Comments welcome!!

An Annotated Bibliography on Local Computer Networks (preliminary edition)

by John F. Shoch

SSL-79-5 May 1979

DRAFT

Preface: This bibliography brings together a wide range of material related to the general area of local computer networking. Many of the individual entries have been supplemented with brief annotations, to help identify some of the salient characteristics of particular designs. In addition, the references are preceded with an overall guide or taxonomy that establishes a structure for considering local networks, and which can serve as a useful means to locate particular articles.

The taxonomy, references, and annotations in this preliminary edition are in a continual state of evolution. Suggestions for additions would be very welcome, as would corrections, comments, or criticisms of the current material. Please address any comments to John Shoch, at the address listed below.

CR Categories: 3.81.

Key words and phrases: Local networks, computer communication, packet switching.

XEROX
PALO ALTO RESEARCH CENTER
3333 Coyote Hill Road / Palo Alto / California 94304

file: b.1 last updated: April 23, 1979 2:35 PM john f. shoch

Part 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 Part 2.

1. General papers, surveys, and conference proceedings

[NBS, 1978a]
[McQuillan, 1978]
[Patton & Franck, 1976]
[Patton & Franck, 1977]
[Patton & Franck, 1978]
[Thurber & Freeman, 1979a]
[Thurber & Freeman, 1979b] revised version of 1979a

2. Fully connected networks (using point to point lines)

No such systems have ever been seriously proposed for local use.

3. Partially connected networks (using point to point lines), store & forward via IMPS

[Lampson & Simonyi, 1972]	Xerox Parc
[Diffley, 1973]	U. of Minn.
[Lidinsky, 1976]	Intra-Laboratory Network (ILN), Argonne National Laboratory
[Amiot, 1976]	
[Fortune, *et al.*, 1977]	
[Lin, 1978]	RIT
[Cain & Morling, 1978]	Mininet, Polytecnic of Central London/U. of Bologne
[Morling, *et al.*, 1978]	

4. Partially connected networks (using point to point lines), store & forward via the hosts

DS/1000 (Hewlett Packard)

A design for 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
[HP, 1977a]
[HP, 1977b]
[HP, 1978a]
[HP, 1978b]
[Shatzer, 1978a]
[Shatzer, 1978b]

RPCNET (IBM Pisa, and others)

[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 S/F routing through the hosts, the current DECNET offerings have no routing, and only support communication among directly connected hosts.
[Teichholtz, 1975]
[Wecker, 1976a]
[Wecker, 1976b]
[Conant & Wecker, 1976]
[Passafiume & Wecker, 1977]
[Wecker, 1978]
[DEC, 1978] introduces Decnet Phase II
[Loveland & Stein, 1979]

5. Simple star networks or strictly hierarchical systems, a special case of the partially connected network

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]

Octopus (LLL)
[Mendicino, 1970]
[Pehrson, 1973]
[Mendicino & Sutherland, 1973]
[Fletcher, 1973a]
[Fletcher, 1973b]
[Owens, 1973]
[Fletcher, 1975]
[Sloan, 1976]
[Watson, 1978]

Philips Research
[Burnett & Sethi, 1977]

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

Laboiink (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]

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

Misc.

[Rosen & Steele, 1973]	Purdue
[Christman, 1973]	Los Alamos Scientific Laboratory, LASL
[Barkauskas, *et al.*, 1973]	BTL-Naperville
[Innes & Alty, 1975]	Liverpool University
[Bock, 1977]	George Washington University
[Sperry-Univac, 1977]	Sperry-Univac AN/USQ-67 switch
[Sprinter, 1978]	RCA

6. Rings and loops

6.1. General papers, surveys, etc.
[Hafner, 1974a]
[Fraser, 1974d]

6.2. 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
[Robilland, 1974]
[Lebetoulle, *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 & 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
[Pogran & Reed, 1978]
[Clark, *et al.*, 1978]
Note: LCS has also produced a series of Local Network Notes (LNN's), marked "...should not be referenced in other publications."

Halo
[Rawson & Metcalfe, 1978]

Sperry Univac Memory Multiplex Data Link (MMDL)
Uses a form of distributed polling in a multi-processor system
[Anderson, 1975]
[Moran, 1975]

Star-Ring
[Potvin, *et al.*, 1971]

Sycor
[Lewis, 1977]

Prime
[Nelson & Gordon, 1978]

6.3. 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]

NSA
[Hassing, 1973]

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

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

ISUNet
[Lee & Pohm, 1978]

Ring Century Bus, Thosiba R&D Center
[Okuda, *et al.*, 1978]

"Frame addressing"
[Saito, 1978]

HDANet proposal
[Bliss, *et al.*, 1976]

6.4. 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]

6.5. 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]

6.6. Specialized loops for terminal systems or CPU-IO bus communication

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

IBM Supermarket/Retail system
[McEnroe, *et al.*, 1975]
[Skatrud & Metz, 1976]

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

Collins C-System
[Newhall & Venetsanopoulos, 1971] cited as one of several examples
[Sharma, et al., 1974]

Other specialized loops
[Weller, 1971] I/O loop at Bell Labs

6.7. Reliability issues

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

6.8. 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"

6.9 Other analytical papers on ring and loop structures

[Spragins, 1971]
[Konheim, 1972]
[Spragins, 1972a]
[Kaye, 1972]
[Chu & Konheim, 1972]
[Spragins, 1972b]
[Gall & Mueller, 1972]
[Noguchi, *et al.*, 1974]
[Wu & Chen, 1975]
[Konhein, 1976]
[Richardson & Yu, 1979]

7. Multi-access bus networks

Ethernet System

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

Fibernet

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

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]

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

Ford Aerospace, Palo Alto
Uses the ACC device, with a Zilog SIO, running at 880 kbps.

ENET and CNET (Queen Marry College, London)
[West, 1977]
[West, 1978]
[West & Davison, 1978]
[Davison, 1978]

Chaosnet (MIT AI Lab)
Nothing published yet, only several internal papers.

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

Ariel (Zilog)
[Hunt, 1978]

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

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

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

Other bus structures, and misc. papers
[Schenkel, 1974]
[Ohnsorge & Schenkel, 1974]
[Orthner & McKeown, 1975]
[Agrawala, *et al.*, 1977]

[Szurkowski, 1978]

8. Other related topics

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

Datapoint's Attached Resource Computer (ARC)

IEEE 488
[IEEE, 1975]+
[Loughry & Allen, 1978]

3M's Communication Systems (CS^2)

Bit-oriented line control protocols (HDLC, ADCCP, SDLC, DDCMP, etc.)

Use of a shared, optical broadcast medium
[Gfeller, *et al.*, 1978]

Part 2: References

[Agrawala, *et al.*, 1977]
A. K. Agrawala, R. M. Bryant, and J. Agre, "Analysis of an Ethernet-like protocol", *Proc. of the Computer Networking Symposium*, IEEE(CS)/NBS, Gaithersburg, December 1977, pp. 104-111.

[Amiot, 1976]
L. W. Amiot, "Front-ending at Argonne National Laboratory", *Proc. of the [1st] Berkeley Workshop on Distributed Data Management and Computer Networks*, Lawrence Berkeley Laboratory, Berkeley, California, May 1976, pp. 43-56.
Includes description of connection between the large Central Computing Facility (CCF) and the Intra-Laboratory Network (ILN).

[Anderson, 1975]
D. R. Anderson, "The EPIC-DPS, a distributed network experiment", *Eascon '75*, Washington, September 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]
R. R. Anderson, J. F. Hayes, and D. N. Sherman, "Simulated performance of a ring-switched data network", *IEEE Trans. on Comm.*, 20:3, June 1972, pp. 576-591.
GPSS simulation of a Pierce loop.

