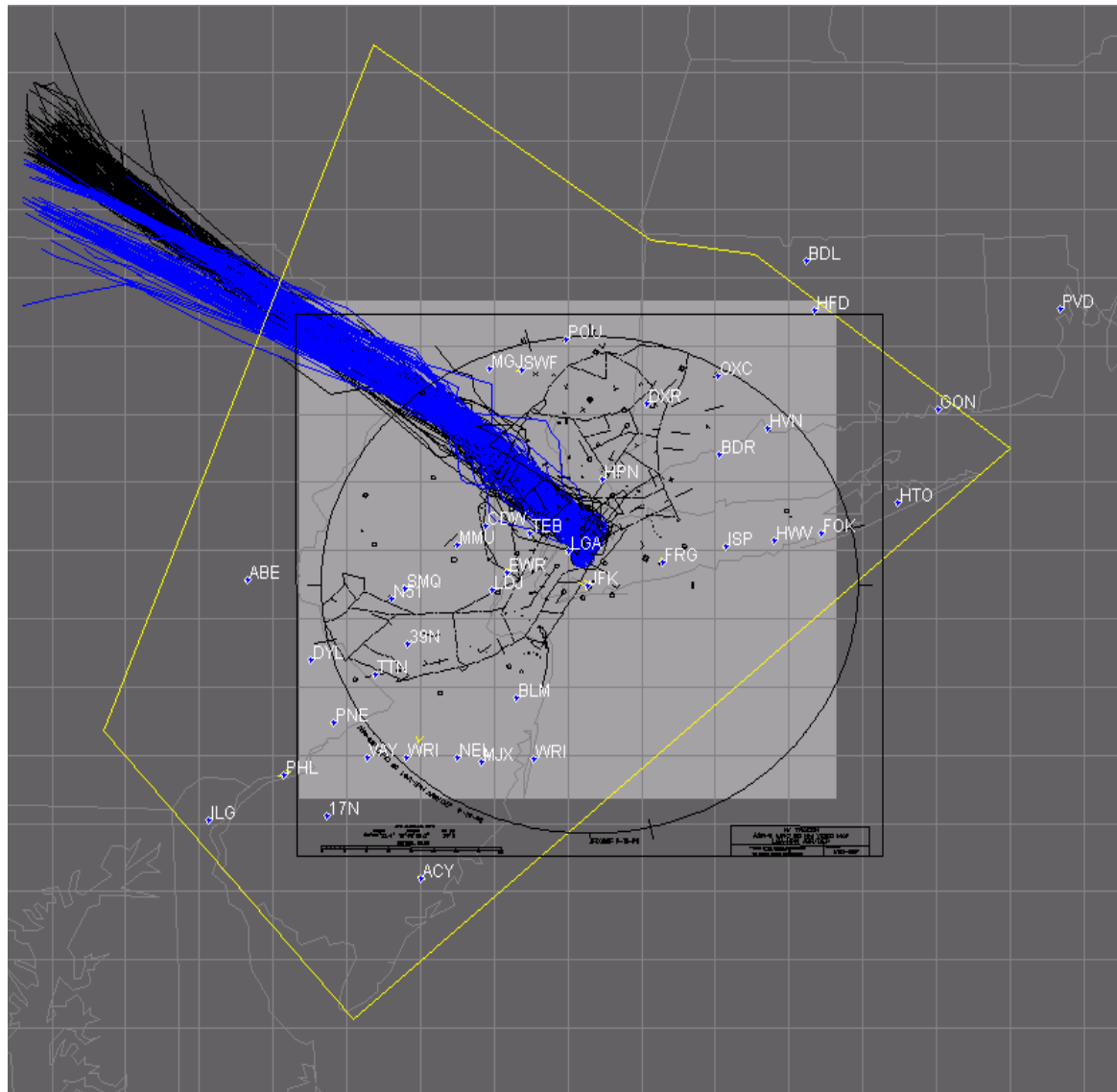
Legend

-  Radar Track Bundles
-  Backbone



Example:

