An Annotated Bibliography on Local Computer Networks
by John F. Shoch
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Preface

This bibliography brings together a wide range of material related to the general area of local computer networking. The references have been divided into two major parts, including the primary section on local networks, and a second section on the important related subject of radio-based systems. In addition, many of the individual entries have been supplemented with brief annotations, to help identify some of the salient characteristics of particular designs.

To help in navigating through these entries, each section is prefaced with a structured guide to the material, identifying related papers and providing a road map through the references. Papers of particular interest have been marked with a star (*), and may be noteworthy for one of several reasons: technical significance, important historical contributions, good summaries, or papers that are just well-written and informative. Anyone who takes the time to read them all would get a good overview of the material.

The field of local networking has been growing very rapidly, and some works may have been overlooked or incorrectly cited; suggestions for additions or corrections would be appreciated. The taxonomy and annotations attempt to interpret much of the literature and, of course, reflect only one opinionated view of the field. Many of these issues are subject to interpretation, and further comments or criticism would be very welcome. Please address any comments to:

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A large scale bibliographic effort such as this one can only succeed through the use of a well equipped library, and with the assistance of some very skilled librarians; this task was much harder than just compiling a list of references, since we wanted to peruse every publication before it was entered in the bibliography. Special thanks go to Giuliana Lavendel, Natalie Yount, Alice Wilder, and the staff of the Library at the Xerox Palo Alto Research Center, who helped to locate many of the more obscure references. We also received important aid from Richard Manuck in the Computer Science Department Library at Stanford University, and made use of the collection in the Engineering Library at Stanford.
1. Local computer networks

1.1. A guide to the literature on local computer networks

This section of the bibliography provides a broad taxonomy for classifying work on local computer networks. In general, systems have been categorized according to their basic physical connectivity: partially connected mesh networks, simple stars, circular structures, bus systems, etc. Each category also incorporates sub-headings for specific network designs, with citations referring to particular papers that are relevant; the complete references may be found in the following section.

0. General papers, surveys, and conference proceedings

[Chu, 1974] Three re-print collections,
[Green & Lucky, 1975] which include some of the
[Chu, 1976] papers described here.
[NBS, 1978a]
[McQuillan, 1978]
[Patton & Franck, 1976]
[Patton & Franck, 1977]
[Patton & Franck, 1978]
[Thurber & Freeman, 1979a]
[Thurber & Freeman, 1979b] revised version of 1979a
[IFIP, 1979]

1. Partially connected networks, store-and-forward

1.1. Partially connected, store-and-forward via Imps

[Heart, et al., 1970] A small sampling of 4 Arpanet papers
[Kleinrock & Naylor, 1974]
[Crowther, et al., 1975]
[McQuillan & Walden, 1977]*
[McKenzie, 1979] Arpanet derivatives
[Lidinsky, 1976] Intra-Laboratory Network (ILN), at
[Amiot, 1976] the Argonne National Laboratory
[Fortune, et al., 1977]
[Lampson & Simonyi, 1979] Xerox Parc
[Lin, 1978] RIT
[Cain & Morling, 1978] Mininet, Polytechnic of Central London and
[Morling, et al., 1978] the University of Bologne

1.1. Partially connected, store-and-forward via hosts

DS/1000 (Hewlett-Packard)
A design for a small scale "store-and-forward by host" system: point-to-point lines, packet switching through the users' hosts (not through Arpanet-style Imps). Distributed routing in the hosts, but the routing tables are static.
[Dickey, 1974] earlier system, 9700, star configurations only
[Hewlett-Packard, 1977a]
[Hewlett-Packard, 1977b]
[Hewlett-Packard, 1978a]
[Hewlett-Packard, 1978b]
[Shatzer, 1978a]
[Shatzer, 1978b]*
[Shatzer, et al., 1979]

RPCNET (IBM Pisa, and others)
[Franchi & Sommi, 1975]
[Franchi, 1976]
[Lenzini & Sommi, 1976]
[Lenzini & Sommi, 1977]
[Lazzeri, et al., 1977]
[Springer, et al., 1978]

DECNET
Some of the earliest DECNET documents appeared around 1974-75. Although eventually intended to support store-and-forward routing through the hosts, the current DECNET offerings have no routing, and only support communication among directly connected hosts.
[Wecker, 1974]
[Wecker, 1975]
[Teichholtz, 1975]
[Wecker, 1976a]
[Wecker, 1976b]
[Conant & Wecker, 1976]
[Passafiume & Wecker, 1977]
[Wecker, 1978]
[DEC, 1978] introduces Decnet Phase II
[Loveland & Stein, 1979]
[Loveland, 1979]

2. Simple star networks and strictly hierarchical systems

NPL
Although authors of some of the earliest discussions of packet switching, the original NPL proposal was for a packet switched backbone net, using a star shaped system for local distribution. Their prototype system included only a single packet switch.
[Davies, et al., 1967]
[Davies, 1968a] five early papers from IFIP '68
[Davies, 1968b]
[Wilkinson & Scantlebury, 1968]
[Bartlett, 1968]
[Scantlebury, et al., 1968]
[Scantlebury, 1969]*
[Wilkinson, 1969]
[Davies, 1971]
[Scantlebury & Wilkinson, 1971]
[Barber, 1973]
[Davies & Barber, 1973]
[Scantlebury & Wilkinson, 1974]*

Octopus (LLL)
[Mendicino, 1970]
[Pehrson, 1973]
[Mendicino & Sutherland, 1973]
[Fletcher, 1973a]
[Fletcher, 1973b]
[Owens, 1973]
[Fletcher, 1975]
[Sloan, 1976]
AN ANNOTATED BIBLIOGRAPHY ON LOCAL COMPUTER NETWORKS

[Watson, 1978]*

Philips Research
[Burnett & Sethi, 1977]

Kuipnet (Kyoto University Information Processing Network)
[Kitazawa, 1976]
[Sakai, et al., 1977]
[Kitazawa & Sakai, 1978]

Labolink (Kyoto University)
[Yajima, et al., 1977a]
[Yajima, et al., 1977b]
[Iwama, et al., 1978]

MISS (University of Chicago)
[Ashenhurst & Vonderohe, 1975]
[Ashenhurst, 1975]

Northwestern
[Lennon, et al., 1973]
[Tsuchiya, et al., 1974]
[Lennon, 1974]
[Lennon, 1975]

IBM's System Network Architecture (SNA)
[Gray & Blair, 1975]
[McFadyen, 1976]
[Cullum, 1976]
[Hobgood, 1976]
[Moulton & Sander, 1977]
[Gray, 1977]
[Cypser, 1978]
[Yasaki, 1978]

AT&T's Transaction Network Service (TNS)
[Fitzwilliam & Wagner, 1978]
[Heffron & Snow, 1978]

Datakit (Bell Labs)
[Fraser, 1979]
[Chesson, 1979]

Sperry-Univac AN/USQ-67 Switch
[Moran & Starkson, 1975]
[Sperry-Univac, 1977] Sperry-Univac AN/USQ-67 switch

Digital PBXs used to switch data
[Davis, 1979]