[Anderson, *et al.*, 1978]
Edward W. Anderson, Edmunde E. Newhall, and Anastasios N. Venetsanopoulos, "A microprocessor-based controller for a loop switching system", *Int. Conf. on Comm.*, Toronto, June 1978.
Loop with a supervisor, provides master clock, initialization of 'control', and recovery. Uses modified HDLC, control sequence is 0 + seven 1's; changed to a HDLC flag when control is siezed. Uses separate loop interface, with buffers, etc.; uprocessor + 60 IC's. Only a prototype controller; runs up to 19.2 kbps.

[Ashenhurst, 1975]
Robert L. Ashenhurst, "Centralized or decentralized computing -- or maybe some of both?", *Proc. Fall COMPCON 75*, IEEE Computer Society, Washington, September 1975, pp. 59-60.

[Ashenhurst & Vonderohe, 1975]+
R. L. Ashenhurst and R. H. Vonderohe, "A hierarchical network", *Datamation*, 21:2, February 1975, pp. 40-44.
Simple hierarchy, local minicomputers tied into an intermediate level (MOM), and ultimately a large host (DAD).

[Avi-Itzhak, 1971]
B. Avi-Itzhak, "Heavy traffic characteristics of a circular data network", *Bell System Tech. Journal*, 50:8, October 1971, pp. 2521-2549.
Has a forward reference to [Pierce, 1972b].

[Babic, *et al.*, 1977]
Gojko A. Babic, Ming T. Liu, and Roberto Pardo, "A performance study of the distributed loop computer network (DLCN)", *Proc. of the Computer Networking Symposium*, IEEE(CS)/NBS, Gaithersburg, December 1977, pp. 66-76.

[Barber, 1973]
D. L. A. Barber, "Local data networks", in Grimsdale and Kuo, eds., *Computer Communication Networks (Proc. of the NATO Advanced Study Institute on Computer Communication Networks, Sussex, September 1973)*, Noordhoff, 1975.
Very general introduction, and a bit of detail on the NPL local network.

[Barkauskas, *et al.*, 1973]

B. J. Barkauskas, R. R. Rezac, and C. A. Trlica, "A computer network for peripheral time sharing", *Compcon 73*, February 1973, pp. 227-229.
BTL-Naperville, star configuration, mini-computers given access to peripherals on the central machine.

[Bartlett, 1968]
K. A. Bartlett, "Transmission control in a local data network", *IFIP Congress 68*, Edinburgh, August 1968.
More on the use of multiplexers to reach the single switch in a local area of the NPL proposal.

[Beaston, 1978]
John Beaston, "LSI devices control loop-mode SDLC data links", *Data Communications*, August 1978, pp. 65-72.

[Bilek, *et al.*, 1978]
R. W. Bilek, D. A. Lutzky, and J. J. Peterka, "Simulating a local computer network", *Third Conf. on Local Computer Networking*, U. of Minn., Minneapolis, October 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]
B. B. Bliss, W. A. Counterman, and E. A. Mackey, "Proposal for a ring network -- IDANET", *Conf. on Experiments in New Approaches to Local Computer Networking*, U. of Minn., St. Paul, September 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)/NBS, Gaithersburg, Maryland, June 1977, pp. 159-166.
Simple star share peripherals among a small number of hosts; uses Altair as a switch, operator control to set up connections, up to 9600 kbps.

[Boggs & Metcalfe, 1978]
David R. Boggs and Robert M. Metcalfe, *Communications Network Repeater*, US Patent no. 4,099,024, July 1978.

[Brandenburg, *et al.*, 1972]
L. H. Brandeburg, B. Gopinath, and R. P. Kurshan, "On the addressing problem of loop switching," *Bell System Tech. Journal*, 50:7, September 1972, pp. 1445-1469.
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]
L. H. Brandenburg, and B. Gopinath, "A table look up approach to loop switching," *Bell System Tech. Journal*, 51:9, November 1972, pp. 2095-2099.
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]
D. J. Burnett and H. R. Sethi, "Packet switching at Philips Research Laboratories", *Computer Networks*, 1977, pp. 341-348.
Hosts all linked to a central packet switch.

[Cain & Morling, 1978]
G. D. Cain and R. C. S. Morling, "Mininet: a local area network for real-time instrumentation and control", *Third Conf. on Local Computer Networks*, U. of Minn., October 1978.
A special purpose system for process control devices. Very small packets, virtual circuits, store-and-forward via microprocessor "exchanges."

[Carpenter & Rosenthal, 1978]
Robert J. Carpenter and Robert Rosenthal, "A local network for the National Bureau of

Standards", *Local Area Networking -- Report of a Workshop Held at the National Bureau of Standards, Aug. 22-23, 1977*, NBS Special Publication 500-31, 1978, pp. 7-9.

[Carpenter, *et al.*, 1978]
Robert J. Carpenter, Joseph Sokol Jr., and Robert Rosenthal, "A microprocessor-based local network node", *Proc. of COMPCON Fall '78*, IEEE Computer Society, Washington, September 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," *NTC*, Birmingham, December 1978, pp. 44.5.1-44.5.7.

[Carsten, *et al.*, 1977]
R. T. Carsten, E. E. Newhall, and M. J. M. Posner, "A simplified analysis of scan times in an asymmetrical Newhall loop with exhaustive service," *IEEE Trans. on Comm.*, com-25:9, September 1977, pp. 951-957.

[Christensen, 1977]
Gary Christensen, "Data trunk contention in the Hyperchannel network", *Conf. on "A Second Look at Local Computer Networking"*, U. of Minn., Minneapolis, October 1977, p. 10.

[Christensen, 1978a]
Gary S. Christensen, "Applications of Hyperchannel", *Local Area Networking -- Report of a Workshop Held at the National Bureau of Standards, Aug. 22-23, 1977*, NBS Special Publication 500-31, 1978.

[Christensen, 1978b]
Gary S. Christensen, "Network monitor unit", *3rd Conf. on Local Computer Networks*, U. of Minn., October 1978.

[Christensen & Franta, 1978]
Gary S. Christensen and W. R. Franta, "Design and analysis of the access protocol for Hyperchannel networks", *Third USA-Japan Computer Conference*, October 1978, pp. 86-93.
This paper is actually a consolidation of two different papers, 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 has several substantial errors.

[Christman, 1973]
Ronald D. Christman, "Development of the LASL computer network", *Compcon 73*, February 1973, pp. 239-242.
A star configuration, to service terminal users and large machines; controlled from a single Front End Machine (FREM).

[Chu & Konheim, 1972]
W. W. Chu and A. G. Konheim, "On the analysis and modeling of a class of computer communications systems", *IEEE Trans. on Comm.*, com-20:3, June 1972, pp. 645-660.
Includes a discussion of analytical results for loops.

[Clark, *et al.*, 1978]
David D. Clark, Kenneth T. Pogran, and David P. Reed, "An introduction to local area networks", *Proc. of the IEEE*, 66:11, November 1978, pp. 1497-1517.

[Coker, 1972]
C. H. Coker, "An experimental interconnection of computers through a loop transmission system," *Bell System Tech. Journal*, 51:6, July-August 1972, pp. 1167-1175.
Written October 1971; describes the interface to the two host computers -- Honeywell DDP516, Bell Labs Acoustic Research Facility, 16k, 16bit, ~1 microsec. memory. Did an FTP program, to get files from the other machine; with PosAck/Retransmission scheme. Also did remote loading and running of second machine. Max. user data rate: 50 Kbits/sec.

[Conant & Wecker, 1976]
G. Conant and S. Wecker, "DNA: an architecture for heterogeneous computer networks", *Third Int. Conf. on Comp. Comm. (ICCC)*, Toronto, August 1976, pp. 618-625.

