

Research Committee Report

Introduction

1. OBJECTIVES

THE 1965 PROGRAM of the Research Committee included the following objectives:

- 1.1. To establish general areas in which further photogrammetric research is most appropriate and desirable.
- 1.2. To determine research interests and capabilities in U. S. Colleges and Universities.
- 1.3. To report on recent research and development activities in the various fields of photogrammetry.
- 1.4. To establish research prize(s).
- 1.5. In cooperation with Commission III, ISP, organize and conduct an International Symposium on Spatial Aerotriangulation.

2. ORGANIZATION OF WORK

The committee consisted of a chairman, a deputy chairman, a member and six subcom-

mittee chairmen. Primary responsibilities of the subcommittee chairman were to survey R&D activities in their areas of interest. The composition of the 1965 Research Committee and the assignments handled by each member are shown in Table 1.

3. REPORT ON THE COMMITTEE ACTIVITIES

Following are some of the highlights of the studies undertaken by the Research Committee in pursuit of the objectives listed above:

3.1. GENERAL AREAS IN WHICH FURTHER PHOTOGRAMMETRIC RESEARCH IS MOST APPROPRIATE AND DESIRABLE (D. C. O'Connor)

As a basis for this report, thirty letters of inquiry were sent out. Nine replies were received. A perusal of the submitted data suggests that there is a widespread interest in all phases of photogrammetry including ground

TABLE 1
ASP'S RESEARCH COMMITTEE STRUCTURE FOR 1965

<i>Position</i>	<i>Name</i>	<i>Assignment</i>
Chairman	H. M. Karara	<ul style="list-style-type: none"> • Coordination of the International Symposium on Spatial Aerotriangulation • Establishment of research prize(s) • Coordination of the activities of the committee
Deputy-Chairman	J. M. Anderson	<ul style="list-style-type: none"> • Survey research interests and capabilities in U. S. colleges and universities
Member	D. C. O'Connor	<ul style="list-style-type: none"> • Establish those general areas in which further photogrammetric research would be most appropriate
Chairman, Sub-committee I	J. M. Dowdy	<ul style="list-style-type: none"> • Report on new research and development activities in <i>Photography and Navigation</i>
Chairman, Sub-committee II	S. V. Veres	<ul style="list-style-type: none"> • Report on new research and development activities in <i>Plotting Theory and Instruments</i>
Chairman, Sub-committee III	H. F. Soehngen	<ul style="list-style-type: none"> • Report on new research and development activities in <i>Aerotriangulation</i>
Chairman, Sub-committee IV	S. K. Ghosh	<ul style="list-style-type: none"> • Report on new research and development activities in <i>Mapping from Photographs</i>
Chairman, Sub-committee V	M. S. Wright	<ul style="list-style-type: none"> • Report on new research and development activities in <i>Special Applications of Photogrammetry</i>
Chairman, Sub-committee VI	O. W. Mintzer	<ul style="list-style-type: none"> • Report on new research and development activities in <i>Photointerpretation</i>

control surveys, photography and camera calibration, aerial triangulation by various means, and more fundamental aspects of metrology and instrument design. A considerable effort is being directed towards the rigorous solution of the photogrammetry "Block." This is undoubtedly one of the outstanding problems for solution, but in Mr. O'Connor's opinion, there is a great danger of the problem being regarded as a manipulative problem for the application of computing methods. There appears to be a great need for research workers, adequately equipped with computational background, and thoroughly versed in the photogrammetric principles relating to what they are ultimately trying to do.

There is a disappointing lack of any really *new* ideas in the suggestions. Most of them represent problems which will not doubt be solved by patient improvement of existing techniques.

It is Mr. O'Connor's opinion that Real Time Systems with the data processed virtually "in situ" offer very challenging fields for endeavor.

As photogrammetry develops, there will be an increasing application of the principles of physics and electronics.

3.2. RESEARCH INTERESTS AND CAPABILITIES IN U. S. COLLEGES AND UNIVERSITIES (*J. M. Anderson*)

Because of the importance of this survey, the complete text is presented in the following pages.

3.3. RECENT RESEARCH AND DEVELOPMENT ACTIVITIES IN THE VARIOUS FIELDS OF PHOTOGRAMMETRY AND PHOTO INTERPRETATION

Six sub-committees were appointed to canvass the recent research and development activities in the vast fields of photogrammetry and photo interpretation. The sub-committees were patterned after the commissions of the International Society for Photogrammetry. The reports of Subcommittees I through IV are included in the following pages.

3.4. EFFORTS TO ESTABLISH RESEARCH PRIZE(S)

The efforts that were started by the 1963 Research Committee to stimulate interest in the establishment of an ASP-endorsed research prize(s) were continued in 1965. At one time, it was thought that a "Zeiss Aerotopograph Research Prize" was about to materialize. A Deed of Award for such a prize was pre-

pared and sent to Transmares Corporation on March 2, 1965. No final reply has been received as yet in spite of the apparent enthusiasm of everybody concerned. The reorganization that took place in the Zeiss Company in West Germany might have something to do with the delay.

No interest has been shown by the numerous sustaining members that have been formally and informally contacted.

The outcome of the Committee's efforts for establishing research prizes obviously fell far short of the Committee's expectations. However, because the entire photogrammetric community would profit by stimulating interest in our profession among promising young people at the university level, I strongly recommend continued efforts in this direction on the part of succeeding Research Committees.

3.5. INTERNATIONAL SYMPOSIUM ON SPATIAL AEROTRIANGULATION

Following the recommendations expressed in a resolution adopted by the International Society for Photogrammetry in 1964, Commission III scheduled an International Symposium on Spatial Aerotriangulation in 1966.

This symposium was held on the Urbana Campus of the University of Illinois February 28 through March 4, 1966. A limited number of prominent experts from throughout the international photogrammetric community were invited to attend this activity. Sixty-three photogrammetric scientists and engineers from 13 countries participated in this Symposium. The program included 33 technical papers dealing with the latest efforts in research and development in the field of aerotriangulation.

The American Society of Photogrammetry, which is responsible for Commission III during the 1964-68 period, was successful in obtaining a grant from the National Science Foundation to financially support the Symposium. The NSF grant, amounting to \$4,400, included \$2,200 to support travel of a limited number of prominent foreign engineers, and \$650 to support travel for a limited number of American engineers.

The role of ASP Research Committee included the preparation of the proposal to the National Science Foundation and the coordination of the Symposium.

The proceedings of the Symposium are scheduled to be published in the latter part of 1966 in *Photogrammetria*.

A detailed report on the Symposium will be submitted to ASP shortly after the conclusion of the convention.