Misc.
[Rosen & Steele, 1973] Purdue
[Christman, 1973] Los Alamos Scientific Laboratory, LASL
[Barkauskas, et al., 1973] BTL-Naperville
[Innes & Alty, 1975] Liverpool University
[Raimondi, et al., 1976] IBM (LABS/7)
3. Rings and loops

3.1. General papers, surveys, etc.

[Hafner, 1974a]
[Fraser, 1974d]

3.2. Rings run with control passing, or "token passing" techniques

Newhall and Farmer ("Newhall Loop")
Bell Labs, variable length frames distinguished with bipolar violation as a token. Not compatible with T1.
[Farmer & Newhall, 1969]*
[Venetsanopoulos & Newhall, 1970]
[Newhall & Venetsanopoulos, 1971]
[Yuen, et al., 1972] simulations of a ring, with TTY hosts
[Manning, 1972] Newhall loop at Toronto
[Robillard, 1974]
[Lebetouille, et al., 1975]
[Carsten, et al., 1977]
[Anderson, et al., 1978] new project, with Newhall
[Carsten & Posner, 1978]

Distributed Computing System (UC Irvine)
[Will, 1970] considered both control passing & empty slot
[Farber, 1970] very early proposal, fixed size blocks
[Farber, 1972]
[Farber & Larson, 1972a]
[Farber & Larson, 1972b]
[Farber & Heinrich, 1972]
[Loomis, 1973(?)
[Farber, et al., 1973]
[Rowe, et al., 1973]
[Farber & Vittal, 1973]
[Farber, 1974]
[Farber, 1975a]
[Farber, 1975b]
[Rowe, 1975]
[Lyle & Farber, 1976]
[Mokapetris, et al., 1977]
[Farber, 1977]
[Mokapetris & Farber, 1977]
[Mokapetris, 1978]

LNI (and the LCS Net at MIT)
Note: LCS has also produced a series of Local Network Notes (LNN's), marked "...should not be referenced in other publications."
[Pogran & Reed, 1978]
[Clark, et al., 1978]*
[Rowe & Birman, 1979]

Prime
[Nelson & Gordon, 1978]
[Gordon & Nelson, 1979]
Sperry-Univac Memory Multiplexer Data Link (MMDL)
Uses a form of distributed polling in a multiprocessor system
[Anderson, 1975]
[Moran, 1975]

Halo
[Rawson & Metcalfe, 1978]

Star-Ring
[Portvin, et al., 1971]

Sycor
[Lewis, 1977]

Distributed algorithms for token regeneration in a ring
[Le Lann, 1977]
[Chang & Roberts, 1979]

3.3. Rings run with the "empty slot" techniques

Pierce
Blocked Switched Loop at Bell Labs, fixed size blocks.
[Pierce, et al., 1971]
[Avi-Itzhak, 1971]
[Hayes & Sherman, 1971a]
[Hayes & Sherman, 1971b]
[Anderson, et al., 1972]
[Pierce, 1972a]
[Pierce, 1972b]* written in 1970
[Kropfl, 1972]
[Coker, 1972]

Loop switching, emerged in conjunction with the Pierce ring
[Graham & Pollak, 1971]
[Brandenburg, et al., 1972]
[Brandenburg & Gopinath, 1972]
[Yao, 1978]

Cambridge Ring
[Wilkes, 1975]
[Wilkes & Wheeler, 1976]
[Hopper, 1978a]
[Hopper, 1978b]
[Hopper & Wheeler, 1979]
[Wilkes & Wheeler, 1979]*
[Needham, 1979]

NSA
[Hassing, 1973]

ISUNet
[Lee & Pohm, 1978]

RCA
[White & Maxemchuk, 1974] (sets up channels)

Ring Century Bus, Thosiba R&D Center
[Okuda, et al., 1978]
3.4. Rings run with "buffer insertion" techniques

Hafner's insertion ring
[Hafner, et al., 1973]*
[Hafner, 1974a]
[Hafner, 1974b]

DLCN: Distributed Loop Computer Network (Ohio State University)
[Reames & Liu, 1975]
[Liu & Reames, 1975]
[Reames & Liu, 1976]
[Liu & Reames, 1977]
[Liu, et al., 1977]
[Oh & Liu, 1977]
[Babic, et al., 1977]
[Pardo, et al., 1977]
[Liu, 1978]

3.5. Loops with centralized control or switching

Spider Network (Bell Labs)
[Hayes, 1973] Two papers modelling what became Spider
[Hayes, 1974]
[Fraser, 1974a]
[Fraser, 1974b]
[Fraser, 1974c]
[Fraser, 1974d]
[Fraser, 1975]

"New modular loop architecture" (Oregon State University)
[Jafari, 1977]
[Jafari & Lewis, 1977]
[Jafari, et al., 1978a]
[Jafari, et al., 1978b]

3.6. Specialized loops for terminal systems or CPU-IO busses

IBM 2790 terminal system
[Steward, 1970]
[Hippert, 1970a]
[Hippert, 1970b]

SDLC, in "loop mode"
[Donnan & Kersey, 1974]
[IBM, 1975]
[Beaston, 1978]
[Signetics, 1978]

IBM Supermarket/Retail system, uses an SDLC-style approach
[McEnroe, et al., 1975]
[Skatrud & Metz, 1976]

IBM 8100, uses an SDLC loop
[IBM, 1978a]
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Collins C-System
[Newhall & Venetsanopoulos, 1971] cited as one of several examples
[Sharma, et al., 1974]

Weller
[Weller, 1971] I/O loop at Bell Labs
"Frame addressing"
[Saito, 1978]

3.7. Reliability issues
[Zafiropulo, 1973]
[Zafiropulo, 1974a]
[Zafiropulo, 1974b]
[Hafner & Nenadal, 1976]
[Laurer & Skatrud, 1977]
[Wong, et al., 1978]
[Hopper & Wheeler, 1979]

3.8. Other ring and loop systems, and misc. papers
[Zafiropulo & Rothauser, 1972]
[Huen, et al., 1977] TECHNEC at IIT
[Yatsuboshi, et al., 1978] Fujitsu
[Schwartz, 1977] chapter 12, "Polling in networks"
[Agrawala, et al., 1978] compares empty slot and token rings

3.9 Other analytical papers on ring and loop structures
[Spragins, 1971]
[West, 1972]
[Konheim, 1972]
[Spragins, 1972a]
[Kaye, 1972]
[Chu & Konheim, 1972]
[Spragins, 1972b]
[Gall & Mueller, 1972]
[Hayes & Sherman, 1972]
[Noguchi, et al., 1974]
[Wu & Chen, 1975]
[Konheim, 1976]
[Majithia & Dube, 1976]
[Majithia & Dube, 1977]
[Yu & Matithia, 1979]
[Richardson & Yu, 1979]

4. Multiaccess bus networks

Ethernet System
[Metcalfe & Boggs, 1976]*
[Metcalfe, et al., 1977]
[Boggs & Metcalfe, 1978]
[Shoch & Hupp, 1979]*
[Thacker, et al., 1979]
[Shoch, 1979]

Fibernet
[Rawson & Metcalfe, 1978]*
[Rawson & Nafarrate, 1978]
[Rawson, et al., 1978]
[Rawson, 1979a]
[Rawson, 1979b]

Priority Ethernet (University of Tokyo)
[Onoe, et al., 1978]

Acknowledging Ethernet
[Tokoro & Tamaru, 1977]

Hyperchannel (NSC)
[Thornton, et al., 1975]
[NSC, 1976]
[Franta, 1976]
[Christensen, 1977]
[Franta, 1977]
[Rodgers, 1977] ITDS, at Goddard Space Flight Center
[Christensen, 1978a]
[Christensen & Franta, 1978]
[Donnelley & Yeh, 1978a]*
[Christensen, 1978b]
[Miller, 1978]
[Donnelley & Yeh, 1978b]
[Nessett, 1978]
[Bilek, et al., 1978]
[Thornton, 1979]*

Note: numerous other papers have appeared in the proceedings of the Minn. workshops, some of which were co-sponsored with NSC.