[Davies, *et al.*, 1967]
D. W. Davies, K. A. Bartlett, R. A. Scantlebury, and P. T. Wilkinson, "A digital communication network for computers giving rapid response at remote terminals," *ACM Symposium on Operating System Principles*, Gatlinburg, Tenessee, October 1967.
The original paper on the NPL proposal.

[Davies, 1968a]
D. W. Davies, "Communication networks to serve rapid-response computers", *IFIP Congress '68*, Edinburgh, August 1968.

[Davies, 1968b]
D. W. Davies, "The principles of a data communication network for computers and remote peripherals", *IFIP Congress 68*, Edinburgh, August 1968.
Describes the two-tier system, with a packet-switched backbone, and a single switch in each local area.

[Davies, 1971]
D. W. Davies, "Packet switching in a public data network", *Information Procesing 1971 (Proc. of IFIP '71)*, North-Holland, 1971.
Mentions the single-switch configuration at NPL.

[Davies & Barber, 1973]
Donald W. Davies and Derek L. A. Barber, *Communication Networks for Computers*, John Wiley & Sons, 1973.
Esp. pp. 261-267, on the NPL local network, a tree of multiplexers with a single switch.

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

[DEC, 1978]
Digital Equipment Corporation, *Decnet phase II, networking distributed computers, a progress report, March 1978*, 1978.

[DeMarines & Hill, 1976]
Victor A. DeMarines and Lawrence W. Hill, "The cable bus in data communications", *Datamation*, August 1976.

[DeMarines & Willard, 1978]
Victor A. DeMarines and David Willard, "Use of CATV coaxial cable supported bus structures", *Proceedings of the 1978 ACM Annual Conference*, Washington, DC, December 1978, pp. 478-479.

[Dickey, 1974]
Shane Dickey, "Distributed computer systems", *Hewlett-Packard Journal*, November 1974, pp. 2-11.
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*, IEEE(CS)/ACM(SigComm), 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]

R. A. Donnan and J. R. Kersey, "Synchronous data link control: A perspective", *IBM Sys. J.*, 13:2, 1974.

[Donnelley & Yeh, 1978a]
James E. Donnelley and Jeffry W. Yeh, "Interaction between protocol levels in a prioritized CSMA broadcast network", *Third Berkeley Workshop on Distributed Data Management and Computer Networks*, August 1978. Reprinted in *Computer Networks*, 3, 1979, pp. 9-23.

[Donnelley & Yeh, 1978b]
James E. Donnelley and Jeffry W. Yeh, "Simulation studies of round robin contention in a prioritized CSMA broadcast network", *Third Conf. on Local Computer Networking*, U. of Minn., Minneapolis, October 1978.
Further simulations of proposed modifications to the Hyperchannel mechanisms: done at LLL.

[Farber, 1970]
D. J. Farber, "Data ring oriented computer networks," in Rustin, ed., *Computer Networks (Courant Computer Science Symposium 3. November-December 1970)*, Prentice-Hall, New York, 1972, pp 79-94.
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, 1974]
D. J. Farber, "An overview of distributed processing aims," *Proceedings of the 8th Annual IEEE Computer Society International Conference* (COMPCON '74), February 1974.

[Farber, 1975a]
D. J. Farber, "A ring network," *Datamation*, February 1975, pp. 44-46.

[Farber, 1975b]
D. J. Farber, "A distributed computer system -- an overview," *Proc. of the Nat. Electronics Conf.*, 30, Chicago, Oct. 1975, pp. 188-190.

[Farber, 1977]
David J. Farber, "The ARPA local network interface", *EASCON-77*, Arlington, Va., September 1977, paper 14-3.

[Farber & Heinrich, 1972]
D. J. Farber, and F. R. Heinrich, "The structure of a distributed computer system -- the distributed file system," *Proceedings of the 1st International Conference on Computer Communications*, Washington, October 1972, pp. 364-370.
Elaborates upon the file system, as part of DCS.

[Farber & Larson, 1972a]
David J. Farber and Kenneth C. Larson, "The system architecture of the distributed computer system -- the communication system," *Proceedings of the Symp. on Computer-Communications Networks and Teletraffic* (Polytechnic Institute of Brooklyn, April 1972), Polytechnic Press 1972, pp. 21-27.
Fixed length, empty slot approach.

[Farber & Larson, 1972b]
David J. Farber and Kenneth C. Larson, "The structure of a distributed computing system -- software," *Proceedings of the Symp. on Computer-Communications Networks and Teletraffic* (Polytechnic Institute of Brooklyn, April 1972), Polytechnic Press, 1972, pp. 539-545.

[Farber & Vittal, 1973]
D. J. Farber, and J. J. Vittal, "Extendability considerations in the design of the Distributed Computer System (DCS)," *National Telecommunications Conference*, November 1973, IEEE, pp. 15E.1-15E.6.

[Farber, *et al.*, 1973]
D. J. Farber, J. Feldman, F. R. Heinrich, M. D. Hopwood, K. C. Larson, D. C. Loomis, and L. A. Rowe, "The Distributed Computing System," *7th Annual IEEE Computer Society International Conference* [*Digest of Papers*, COMPCON 73], February 1973, pp. 31-34. (Reprinted in [Chu, 1974].)

[Farmer & Newhall, 1969]
W. D. Farmer and E. E. Newhall, "An experimental distributed switching system to handle bursty computer traffic," *Proc. of ACM Symposium on Problems in the Optimization of Data Communication Systems* (1st Data Comm. Sym.), October 1969, Pine Mountain, Georgia, pp. 1-33.
Describes 3 station prototype, no central control, but loop supervisor for clock. 6.312 Mhz, 3.156 Mbps, but does not use standard T2 coding; 1 bit delay per host. "Polling packets" sent around. "Primary" part of interface is powered from the line. Loop supervisor puts 0's on the loop, reclocks signals.

[Fitzwilliam & Wagner, 1978]
J. W. Fitzwilliam and R. L. Wagner, "Transaction network, telephones and terminals: overview", *Bell System Tech. Journal*, 57:10, December 1970, pp. 3325-3329.
Transaction system with a central host, via switched network or using a local message switch for polled access.

[Fletcher, 1973a]
John G. Fletcher, "Octopus communications structure", *7th Annual IEEE Computer Society Int. Conf. (COMPCON '73)*, San Francisco, February 1973, pp. 21-23.

[Fletcher, 1973b]
J. G. Fletcher, "The Octopus computer network", *Datamation*, April 1973, pp. 58-63.

[Fletcher, 1975]
John G. Fletcher, "Principles of design in the Octopus computer network", *Proc. of the ACM 1975 Annual Convention (ACM '75)*, Minneapolis, October 1975, pp. 325-328.

[Fortune, *et al.*, 1977]
P. J. Fortune, W. P. Lidinsky, and B. R. Zelle, "Design and implementation of a local computer network", *Proc. of the Int. Conf. on Comm. (ICC)*, Chicago, June 1977, pp. 221-226.
Design for an Arpanet-like system; first phase is a two-host prototype.

[Franchi, 1976]
Paolo Franchi, "Distribution of functions and control in RPCNET", *Proc. of the 3rd Annual Symposium on Computer Architecture*, ACM SIGARCH, January 1976, pp. 130-135.
Sort of a mini-SNA, but with no SSCP. S/F via the hosts; uses flooding to spread changes to the network organization.

[Franta, 1976]
W. R. Franta, "Early remarks on trunk utilization and message throughput", *Conf. on Experiments in New Approaches to Local Computer Networking*, U. of Minn., St. Paul, September 1976.

[Franta, 1977]
W. R. Franta, "Decision and realization points for random access path controls", *Conf. on "A Second Look at Local Computer Networking"*, U. of Minn., Minneapolis, October 1977.

