



Agenda Item 2: Air Navigation Issues
2.3 Follow-up to other Air Navigation Issues

PROGRESS OF THE AIRPORT COOPERATIVE RESEARCH PROGRAM
(ACRP)

(Presented the United States of America)

SUMMARY

The Airport Cooperative Research Program (ACRP) carries out applied research on problems that are shared by airport operating agencies throughout the world. The ACRP undertakes research in a variety of airport subject areas, on topics that existing research programs do not adequately address. An example of a recently completed project is, “Innovative Finance and Alternative Sources of Revenue for Airports” (ACRP Synthesis 1). Section 6 of this paper lists other projects that are scheduled for completion in the near future.

Participation from airport industry stakeholders is critical in helping to identify areas of concern, provide guidance during the research process, and distributing research results. Accordingly, all those who have an idea of how research can help solve a particular airport problem are encouraged to submit their suggestion to ACRP. Section 2 of this paper describes the various ways one can participate in ACRP. The results of all ACRP research projects are available online, free of charge, for anyone interested in benefiting from this important program.

1. INTRODUCTION

1.1 Advances in technology and new operating procedures provide a great benefit for the aviation industry, but these advances also bring increased challenges and make it ever more difficult for airports and airport operators worldwide to maintain a safe and efficient airspace system. A robust research and development program is therefore essential to solving these common problems.

1.2 The Airport Cooperative Research Program (ACRP) carries out applied research on problems that are shared by airport operating agencies and are not being adequately addressed by existing federal research programs. The ACRP undertakes research in a variety of airport subject areas, including: design, construction, environment, maintenance, safety, security, policy, planning, human resources, administration, and operations.

1.3 A memorandum of agreement provides organizational guidance for the three main entities that comprise the ACRP. The U.S. Federal Aviation Administration (FAA) funds the program; the National Academy of Sciences, acting through its Transportation Research Board (TRB), administers the program; and the ACRP Oversight Committee (AOC), an independent governing board composed of airport managers and other aviation officials appointed by the U.S. Secretary of Transportation, selects all of the program's research projects.

1.4 As a service to airport operators throughout the world, all ACRP research products are available, free of charge, through TRB's website: <http://www.trb.org/crp/acrp/acrp.asp>.

2. PARTICIPATION

2.1 The ACRP benefits from the cooperation and participation of airport professionals, air carriers, shippers, state and local government officials, equipment and service suppliers, airport users, educational institutions, and other research organizations. TRB annually solicits these groups for research topics and industry concerns.

2.2 A founding principle of the ACRP is to accept research requests from anyone who has an idea of how applied research can help solve a particular airport problem. These requests are formally called problem statements, and submissions are accepted at anytime throughout the year. Instructions for submitting problem statements can be found on TRB's website.

2.3 Individuals within the airport industry are also encouraged to participate directly in the research process. For every project that ACRP initiates, a technical panel of experts is formed to oversee the research being conducted. One can be considered as a candidate for serving on a technical panel by submitting their resume to TRB. If chosen to serve on a technical panel, individuals need only to provide their time and knowledge to the research process, as all travel expenses for the project are paid for by TRB.

2.4 Similarly, if an individual or organization believes that they have the expertise to solve one of ACRP's research problems, they are encouraged to submit a proposal in response to projects that are initiated. Requests for proposals (RFPs) are solicited to the aviation industry by TRB through their mailing lists. Instructions for signing up to the mailing list and preparing proposals can also be found on the TRB website.

3. RESEARCH PRODUCTS

3.1 The nature of airport problems requires ACRP research to have products specifically tailored to obtain maximum effectiveness.

- Standard research projects are relatively low cost studies lasting one to two years resulting in original research that can be published as a report, guidebook, multimedia disk (CDs and DVDs), computer software, informational pamphlet, and/or a presentation.
- Special research projects are conducted in areas of specific interest to the airport community, of which there are currently three main areas: Legal aspects of airport programs; Quick response studies for special needs; and Synthesis of information related to airport problems. The products of this special research will generally be in the form of legal briefs or short reports intended to capture and consolidate information or practices currently in use by the airport industry.