NBS
[NBS, 1977]
[Carpenter & Rosenthal, 1978]
[NBS, 1978b]
[Carpenter, et al., 1978]
[Carpenter & Sokol, 1979]

Ford Motor Co.
[Sherman & Gable, 1977]
[Sherman, et al., 1978a]
[Sherman, et al., 1978b]
[Gable, 1978]

Ford Aerospace, Palo Alto
[Biba & Yeh, 1979]

ENET and CNET (Queen Mary College, London)
[West, 1977]
[West, 1978]
[West & Davison, 1978]
[Davison, 1978]
Chaosnet (MIT AI Lab)
[Greenblatt, 1979]

Batnet (Battelle)
[Gerhardstein, et al., 1978]

Ariel (Zilog)
[Hunt, 1978]

PERQ (Three Rivers Computer Corp.)
[Three Rivers, 1979(?)]

Sperry-Univac Shnipads
[Sperry-Univac, 1978(?)]
[Kuhns & Shoquist, 1979]

Background on use of CATV to carry data
[Switzer, 1972]
[Lancaster & Garodnick, 1973]
[Smith, 1975]
[Frisch, 1977]

Mitre CATV-based systems (Mitrix, dual-mode, CSMA, etc.)
[Willard, 1973]
[Willard, 1974]
[DeMarines & Hill, 1976]
[Meisner, et al., 1977a] "dual mode", for the CIA, Mitrix II
[Hopkins, 1977] CSMA/LWT
[Hanks, 1978] Mitrenet
[DeMarines & Willard, 1978]
[Naylor, 1978]
[Wanner, 1978] system at the Promis Lab., polling
[Hertzberg, et al., 1979]
[Hopkins, 1979]

Honeywell "multi-computer" bus structures
[Jensen, 1975]
[Jensen, 1978]

Other bus structures, and misc. papers
[Schenkel, 1974]
[Ohnsorge & Schenkel, 1974]
[Orthner & McKeown, 1975]
[Agrawala, et al., 1977]
[Szurkowski, 1978]
[Almes & Lazowska, 1979]
[Tobagi & Hunt, 1979]

5. Other related topics

IEEE 488
[IEEE, 1975]
[Loughry & Allen, 1978]
Use of a shared, optical broadcast medium
[Gfeller, et al., 1978]
1.2. References on local computer networks

[Agrawala, et al., 1977]
Models a specific Ethernet-style design using a separate network processor at each host; this processor can buffer packets and generate low-level acks.

[Agrawala, et al., 1978]

[Almes & Lazowska, 1979]

[Amiot, 1976]
Includes a description of the connection between the large Central Computing Facility (CCF) and the Intra-Laboratory Network (ILN).

[Anderson, 1975]
A multi-processor system, using a special ring system for processor-to-memory communication (MMDL). Uses a form of "distributed polling."

[Anderson, et al., 1972]
GPSS simulation of a Pierce loop.

[Anderson, et al., 1978]
Loop with a supervisor: provides master clock, initialization of 'control' and recovery. Uses modified HDLC: control sequence is a 0 + seven 1's, changed to an HDLC flag when control is siezed. Uses separate loop interface, with buffers, etc. -- microprocessor + 60 IC's. Only a prototype controller; runs at up to 19.2 kbps.

[Ashenhurst, 1975]
Robert L. Ashenhurst, "Centralized or decentralized computing -- or maybe some of both?", 11th IEEE Computer Society International Conference (COMPCON Fall '75), Washington, September 1975, pp. 59-60.

[Ashenhurst & Vonderohe, 1975]
Simple hierarchy: local minicomputers tied into an intermediate level (MOM), and ultimately a large host (DAD).
[Avi-Itzhak, 1971]
Has a forward reference to [Pierce, 1972b], which later outlined the design of this "empty slot" ring.

[Babic, et al., 1977]

[Barber, 1973]
Very general introduction, and a bit of detail on the NPL local network.

[Barkauskas, et al., 1973]
BTL-Naperville, star configuration, mini-computers given access to peripherals on the central machine.

[Bartlett, 1968]
More on the use of multiplexers to reach the single switch in a local area of the NPL proposal.

[Beaston, 1978]

[Biba & Yeh, 1979]
Ford Aerospace, Palo Alto. Uses PDP-11's with a separate controller/interface (the UMC-Z80 which includes a Zilog Z80 and SIO ship); runs at 880 kbps, and connects to the Ford Motor Co. transceiver.

[Bilek, et al., 1978]
Discrete event simulation of a Hyperchannel system; very limited results, but did show potential deadlocks in allocation of channel adapters.

[Bliss, et al., 1976]
A very similar version of this paper was also presented at the same conference the following year.

[Bock, 1977]
Peter Bock, "A data communications operating system (DCOS) for microprocessor-driven peripherals", *16th Annual Technical Symposium*, ACM(DC) and NBS, Gaithersburg, Maryland, June 1977, pp. 159-166.
Simple star to share peripherals among a small number of hosts; uses Altair as a switch, operator control to set up connections, runs at up to 9600 kbps.
[Boggs & Metcalfe, 1978]

[Brandenburg, et al., 1972]
More on addressing methods for inter-loop switching. Uses matrix algebra techniques to analyze the network; provides a more space-efficient method.

[Brandenburg & Gopinath, 1972]
More on inter-loop switching, this time using a scaler product of the address in the block, with a bit entry in a special table. Yields the distance to the destination.

[Burnett & Sethi, 1977]
Hosts all linked to a central packet switch.

[Cain & Morling, 1978]
A special-purpose system for process control devices. Very small packets, virtual circuits, store-and-forward via microprocessor "exchanges."

[Carpenter & Rosenthal, 1978]

[Carpenter & Sokol, 1979]

[Carpenter, et al., 1978]
Microprocessor TIE's for dumb devices: packet buffer in the TIE, user interface runs only up to 9600 bps.

[Carsten & Posner, 1978]
R. T. Carsten and M. J. M. Posner, "Simplified statistical models of single and multiple Newhall loops", *National Telecommunications Conference (NTC '78)*, Birmingham, December 1978, pp. 44.5.1-44.5.7.