[Fraser, 1974a]
A. G. Fraser, "Spider -- an experimental data communications system", *International Communications Conference (ICC)*, IEEE, 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]
A. G. Fraser, *Spider -- A data communications experiment*, Bell Laboratories Computing Science Technical Report #23, December 1974.

[Fraser, 1974c]
A. G. Fraser, *Loops for data communications*, Bell Laboratories Computing Science Technical Report #24, December 1974.

[Fraser, 1974d]
A. G. Fraser, "Loop transmission systems for data", *Computer Communications Review*, 4:4, October 1974, pp. 2-8.

[Fraser, 1975]
A. G. Fraser, "A virtual channel network", *Datamation*, 21:2, February 1975, pp. 51-56.

[Frisch, 1977]
Ivan T. Frisch, "Experiments on random access packet data transmission on coaxial cable video transmission systems", *IEEE Trans. on Comm.*, com-25:10, October 1977, pp. 1199-1203.
Describes results of experimental transmission of packets through a CATV system.

[Gable, 1978]
M. G. Gable, "A local network architecture for industrial applications", *Instrumentation Society of America 1978 Annual Conference*, pp. 119-124.
Ford Research's bus sytem for process control, testing, etc.

[Gall & Mueller, 1972]
D. A. Gall and H. R. Mueller, "Waiting-time distributions and buffer overflow in priority queueing systems", *IEEE Trans. on Comm.*, com-20:5, October 1972, pp. 865-877.
Single server loop, with priority polling scan.

[Gerhardstein, *et al.*, 1978]
L. H. Gerhardstein, J. O. Schroeder, and A. J. Boland, "The Pacific Northwest Laboratory minicomputer network", *Proceedings of the Third Berkeley Workshop on Distributed Data Management and Computer Networks*, San Francisco, August 1978.

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

[Graham & Pollak, 1971]
R. L. Graham and H. O. Pollak, "On the addressing problem for loop switching," *Bell System Tech. 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).

[Hafner, 1974a]
E. R. Hafner, "Digital communication loops - a survey", *Int. Zurich Seminar on Digital Communication*, March 1974, paper D1.
A good introductory survey; additional details on their "loop extension" approach.

[Hafner, 1974b]+
E. R. Hafner, "The implementation of distributed control in a loop system", *Int. Switching Sym.*, Munchen, 1974.

[Hafner & Nenadal, 1976]
E. Hafner and Z. Nenadal, "Enhancing the availability of a loop system by meshing", *Int. Zurich Sem. on Dig. Comm.*, March 1976, paper D4.
Running alternate lines in a loop structure, able to skip over failed nodes.

[Hafner, *et al.*, 1973]
E. R. Hafner, Z. Nenadal, M. Tschanz, "A digital loop communication system", *Int Conf. on*

Comm., Seattle, June 1973, pp. 50-24 - 50-29. Revised version pubished in *IEEE Trans. on Comm.*, June 1974, pp. 877-881.
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]
James P. Hanks, "Mitrenet -- introduction and overview", *Local Area Networking -- Report of a Workshop Held at the National Bureau of Standards, Aug. 22-23, 1977*, NBS Special Publication 500-31, 1978, p. 10.

[Hassing, *et al.*, 1973]
Thomas E. Hassing, Raymond M. Hampton, Gerald W. Bailey, and Robert S. Gardella, "A loop network for general purpose data communications in a heterogeneous world", *3rd Data Communications Symposium*, IEEE(CS)/ACM(SigComm), St. Petersburg, Florida, November 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]
J. F. Hayes, "Modeling an experimental computer communications network," *3rd Data Communications Symposium*, St. Petersburg, November 1973, pp. 4-11.
Models what became Spider: similar to [Hayes, 1974].

[Hayes, 1974]
J. F. Hayes, "Performance models of an experimental computer communications network," *Bell System Tech. Journal*, 53:2, February 1974, pp. 225-259.
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]
J. F. Hayes and D. N. Sherman, "Traffic and delay in a circular data network", *2nd Sym. on Problems in the Optimization of Data Comm. Systems* (2nd Data Comm. Sym.), ACM SigComm/IEEE, Palo Alto, California, October 1971.
Delay estimates for a Pierce loop.

[Hayes & Sherman, 1971b]+
J. F. Hayes and D. N. Sherman, "Traffic analysis of a ring switched data transmission system", *Bell System Tech. Journal*, 50:9, November 1971, pp. 2947-2978.
Delay estimates for a Pierce loop.

[Heffron & Snow, 1978]
W. G. Heffron, Jr. and N. E. Snow, "Transaction network, telephones, and terminals: transaction network service", *Bell System Tech. Journal*, 57:10, December 1978, pp. 3331-3347.
Message switching system for inquiry/response from a central host: polled control from a local switch.

[Hippert, 1970a]
R. O. Hippert, "A pulse-code-modulated transmission loop", *Int. Conf. on Comm.*, San Francisco, June 1970, pp. 36-10 - 36-15.
IBM 2790 terminal system.

[Hippert, 1970b]
R. O. Hippert, "IBM 2790 Digital transmission loop", *IBM J. of Res. and Dev.*, 14:6, November 1970, pp. 662-667.

[Hopkins, 1977]
G. T. Hopkins, *A bus communications system*, Mitre Technical Report 3515, Mitre Corporation, Bedford, Mass., November 1977.

[Hopper, 1978a]
A. Hopper, "Data ring at Computer Laboratory, University of Cambridge", *Local Area Networking -- Report of a Workshop Held at the National Bureau of Standards, Aug. 22-23, 1977*, NBS Special Publication 500-31, 1978, pp. 11-16.

[Hopper, 1978b]
Andrew Hopper, *Local area computer communication network*, Technical Report no. 7 (PhD thesis), University of Cambridge Computer Laboratory, Cambridge, England, April 1978.

[Hopper & Wheeler, 1979]
A. Hopper and D. J. Wheeler, "Maintenance of ring communication systems," *IEEE Trans. on Comm.*, com-27:4, April 1979, pp. 760-761.
Extension of the Cambridge Ring work; have each station recompute parity, report an error to a monitoring station.

[HP, 1977a]
Hewlett Packard Corporation, *Distributed Systems Networks*, October 1977.

[HP, 1977b]
Hewlett Packard Corporation, *Distributed Systems/1000, Technical Data*, October 1977.

[HP, 1978a]
Hewlett Packard Corporation, *Distributed Systems/1000*, March 1978.

[HP, 1978b]
Hewlett Packard Corporation, *DS/1000, Network Manager's Manual*, 1978.

[Huen, *et al.*, 1977]
W. Huen, P. Greene, R. Hochsprung, O. El-Dessouki, "A network computer for distributed processing", *Proc. Fall COMPCON 77*, IEEE Computer Society, Washington, September 1977, pp. 326-330.
Ties together a group of LSI/11's, to run a single program. Byte parallel ring.

[Hunt, 1978]
Bruce Hunt, "Ariel", unpublished talk, Stanford University, November 1978.

[IBM, 1975]
IBM, *IBM synchronous data link control, general information*, 2nd edition, May 1975.

[IEEE, 1975]+
IEEE Standard 488-1975, *Digital interface for programmable instrumentation*, IEEE, New York, April 1975.

[Innes & Alty, 1975]
D. R. Innes and J. L. Alty, "An intra university network", *4th Data Communications Symposium*, Quebec, October 1975, pp. 1-8 - 1-13.
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.

[Iwama, *et al.*, 1978]
K. Iwama, Y. Kambayashi, and S. Yajima, "Computer communication interfaces based on two-input/output-pair automata and their implementation in the Labolink network", *Proc. 4th ICCC*, Kyoto, September 1978.

