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**Microwave Landing System (MLS) Implementation
(Volume I)**

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SC-125

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F O R E W O R D

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P R E F A C E

This Document was prepared by the membership of RTCA Special Committee 125 which included a wide spectrum of the prospective users of MLS. The Committee was constantly mindful of the stipulation to their Terms of Reference which states "... assuming that it (MLS) will be the primary system in service by the year 2000." The technical aspects of MLS and ILS equipments were considered; it was also necessary to consider the economic user requirements and facility transition planning during this projected period.

Although there is general recognition of the need for a successor system for ILS, a nationwide implementation beginning date is not specifically recommended. Instead, the recommendations are made in Chapter 7 with regard to the basic direction to the Committee. In the opinion of the Committee, application of the Committee's recommendations at the time a decision is made to implement MLS could result in an effective implementation program.

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SUMMARY

S U M M A R Y

This Document responds to the Terms of Reference presented to RTCA Special Committee 125 (see Chapter 2) by providing recommendations for a national Microwave Landing System (MLS) implementation policy.

The recommendations included herein (particularly in Chapter 7) of necessity represent an amalgamation of differing views on how best to transition from VHF/UHF ILS to a standard MLS. In spite of the diverse interests involved, the Committee concluded that on an overall basis, MLS will be a worthy successor to ILS and identified a large number of benefits which MLS may provide. However, the Committee also noted that full exploitation of the potential value of MLS requires FAA's commitment to providing the benefits including taking steps such as changes in FAA's standards and criteria for system implementation, operation, and utilization. Hence, in addition to a proposed implementation strategy, the Document presents a number of complementary recommendations which must be considered in full context with the strategy itself. From a user point of view the recommendations are, perhaps, more important than the strategy. The former are designed to reduce the trauma associated with so large an undertaking as the transition from ILS to MLS by maximizing benefits, minimizing costs, providing for a smooth and evolutionary transition process, and protecting against the premature removal of ILS facilities.

In effect, three individual strategies (short, middle and long term) are presented to match the differing objectives of each phase of the total program. Also, because change is inevitable, the Committee strongly recommends that FAA make a conscious and determined effort to seek and utilize user inputs in the regular review and revision of the strategy to meet changing requirements.

The Document is divided into two parts. Chapter material represents the main body of the Document and provides Committee-approved material including user recommendations in response to the Terms of Reference. The Appendices are the Reports of informal working groups which were assigned responsibility to investigate and report on specific aspects of MLS implementation which might be helpful to the Committee in forming its recommendations. While the Appendices were not subject to the endorsement of the full Committee, they represent the findings of experts who conducted intensive investigation into their assigned subject areas. As such they may be of considerable value to readers who wish to obtain more detailed information in particular interest areas.

A formal MLS Program Steering Committee should be established to serve as a mechanism for soliciting and coordinating views on initiating and updating the MLS implementation plan. This will include identifying and resolving to the extent feasible, problems which may arise; and for generally monitoring program progress. Membership should include duly appointed representatives of user organizations and should be chaired by an FAA representative.