[Carsten, et al., 1977]

[Chang & Roberts, 1979]
Discusses an algorithm that might be used to assure unique regeneration of a lost control token, in a token-passing ring system.
[Chesson, 1979]
See also [Fraser, 1979].

[Christensen, 1977]

[Christensen, 1978a]

[Christensen, 1978b]

[Christensen & Franta, 1978]
This paper is actually a consolidation of two different papers which were presented at an earlier conference in Minneapolis. The first part is an overview of the Hyperchannel, which is not bad; the second part is a bit of analysis, and is not as strong.

[Christman, 1973]
A star configuration, to service terminal users and large machines; controlled from a single Front End Machine (FREM).

[Chu, 1974]

[Chu, 1976]

[Chu & Konheim, 1972]
Includes a discussion of analytical results for loops.

[Clark, et al., 1978]

[Coker, 1972]
Written October 1971; describes the interface to the two host computers. Honeywell DDPS16, Bell Labs Acoustic Research Facility, 16k, 16bit, ~1 microsec. memory. Did an FTP program, to get files from the other machine; used a PosAck/Retransmission scheme. Also did remote loading and running of the second machine. Max. user data rate: 50 Kbits/sec.
[Conant & Wecker, 1976]

[Crowther, et al., 1975]
An expanded version of this paper later appeared as [McQuillan & Walden, 1977].

[Cullum, 1976]

[Cypser, 1978]
Presents a detailed discussion of IBM's SNA.

[Davies, et al., 1967]
The original paper on the NPL proposal.

[Davies, 1968a]

[Davies, 1968b]
Describes the two-tier system, with a packet-switched backbone and a single switch in each local area.

[Davies, 1971]
Mentions the single-switch configuration at NPL.

[Davies & Barber, 1973]
Esp. pp. 261-267, on the NPL local network: a tree of multiplexers with a single switch.

[Davis, 1979]
George R. Davis, "The changing face of the private branch exchange," *Data Communications*, August 1979, pp. 43-49.
A general review of newer PBXs using digital switching, and their potential to serve as star-shaped switches handling digital data connections.

[Davison, 1978]
Alan Davison, *Design of a low-cost broadcast packet transmission network*, TR 119, Computer Systems Laboratory, Queen Mary College, October 1977, revised March 1978.
[DEC, 1978]

[DeMarines & Hill, 1976]

[DeMarines & Willard, 1978]

[Dickey, 1974]
Star shaped system; precursor to later HP DS/1000 work.

[Diffley, 1973]
Michael W. Diffley, "Design considerations of a proposed local area computer network emphasizing the needs of the health sciences", 3rd Data Communications Symposium, ACM and IEEE, St. Petersburg, Florida, November 1973, pp. 97-103.
Currently running a very small star; proposal for a small Arpanet-style system, with "exchange nodes".

[Donnan & Kersey, 1974]

[Donnelley & Yeh, 1978a]

[Donnelley & Yeh, 1978b]
Further simulations of proposed modifications to the Hyperchannel mechanisms; done at LLL.

[Farber, 1970]
A fascinating early paper: no central control, but fixed size blocks on the loop (300 bits); each with a leading free/busy bit. Direct, 8-bit addressing of destination node.

[Farber, 1972]
A comparison of 7 networks, including DCS. Written in the "future present tense," it reports 9 nodes on the ring, using fixed length messages; that configuration was apparently never operational.

[Farber, 1974]
[Farber, 1975a]

[Farber, 1975b]

[Farber, 1977]

[Farber & Heinrich, 1972]
Elaborates upon the file system, as part of DCS.

[Farber & Larson, 1972a]
Fixed length, empty slot approach.

[Farber & Larson, 1972b]

[Farber & Vittal, 1973]

[Farber, et al., 1973]

[Farmer & Newhall, 1969]
Describes 3-station prototype of a ring: no central control, but a "loop supervisor" to provide clocking. 6.312 Mhz, 3.156 Mbps, but does not use standard T2 coding; 1 bit delay per host. "Primary" part of interface is powered from the line. Loop supervisor puts 0's on the loop, reclocks signals.

[Fitzwilliam & Wagner, 1978]
Transaction system with a central host, via switched network or using a local message switch for polled access.

[Fletcher, 1973a]
[Fletcher, 1973b]

[Fletcher, 1975]

[Fortune, et al., 1977]
Design for an Arpanet-like system; first phase is a two-host prototype.

[Franchi, 1976]
Sort of a mini-SNA, but with no SSCP. S/F via the hosts; uses flooding to spread changes to the network organization.

[Franchi & Sommi, 1975]

[Franta, 1976]

[Franta, 1977]

[Fraser, 1974a]
A. G. Fraser, "Spider -- an experimental data communications system", International Conference on Communications (ICC ’74), Minneapolis, June 1974, pp. 21F-1 - 21F-10.
Buffered, centrally controlled. Central switching machine, connected to terminals with a T1 twisted-pair line (1.544 megabits/sec). Fixed slots around the loop. Each TIU introduces 8 bits of delay.

[Fraser, 1974b]

[Fraser, 1974c]

[Fraser, 1974d]

[Fraser, 1975]

[Fraser, 1979]
A. G. Fraser, "Datakit -- A modular network for synchronous and asynchronous traffic", International Conference on Communications (ICC ’79), Boston, June 1979.
See also [Chesson, 1979]. Up to 511 modules connected in a star to a single node.
[Frisch, 1977]

[Gable, 1978]

[Gall & Mueller, 1972]

[Gerhardstein, et al., 1978]

[Gfeller, et al., 1978]
F. R. Gfeller, H. R. Muller and P. Vettiger, "Infrared communication for in-house applications", *17th IEEE Computer Society International Conference (COMPCON Fall '78)*, Washington, September 1978, pp. 132-138. IBM Zurich; using LED's and photodiodes on terminals within a room, with a 'satellite' on the ceiling.

[Gordon & Nelson, 1979]

[Graham & Pollak, 1971]
R. L. Graham and H. O. Pollak, "On the addressing problem for loop switching", *Bell System Technical Journal*, 50:8, October 1971, pp. 2495-2519. Contains a forward reference to Pierce's then unpublished paper, which did not emerge until the following year. Advocates distributed control, and not a pre-determined routing. Suggests special binary addresses for each node; can then compute a Hamming distance between two nodes (loops).

[Gray, 1977]

[Gray & Blair, 1975]

[Green & Lucky, 1975]

[Greenblatt, 1979]
Richard Greenblatt, personal communication, MIT AI Laboratory, May 1979. Demonstration of the Chaosnet. There are no papers yet published.
[Hafner, 1974a]
A good introductory survey; additional details on their "loop extension" approach.

[Hafner, 1974b]
Describes the switching procedures used with the ring to support voice communication: establish calls, carry voice, build conference calls, etc.

[Hafner & Nenadal, 1976]
Running alternate lines in a loop structure, able to skip over failed nodes.

[Hafner, et al., 1973]
Switching a shift register into a loop. Distributed control, but still has a special node to provide clock and synch., remove smashed packets. Designed mainly for voice.

[Hanks, 1978]

[Hassing, et al., 1973]
Done at NSA. two rings running in opposite directions, empty slot technique. Set switches to make one node generate the clock for all, and introduce a null packet, if needed. Packets may circulate many times if not taken immediately at the destination.