[Jafari, 1977]+
H. Jafari, *A new loop structure for distributed microcomputing systems*, PhD Dissertation, Oregon State University, Corvallis, December 1977.

[Jafari & Lewis, 1977]+

H. Jafari and T. G. Lewis, "A new loop structure for distributed microcomputing systems", *Proc. First Annual Rocky Mountain Symposium on Microcomputers: Systems, Software and Architecture*, 1977.

[Jafari, *et al.*, 1978a]
H. Jafari, J. Spragins, and T. Lewis "A new modular loop architecture for distributed computer systems", *Trends and Applications 1978: Distributed Processing*, NBS/IEEE(DC) Symposium, 1978, pp. 72-77.

[Jafari, *et al.*, 1978b]
H. Jafari, T. Lewis, and J. Spragins "A new ring-structured microcomputer network", *Proc. of the 4th ICCC*, Kyoto, Japan, September 1978.
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]
E. Douglas Jensen, "A distributed function computer for real-time control", *2nd Annual Symposium on Computer Architecture*, ACM/SIGArch, January 1975.

[Jensen, 1978]
E. Douglas Jensen, "The Honeywell experimental distributed processor -- an overview", *Computer*, January 1978, pp. 28-38.

[Kaye, 1972]
A. R. Kaye, "Analysis of a distributed control loop for data transmision", *Sym. on Computer-Communications Networks and Teletraffic*, Polytechnic of Brooklyn, April 1972, pp. 47-58.
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]
Shigeyoshi Kitazawa and Toshiyuki Sakai, "Performance evaluation of the Kuipnet computer network", *Computer Communications*, 1:3, June 1978, pp. 149-155.

[Konheim, 1972]
A. G. Konheim, "Service epochs in a loop system", *Sym. on Computer-Communications Networks and Teletraffic*, Polytechnic of Brooklyn, April 1972, pp. 125-143.
Loop system with a central station and N terminals.

[Konheim, 1976]
A. G. Konheim, "Chaining in a loop system", *IEEE Trans. on Comm.*, com-24:2, February 1976, pp. 203-210.
Loop with central control and chaining, or hub-polling.

[Kropfl, 1972]
W. J. Kropfl, "An experimental data block switching system," *Bell System Tech. Journal*, 51:6, July-August 1972, pp. 1147-1165.
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]
Richard C. Kuhns and Marc C. Shoquist, "A serial data bus system for local processing networks", *18th IEEE Comp. Soc. Int. Conf. (Compcon 79 Spring)*, San Francisco, February 1979, pp. 266-271.
10 mbps Triax cable, separate control and data lines, central control.

[Labonte, 1973]
Robert C. Labonte, "Developing a wired nation -- a general purpose digital communications system for operation on a conventional CATV system", *7th IEEE Comp. Soc. Int. Conf.* (Compcon 73), San Francisco, February 1973, pp. 85-88.

[Lampson & Simonyi, 1972]
Butler Lampson and Charles Simonyi, unpublished papers, Xerox Palo Alto Research Center, 1972.
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", *Nat. Telecomm. Conf.*, Atlanta, November 1973, paper 38C.

[Laurer & Skatrud, 1977]
G. J. Laurer and L. O. Skatrud, "Automatic loop reconfigurator", *IBM Tech. Disc. Bull.*, 19:10, March 1977, pp. 3824-3828.
Complicated scheme to reconfigure a broken loop as two half-duplex, multi-drop lines.

[Lazzeri, *et al.*, 1977]+
L. Lazzeri, L. Lenzini, and A. Springer, "Terminal access to host computers through RPCNET", *ACM International Computing Symposium (ICS77)*, Liege, Belgium, April 1977.

[Lebetoulle, *et al.*, 1975]
J. Lebetoulle, E. G. Manning, and R. W. Peebles, "A homogeneous computer network -- analysis and simulation," *Computer Networks*, 1977, pp. 225-240. (An earlier report appeared as Computer Communications Networks Group Report E-30, University of Waterloo, Waterloo, Ontario, Canada, January 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. This is, however, a loop model of communicating computers, rather than the more common model of many terminals and a single computer. Note: "Mininet" is the name of the architecture for handling distributed transaction processing; there have been no reports of experience with any local network implementations.

[Lee & Pohm, 1978]
Chong C. Lee and Arthur V. Pohm, "Interface processor for high speed recirculating data network", *Proc. of COMPCON Fall '78*, IEEE Computer Society, Washington, September 1978.
ISUnet, a T1 loop with 32 circulating slots; repeaters powered from the line.

[Lennon, *et al.*, 1973]
William J. Lennon, Ronald C. Barrett, and John T. Spies, "A mini-computer research network", *7th IEEE Comp Soc. Int. Conf.* (Compcon 73), San Francisco, February 1973, pp. 191-194.

[Lennon, 1974]
William J. Lennon, "A mini-computer network for support of real time research", *Proc. of the ACM Annual Conf. (ACM '74)*, San Diego, November 1974, pp. 595-604.

[Lennon, 1975]
William J. Lennon, "A user oriented mini-computer network", *Proc. Fall COMPON 75*, IEEE Computer Society, Washington, September 1975, 133-136.
Simple star system, nodes linked to Network Central; looks like a paper tape device to users' machines.

[Lenzini & Sommi, 1976]
L. Lenzini and G. Sommi, "Architecture and implementation of RPCNET", *Proc. of the 3rd International Conference on Computer Comm.*, Toronto, August 1976, pp. 605-611.

[Lenzini & Sommi, 1977]

L. Lenzini and G. Sommi, "RPCNET, a network among education and research organization in Italy: characteristics and status", *Eurocon '77*, Venice, May 1977, paper 3.1.3.

[Lewis, 1977]
Fred V. Lewis, "Use of a rotating-master loop network as a high integrity intersystem data link", *Proc. of the Nat. Electronics Conf.*, 31, Chicago, October 1977, p. 30.
One-page proposal for a ring using SDLC control frames, with "ring-master" status being passed around the ring.

[Lidinsky, 1976]
Willaim P. Lidinsky, "The Argonne Intra-Laboratory Network", *Proc. of the [1st] Berkeley Workshop on Distributed Data Management and Computer Networks*, Lawrence Berkeley Laboratory, Berkeley, California, May 1976, pp. 263-275.
Scaled down Arpanet, 50 kbps lines, packet switching through Interface Processing Units (IPU's, like IMP's) containing dual microprocessors.

[Lin, 1978]
Kuang-Shin Lin, "Design of a packet-switched micro-subnetwork", *17th IEEE Comp. Soc. Int. Conf. (COMPCON Fall '78)*, IEEE Computer Society, Washington, September 1978, pp. 184-193.
A small network with 4 hosts and 4 "micro-Imps."

[Liu, 1978]
Ming T. Liu, "Distributed Loop Computer Networks", in *Advances in Computers, Volume 17*, M. C. Yovits, ed., Academic Press, 1978, pp. 163-221.

[Liu & Reames, 1975]
Ming T. Liu and Cecil C. Reames, "The design of the Distributed Loop Computer Network", *International Computer Symposium 1975*, Taipei, August 1975, pp. 273-283 (vol. 1).

[Liu & Reames, 1977]
Ming T. Liu and Cecil C. Reames, "Message communication protocol and operating system design for the distributed loop computer network (DLCN)", *4th Annual Symposium on Computer Architecture*, March 1977, pp. 193-200.

[Liu, *et al.*, 1977]
M. T. Liu, G. Babic, and R. Pardo, "Traffic analysis of the distributed loop computer network (DLCN)", *Nat. Tele. Conf.*, December 1977, paper 31:5.

[Loomis, 1973]+
Loomis, D.C., *Ring communication protocols*, DCS Technical Report #26, UC Irvine, January 1973.
Describes use of the control token, to control the loop.

