Journal of Aircraft

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The Extension of Professional Knowledge

MAN'S efforts to extend his operational environment beyond the confines of the surface of the earth have been marked by dramatic advances in technology and the employment of an ever-broadening spectrum of scientific disciplines. From the first struggles to overcome gravitational restrictions to the probing of the outer reaches of our universe and beyond, the areas of science and engineering involved in this process have been continually expanding.

Recognizing the need for cohesive professional effort in these fields of development, the Institute of the Aerospace Sciences and the American Rocket Society joined forces, a year ago, to form the AIAA. The objective of the new Institute, as stated in its Constitution, is "to advance the arts, sciences, and technology of aeronautics and astronautics." As a means of accomplishing this objective, the organization is directed to "foster the dissemination of new knowledge." This, in the words of Martin Summerfield, AIAA Vice-President—Publications, is "in fact, the primary mission of all [technical and] learned societies." The AIAA publications program is designed as an integral part of the implementation of this directive.

One aspect of the problem of "information handling and retrieval," of which publication is an essential part, was illustrated by L. Eugene Root, last president of the IAS, when he observed that the average technical library is now doubling its holdings each eleven years. He also quoted the late "Dutch" Kindelberger's remark that "Research results are like eggs; both need to be used while fresh."

Confronted with the growing rate of accumulation of scientific and technical information, and the need for its dissemination "while fresh," the Officers and Directors of AIAA have established an expanded publications program to meet the diversified requirements of the Institute's members. The *Journal of Aircraft*, which makes its debut with this issue, joins its companions, the *AIAA Journal*, the new *Journal of Spacecraft and Rockets*, and the magazine *Astronautics and Aeronautics*, to complete the current phase of this expansion.

The scope of the *Journal of Aircraft* is described inside the front cover. Essentially, our mission is to provide a medium for exchange of new ideas and knowledge which will contribute to the advancement of the science and technology of *airborne* flight. We hope to be able to give proper coverage to developments in all related fields of specialization.

It must be made clear that our primary concern, like that of the *JSR*, will be with significant *applications* and *effects* of new knowledge, rather than with research of a fundamental nature. This latter area of interest will continue to be emphasized by the *AIAA Journal*. The lines of demarcation of these areas, however, are constantly shifting and, in fact, are becoming blurred. Quoting again from Mr. Root, "The traditional distinction between science and technology is disappearing. The time between discovery and exploitation is being drastically compressed .... We may look upon science as 'learning' and technology as 'doing'—two modes of interacting with the same underlying body of knowledge. The professional needs and interests of scientist and engineer, at least in industry, will become largely indistinguishable."

The Editors of the AIAA publications are fully aware of the possibilities of overlap of professional interests among their readers. Every effort will be made to assure that each article to be printed is assigned to the publication in which it will receive the widest readership among those who can benefit from the information presented.

The *Journal of Aircraft* joins a family which has illustrious antecedants. The *Journal of the Aerospace Sciences* and the *ARS Journal*, publications of AIAA's predecessor societies, established high standards of technical quality and professionalism. We hope to emulate these standards.

In keeping with the objective of stimulating research and thought which will advance the "state of the art," the *Journal of Aircraft* will not hesitate to publish material which might be classed as "controversial," provided it meets the required professional specifications and is based on sound technical reasoning. To the best of our ability, we will present all sides of any such technical argument, as well as constructive comment by readers.

One might well ask at this point, "Who is to judge whether an article is technically sound?" Your editors lay no claim to infallibility, and, for this reason, each article or paper submitted for publication is subjected to the rigorous review system established for all AIAA journals. This procedure will be described briefly.

Each manuscript received by AIAA is logged in at the publications office, and examined by the Managing Editor, who tentatively assigns it to one of the publications. The Editor-in-Chief then studies the manuscript, and if he con-

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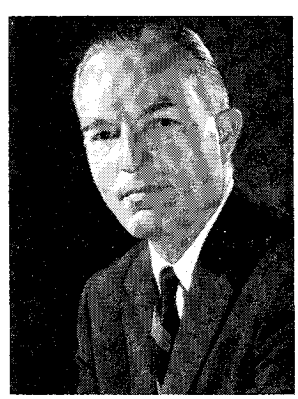

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curs that it is appropriate for his journal, he may 1) directly accept it for publication as an Engineering Note (if it is of appropriate length and scope), or 2) assign it to one of the Associate Editors with competence in the subject of the paper (in some cases, to himself). The Associate Editor, after scanning the content of the manuscript, selects reviewers (no less than two) who are known by him to have specialized knowledge or background in the field. The reviewers receive the manuscript, accompanied by confidential report forms.

Reviewers' comments are carefully studied by the Associate Editor, who then has the responsibility to take action, such as 1) recommending revisions or corrections by the author; 2) obtaining additional reviews; or 3) rejecting the article because a) it presents material which is no longer new, b) it is not based on (what the editor considers to be) solid technical ground, or c) it presents a biased point of view (or a sales pitch).

Editors, reviewers, and author do not always agree. Although the judgment of the Editor-in-Chief is final in such cases, it is our policy to "lean in favor of the author," for, as Dr. Summerfield has said, "it is better to risk publication of an occasional poor paper than to throttle a potentially stimulating idea."

Having described some of our philosophy and procedure, we would now like to discuss our readers. In the parlance of other communications media, this is an "audience participation show," for indeed, it is the group of professional people whose interests we are trying to serve that provides our authors, reviewers, and critics. We wish to encourage your participation in all of these roles. The success of the *Journal of Aircraft* will depend on the degree to which this invitation is accepted.

It is appropriate at this point to mention that manuscripts are received from three basic sources: 1) papers preprinted for AIAA meetings (which are automatically *considered* for publication but not necessarily accepted); 2) papers submitted directly to the AIAA editorial office by authors; and 3) papers solicited by the editors. All manuscripts are processed in the same manner.

The first service which our readers can perform is to direct the attention of the editors to scientific and engineering developments and concepts which might form the basis of worthwhile articles in the journal. In a rapidly paced industry such as ours, this type of "intelligence service" is vital to assure that significant information is not overlooked.

Secondly, to you, as an author, we have some suggestions. For your paper to be given serious and expeditious consideration for publication, it must follow the guidelines in "Information for Contributors" printed on the inside back cover of the journal. The directions as to length, preparation of illustrations, and the form and content of the abstract are particularly important. The paper must, of course, be of high technical quality and in clear, concise language which can be understood by professional people.

If your paper is accepted for publication, your response to requests for revisions or comments should be as rapid as possible. We are under no obligation to retain papers in our files for indefinite periods.

Thirdly, if you are requested to review a manuscript, your editors will rely heavily on your judgment as to its technical quality and timeliness. You are therefore urged to give the paper thorough consideration and to provide complete, constructive information on the confidential review form.

Finally, in your role as critic, you can be extremely helpful. We encourage your comments on any and all aspects of the journal, and welcome your ideas on ways to improve its effectiveness in achieving the objectives which have been established for us.

The *Journal of Aircraft* begins, modest in size, with its editors humbly aware of its responsibility to the profession it serves. With the cooperation of Readers, Authors, Critics, and Editors, who are really interchangeable, we will strive to fulfill our commitments in a manner creditable to AIAA.

Carl F. Schmidt, *Editor-in-Chief*