ACRP Problem Statement No. 13-04-07

Ground Reservation Scheduling & Enforcement for Emergency Management/Response Operations

ACRP Staff Comments: No staff comments.

TRB Aviation Group Committees Comments: AVIATION SECURITY AND EMERGENCY MANAGEMENT:
The proposal identifies ground reservation scheduling and coordination as a key component for airport emergency management. However, the specific research outcomes and potential payoffs appear less certain. It is unclear whether the research will produce anything more than an evaluation of need, whereas, many airports, smaller airports in particular, may benefit from guidelines or a tool they could adapt for their specific needs. There is no nationwide or region-wide civil airport agency which manages airport ground space/parking space/load-unload space at an airport experiencing heavy air traffic during a humanitarian assistance or disaster relief event. The study offers that there should be such an agency. One reviewer's opinion is that it is the duty of airport managers and their staff to control such space allocation, dates, times, political requests, and high-roller personality demands. It is a fact that the DOD/USAF participates in every disaster assistance effort, many times by deploying its Regional Air Movement Control Center (RAMCC), to manage the airflow and ground space at that "disaster airport." The airport manager and the RAMCC must coordinate continually. It seems the proposer’s experience was that the airport manager was not "in the game." No need to spend dollars here.

Review Panel: Not recommended — What is the proposed research trying to solve? IROPS should help cover this for airports of any size and should be addressed in an airport's IROPS plan.

AOC Disposition: No funds allocated. No discussion.
I. PROBLEM TITLE
Ground Reservation Scheduling & Enforcement for Emergency Management/Response Operations

II. RESEARCH PROBLEM STATEMENT
The seam between the FAA’s focus on airspace operations and airfield manager’s focus on ground operations has proven to be a potential source of operational paralysis during Emergency Management/Response Operations. Examples of this are visible in the aftermath of Hurricane Katrina when the deluge of relief supplies overwhelmed the New Orleans International Airport and other airports and more recently by the global response to the 2010 earthquake in Haiti. In both instances, the FAA was able to provide sound airspace deconfliction and sequencing; however, airfield management was unable to establish an effective means of scheduling and enforcing the overall airflow due to numerous factors including a lack of manpower and access to effective tools. During the response effort in Haiti, the US DoD was called upon to provide assistance. While the DoD was able to establish a scheduling and enforcement process through the use of the 601st Regional Air Movement Control Center (dubbed Haiti Flight Operations Coordination Center for the operation), it highlighted the importance for this capability to reside with civilian Airfield Managers in order to mitigate financial and political influences.

This project should establish industry standards for developing a wholly or partially automated system/process for scheduling and enforcing Ground Reservations at civilian airports (large and small) with specific attention to both major focus areas defined herein. Past research has shown a tendency to underestimate the complexity of the issues with particular regard to Emergency Management/Response Operations when Traffic Volume, Request Volume, Priority of Needs, Priority of Access, Apportionment/Allocation of Ramp Space/Ground Times, Responsiveness, Flexibility, Fidelity and Validation must be considered.

III. OBJECTIVE
Evaluate the need to develop a civilian based Ground Reservation Scheduling and Enforcement capability and identify the key elements required to ensure applicability to both Emergency Management/Response Operations as well as day-to-day operations.

IV. RESEARCH PROPOSED
Using literature searches, interviews, workshops/focus groups, and site visits, with work to be focused on two major areas:
1. Evaluate the need to develop a civilian-based Ground Reservations Scheduling and Enforcement capability to support airfield managers during Emergency Management/Response Operations.
2. Evaluate the feasibility and applicability to employ a civilian based Ground Reservation Scheduling and Enforcement capability for daily operations to encourage industry-wide employment facilitating proliferation and familiarity for employment during Emergency Management/Response Operations, perhaps by piloting the system at a small- to medium-sized airport.

V. ESTIMATE OF THE PROBLEM FUNDING AND RESEARCH PERIOD
Recommended Funding: $350,000
Research Period: 18 months
VI. URGENCY AND PAYOFF POTENTIAL
While the US DoD capability has proven an effective stopgap, the need for a civilian capability to mitigate commercial and political influences is considerably high. With regard to potential payoff, while the ability to establish an industry standard for Ground Reservation Scheduling and Enforcement for both Emergency Management/Response Operations and day-to-day operations has a significant potential for financial return, the greatest payoff is reflected in the potential to positively influence Humanitarian Assistance/Disaster Relief Operations both domestically and internationally and ultimately saving lives.

VII. RELATED RESEARCH
The US Air Force has a doctrine for employment of Regional Air Movement Control Centers (RAMCC) for the management of civil/military airflow in support of Combat and Humanitarian Assistance/Disaster Relief (HA/DR) Operations. However, no civilian equivalent appears to exist.

VIII. PERSON(S) DEVELOPING THE PROBLEM
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IX. PROCESS USED TO DEVELOP PROBLEM STATEMENT
This problem statement was developed jointly by James F. Smith and Major Joseph J. Grindrod. The problem statement was refined in consultation with the Airport Planning and Operations Committee (APOC) of the Transportation & Development Institute of ASCE. APOC endorses this proposed project.

X. DATE AND SUBMITTED BY
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