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Microwave Technology and Careers in Transition: The Interests and Activities of Visitors to the Sperry Gyroscope Company's Klystron Plant in 1939-1940

J.H. Bryant. "Microwave Technology and Careers in Transition: The Interests and Activities of Visitors to the Sperry Gyroscope Company's Klystron Plant in 1939-1940." 1990 Transactions on Microwave Theory and Techniques 38.11 (Nov. 1990 [T-MTT]): 1545-1558.

An 18-month "window in time," June 1939 to November 1940, is provided by the Visitor Register of the Sperry Gyroscope Company plant in San Carlos, California, where the klystron electron tube was first manufactured. This register was recently donated to the Stanford University Archives by William T. Cooke, who became manager of the Sperry Gyroscope Company klystron project in 1938. The klystron electron tube is significant in being the first microwave source that was both electrically and mechanically suitable for use in systems. A few of the visitors to the Sperry plant were experts in electron tubes, and were interested in the structure and design details of klystrons. Most of them, however, were interested in potential applications of the emerging microwave technology, represented by the klystron electron tube, waveguide, and compact antennas, which held promise for filling needs in aircraft navigation and instrument landing systems. In 1940 the interest shifted to include urgent needs for microwave radar systems to meet the growing threat of global conflict. The small Sperry facility in San Carlos never had more than 12 employees, but it was a fascinating crossroads for visitors with widely different levels of interest and responsibility. In fact, the list of visitors reads like a who's who among scientists, engineers, and others in academic, government, military, and industrial positions--from top executive to the working level. The Visitor Register is reproduced in Fig. 1, with the entries sequentially numbered. Register entries are transcribed in Fig. 2. All but a few of the names have been deciphered and most of the individuals identified. In the text, the numbers in parentheses after names refer to the sequential numbers. The 121 entries date from June 27, 1939, to November 5, 1940. There are 115 individuals, six of them having made two visits. It is known that not all visitors--especially local ones--signed the register. A sizable number of the 115 visitors to the Sperry plant are living today, and much valuable information was obtained from

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them in correspondence, visits, and telephone conversations. This information has been combined with information from other knowledgeable individuals and from publications. The result, presented in Section II, forms a historical mosaic, created around the individuals who signed the Visitor Register and who played important roles in bringing new systems and equipment into being between 1940 and 1945. The background to this activity is given in Section I.

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