[Loughry & Allen, 1978]
Donald C. Loughry and Mark S. Allen, "IEEE Standard 488 and Microprocessor Synergism", *Proc. of the IEEE*, 66:2, February 1978, pp. 162-172.

[Loveland & Stein, 1979]
Richard A. Loveland and Charles W. Stein, "How Decnet's communications software works", *Data Communications*, January 1979.
Lots of prose, not much hard information.

[Lyle & Farber, 1976]
Michael R. Lyle and David J. Farber, "Transmission systems tradeoffs in ring-structured digital systems", *Proc. of the [1st] Berkeley Workshop on Distributed Data Management & Computer Networks*, Berkeley, May 1976.
Early discussion of design considerations for the LNI, including a single chip, LSI version.

[Manning, 1972]
Eric G. Manning, "Newhall loops and programmable TDM -- two facets of Canadian research in

computer communications," *Proceedings of the 1st Int. Conf. on Comp. Comm.*, Washington, October 1972, pp. 338-342.
Proposal to use 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 next takes 2 msec.

[McEnroe, *et al.*, 1975]
P. V. McEnroe, H. T. Huth, E. A. Moore, and W. W. Morris, "Overview of the supermarket system and the retail store system", *IBM Sys. J.*, 14:1, 1975.
Loop system for terminals.

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

[Meisner, *et al.*, 1977a]
Norman B. Meisner, Joshua L. Segal, and Malcolm Y. Tanigawa, "Dual-mode slotted TDMA digital bus", *Fifth Data Communications Symposium*, Snowbird, Utah, September 1977, 5-14 - 5-18.

[Meisner, *et al.*, 1977b]
Norman B. Meisner, David G. Willard, and Gregory T. Hopkins, "Time division digital bus techniques implemented on coaxial cable", *Proc. of the Computer Networking Symposium*, IEEE(CS)/NBS, Gaithersburg, Maryland, December 1977, pp. 112-117.

[Mendicino, 1970]
Samuel F. Mendicino, "Octopus: The Lawrence Radiation Laboratory Network", in Rustin, ed., *Computer Networks (Courant Computer Science Symposium 3, November-December 1970)*, Prentice-Hall, New York, 1972, pp. 95-110.

[Mendicino & Sutherland, 1973]
Sam F. Mendicino and George G. Sutherland, "Performance measurements in LLL Octopus computer network", *7th IEEE Comp. Soc. Int. Conf.* (Compcon 73), San Francisco, February 1973.

[Metcalfe & Boggs, 1976]
Robert M. Metcalfe and David R. Boggs, "Ethernet: Distributed packet switching for local computer networks", *CACM*, 19:7, July 1976, pp. 395-404. (Earlier version issued as Xerox Parc Computer Science Report CSL-75-7.)

[Metcalfe, *et al.*, 1977]
Robert M. Metcalfe, David R. Boggs, Charles P. Thacker, and Butler W. Lampson, *Multipoint data communication system with collision detection*, US Patent no. 4,063,220, December 1977.

[Miller, 1978]
Walt Miller, "Interconnecting local networks", *Third Conf. on Local Computer Networks*, U. of Minn., October 1978.
NSC/BNR project, interconnect Hyperchannel systems via T3 microwave.

[Mockapetris, 1978]
Paul V. Mockapetris, *Design considerations for the ARPA LNI name table*, Technical Report 92, Department of Information and Computer Science, UC Irvine, Revised May 1978.

[Mockapetris & Farber, 1977]
Paul V. Mockapetris and David J. Farber, "Experience with the Distributed Computer System (DCS)", Technical Report 116, Department of Information and Computer Science, UC Irvine, 1977.

[Mockapetris, *et al.*, 1977]

Paul V. Mockapetris, Michael R. Lyle, and David J. Farber, "On the design of local network interfaces", *Information Processing '77* (Proc. of IFIP '77), North-Holland, 1977, pp. 427-430.

[Moran, 1975]
D. M. Moran, "Memory multiplexer data link, an intermodular network", *Eascon '75*, Washinton, September 1975.
MMDL connects processors and memories in a multi-processor; uses a form of "distributed polling" around the ring.

[Morling, *et al.*, 1978]
R. C. S. Morling, G. Neri, G. D. Cain, E. Faldella, T. Salmon, and D. J. Stedham, "The Mininet inter-node control protocol", *Sym. on Computer Network Protocols*, Liege, 1978, paper B4.

[Naylor, 1978]
J. C. Naylor, Jr., "Data bus design concepts, issues and prospects", *EASCON '78*, Arlington, Virginia, September 1978, pp. 34-39.

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

[NBS, 1978a]
National Bureau of Standards, *Local Area Networking -- Report of a Workshop Held at the National Bureau of Standards, Aug. 22-23, 1977*, NBS Special Publication 500-31, 1978.

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

[Nelson & Gordon, 1978]
David L. Nelson and Robert L. Gordon, "Computer cells -- a network architecture for data flow computing", *Proc. of COMPCON Fall 1978*, IEEE Computer Society, Washington, September 1978.
This system includes a communications ring connecting Prime P400 computers, apparently running at 10 mbps.

[Nessett, 1978]
Dan Nessett, "Protocols for buffer space allocation in CSMA broadcast networks with intelligent interfaces", *Third Conf. on Local Computer Networking*, U. of Minn., Minneapolis, October 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]
E. E. Newhall, and A. N. Venetsanopoulos, "Computer communications -- representative systems," *Information Processing 71 (Proc. of IFIP 71)*, North-Holland, 1972, pp. 545-552.
Summaries of the Arpanet, the Collins C-System TDM loop, and the Farmer/Newhall loop.

[Noguchi, *et al.*, 1974]
S. Noguchi, N. Shiratori, K. Teruya, and J. Oizumi, "On characteristics of loop computer network", *Proc. of the 7th Hawaii Int. Conf. on System Sciences, Computer Nets*, January 1974, pp. 24-26.
A brief consideration of a ring structure where collisions may take place, Aloha-style.

[NSC, 1976]
Network Systems Corp., (untitled paper), *Conf. on Experiments in New Approaches to Local Computer Networking*, U. of Minn., St. Paul, September 1976.

[Oh & Liu, 1977]
Y. Oh and M. T. Liu, "Interface design for distributed control loop networks", *Nat. Tele. Conf.*, December 1977, paper 31:4.

Proposed structure for a DCLN interface: lots of hardware, introduces delay at each node.

[Ohnsorge & Schenkel, 1974]
H. Ohnsorge and K. D. Schenkel, "An integrated communication system with fully decentralized switching", *IEEE Trans. on Comm.*, com-22:9, September 1974, pp. 1292-1296.
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; 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", *Proc. of the 4th ICCC*, Kyoto, September 1978.
Control station generates timing pulses of the bus, and clears any packet which circulates 256 times (!); both a data and control loop, 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]
Morio Onoe, Yasuhiko Yasuda, and Mitsuru Ishizuka, "A random access packet communication system with priority function -- Priority Ethernet", *National Convention of the Information Processing Society of Japan*, paper no. 3A-1, August, 1978.

[Orthner & McKeown, 1975]
F. Helmuth Orthner and David M. McKeown, Jr., "A packet switching network for minicomputers", *Proc. Fall COMPCON 75*, IEEE Computer Society, Washington, September 1975.
Parallel bus with an arbiter; micro-IMPS between the hosts and the bus, to minimize host changes. Super Unibus, can read and write to other units.

[Owens, 1973]
Jerry L. Owens, "A user's view of the Lawrence Livermore Laboratory's computer networks", *7th IEEE Comp. Soc. Int. Conf.* (Compcon 73), San Francisco, February 1973, pp. 75-78.

