

CSAC 84/2/82

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Catalogue of the papers of

WILLIAM RENWICK

(1924 - 1971)

Including material relating to the EDSAC computer

Deposited in the University Library, Cambridge

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1982

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GENERAL INTRODUCTION

NOTE ON THE CAREER OF WILLIAM RENWICK

William Renwick was educated at Forth Primary and Lanark Grammar Schools, and at the University of Glasgow, 1941 - 43, where he graduated B.Sc. in Mathematics, Physics and Electronics. From 1943 to 1947 he worked on radar at the Admiralty Signals Establishment, and in 1947 was appointed University Demonstrator in the Mathematical Laboratory, Cambridge (M.A. 1949) where he became responsible for the direction and supervision of R. and D. in the Digital Computer Department and was one of the team which developed the EDSAC computer (see Section D). He became Senior Assistant in Research at the Mathematical Laboratory, and in 1958 joined the Plessey Company at the Electronic Research Laboratory, Roke Manor, Romsey. In 1965, on the formation of the Company's Automatic Group at Poole, he became its first Research Manager, the position he held at the time of his death in 1971 at the age of 47.

Renwick is commemorated by two annual prizes funded by the Plessey Company: the William Renwick Memorial Prize to the author of 'the highest quality technical paper published by its employees', and a prize at University College, Swansea 'to the candidate who has attained the highest standard in the honours examination in Computer Technology' (see A.2).

Renwick was married, with two daughters.

PROVENANCE OF THE COLLECTION

The material was received from Mrs. J.K.M. Renwick via Plessey Controls Limited and through the good offices of Professor M.V. Wilkes, FRS.

The published material in Section C was made available by the Plessey Library, Poole.

ACKNOWLEDGMENTS

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SECTION A BIOGRAPHICAL AND PERSONAL A.1 - A.3

- A.1 Obituary tributes.

 Career note from Plessey Company.
- A.2 Miscellaneous information on Renwick Memorial Prizes
 at Plessey Company, and University College, Swansea.
- A.3 Miscellaneous items: photograph of Renwick (from Plessey
 Company), review of Renwick's book Digital Storage
 Systems, 1964, I.E.E. Conference notice.

SECTION B RESEARCH NOTES AND LECTURES B.1 - B.5

- B.1 Loop binder, inscribed 'CIRCUITS' inside front cover.
- Ms. notes on circuits, on poor quality wartime paper, n.d., perhaps taken at Glasgow University.
- B.2 Large ledger-type loose-leaf binder, inscribed 'William Renwick B.Sc.' inside front cover.
- Ms. notes on Fundamentals of Electricity, Triodes, Oscillators, Amplifiers, Transmission Lines, U.H.F., etc., n.d., perhaps written up from lectures at Glasgow University where Renwick graduated B.Sc. in 1943.
- B.3 Binder inscribed 'SUPERSONICS' on front cover.
- Miscellaneous mathematical calculations and modelling, leading to note at rear of binder 'Attenuation of Supersonics [in delay lines] in Mercury' (as later used in EDSAC I).
- n.d., but perhaps part of work on EDSAC at Mathematical Laboratory, Cambridge.
- B.4 14 pp. ms. lecture on 'Impact of Automation', n.d., probably late 1960s after Renwick's move to become first Manager of Automation Group Research Laboratory of Plessey Company.
- B.5 'The two facets of Plessey Poole'.
- Description by Renwick of work of Poole division, and of new 'o.c.r.' (optical character reading) machine, as reported in New Electronics, January-February 1971.

SECTION C PUBLICATIONS

Folder of published papers by Renwick (some collaborative), 1955-72, the last of these being posthumous; book review, n.d., c.1956; letter to Electronic Engineering, c.1956.

For additional articles by Wilkes and Renwick on the EDSAC, see D.3.

A note of published work held in the University of Cambridge Computer Laboratory Library, kindly made available by the Librarian, is included in the folder.

SECTION D THE EDSAC D.1 - D.5

(Electronic Delay Storage Automatic Calculator)

The EDSAC was one of the earliest electronic calculating machines, developed in the University Mathematical Laboratory, Cambridge, by M.V. Wilkes and colleagues. At a conference on High Speed Calculating-Machines, held at Cambridge 22-25 June 1949, and the first of its kind in Britain, the machine was presented jointly by Wilkes and Renwick.

- D.1 'Progress Report on the Automatic Computing Engine', by J.H. Wilkinson, April 1948.

The report is 'a general introduction to the work carried out by Dr. Turing [A.M. Turing] and his collaborators during the last two years at the National Physical Laboratory'.

Mathematics Division report, 127 pp. duplicated typescript.

- D.2 'Report of a Conference on High Speed Automatic Calculating-Machines', Cambridge, 22-25 June 1949, issued by the University Mathematical Laboratory, Cambridge, with the co-operation of the Ministry of Supply, January 1950.

Renwick's personal copy, with his signature on the front cover.

141 pp. duplicated typescript.

- D.3 Spring-back binder of press-cuttings, photographs and articles re EDSAC, 1947-49.

Includes group photograph of members of the Mathematical Laboratory, 1947-48, 1948-49, and two articles by Wilkes and Renwick, 'An Ultrasonic Memory Unit for the EDSAC', Electronic Engineering, 20, July 1948, and 'The EDSAC - an Electronic Calculating Machine', J. Scientific Instruments & Phys. in Ind., 26, December 1949.

- D.4 Framed original of the first output from EDSAC. Squares from zero to 99.

n.d., but October 1947.

8" x 4½" inside frame.

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D.5 Framed photograph of EDSAC, at University Mathematical
Laboratory, Cambridge.

Dated on verso October 1947.

19" x 15" inside frame.