[Hayes, 1973]
Models what became Spider; similar to [Hayes, 1974].

[Hayes, 1974]
Models what became Spider: unlike Pierce's earlier work, it is a loop to a central switch. Switch does routing and control of traffic. Switch can buffer blocks, and can centrally tell terminals to shut off, if backlog is growing. All data must first go through the switch, even if it is destined for another terminal on the same loop. Uses 1.544 megabit/sec. line (T1).

[Hayes & Sherman, 1971a]
Delay estimates for a Pierce loop.

[Hayes & Sherman, 1971b]
Delay estimates for a Pierce loop; analysis and simulation.
[Hayes & Sherman, 1972]

[Heart, et al., 1970]

[Heffron & Snow, 1978]

[Hertzberg, et al., 1979]

[Hewlett-Packard, 1977a]

[Hewlett-Packard, 1977b]

[Hewlett-Packard, 1978a]

[Hewlett-Packard, 1978b]

[Hippert, 1970a]

[Hippert, 1970b]

[Hobgood, 1976]

[Hopkins, 1977]
[Hopkins, 1979]

[Hopper, 1978a]

[Hopper, 1978b]

[Hopper & Wheeler, 1979]
Extension of the Cambridge Ring work: have each station recompute parity, report an error to a monitoring station.

[Huen, et al., 1977]
Ties together a group of LSI/11's, to run a single program. Byte parallel ring.

[Hunt, 1978]

[IBM, 1975]

[IBM, 1978a]
(Second edition, March 1979.)
The 8100 has provision for an SDLC loop-mode link for connecting peripherals. Can have a "directly attached loop" or use a communication line to a "data link attached loop."

[IBM, 1978b]

[IBM, 1978c]
Includes photographs and detailed description of equipment used to construct SDLC loop systems for the 8100.

[IEEE, 1975]

[IFIP, 1979]

[Innes & Alty, 1975]
Star configuration: mini-computers attached to a single Support Computer, which in turn interfaces to a large-scale machine. Byte parallel links to the Support Computer, up to about 250 kbps.
AN ANNOTATED BIBLIOGRAPHY ON LOCAL COMPUTER NETWORKS

[Iwama, et al., 1978]

[Jafari, 1977]

[Jafari & Lewis, 1977]

[Jafari, et al., 1978a]

[Jafari, et al., 1978b]
Really a loop, with a loop controller. Two channels, one for control and one for data; negotiate on control channel to set switches at intermediate nodes on the data ring.

[Jensen, 1975]

[Jensen, 1978]

[Kaye, 1972]
Analysis of a Newhall-style, control passing system.

[Kitazawa, 1976]
Shigeyoshi Kitazawa, Development of an in-house computer network Kuipnet, Department of Information Science (thesis), Kyoto University, December 1976.
Modelled after the Arpanet, but a simple star with a single IMP.

[Kitazawa & Sakai, 1978]
Provides some real performance measurements for this modest star-shaped packet switching system.

[Kleinrock & Naylor, 1974]
Includes lots of Arpanet measurements, as well as a brief discussion of incestuous traffic -- traffic between two local hosts connected to the same Imp.
[Konheim, 1972]
Loop system with a central station and N terminals.

[Konheim, 1976]
Loop with central control and chaining, or hub-polling.

[Kropfl, 1972]
Originally written in February 1971; describes an implementation of the Pierce loop augmented with a mechanism for "hog prevention." Used T1 technology for a single loop, with one A box (controller) and 2 B boxes.

[Kuhns & Shoquist, 1979]
10 Mbps Triax cable, separate control and data lines, central control.
[Labonte, 1973]

[Lampson & Simonyi, 1979]
Butler Lampson and Charles Simonyi, personal communication, Xerox Palo Alto Research Center, July 1979
Proposal for a high performance local network, up to 50 Mbps, using an ECL micro-Imp.

[Lancaster & Garodnick, 1973]
Paul Lancaster and Joseph Garodnick, "CATV environment for data communications", National Telecommunications Conference (NTC '73), Atlanta, November 1973, paper 38C.

[Laurer & Skatrud, 1977]
Scheme to reconfigure a broken loop as two half-duplex, multi-drop lines.

[Lazzeri, et al., 1977]

[Lebetoulle, et al., 1975]
Modeled a very specialized environment: identical hosts connected to a Newhall-Farmer style loop, doing restricted, transaction interactions over a shared data base. Limited protocols. Initially, two PDP-11's as user hosts. Note: "Mininet" is the name of the architecture for handling distributed transaction processing: there have been no reports of actual experience with any local network implementations.

[Lee & Pohm, 1978]
ISUnet, a T1 loop with 32 circulating slots; repeaters powered from the line.

[Le Lann, 1977]
See esp. section 4, techniques which might be used to regenerate a lost control token in a token-passing ring.

[Lennon, et al., 1973]

[Lennon, 1974]

[Lennon, 1975]
Simple star system, nodes linked to central point; looks like a paper tape device to users' machines.
[Lenzini & Sommi, 1976]

[Lenzini & Sommi, 1977]
L. Lenzini and G. Sommi, "RPCNET, a network among education and research organizations in Italy: characteristics and status", European Conference on Electrotechnics (Eurocon '77), Venezia, May 1977, paper 3.1.3.

[Lewis, 1977]
One-page proposal for a ring using SDLC control frames, with "ring-master" status being passed around the ring.

[Lidinsky, 1976]
Scaled down Arpanet, 50 Kbps lines, packet switching through Interface Processing Units (IPUs, like Imps) containing dual microprocessors.

[Lin, 1978]
A small network with 4 hosts and 4 "micro-ImPs."

[Liu, 1978]

[Liu & Reames, 1975]

[Liu & Reames, 1977]

[Liu, et al., 1977]
M. T. Liu, G. Babic, and R. Pardo, "Traffic analysis of the distributed loop computer network (DLCN)", National Telecommunications Conference (NTC '77), December 1977, paper 31:5.

[Loomis, 1973(?)]
D. C. Loomis, Ring communication protocols, Technical Report #26, Dept. of Information and Computer Science, UC Irvine, undated (but listed elsewhere as January 1973). Describes use of a control token, passed around to control the ring.

[Loughry & Allen, 1978]

[Loveland, 1979]
Richard A. Loveland, "Putting Decnet into perspective", Datamation, March 1979, pp. 109-114. Recites some of the Decnet history, including lack of routing in Phase I and Phase II.
[Loveland & Stein, 1979]

[Lyle & Farber, 1976]

[Majithia & Dube, 1976]
J. C. Majithia and J. D. Dube, "Results for a loop network with a hybrid message-handling protocol", Proc. IEE, 123:8, August 1976, pp. 775-776. Short note describing simulation of a hypothetical full-duplex ring, with different priority classes.

[Majithia & Dube, 1977]

[Manning, 1972]
Eric G. Manning, "Newhall loops and programmable TDM -- two facets of Canadian research in computer communications", First Int. Conference on Computer Communication (ICCC), Washington, October 1972, pp. 338-342. Proposal to use a Newhall loop to connect TIP-like nodes. Brief description of a 2-node Newhall loop implemented at the University of Toronto (to Waterloo): METANET. Notes that passing of control from one node to the next takes 2 msec.

