

# Symposium Proceedings

## The Systems Approach to Data Transmission

A one-day Symposium on "The Systems Approach to Data Transmission" was held on 12th March 1963, at the Northampton College of Advanced Technology, London.

The Symposium was organized by the Data Transmission Committee of the Society and its purpose was explained by the Chairman of the Committee, **Mr. R. G. Dowse** (*Dolcis Ltd.*), in his opening remarks at the Morning Session:

"The role of the Data Transmission Committee is to draw public attention to the possibilities inherent in this comparatively new technique, to help in spreading knowledge of the subject, and to provide a forum in which it can be discussed. The B.C.S. has organized several meetings on Data Transmission but these have been mainly concerned with the technical characteristics, and the limitations of the equipment, and it seemed to us that there was a need to consider the technique in the whole context of data processing. Data Transmission is not an end in itself—merely one of the new methods at our disposal. For this reason we selected the title 'The Systems Approach to Data Transmission' and we hope that the papers which will be presented to you will enable you to view the technique as one which will assist in solving many difficult problems in operational control and which will enable us to realize the full possibilities of integrated data processing.

"This afternoon, Mr. Smith will present the views of the Committee and therefore I do not wish to anticipate his paper at this stage. I should like however to draw your attention to the problems of standardization. If data transmission equipment is to be fully integrated into a system and not merely treated as an alternative means of communication, then it is obvious that there must be a high degree of compatibility between the transmission equipment and the central installation. Unless effective standards are established, there will be a tendency for development to be patchy and unco-ordinated, with the waste that so frequently occurs when standards are finally introduced, due to obsolescence. Manufacturers need assurance that the products they develop will not be wasted by changing standards and in a rapidly shrinking world, this is true in the international field as well as in U.K.

"The British Standards Institution has a committee charged with responsibility in this field. The B.S.I. performs a useful and essential function but it seems to

me that at present the primary initiative lies with the Trade Associations. The Associations of manufacturers in communication equipment and in data processing equipment must continually press for the establishment of standards but there is of course a third party to these discussions, namely the G.P.O. Perhaps the Post Office should force the pace, not only to ensure that British manufacturers agree amongst themselves but so that valuable export opportunities are not lost because of a failure to conform to world standards. The links of the Post Office with the rest of the world are a valuable source of information and they will perform a public service of great importance if a strong and early lead is given. It is very encouraging to know that the Post Office, through the Consultative Committee on International Telephones and Telegraphs is actively engaged on this. An international standard on modulation has been agreed and standards for error control are under consideration.

"In planning a Symposium of this nature, it is difficult to gauge in advance the extent of the interest in the subject and the demand for tickets. Your Committee planned for a maximum attendance of 200 and I am sorry to say that it was necessary to close the booking list about ten days ago. A large number of applications have been received to whom letters of regret have been sent and we are naturally sorry that it has not been possible to allot tickets to everyone who wished to come. As I am sure you will appreciate, the domestic arrangements of running meetings must be made well in advance and it is difficult to cope with a last minute rush. We are however delighted with the response and it is evident that the interest in the subject is now becoming widespread. I am particularly glad to welcome today several gentlemen from France and Holland, and I have had requests for papers from Canada and Australia."

A feature of the Symposium was a Discussion Forum under the Chairmanship of **Dr. M. V. Wilkes, F.R.S.**, in which panel members described their approach to data transmission, the problems faced, the solutions adopted, the benefits gained and the lessons learned. This was followed by a general discussion which gave members of the audience the opportunity to give their own views and challenge those of the Panel.

The proceedings of the Symposium including the paper and discussions are published in the following pages of the Journal.