RTCA

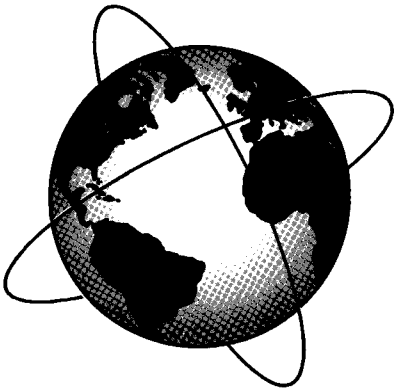
EXECUTIVE SUMMARY

RTCA Task Force Report

on the

Global Navigation Satellite System (GNSS)

Transition and Implementation Strategy



RTCA, Inc.
September 1992

EXECUTIVE SUMMARY

RTCA TASK FORCE REPORT ON THE GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) TRANSITION AND IMPLEMENTATION STRATEGY

September 1992

CONTENTS:

RTCA

RTCA, Inc., a non-profit organization whose membership represents a cross-section of the aviation community, operates as a Federal Advisory Committee. Through the use of volunteers, RTCA regularly develops consensus recommendations on major aviation-related communication, navigation and surveillance issues.

Inquiries and comments concerning RTCA and its publications can be addressed to:

RTCA, Inc.
1140 Connecticut Avenue, N.W.
Suite 1020
Washington, D. C. 20036-4001

Telephone: 202-833-9339
Facsimile: 202-833-9434
Easylink: 62805284
Telex: 2407254 RTCA UQ

OVERVIEW

Implementation of the Global Navigation Satellite System (GNSS) represents the greatest opportunity to enhance aviation system capacity, efficiency and safety since the introduction of radios and radio-based navigation more than 50 years ago. Operational use of GNSS offers civil aviation two major opportunities:

- to significantly improve both the accuracy and timeliness with which aircraft position information can be determined everywhere in the world.

- to effect a fundamental change in the concepts used to manage aircraft operations and the procedures attendant therewith.

In brief, the RTCA Task Force on GNSS Transition and Implementation Strategy concluded that:

- aviation system users need and want the operational benefits that will accrue with the use of GNSS.

- the technology required to achieve a GNSS initial operational capability is available.

- there are no institutional issues that should preclude an early, initial operational capability.

- the transition to GNSS-supported operations should be user-driven and should occur in an evolutionary manner.

- Initiatives to address and resolve issues attendant with longer-term use of GNSS should promptly begin.

GNSS is a here and now capability that will provide major operational benefits to all users of the air transportation system. The Task Force strongly recommends implementation of an early initial operational capability and follow-on efforts to quickly resolve longer-term institutional and equipment development issues.

BACKGROUND

During the latter portion of 1991, the International Civil Aviation Organization (ICAO) Tenth Air Navigation Conference resulted in international agreement supporting the adoption of the Future Air Navigation System/Global Navigation Satellite System as a key element of the future Air Traffic Management (ATM) system. Soon thereafter, Federal Aviation Administration (FAA) Administrator James B. Busey asked RTCA to develop community consensus regarding implementation of GNSS for civil aviation use in the United States and to provide FAA with appropriate recommendations for achieving that objective.

In response to the FAA Administrator's request, RTCA formed a Task Force (TF-1), chaired by Mr. James A. Abrahamson, Executive Vice President