



Agenda Item 2: Review of Air Navigation Matters
2.2 Air Navigation specific activities:
2.2.3 Aerodromes and Ground Aids (AGA)

**AIRPORT COOPERATIVE RESEARCH PROGRAM (ACRP) PRODUCTS FOR THE
CARIBBEAN REGION**

(Presented by 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.

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.

ACRP contains a number of projects that may be of interest to the Caribbean airport community. An example of a recently completed project is, "Guidebook for Managing Small Airports" (ACRP Report 16). Section 4 of this paper contains a list of other completed projects and Section 5 contains a list of projects currently underway that are scheduled for completion in the near future.

The results of all ACRP research projects are available online, free of charge, for anyone interested in benefiting from this important program. The ACRP website is:
<http://www.trb.org/crp/acrp/acrp.asp>

**Strategic
Objectives**

This working paper is related to Strategic Objectives A and D.

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 Results

4.1 There are currently 173 research projects underway within the ACRP. To date, 39 research projects have been completed. These results have been published and are currently available online through the TRB website. Products that may be of interest to the Caribbean airport community include:

- Safety Management Systems for Airports, Vol.1: Overview (Report 1)
- Quarantine Facilities for Arriving Air Travelers: Identification of Planning Needs and Costs (Report 5)
- Innovations for Airport Terminal Facilities (Report 10)
- Integrating Airport Information Systems (Report 13)
- Guidebook for Managing Small Airports (Report 16)
- Innovative Finance and Alternative Sources of Revenue for Airports (Synthesis 1)
- General Aviation Safety and Security Practices (Synthesis 3)
- Counting Aircraft Traffic Operations at Small and Non-Towered Airports (Synthesis 4)
- Airport Sustainability Practices (Synthesis 10)
- Impact of Airport Rubber Removal Techniques on Runways (Synthesis 11)
- Identification of the Requirements and Training To Obtain Driving Privileges on Airfields (Synthesis 15)

5.0 FUTURE RESEARCH

5.1 Projects currently underway on topics that may be of interest to the Caribbean airport community include:

- Marketing Techniques for Small Airports (1-04)
- Guidebook for Airport Capital Project Delivery Systems (1-05)
- Airport-Airline Agreements and Rate Methodologies-Trends and Characteristics (1-07)
- Developing Best Management Practices-Airport Leasing Policy and Metrics for Evaluating Private Investments on Airports (1-08)
- Capital Projects: Budgeting, Financing, and Management—Best Practices and IT Applications (1-10)
- Airport Concession Planning—Concepts and Business Terms (1-11)
- A Primer for Enterprise Information Systems at Airports (1-12)
- Guidebook of Practices for Improving Environmental Performance at Small Airports (2-13)
- Simulation-Based Training and Exercise of Civil Aviation Emergency Response Personnel (4-04)
- A Guidebook for Developing Airport Safety Management Systems (4-05)

- Analysis and Best Management Practices for the Prevention of Wildlife Strikes at Small Airports (4-06)
- Airport Economic Development Opportunities and Incentives (S01-02)
- Common Airport Pavement Maintenance Practices (S09-02)
- Airport Energy Efficiency and Cost Reduction (S10-04)

6. Conclusion

6.1 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>).