

FAA/Industry Collaborative Weather Rerouting Workshop

ATC Focus Area Discussion Summaries

April 10 - 11, 2001

Topic 1: Data Acquisition & Dissemination

ATC Team

- Weather
 - Most reliable source/ More accurate forecast
 - Needs to be verified, e.g. planned for, never arrived (Pilots/controllers)
 - Longer forecast for planning (Meteorologists)
 - TSD weather is valuable
- Volume
 - TSD graphics useful
 - Need to know reroutes to effectively manage resources
 - Earlier warning (TMU)

Topic 1: Data Acquisition & Dissemination

ATC Team (concluded)

- Complexity
 - Information from controllers and pilots (current situation)
 - Information from TMU (future time)
- Strategic plan
 - Reasons for plan - big picture
 - Need good way to communicate
 - Need to be able to make controller understand
 - Everyone should have the same information
 - Availability of reroutes easier to get into computer
 - Ability to display reroute plan, rationale and impact to controllers

Topic 2: Automation & Procedures

ATC Team

- Tool that combines volume and complexity and gives indication (of change/problem)
 - More accurate Monitor Alert parameter (MAP) numbers
 - Means of expressing complexity in MAPs
 - Need to explore methods to:
 - Capture complexity numbers
 - Validate MAP numbers
- Trial planner
 - Reroutes overload sector, if so, then test moving traffic in affected sector (off-loading)

Topic 2: Automation & Procedures

ATC Team (cont'd)

- Shared information tool with:
 - Reroute information
 - IDS 4/5 capabilities
 - Weather information
 - MIT information
 - Approach plate information
 - Real-time
 - Highlight when something has changed
- Better weather display on MDM

Topic 2: Automation & Procedures

ATC Team (concluded)

- Procedures
 - Need to consult with Ops Sup to verify constraints in Area. Get info from Area before making rerouting plan. (Keep sup in the loop.)
 - Share planned reroutes based on future weather well in advance
 - Ops Sup can adjust area configuration/resources or initiate TFM restrictions based on area knowledge
 - Procedure to issue reroute
 - Sector with control of aircraft will read reroute to aircraft (till CPDLC)
 - Automatic amendment to Host

Topic 3: Practical Application in Real-Time ATC Team

- Identify weather problem
 - Controller
 - Relay accurate real-time weather-related information to Ops Sup
 - Ops Sup/CIC
 - Inform TMU
 - Resolve small problems
 - Initial reaction and solution to problem (short-term, tactical)
 - TMU - facility-wide weather problem identification
 - ATCSCC - system-wide weather problem identification
 - Airlines
 - Share information with ATCSCC to anticipate problems
 - Pilots - Tell controller of intentions

Topic 3: Practical Application in Real-Time ATC Team (cont'd)

- Design reroutes
 - Controller
 - Provide feedback on what will/won't work in sector
 - Take care of initial problems (e.g., deviations)
 - Ops Sup
 - Pass Controller information to TMU
 - Collaborate with adjacent areas/ inform TMU
 - Take care of small (now) problems
 - Suggest reroutes
 - TMU
 - Take care of bigger (future) problems
 - Plan bigger reroutes and share information. Involve affected areas before implementing.

Topic 3: Practical Application in Real-Time ATC Team (cont'd)

- Design reroutes (cont'd)
 - ATCSCC
 - Coordinate when more than one facility involved
 - Sometimes needs to exercise authority to implement route with system impact
 - Focal point for National implementation
 - Airlines
 - Keep FAA informed of routes required by FARs
 - Share plans - information on cancellations/ substitutions etc. most important priorities (to the degree it impacts weather/ reroute planning)

Topic 3: Practical Application in Real-Time ATC Team (cont'd)

- Determine reroute capacity
 - Controller
 - Provide Ops Sup with information on what traffic can be accommodated
 - Keep Ops Sup updated (in general)
 - Ops Sup
 - Based on Controller input and TMU input on plan, determine sector capacity
 - Configure sectors, utilize resources and implement TFM initiatives to maximize sector efficiency
 - TMU
 - Use automation tools (w/ accurate information) to determine capacity
 - Determine if reroute capacity is adequate for need
 - ATCSCC - Mediate plans between adjacent facilities

Topic 3: Practical Application in Real-Time ATC Team (cont'd)

- Assign specific flights to reroutes (depends on size of problem)
 - Controller - work on aircraft in sector
 - Ops Sup
 - Collaborate with adjacent area for aircraft in area
 - Monitor impact / Make adjustments
 - TMU
 - Use tools available and make assignments
 - Monitor weather
 - Make changes
 - ATCSCC - Collaborate with airlines
 - Airlines - Collaborate with ATCSCC

Topic 3: Practical Application in Real-Time ATC Team (cont'd)

- Implement reroute strategy
 - Controller
 - Reroute active affected flights; Scan Proposed flights for compliance
 - Ops Sup
 - Disseminate information to Controller
 - Monitor Flow/ feedback to TMU
 - Apply additional restrictions if necessary
 - TMU
 - Send reroutes to affected facilities
 - Adjust reroutes as weather moves
 - Evaluate feedback from Ops Sup
 - Adjust restrictions as necessary
 - ATCSCC - Act as liaison between facilities & airlines
 - Airlines - File right routing

Topic 3: Practical Application in Real-Time ATC Team (concluded)

- Collaboration not needed/possible when:
 - Unexpected weather develops suddenly; need to stop traffic
 - Need to react to unsafe or time-critical situation
- Important areas for next step research
 - Valid volume and complexity numbers (revised Monitor Alert platform)
 - Weather forecast accuracy
 - Reroute planning tools (research and deployment)
 - More TSD capacity - more windows in areas slows system
 - Common platform
 - More shared automation allowing ‘information on demand’