

BOOK REVIEWS

ELECTRONIC POSITIONING SYSTEMS FOR SURVEYORS

by Angelo A. FERRARA

Technical Memorandum C&GSTM-3, Environmental Science Services Administration, Rockville, Maryland, 1967. 20 × 27 cm. VIII + 98 pages. For sale through the Clearinghouse for Federal Scientific and Technical Information, U.S. Department of Commerce, Sills Building, 5285 Port Royal Road, Springfield, Virginia 22151. Hard copy \$ 3.00; microfiche \$ 0.65

This memorandum briefly describes and concisely summarizes the characteristics of nearly thirty electronic positioning systems that are of interest for surveyors. A few navigational systems are included which may meet the requirements of a specific application, or may be all that is available to meet a given situation. The systems described range from Loran A, with a resolution of one microsecond, to the exquisite types such as the Geodimeter, with a resolution of approximately one centimetre.

The data for each system are presented under three headings; an abstract of specifications, a short description of the operating principles and characteristics of the equipment, and a bibliography.

The specifications are based on the literature listed in the bibliography, with the important exception that the use of the term "accuracy" is avoided. The author rightfully states that a manufacturer's claim of accuracy could be misleading unless the term is clearly defined, and that the determination of an absolute value is influenced by factors beyond the control of the operator or the equipment. In lieu of "accuracy", the term "resolution" is used. In addition to resolution, the abstracts include such headings as application, frequency, display, advantages and limitations.

The abstracts are followed by descriptions of operating principles and characteristics of the equipment. Here, the publication has its greatest value to the surveyor, as the data presented are based upon field experience of the actual systems by the Coast and Geodetic Survey.

Each system described includes a bibliography. Some, such as those of the Decca family of instruments and Loran A, contain a large number of listings, while others list only the manufacturers' literature. It is to be noted that the publications of the International Hydrographic Bureau are mentioned in a number of these sections.

Mr. FERRARA is eminently qualified to compile this Memorandum. He has served as an electronic engineer with the Coast and Geodetic Survey for many years, and has had extensive experience in the testing, evaluation, maintenance and installation of many of the systems described.

THE JOURNALS OF CAPTAIN JAMES COOK

Edited by J. C. BEAGLEHOLE

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The voyage of the "Resolution" and "Discovery", 1776-1780
(in two volumes)

CCXXIV + 1646 pages; 78 plates; 15 figures; 16 × 24.5 cm
Cambridge University Press for the Hakluyt Society, 1967

These two volumes form the final part of Dr. J. C. BEAGLEHOLE'S monumental task of presenting the Journals of Captain Cook and contemporary accounts by his fellow officers. The years covered are 1776-1780, the years of Cook's third and last voyage.

The Expedition was given as objective "the discovery of a North West passage by sea from the Pacific to the Atlantic Ocean". Others had penetrated these largely uncharted seas as far north as nearly 70°, and others like Cook and his men had been obliged to turn South, defeated in their search by the elements. In Cook's case it was the fog which caused him to turn back : somewhat surprisingly he seems not to have encountered the ice which renders these waters unnavigable most of the year.

Cook had visited the Hawaiian Islands on his way North, and here it was that he returned to refit — and where he met a tragic death at the hands of the natives. Dr. BEAGLEHOLE advances some interesting theories for the miscalculations leading up to this seemingly unnecessary clash with the Hawaiians who had in the first place received Captain Cook with as much ceremony as they accorded their own chiefs.

To the hydrographic surveyor the work holds much interest, for in these Journals Cook and his officers noted meticulously all they encountered, and whenever the opportunity occurred detailed astronomical and nautical observations were made.

The volumes contain many illustrations, notably a set of reproductions of water colour drawings by the talented artist who accompanied the Expedition.

The whole work is very well and fully documented, and there is a series of Appendices complementing the Journals themselves.

This most scholarly and enthralling work helps us to understand our debt to Cook for his extraordinary contribution to geographical knowledge.