[Pardo, *et al.*, 1977]
Roberto Pardo, Ming T. Liu, and Gojko A. Babic, "Distributed services in computer networks: designing the distributed loop date (sic) base system", *Proc. of the Computer Networking Symposium*, IEEE(CS)/NBS, Gaithersburg, December 1977, pp. 60-65.

[Passafiume & Wecker, 1977]
Joseph J. Passafiume and Stuart Wecker, "Distributed file access in Decnet", *2nd Berkeley Workshop on Distributed Data Management and Computer Networks*, May 1977, pp. 114-129.

[Patton & Franck, 1976]
Peter C. Patton and Abe Franck, Eds., *Conf. on Experiments in New Approaches to Local Computer Networking*, U. of Minn., St. Paul, September 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]
Peter C. Patton and Abe Franck, Eds., *Conf. on "A Second Look at Local Computer Networking"*, U. of Minn., Minneapolis, October 1977.

[Patton & Franck, 1978]
Peter C. Patton and Abe Franck, Eds., *Third Conf. on Local Computer Networking*, U. of Minn., October 1978.

[Pehrson, 1973]
David L. Pehrson, "Interfacing and data concentration", in *Computer-Communication Networks*, Abramson and Kuo, Eds., Prentice-Hall, 1973.
Esp. section 6.8, an extended example treating the Octopus network.

[Pierce, 1972a]

J. R. Pierce, "How far can data loops go?", *IEEE Trans. on Comm.*, com-20, June 1972, pp. 527-530. Reprinted in [Green & Lucky, 1975].

[Pierce, 1972b]
J. R. Pierce, "Network for block switching of data," *Bell System Tech. Journal*, 51:6, July-August 1972, pp. 1133-1145.
Originally written in 1970. Terminals connected to loops; loops may 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]
J. R. Pierce, C. H. Coker, and W. J. Kropfl, "An experiment in addressed block data transmission around a loop," *IEEE International Convention Record*, March 1971, pp. 222-223.
Pierce's first paper on the subject. Describes possible hierarchy of loops, connecting the entire country.

[Pogran & Reed, 1978]
K. T. Pogran and D. P. Reed, "The MIT Laboratory for Computer Science Network", *Local Area Networking -- Report of a Workshop Held at the National Bureau of Standards, Aug. 22-23, 1977*, NBS Special Publication 500-31, 1978, pp. 20-22.

[Potvin, *et al.*, 1971]
J. N. Potvin, P. Chenevert, K. C. Smith and P. Boulton, "Star-Ring: a computer intercommunication and I/O system", *Information Processing 71 (Proc. of IFIP 71)*, North-Holland, 1972.
Central, high-speed parallel ring (option for buses radiating out from a node); daisy chain of control around the ring, address the destination explicityly on 1 of n address lines.

[Rawson, 1979]
E. G. Rawson, "Optical fibers for local computer networks," *Digest of Topical Meeting on Optical Fiber Communication*, Washington, March 1979, pp. 60-64.

[Rawson & Metcalfe, 1978]
Eric Rawson and Robert M. Metcalfe, "Fibernet: multimode optical fibers for local computer networks", *IEEE Trans. on Comm.*, 26:7, July 1978, pp. 983-990.
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.

[Rawson & Nafarrate, 1978]
Eric Rawson and Antonio B. Nafarrate, "Star couplers using fused biconically tapered multimode fibres," *Electronic Letters*, 14:9, April 27, 1978, pp. 274-275.
Reports on 19-channel transmissive star couplers (a la Fibernet), but now formed with thermal fusing.

[Rawson, et al., 1978]
E. G. Rawson, R. M. Metcalfe, R. E. Norton, A. B. Nafarrate, and D. Cronshaw, "Fibernet: A fiber optic computer network experiment," *Proc. of the Fourth European Conference on Optical Communication (r4h ECOC)*, Genova, Italy, September 1978.

[Reames & Liu, 1975]
Cecil C. Reames and Ming T. Liu, "A loop network for simultaneous transmission of variable-length messages", *2nd Annual Symposium on Computer Architecture*, ACM/SIGArch, January 1975, pp. 7-12.

[Reames & Liu, 1976]
Cecil C. Reames and Ming T. Liu, "Design and simulation of the Distributed Loop Computer Network (DLCN)", *3rd Annual Symposium on Computer Architecture*, ACM/SIGArch, January 1976, 124-129.

[Richardson & Yu, 1979]
R. G. Richardson and L. W. Yu, "The effect of protocol on the response time of loop structures for data communications", *Computer Networks*, 3, 1979, pp. 57-66.

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

[Robilland, 1974]
P. N. Robilland, "An analysis of a loop switching system with multirank buffers based on the Markov process," *IEEE Trans. on Comm.*, 22:11, November 1974, pp. 1772-1778.
Considers a Farmer/Newhall loop: bufferend I/O terminals, a loop, and a loop supervisor to provide clock and failure control.

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

[Rosen & Steele, 1973]
Saul Rosen and John M. Steele, "A local computer network", *7th IEEE Comp. Soc. Int. Conf.* (Compcon 73), San Francisco, February 1973, 129-132.
Star configuration, terminals and small hosts access a CDC 6500, 9.6kbps lines.

[Rowe, *et al.*, 1973]
Lawrence A. Rowe, Marsha D. Hopwood, David J. Farber, "Software methods for achieving fail-soft behavior in the Distributed Computing System", *IEEE Symposium on Computer Software Reliability*, April 1973.

[Rowe, 1975]
Rowe, L.A., "The Distributed Computing Operating System," DCS Technical Report #66, June 1975.
A nice overview of the system, and discussion of software. Includes a tiny bit of performance information.

[Saito, 1978]
T. Saito, "A subscriber carrier system based upon frame addressing system", *IEEE Trans. on Comm.*, com-26:8, August 1978, pp. 1287-1295.
Loop system for carrying voice, dynamically allocates portions within a frame.

[Sakai, *et al.*, 1977]
T. Sakai, T. Hayashi, S. Kitazawa, K. Tabata, and T. Kadade, "Inhouse computer network Kuipnet", *Information Processing 77 (Proc. IFIP 77)*, North-Holland, 1977, pp. 161-166.
Star configuration with point-to-point lines (~1 mbps) to a simple switching machine.

[Scantlebury, *et al.*, 1968]
R. A. Scantlebury, P. T. Wilkinson and K. A. Bartlett, "The design of a message switching centre for a digital communication network", *IFIP Congress 68*, Edinburgh, August 1968.

[Scantlebury, 1969]
R. A. Scantlebury, "A model for the local area of a data communication network -- objectives and hardware organization", *Proc. of the ACM Sym. on Problems in the Optimization of Data Comm. Systems* (1st Data Comm. Sym.), ACM SigComm, Pine Mountain, Georgia, October 1969.
Local system for NPL, mainly for terminals connected through multiplexers to a single central switch.

[Scantlebury & Wilkinson, 1971]
R. A. Scantlebury and P. T. Wilkinson, "The design of a switching system to allow remote access to computer services by other computers and terminal devices", *2nd Sym. on Problems in the Optimization of Data Comm. Systems* (2nd Data Comm. Sym.), ACM SigComm/IEEE, Palo Alto, California, October 1971.

[Schenkel, 1974]
K. D. Schenkel, "An integrated 300 mbit/s time division multiplexed communication system with decentralized switches", *Int. Zurich Sem. on Dig. Comm.*, March 1974, paper D3.
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.

[Schwartz, 1977]
Mischa Schwartz, *Computer-communication network design and analysis*, Prentice-Hall, 1977.
Esp. chapter 12, "Polling in networks" and chapter 13, "Random access techniques."

