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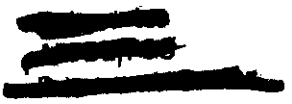

PROCEEDINGS OF THE SELF ADAPTIVE FLIGHT CONTROL SYSTEMS SYMPOSIUM

Lt P. C. Gregory, Editor
FLIGHT CONTROL LABORATORY

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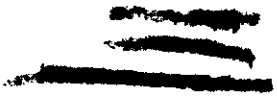

FOREWORD

In compliance with the direction of Headquarters, Air Research and Development Command, a Symposium on Self Adaptive Flight Control Systems was held at Wright Air Development Center on 13-14 January 1959.

The preparations for this symposium were handled jointly by the Control Requirements Section of the Control Synthesis Branch, Flight Control Laboratory and the office of the Deputy Chief of Staff for Plans and Operations. The efforts of the following persons, members of the symposium committee, helped to make the event a success: Mr. A. J. Cannon, Mr. A. S. Drysdale, Mr. C. E. Sondergelt, Mr. L. A. Ferguson, Mr. R. E. Hendrickson, Capt R. V. Simon, M/Sgt W. A. Wood, and M/Sgt H. T. Blaine. The proceedings of the symposium were transcribed by Mr. P. Lund.

The selection of papers and speakers for the symposium was accomplished by Capt R. R. Rath. Assistance in the editing of the proceedings of this symposium was given by Mr. L. A. Ferguson. Miss Annie R. Richardson prepared a large part of the final typed manuscript.

The success of the symposium and the value of these proceedings are both due entirely to the efforts of the contributors of the papers. Their cooperation is gratefully acknowledged.

Lt P. C. Gregory

ABSTRACT

This report gives an account of the presentations at the Symposium on Self Adaptive Flight Control Systems held at Wright Air Development Center on 13-14 January 1959. Papers presented described the " state of the art" of adaptive control systems. Various self adaptive control philosophies and the mechanization and flight test of these philosophies are presented. Future plans and programs for self adaptive systems are discussed. Individual conclusions reached indicate that present flight control systems in operational vehicles could have a self adaptive capability.

PUBLICATION REVIEW

The publication of this report does not constitute approval by the Air Force of the findings or conclusions contained herein. It is published only for the exchange and stimulation of ideas.

FOR THE COMMANDER:

F. B. CARLSON
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