



International Civil Aviation Organization

**FIFTEENTH MEETING OF THE
ASIA/PACIFIC AIR NAVIGATION PLANNING AND
IMPLEMENTATION REGIONAL GROUP (APANPIRG/15)
Bangkok, Thailand, 23 to 27 August 2004**

Agenda Item 3: CNS/ATM Implementation and related activities

ASIA-PACIFIC REGIONAL NAVIGATION FEASIBILITY STUDY

(Presented by the United States of America)

SUMMARY

This paper provides a description of a regional navigation study being performed for the APEC GNSS Implementation Team (GIT) by The MITRE Corporation and sponsored by the U.S. Trade Development Agency (US TDA). The objective of the study is to present the costs, benefits, and performance of various GNSS and augmentation systems for the Asia-Pacific countries. The study should be completed in early 2005.

1. INTRODUCTION

1.1 The intent of the Asia-Pacific Regional Navigation Feasibility Study (ARNFS) is to provide the guiding principles, managerial guidelines and a technical roadmap for CNS/ATM implementation and transition efforts over the period 2003-2013 for the participating economies and to complement the International Civil Aviation Organization's (ICAO) plans and requirements for the Asia-Pacific region. The study is to concentrate primarily on the navigational areas and integration of navigation components in CNS/ATM technologies.

1.2 In addition, as part of the implementation effort, the study will identify possible sources of potential funding for implementation (i.e., such as ExIm Bank, Asian Development Bank, Japan Bank for International Cooperation, the Asia-Pacific Economic Cooperation (APEC) Transportation Working Group and/or from the economies themselves).

1.3 The study is designed to document and assess existing conditions, analyze airspace user trends, establish future requirements appropriate to the region, conduct cost/benefit analyses, provide preliminary site and geographical configurations of recommended systems, provide a safety analysis, establish a phased implementation time-table with related budgets, evaluate the environmental impact of implementation, and address financing of the systems. The study will provide information to the participating economies to aid in defining, developing and implementing a regional Global Navigation Satellite System (GNSS) capability. The study should allow for an incremental implementation of system components and capabilities so that individual economies can transition to GNSS at their own pace. It also should provide a "menu" for the economies to decide what components they really need and what costs they can realistically afford. As such, this is not an all or nothing initiative, but one that can be tailored to the region and to the participating economies by cost, schedule, operational technical, or other requirements.

1.4 The participating economies are:

- Peoples Republic of China
- Republic of Indonesia
- Malaysia
- Republic of the Philippines
- Republic of Korea
- Kingdom of Thailand
- Socialist Republic of Vietnam
- Chinese Taipei
- Republic of Singapore
- Hong Kong Special Administrative Region (SAR)

1.5 The MITRE Corporation is a not-for-profit firm based in the USA that works in the public interest. The corporation conducts no commercial activities and has no financial interest in any commercial activity. MITRE's principal clients are the U.S. Government, primarily the Department of Defense and the Federal Aviation Administration. MITRE has extensive background in CNS/ATM technologies and implementation, having worked for the FAA and foreign governments for many years in these areas.

2. STATUS AND SCHEDULE

2.1 The participating economies met in Singapore in December 2003 in a kickoff meeting for the study. At the kickoff meeting, the contractor and participating economies were introduced, the terms of reference for the study was reviewed, and the overall schedule of the project was agreed upon. MITRE subsequently visited each economy during February and March 2004 to gather CNS/ATM data and discuss the study with government officials, aviation organizations, non-aviation organizations, and user groups.

2.2 MITRE will produce an interim report in the last quarter of 2004, which will be reviewed in a second meeting of the participating economies during November 2004. After incorporating comments on the interim report, a final report will be completed in early 2005. The final report, after release by the US TDA, will be a public document.

3. CONCLUSION

3.1 The meeting is requested to note the material presented in this information paper and consider its contribution to APEC GNSS implementation.

3.2 For further information about the ARNFS, contact:

Dr. S.V. Massimini or Dr. D.R. Owen

The MITRE Corporation
MS N670
7515 Colshire Drive
McLean VA 22102 USA

Phone:

(1) 703 883 5893 (Massimini)

(1) 703 883 5568 (Owen)

Internet: svm@mitre.org rowen@mitre.org