4. ACRP PROGRESS

4.1 There are currently 66 research projects underway within the ACRP.

July 2004: Startup funding provided by FAA

Sep. 2005: Memorandum of Agreement executed

Jan. 2006: 1st ACRP Oversight Committee (AOC) meeting, 17 standard and 12 special projects initiated

July 2006: 2nd AOC meeting, 17 standard and 12 special projects initiated

Jan. 2006: 3rd AOC meeting, 5 standard and 3 special projects initiated

5. COMPLETED RESEARCH

5.1 To date, two research projects have been completed by ACRP. These results have been published and are currently available online through the TRB website.

- Innovative Finance and Alternative Sources of Revenue for Airports (11-03/S01-01)
- Aviation Forecasting Methodologies (11-03/S03-01)

6. FUTURE RESEARCH

6.1 Seven research projects are scheduled for completion in FY 07.

- Compilation of Airport Law Resources (11-01/Topic 3)
- Model for Improving Energy Use in U.S. Airport Facilities (11-02/Task 1)
- Airport Ground Access: Updating and Building Upon the Work of TCRP Reports 62 & 83 (11-02/Task 2)
- Improving Stabilization and Use of Aircraft Evacuation Slides at Airports (11-02/Task 3)
- Airport Ground Access Mode Choice Models (11-03/S03-02)
- General Aviation Safety and Security Practices (11-03/S04-01)
- Counting Aircraft Traffic Operations at Small and Non-Towered Airports (11-03/S10-01)

6.2 Twenty-three projects are scheduled for completion during FY 08.

- Guidebook for Managing Small Airports (1-01)
- Managing Runoff from Aircraft and Airfield Deicing and Anti-Icing Operations (2-02)
- Airport-Related Hazardous Air Pollutants Analysis (2-03)

- Research Needs Associated with Particulate Emissions at Airports (2-04)
- U.S. Airport Passenger-Related Processing Rates (3-02)
- Guidebook for Airport-User Survey Methodology (3-04)
- Aircraft Overrun and Undershoot Analysis for Runway Safety Areas (4-01)
- Lightning-Warning Systems for Use by Airports (4-02)
- Guidance for Developing Regionally Coordinated Airport Emergency Plans for CBRNE Events (5-01)
- New Concepts for Airport Terminal Landside Facilities (7-01)
- Airport Curbside and Terminal-Area Roadway Operations (7-02)
- Guidelines for the Collection and Use of Geospatially Referenced Data for Airfield Pavement Management (9-01)
- Planning Guide for Offsite Terminals (10-02)
- Compilation of Digest - Parts 13 and 16 Determinations and Related Documents (11-01/Topic 1)
- Theory and Law of Airport Revenue Diversion (11-01/Topic 2)
- Survey of Airport Laws and Regulation of Commercial Ground Transportation (11-01/Topic 4)
- Responsibilities for Implementation and Enforcement of Airport Land-Use Zoning Restrictions (11-01/Topic 5)
- Who is the owner or Operator for Purposes of the Right to Self-Fuel? (11-01/Topic 6)
- The Impact of Airline Bankruptcies on Airports (11-01/Topic 7)
- The Law and Regulation of Airport Ownership (11-01/Topic 8)
- Survey of Elements of Disparity Studies for Airport Disadvantaged Business Enterprise Programs (11-01/Topic 9)
- Overview of Airport Safety Management Systems - Definition and Status (11-02/Task 4)
- Quarantine Facilities for Arriving Air Travelers: Identification of Planning Needs and Costs (11-02/Task 5)

7. CONCLUSION

7.1 Airport operators around the world encounter a wide variety of very complex and difficult issues. However, while every airport is unique, the problems that must be solved are often similar in nature. The airport community has a great resource in solving these shared problems through the Airport Cooperative Research Program (ACRP). Research within ACRP covers many areas of interest, and the products can be tailored for delivery in many different formats for maximum effectiveness. There are many ways to participate in ACRP, and everyone is encouraged to submit their ideas for future research topics as well as using any of the free products currently available on the program's website (<http://www.trb.org/crp/acrp/acrp.asp>).