

Reviews

"Packet Communication", R. M. Metcalfe, MAC TR-114, Dec. 1973
MIT Project MAC

This report of nearly 200 pages gives a detailed development of the theory of packet communication. The author starts with a history of "store-and-forward" computer communications networks. He presents a taxonomy of communication techniques drawing examples from the various networks in existence today.

The report is broken up into three major areas the first of which is an analysis of store-and-forward packet communication. A few of the topics covered are feedback analysis, capacity and delay, channel errors, acknowledging, and sizing.

The second major area is an analysis of broadcast packet communication. The examples are drawn mainly from the ALOHA network. The author includes topics such as block times, slotting, system stability, and a comparison of the various ALOHA configurations.

The third area covers thin-wire interprocess communication. The main part of the discussion centers on the protocols proposed for this technology.

The report concludes with two appendices. The first deals with the ARPA net communications subnet and the IMP-HOST protocol. The second deals with ARPA net host-host protocol.