

SYMPOSIUM NON-TOPOGRAPHIC PHOTOGRAMMETRIC INSTRUMENTS

MODERATOR: *David Landen, Staff Engineer,
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WHEN most of us speak of photogrammetry it is usually in connection with aerial photography and its application to surveying and mapping. When the founders of our Society, however, met twenty years ago to decide on the aims of the new American Society of Photogrammetry, they took care not to limit our Society to a single activity. The passing years have borne out the wisdom of a *broad and basic definition for photogrammetry—namely, the science and art of making reliable measurements from photographs.* The division of our founders is all the more remarkable when it is remembered, that all of them, when they met at



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Front row—Left to right—E. L. Merritt, Heinz Gruner, Thomas M. Edwards
Back row—Left to right—W. A. Fischer, G. T. McNeil, David Landen (chairman)

Captain O. S. Reading's home in Washington, D. C. twenty years ago, were trained and engaged at that time in the surveying and mapping industry.

What established the importance of basic measurements in their minds? Why were these men so convinced that the science of measuring with photographs should not be concentrated in any one field? They must have realized, even at that early date, that photogrammetry, like all other forms of measurement, cannot be compartmentized. They recognized that there can be no real boundaries between the work of the topographer, the geodesist, the geologist, the forester, the geographer, and others, who either in the present or future apply the science of photographic measurements to their work. Each field of work contributes to knowledge of the other; each shares in the success of the other.

All photogrammetrists meet on one common ground. They recognize the power and versatility of the photograph to capture and record in a precise,

geometrically-correct fashion much of the quantitative data that goes into the making of reliable measurements.

The non-topographic photogrammetrists—they are really photogrammetrists who apply topographic concepts to their own work—might chart their way into the future with the words of Lord Kelvin, the English physicist who said:

“When you can measure what you are talking about and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind. It may be the beginning of knowledge, but you have scarcely, in your thoughts, advanced to the stage of science, whatever the matter may be.”

This symposium has been brought together because of a growing interest in photographic measuring instruments that can be applied in many fields of science, in addition to surveying and mapping. Some of these instruments, you will recognize, are adaptations of instruments that have been developed for topographic mapping; other instruments that you will hear about have been developed, or are in process of development, for distinctly different uses—for example, for geologic mapping. These developments will be followed with interest by many of us; they unmistakably indicate a wider application of photogrammetry to geology, engineering, hydromechanics, architecture, archaeology, meteorology, medicine, photosculpture, to mention only a few fields. Photogrammetry has even found a place in atomic physics, in the tracking of alpha-particles and other forms of radiation, by stereophotogrammetric means.

This Semi-Annual meeting marks the first time the American Society of Photogrammetry is conducting an entire meeting on non-topographic concepts of photogrammetry. Our Society is deeply indebted to our participants for giving so freely of their time and skills in bringing to you some of the latest instrument developments in these special applications of photogrammetry.

INDUSTRIAL PHOTOGRAMMETRY*

Thomas Edwards, Reed Research Inc., Washington 7, D.C.

AS ONE who works with Photogrammetry—not at it—there are times that I find it hard to believe that the science of Photogrammetry was introduced at about the same time that the first practical photographs were being made. It has not enjoyed application to the same broad front that photography has. Since its inception Photogrammetry has been developed as a topographic mapping science and has dealt almost exclusively with terrestrial and aerial photography. Application to other fields has been limited to the efforts of only a few workers and organizations. Applications to industrial problems, if Spectrography and Radiography are excluded, have been practically nonexistent. A discussion of the reasons for this confinement would be a digression; let us consider the result.

We must first appreciate that the current state of technics in our science is high; and the increasing strong desire to broaden our scope is not untimely. The major deterrent to the application of Photogrammetry to new fields has been our self-containment. Too few of our members are in a position where they may be confronted with nontopographic problems, and certainly they have rare occasion to express an opinion or reaction to this subject to other than a fellow Photo-

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