

PANEL DISCUSSION  
ADAPTABILITY AND ACCURACY OF STEREO-  
PLOTTING INSTRUMENTS\*

*Chairman*, Mr. John I. Davidson, U.S. Geological Survey.

*Moderator*, Professor H. Oakley Sharp, Rensselaer Polytechnic Institute.

*PAPERS*. Mr. Alfred O. Quinn, Aero Service Corporation; Mr. Leon T. Eliel, Fairchild Aerial Surveys, Inc.; Mr. Louis A. Woodward, Jack Ammann Photogrammetric Engineers; Mr. Robert E. Altenhofen, U.S. Geological Survey; Mr. John V. Sharp, Bausch and Lomb Optical Co.

DISCUSSION

*Chairman Davidson*: The Scotch poet, Robert Burns, once wrote: "Oh, wad some power the giftie gie us to see oursel's as others see us! It wad frae monie a blunder free us and foolish notion."

Last year, at the Annual Meeting, we were given the opportunity, if not actually invited, to re-evaluate our equipment and methods. Mr. Saralegui's



Members of panel discussion on plotting instruments, from left to right: John V. Sharp; Professor Ir. W. Schermerhorn; Louis A. Woodward; Professor H. Oakley Sharp, moderator; John I. Davidson, chairman; Robert E. Altenhofen; Leon T. Eliel; Alfred O. Quinn.

bird's-eye view of the American scene as presented in his paper<sup>1</sup> furnishes the incentive for the organization of this panel.

We had hoped to precede this discussion with Mr. Pennington's paper, giving the results of tests on a number of stereoplottling instruments now in general use in the United States. Due to circumstances beyond his control, that information is not available.

The panel, however, represents many years of experience which will, we hope, compensate for this circumstance. The educational phase is in the capable hands of Professor H. Oakley Sharp, who will act as moderator. He will introduce the members of the panel.

Professor Sharp is head of the Geodetic and Transportation Division of the Civil Engineering Department of Rensselaer Polytechnic Institute. He graduated from RPI in 1914, worked with a consulting engineering firm for one and

\* Seventeenth Annual Meeting of the Society, Washington D. C., Jan. 10-12, 1951.

<sup>1</sup> Saralegui, A. M., "Something about North American Photogrammetry by a South American." *PHOTOGRAMMETRIC ENGINEERING*, Vol. XVI, No. 1, p. 128.

one-half years, and with a firm of mechanical engineers for three years. This was followed by one year with General Electric and four years of teaching mathematics. He then entered the Engineering Department of RPI and has remained there until the present.

Professor Sharp has written a text book on photogrammetry, one on geodetic control surveys, one on highways and airport engineering; another one on photogrammetry is to be published this year.

Professor Sharp is a member of Sigma Xi, Tau Beta Pi and the civil engineering honor fraternity Chi Epsilon. He is a member of the ASCE, the Highway Research Board, the American Railroad Engineering Association, the American Association of Engineering Education, the American Roadbuilders Association, and the American Congress on Survey and Mapping. He has been a director of this Society and past president of the Mohawk-Hudson Section of ASCE and the Society of Engineers of Eastern New York. Professor Sharp will try to keep all of this talent in order through the afternoon.

I now present Professor Sharp.

*Moderator Sharp:* All of those societies evidence a rather tough hide because I have been exposed to a lot of things in the past. But today I feel somewhat like a turtle which never gets any place unless he sticks his neck out. I have agreed to stick my neck out today. In fact, a few minutes ago I faintly heard a bell in the back of the room. I did not know but what they were getting ready for rounds of three minutes or something of that kind.

In today's panel there probably is some disagreement between people who work with these various types of plotting instruments, disagreement perhaps because we have become accustomed to use a certain type of instrument, and that is the one used in the course of our training. But I think we are all agreed upon one fundamental principle. In fact, all of our plotting instruments are probably based on that fundamental principle. It resolves itself from that point on as to how we may apply that principle, what sort of levers and gadgets and push-buttons we may use in accomplishing what we are endeavoring to do; that is, produce an accurate map.

My experience has been quite largely in engineering. Photogrammetry has been one of the fields, but I have been involved in many engineering projects, and I would say that engineering is one of economics. I think that applies to almost any type of engineering. A man might go out and build a highway as the Roman roads were built, without much engineering. They have lasted centuries. But today an engineer's duty is try to build something as economically as possible. In that we would include maps as well as bridges, buildings or any other type of structure.

So these instruments that we use from time to time bring to mind the question of economy and the purpose which we are going to use the map for. We cannot produce maps to one fixed scale and say that those are going to answer all questions.

So when we start talking about these various pieces of equipment, I do not think we can condemn any of them. They are all good and they all have a place within our process of making maps. I will give you the order in which these men will speak, as it is not the order printed on the program.

The first speaker will be Mr. John V. Sharp, No. 2, Mr. Leon T. Eliel, No. 3, Mr. Louis A. Woodward, No. 4, Mr. Alfred O. Quinn, No. 5, Mr. Robert E. Altenhofen, and No. 6, our good friend Professor Schermerhorn.

We will now proceed to the first paper by Mr. John V. Sharp.