[McEnroe, et al., 1975]

[McFadyen, 1976]

[McKenzie, 1979]
Alex McKenzie, personal communication, BBN, July 1979. Described several scaled-down or derivative versions of the Arpanet.

[McQuillan, 1978]
John M. McQuillan, Understanding the new local network technologies, BBN Report 3927, September 1978.

[McQuillan & Walden, 1977]
J. M. McQuillan and D. C. Walden, "The ARPA Network design decisions", Computer Networks, 1:5, August 1977, pp. 243-289. This is an expanded version of [Crowther, et al., 1975]; it is one of the best all-around papers on the Arpanet, exploring many aspects of the design. Includes a short discussion of problems associated with network front end machines (esp. sections 3.3.2 and 5.2.2).

[Meisner, et al., 1977a]
[Meisner, et al., 1977b]

[Mendicino, 1970]

[Mendicino & Sutherland, 1973]

[Metcalfe & Boggs, 1976]

[Metcalfe, et al., 1977]

[Miller, 1978]
NSC/BNR project, interconnect Hyperchannel systems via T3 microwave.

[Mockapetris, 1978]

[Mockapetris & Farber, 1977]

[Mockapetris, et al., 1977]

[Moran, 1975]
MMDL connects processors and memories in a multi-processor; uses a form of "distributed polling" around the ring.

[Moran & Starkson, 1975]
Describes some components later used in a centralized circuit switch, [Sperry-Univac, 1977].
[Morling, et al., 1978]  

[Moulton & Sander, 1977]  

[Naylor, 1978]  

[NBS, 1977]  
"NBS experimenting with 'Ethernet' packet switching", *Data Communications*, February 1977, p. 20.

[NBS, 1978a]  

[NBS, 1978b]  
"NBS to construct local packet network", *Data Communications*, November 1978, p. 22.

[Needham, 1979]  

[Nelson & Gordon, 1978]  
This system includes a communications ring connecting Prime P400 computers, running at 10 Mbps.

[Nessett, 1978]  
Some bus networks (such as the Hyperchannel) provide packet buffers as part of the interface; discusses ways to manage buffer allocation in these units.

[Newhall & Venetsanopoulos, 1971]  
Summaries of the Arpanet, the Collins C-System TDM loop, and the Farmer/Newhall loop.

[Noguchi, et al., 1974]  
A brief consideration of a ring structure where collisions may take place, Aloha-style.

[NSC, 1976]  
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[Oh & Liu, 1977]
Y. Oh and M. T. Liu, "Interface design for distributed control loop networks", National Telecommunications Conference (NTC '77), December 1977, paper 31:4.
Proposed structure for a DCLN interface: lots of hardware, introduces delay at each node.

[Ohnsorge & Schenkel, 1974]
Proposal for a bus system for voice and data, using distinct transmit and receive tree structures. Stations individually set up TDM channels to carry voice or data; the system does depend upon a central clock.

[Okuda, et al., 1978]
N. Okuda, T. Kunikyo, and T. Kaji, "Ring Centry Bus -- an experimental high speed channel for computer communications", Fourth International Conference on Computer Communication (ICCC), Kyoto, September 1978.
Control station generates timing pulses of the ring, and clears any packet which circulates 256 times (!); both a data and control loop, using fiber optics. 100 Mbps, TDM, 8 channels (packets) circulating within exactly 1 frame; if channel is empty, can grab it, and reuse it repeatedly.

[Onoe, et al., 1978]

[Orthner & McKeown, 1975]
Parallel bus with an arbiter; micro-imp's between the hosts and the bus, to minimize host changes. Sort of like a super Unibus, can read and write to other units.

[Owens, 1973]

[Pardo, et al., 1977]

[Passafiume & Wecker, 1977]

[Patton & Franck, 1976]
Mainly focused on techniques related to "large scale" hosts. This first conference was co-sponsored with NSC, and many of the papers are from potential users of the Hyperchannel. Only selected papers have been included in this bibliography.

[Patton & Franck, 1977]
[Patton & Franck, 1978]

[Pehrson, 1973]
Esp. section 6.8, an extended example treating the Octopus network.

[Pierce, 1972a]

[Pierce, 1972b]
Originally written in 1970. Terminals connected to loops; loops may then be interconnected. Uses regular digital lines (T1), without special modulation (unlike Newhall). Each loop requires a special "A" box, for loop timing, etc.
"The data network has been deliberately kept very simple. It is multiprocessing with a vengeance."

[Pierce, et al., 1971]
Pierce's first paper on the subject. Describes possible hierarchy of loops, connecting the entire country.

[Pogran & Reed, 1978]

[Potvin, et al., 1971]
Central, high-speed parallel ring (option for buses radiating out from a node); daisy chain of control around the ring, address the destination explicitly on 1 of n address lines.

[Raimondi, et al., 1976]
Originally a laboratory automation system, connecting a group of System/7's in a star to a 360 or 370. Central host used for program development, data analysis, etc.

[Rawson, 1979a]

[Rawson, 1979b]

[Rawson & Metcalfe, 1978]
Compares alternative architectures for local nets using fiber optics; reports on Fibernet, a transmissive star coupler formed using a mixing rod. Good collection of references on work in this area.
Reports on 19-channel transmissive star couplers (a la Fibernet), but now formed with thermal fusing.


Models inquiry/response traffic for N terminals and 1 host.

Considers a Farmer/Newhall loop: buffered I/O terminals, a loop, and a loop supervisor to provide clock and failure control.

John C. Rodgers, "Computer networking with a data bus", *16th Annual Technical Symposium*, ACM(DC) and NBS, Gaithersburg, Maryland, June 1977, pp. 45-50.
Plan to use an NSC Hyperchannel; run the 4 trunks at different rates.

Star configuration, terminals and small hosts access a CDC 6500, 9.6 Kbps lines.

A nice overview of the system, and discussion of software. Includes a tiny bit of performance information.

The "Cocanet" is a local network being built to support research on distributed data bases; the network is being built with the "LNI" ring interfaced originally developed at UC Irvine [Mockapetris, et al., 1977].

Loop system for carrying voice, dynamically allocates portions within a frame.

Star configuration with point-to-point lines (~1 Mbps) to a simple switching machine.


Local system for NPL, mainly for terminals connected through multiplexers to a single central switch.


Describes use of the NFL network, supporting about 75 terminals and 12 hosts -- connected through a single packet switch.

Bus structure with no central control; two parallel send and receive trees. Proposal to use a branching tree utilizing fiber optics; actual system had only 1 branch, 3 hosts, used coaxial cable.


Uses a backbone TDM loop to connect major peripherals; a slower TDM loop to connect terminals.

Point to point lines, store-and-forward processing through the host, static routing tables (can be reset by hand, if there is a failure).
the "store-and-forward via host" technique introduces significant delays.