LGA-Rwy 13 Departures

- 3-D Procedure Variation
- 2-Bundles



Legend

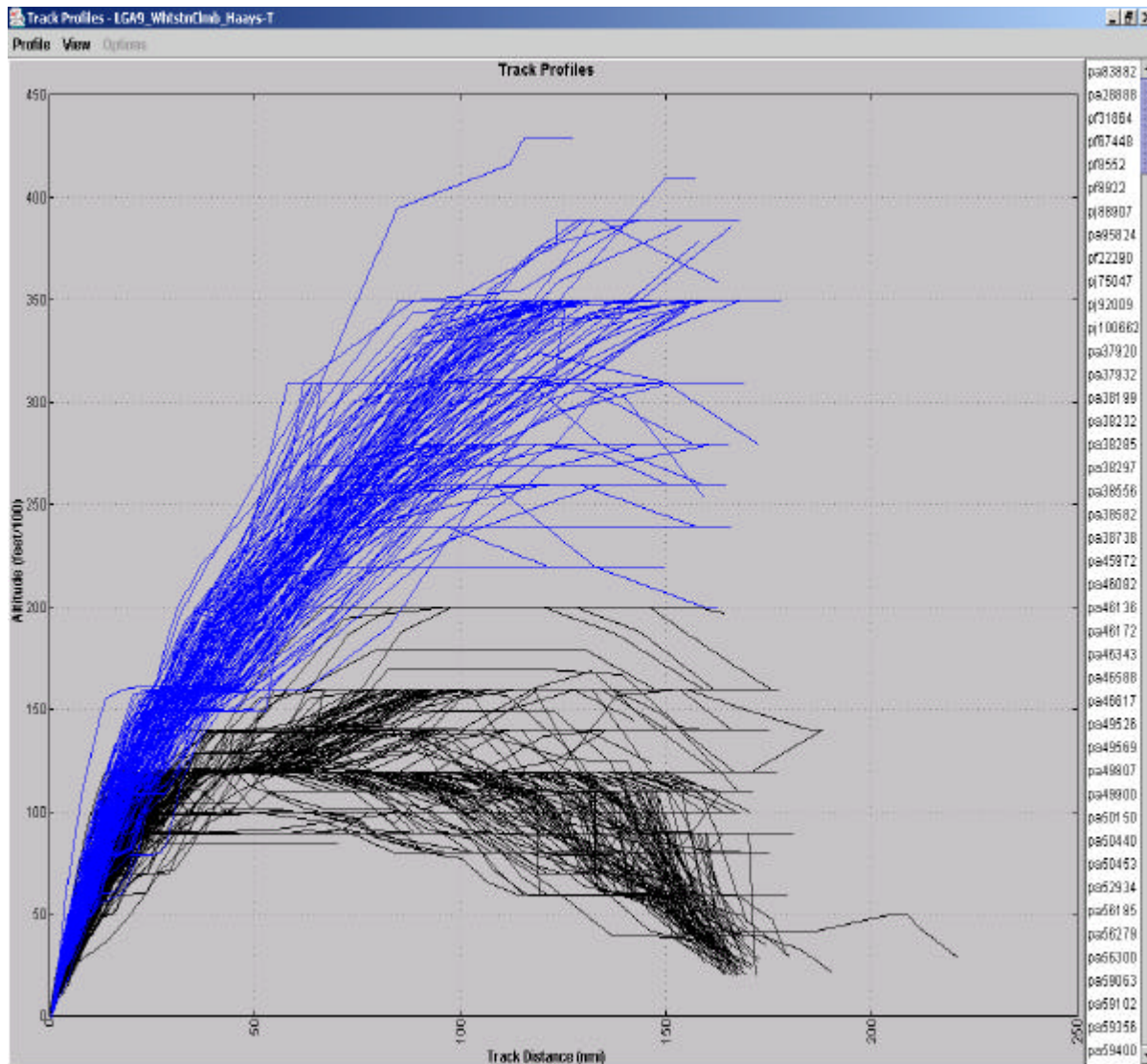
-  Radar Track Bundles
-  Study Area



Example:

LGA-Rwy 13 Departures

- 3-D Procedure Variation
- 2-Bundles



Legend

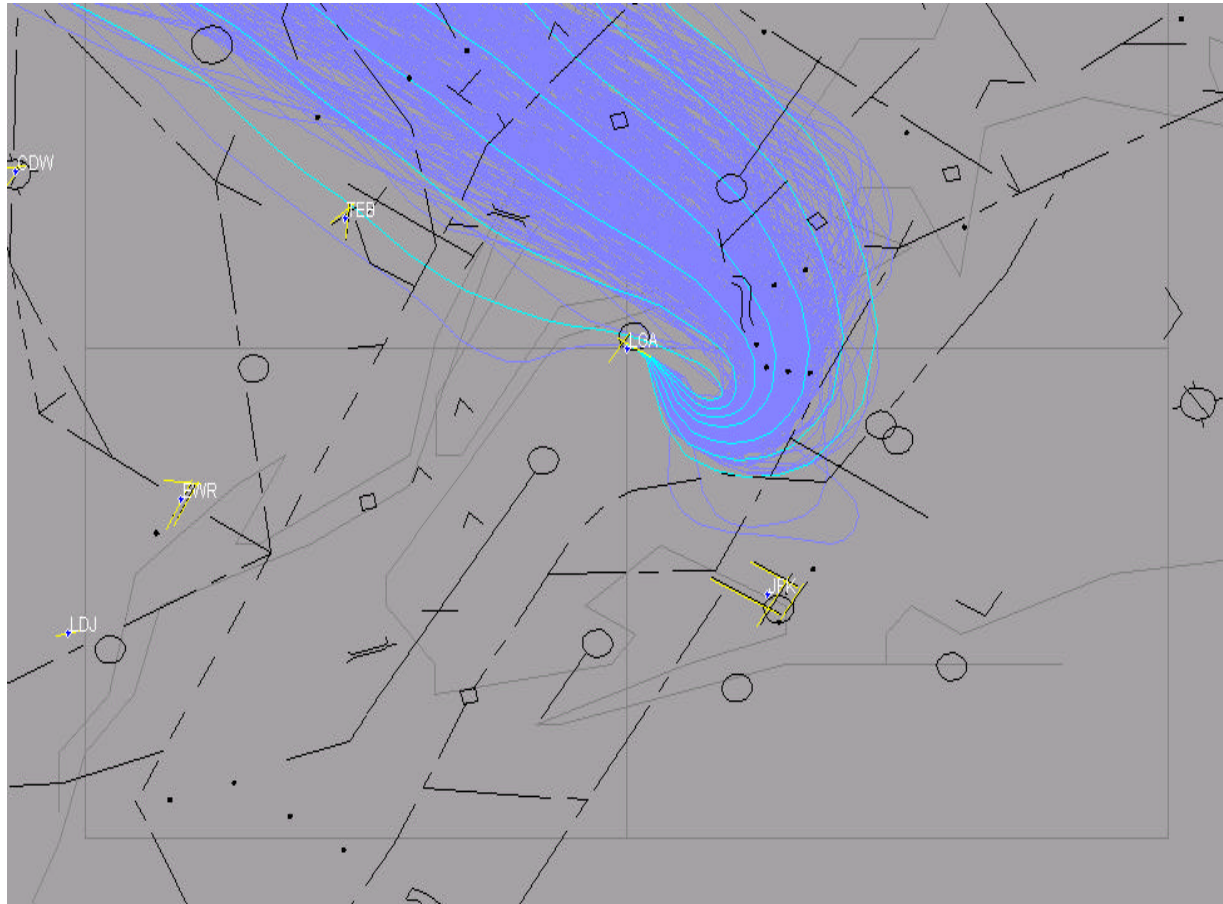
==== Radar Track Bundles



Example:

LGA-Rwy 13 Departures

➤ **Backbone and
Sub-tracks.**



Legend

- Radar Track Bundles
- Backbone/Subtracks



Questions ?