[Shatzer, et al., 1979]
R. R. Shatzer, L. C. Hartge, A. P. Russon, and J. D. Chisholm, "HP's network concept stresses resource sharing and flexibility", Data Communications, August 1979, pp. 73-82.
Further discussion of HP's DSN architecture, and examples of the store-and-forward implementation in DS/1000.

[Sherman & Gable, 1977]
Brief note on a manufacturing control application, used as an early test of an Ethernet-like system.

[Sherman, et al., 1978a]

[Sherman, et al., 1978b]

[Shoch, 1979]
Includes a general discussion and taxonomy of local networks, and detailed performance studies of the Ethernet system.

[Shoch & Hupp, 1979]

[Signetics, 1978]
A chip to do SDLC/HDLC/ADCCP, including loop mode.

[Skatrud & Metz, 1976]

[Sloan, 1976]

[Smith, 1975]
Reviews several proposals for two-way cable systems, and describes the Mitrix data communications system done at Mitre.

[Sperry-Univac, 1977]
Sperry-Univac, AN/USQ-67 converter-switching system, signal data, Sperry-Univac Defense Systems, 1977. 640x640 centralized switch, for inter-connecting peripherals, hosts, etc. Reports reduction of cable weight from 121 tons to 2.5 tons.
[Sperry-Univac, 1978(?)]
Sperry-Univac, AN/UYC 501(V) -- Shinpads system data bus (product brochure), Sperry-Univac, undated (probably 1978).
Cable bus for shipboard use, with a central controller.

[Spragins, 1971]
Loop configurations: one CPU with multiple terminals, using centralized control.

[Spragins, 1972a]
J. D. Spragins, "Loops used for data collection", Symposium on Computer-Communications Networks and Teletraffic, (Polytechnic Institute of Brooklyn, April 1972), Polytechnic Press, 1972, pp. 59-76.
Model for only in-bound traffic on a loop, from terminals to a central controller.

[Spragins, 1972b]
Loops with central control and fixed slots.

[Springer, 1978]
A space division switch, "fast circuit switching."

[Springer, et al., 1978]
Allen Springer, Livio Lazzeri, and Luciano Lenzini, "The implementation of RPCNET on a minicomputer", Computer Comm. Review (ACM SigComm), 8:1, January 1978, pp. 4-14. Implementation in the System/7; S/F via host, dynamic update of routing tables in case of line or host failure. Not much of an end-to-end protocol, however (looks like there will be permanent loss of a packet if it is stuck in a host which crashes).

[Steward, 1970]

[Switzer, 1972]

[Szurkowski, 1978]
A central PDP-11/70 with a string of micro-processors for data acquisition; a 'super Unibus' with a single bus controller.

[Teichholtz, 1975]
[Thacker, et al., 1979]  
Describes the Alto computer, including its Ethernet interface (section 5).

[Thornton, 1979]  
A good clear discussion of the Hyperchannel.

[Thornton, et al., 1975]  

[Three Rivers, 1979(?)]  
Single user machines, tied together with a 10 Mbps cable system.

[Thurber & Freeman, 1979a]  

[Thurber & Freeman, 1979b]  
Revised version of their earlier article, [Thurber & Freeman, 1979a].

[Tobagi & Hunt, 1979]  

[Tokoro & Tamaru, 1977]  

[Tsuchiya, et al., 1974]  
Simple star configuration.

[Van den Bos, 1977]  
A simple star system, giving multiple PDP-11's access to a central 370.

[Venetsanopoulos & Newhall, 1970]  
Abstract only, no paper.
[Wanner, 1978]  
CATV bus, uses central controller with polling of other terminals.

[Watson, 1978]  
A good review of the development of the Octopus system, and some of the problems encountered.

[Wecker, 1974]  
S. Wecker, "Dialog: Advanced link control runs full and half duplex on various types of nets", Data Communications, September/October 1974, pp. 36-46.  
Describes DDCMP, Digital's line control procedure.

[Wecker, 1975]  
Describes DDCMP, Digital's line control procedure.

[Wecker, 1976a]  

[Wecker, 1976b]  
Stuart Wecker, "DECNET: a building block approach to network design", National Telecommunications Conference (NTC '76), Dallas, November 1976, paper 7.5.

[Wecker, 1978]  

[Weller, 1971]  
David R. Weller, "A loop communication system for I/O to a small multi-user computer", 5th Annual IEEE Computer Society International Conference, Boston, September 1971, p. 77-78.  
At Bell Labs, loop for I/O to a small host, fixed size 35 bits/frame.

[West, 1972]  
Reprinted in [Green & Lucky, 1975].

[West, 1977]  

[West, 1978]  

[West & Davison, 1978]  
Anthony West and Allan Davison, CNET -- A cheap network for distributed computing, TR 120, Computer System Laboratory, Queen Mary College, March 1978.
[White & Maxemchuk, 1974]
H. E. White and N. F. Maxemchuk, "An experimental TDM data loop exchange", International Conference on Communications (ICC '74), Minneapolis, June 1974, paper 7A.
TDM loop, fixed channels up to 9600 bps, run by a loop clock. Several loops, connected through a switch.

[Wilkes, 1975]
M. V. Wilkes, "Communication using a digital ring", PACNET Conference, Sendai, Japan, August 1975. (See also [Wilkes & Wheeler, 1976].)

[Wilkes & Wheeler, 1976]

[Wilkes & Wheeler, 1979]

[Wilkinson, 1969]
NPL system, basically terminals connected to a star.

[Wilkinson & Scantlebury, 1968]
Describes the single Interface Computer (IC) in each local area, connected to the S/F backbone.

[Will, 1970]
Craig Will, "The data ring: a communication facility for the DCS", Appendix 2, Supplement to proposal for research submitted to the National Science Foundation on Distributed Computing System, University of California, Irvine, October 1970.
Very early material: includes a comparison of control passing vs. empty slot.

[Willard, 1973]
David G. Willard, "MITRIX: a sophisticated digital cable communications system", National Telecommunications Conference (NTC '73), Atlanta, November 1973, paper 38E.

[Willard, 1974]

[Wong, et al., 1978]
Restricted model of a low-speed loop used to connect terminals to a concentrator, for access to a host. Reliability estimates for 3 different schemes to bypass broken components, and some simple discrete simulations.

[Wu & Chen, 1975]

[Yajima, et al., 1977a]
Simple star topology, but uses fiber optic links.
[Yajima, et al., 1977b]
Simple star topology, but uses fiber optic links.

[Yao, 1978]

[Yasaki, 1978]
Reports on results of a survey of 15 large SNA installations.

[Yatabasho, et al., 1978]
2-level hierarchy of loops: 48 Kbps HDLC loops for terminals, 6.3 Mbps ring as a Data Highway, or backbone.

[Yu & Majithia, 1979]
Proposal for a full-duplex empty slot (Pierce) ring, with two slot sizes and an "adaptive priority scheme." Small packets for control; used to set priorities from a loop supervisor.

[Yuen, et al., 1972]
Reprinted in [Chu, 1976].
Simulation of the ring, at 40.8 kbits/sec and 3.2 megabits/sec. Each unit on the loop is a Teletype; requires an 8-bit buffer in each.

[Zafiropulo, 1973]
Analytical derivation for average availability in a hierarchy of loops. Shows that even with very large numbers of terminals, more than 3 stages adds little to the reliability.

[Zafiropulo, 1974a]
Assessment of techniques for using a stand-by loop, with bypass and self-heal actions; procedures for reconfiguration.

[Zafiropulo, 1974b]
Expanded version of [Zafiropulo, 1974a].

[Zafiropulo & Rothauser, 1972]
Proposal for a loop in which a loop controller circulates an empty frame structure. Partitioned into 2 parts, one for regular speech traffic and one for data.
2. Radio communications

Radio-based networks may not -- strictly speaking -- be local networks, but many of the techniques are important in the consideration of such local networks. This section includes most of the important papers; it does not attempt to fully record all of the work done on multiaccess radio and satellite channels, nor does it include working papers such as the Packet Radio Temporary Notes. Papers are generally of two different kinds: proposals or descriptions for working systems, and primarily analytical work.

2.1. A guide to the literature on radio communications

Aloha System (University of Hawaii)
[ Abramson, 1970]
[ Abramson, 1973a]
[ Abramson, 1973b]
[ Kuo & Binder, 1973]
[ Binder, et al., 1975]

Slotted Aloha
[ Roberts, 1972]

Reservation Aloha
[ Crowther, et al., 1973]

Packet Radio Network
[ Kahn, 1975]
[ Burchfiel, et al., 1975]
[ Fralick, et al., 1975]
[ Fralick & Garrett, 1975]
[ Frank, et al., 1975]
[ Kunzelman, 1978]
[ Kahn, et al., 1978]
[ Shoch & Stewart, 1979a]
[ Shoch & Stewart, 1979b]

Further random access proposals, and analytical papers
[ McGregor, et al., 1971]
[ Metcalfe, 1973a]
[ Metcalfe, 1973b]
[ Gitman, et al., 1974]
[ Kleinrock & Lam, 1974]
[ Kleinrock and Tobagi, 1974]
[ Gitman, 1975]
[ Carleial & Hellman, 1975]
[ Kleinrock & Lam, 1975]
[ Binder, 1975]
[ Ferguson, 1975a]
[ Lam & Kleinrock, 1975]
[ Ferguson, 1975b]
[ Kleinrock & Tobagi, 1975]
[ Tobagi & Kleinrock, 1975]
[ Metzner, 1976]
[ Yasuda & Tasaka, 1976]
[ Gitman, et al., 1976]
[ Tobagi & Kleinrock, 1976]
[ Abramson, 1977]
Mobile/Cellular radio systems
A great deal of work in this area is reported at the annual IEEE Vehicular Technology Conference and in the IEEE Trans. on Vehicular Technology (see, for example, the "Special Joint Issue on Mobile Communications", IEEE Trans. on Vehicular Technology, vt-22:4, November 1973, and IEEE Trans. on Comm., comm-21:11, November). Listed below are several other articles on this subject.
[Schiff, 1970]
[Cox & Reudink, 1972]
[Bell, 1979]
[Hindin, 1979]
2.2. References on radio communications

[Abramson, 1970]

[Abramson, 1973a]

[Abramson, 1973b]

[Abramson, 1977]

[Bel, 1979]
Bell System Technical Journal, 58:1, January 1979, Special issue on the Advanced Mobile Phone Service.

[Binder, et al., 1975]

[Binder, 1975]
Richard Binder, "A dynamic packet-switching system for satellite broadcast channels", International Conference on Communications (ICC '75), San Francisco, June 1975, pp. 41-1 - 41-5.

[Borgonovo & Fratta, 1978]

[Burchfiel, et al., 1975]

[Callender, 1977]

[Carleial & Hellman, 1975]

[Cox & Reudink, 1972]

[Crowther, et al., 1973]
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[Eaves, 1979]

[Fayolle, *et al.*, 1977]

[Ferguson, 1975a]

[Ferguson, 1975b]
Michael J. Ferguson, "A study of unslotted Aloha with arbitrary message lengths", *4th Data Communications Symposium*, ACM and IEEE, Quebec City, October 1975, pp. 5-20 - 5-25.

[Ferguson, 1977a]

[Ferguson, 1977b]

[Fralick, *et al.*, 1975]

[Fralick & Garett, 1975]

[Frank, *et al.*, 1975]

[Fukuda, *et al.*, 1978]


[Gitman, et al., 1975]

[Gitman, 1975]

[Hansen & Schwartz, 1977]

[Hinden, 1979]

[Jacobs, et al., 1978]

[Kahn, 1975]

[Kahn, et al., 1978]

[Kleinrock & Gerla, 1978]

[Kleinrock & Lam, 1974]

[Kleinrock & Lam, 1975]

[Kleinrock & Scholl, 1977]
L. Kleinrock and M. Scholl, "Packet switching in radio channels: new conflict-free multiple access schemes for a small number of data users", *International Conference on Communications (ICC '77)*, Chicago, June 1977, paper 22.1, pp. 105-111.

[Kleinrock & Tobagi, 1974]
Leonard Kleinrock and Fouad Tobagi, "Carrier sense multiple access for packet switched radio channels", *International Conference on Communication (ICC '74)*, Minneapolis, June 1974, paper 21B.
[Kleinrock & Tobagi, 1975]

[Kleinrock & Yemini, 1978]
L. Kleinrock and Y. Yemini, "An optimal adaptive scheme for multiple access broadcast communication", International Conference on Communications (ICC '78), Toronto, June 1978, paper 7.2.

[Kobayashi, et al., 1977]

[Kunzelman, 1978]

[Kuo & Binder, 1975]

[Lam, 1977]
Simon S. Lam, "Satellite multiaccess schemes for data traffic", International Conference on Communications (ICC '77), Chicago, June 1977, paper 37.1.
A good overview and comparison of satellite techniques.

[Lam, 1978]
Simon S. Lam, "An analysis of the reservation-aloha protocol for satellite packet switching", International Conference on Communications (ICC '78), Toronto, June 1978, paper 27.3.

[Lam & Kleinrock, 1975]

[McGarty & Singh, 1977]

[McGregor, et al., 1971]
Dennis N. McGregor, Milton E. Jones, and Peter E. O'Neil, "Comparison of several demand assignment multiple access/modulation techniques for satellite communications", International Conference on Communications (ICC '71), Montreal, June 1971, pp. 42-7 - 42-14.
Primarily a comparison of FDMA techniques; also SSMA and PAMA.

[Metcalfe, 1973a]

[Metcalfe, 1973b]
[Metzner, 1976]  

[Ng & Mark, 1977]  

[Ng & Mark, 1978]  

[Okada, et al., 1978]  

[Roberts, 1972]  

[Roberts, 1973]  

[Rothauser & Wild, 1977]  

[Rubin, 1977]  
I. Rubin, "A group random-access procedure for multi-access communication channels", *National Telecommunication Conference (NTC '77)*, 1977, paper 12:5.

[Sastry, 1977]  

[Schiff, 1970]  

[Schuchman, 1977]  

[Shoch & Stewart, 1979a]  

[Shoch & Stewart, 1979b]  
[Szpankowski, et al., 1978]

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[Yasuda & Tasaka, 1976]