[Sharma, *et al.*, 1974]
R. L. Sharma, J. C. Shah, M. T. El-Bardai, and K. K. Sharma. "C-system: multiprocessor network architecture", *Information Processing 74 (Proc. of IFIP '74)*, North Holland, 1974.
Uses a backbone TDM loop to connect major peripherals; a slower TDM loop to connect terminals.

[Shatzer, 1978a]
Robert R. Shatzer, "Distributed Systems/1000", *Hewlett-Packard Journal*, March 1978, pp. 15-20.
Point to point lines, store and forward processing through the host, static routing tables (can be reset by hand, if there is a failure).

[Shatzer, 1978b]
Robert R. Shatzer, "A minicomputer-based resource sharing datagram network", *Trends and Applications 1978: Distributed Processing*, NBS/IEEE(DC) Symposium, May 1978.
A nicely written paper, describing a full architecture from a datagram network up to user programs. Unfortunately, the mini-Arpanet design is not very attractive.

[Sherman & Gable, 1977]
R. H. Sherman and M. Gable, "Microprocessor based networks applied to manufacturing control systems", *Proc. of the Nat. Electronics Conf.*, vol. 31, Chicago, October 1977, pp. 27-28.
Brief note on manufacturing control application, early test of an Ethernet-like system.

[Sherman, *et al.*, 1978a]
R. H. Sherman, M. Gable, and G. McClure, "Current summary of Ford activities in local networking", *Local Area Networking -- Report of a Workshop Held at the National Bureau of Standards, Aug. 22-23, 1977*, NBS Special Publication 500-31, 1978, pp. 22-23.

[Sherman, *et al.*, 1978b]
R. H. Sherman, M. Gable, and G. McClure, "Concepts, strategies for local data network architectures", *Data Communications*, July 1978.

[Shoch & Hupp, 1979]
John F. Shoch and Jon A. Hupp, "Performance of an Ethernet local network -- a preliminary report", *Local Area Communications Network Symposium*, Boston, May 1979.

[Skatrud & Metz, 1976]
R. O. Skatrud and W. C. Metz, "Loop communications within supermarket store systems", *Int. Conf. on Comm.*, Philadelphia, June 1976, pp. 30-6 - 30-11.

[Sloan, 1976]
Lansing J. Sloan, "A new design for interfacing computers to the Octopus network", *Conf. on Experiments in New Approaches to Local Computer Networking*, U. of Minn., St. Paul, September 1976.

[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 (1978?).
Cable bus for shipboard use, with a central controller.

[Spragins, 1971]

J. D. Spragins, "Analysis of loop transmission systems", *Second Sym. on Problems in the Optimization of Data Comm. Systems (2nd Data Comm. Sym.)*, Palo Alto, October 1971, pp. 175-182.
Loop configurations: one CPU with multiple terminals, central control.

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

[Spragins, 1972b]
J. D. Spragins, "Loops transmission systems -- mean value analysis", *IEEE Trans. on Comm.*, com-20:3, June 1972, pp. 592-602.
Loops with central control and fixed slots.

[Springer, 1978]
Joseph F. Springer, "The distributed data network, its architecture and operation," *Proc. of the 17th IEEE Computer Soc. Int. Conf. (Compcon Fall '78)*, Washington, DC, September 1978, pp. 221-228.
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, looks like permanent loss of a packet if stuck in a host which crashes.

[Steward, 1970]
E. H. Steward, "A loop transmission system", *ICC '70*, San Francisco, June 1970, pp. 36-1 - 36-9.

[Switzer, 1972]
I. Switzer, "The cable television system as a computer-communications network", *Proc. of the Sym. on Computer-Communications Networks and Teletraffic* (Polytechnic Institute of Brooklyn, April 1972), Polytechnic Press, 1972.
Background on cable TV, possible ways to carry data.

[Szurkowski, 1978]
Edward Szurkowski, "A high bandwidth local computer network", *Proc. COMPCON Fall '78*, IEEE Computer Society, Washington, September 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]
N. A. Teichholtz, "Digital network architecture," *European Comp. Conf. on Comm. Networks (Online)*, London, September 1975, pp. 13-24.
A very early discussion of the broad outlines of DEC's DNA: DDCMP, NSP, DAP; little hard information.

[Thornton, 1979]
James E. Thornton, "Overview of Hyperchannel", *18th IEEE Comp. Soc. Int. Conf. (Compcon 79 Spring)*, San Francisco, February 1979, pp. 262-265.
A good clear discussion of the Hyperchannel.

[Thornton, *et al.*, 1975]
James E. Thornton, Gary S. Christensen, and Peter D. Jones, "A new approach to network storage management", *Computer Design*, November 1975, pp. 81-85.

[Thurber & Freeman, 1979a]
Kenneth J. Thurber and Harvey A. Freeman, "Local computer network architectures," *COMPCON Spring '79*, San Francisco, February-March 1979.

[Thurber & Freeman, 1979b]
Kenneth J. Thurber and Harvey A. Freeman, "A bibliography of local computer network architectures," *Comp. Arch. News*, 7:5, February 1979.
Revised version of their earlier article, [Thurber & Freeman, 1979a].

[Tokoro & Tamaru, 1977]
M. Tokoro and K. Tamaru, "Acknowledging Ethernet", *Proc. COMPCON 77*, pp. 320-325, Sept. 1977.

[Tsuchiya, *et al.*, 1974]
M. Tsuchiya, S. S. Yau, and M. J. Gonzalez, "Use of a computer network as peripheral devices", *Digest of Papers, 8th IEEE Comp. Soc. Int. Conf.* (Compcon '74), San Francisco February 1974, pp. 117-119.
Simple star configuration.

[Venetsanopoulos & Newhall, 1970]
A. N. Venetsanopoulos and E. E. Newhall, "Traffic considerations in an experimental distributed switching system", *Canadian Symposium on Communications*, IEEE, November 1970, p. 37.
Abstract only, no paper.

[Wanner, 1978]
James F. Wanner, "Wideband communication system improves response time", *Computer Design*, December 1978, pp. 85-92.
CATV bus, uses central controller with polling of other terminals.

[Watson, 1978]
Richard W. Watson, "The LLL Octopus network: some lessons and future directions", *Proc. of the 3rd USA-Japan Computer Conference*, San Francisco, October 1978, pp. 12-21.

[Wecker, 1976a]
Stuart Wecker, "The design of DECNET -- a general purpose network base", *IEEE Electro '76*, Boston, May 1976.

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

[Wecker, 1978]
Stuart Wecker, "DECNET: Issues related to local networking", *Local Area Networking -- Report of a Workshop Held at the National Bureau of Standards, Aug. 22-23, 1977*, NBS Special Publication 500-31, 1978, pp. 26-31.

[Weller, 1971]
David R. Weller, "A loop communication system for I/O to a small multi-user computer", *Proc. of the 1971 IEEE Int. Comp. Soc. Conf.*, Boston, September 1971, p. 77-78.
At Bell Labs, loop for I/O to a small host, fixed size 35 bits/frame.

[West, 1977]
Anthony R. West, *A broadcast packet-switched computer communication network: design progress report*, TR 121, Computer System Laboratory, Queen Mary College, London, February 1977.

[West, 1978]
Anthony R. West, "Local area networks at Queen Mary College", *Local Area Networking -- Report of a Workshop Held at the National Bureau of Standards, Aug. 22-23, 1977*, NBS Special Publication 500-31, 1978, pp. 23-26.

[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", *Int. Comm. Conf.*, 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]
M. V. Wilkes and D. J., Wheeler, "Design of a digital ring -- Addendum to a a paper presented to the PACNET Conference held in Sendai Japan, in August 1975", December 1976.

[Wilkinson, 1969]
P. T. Wilkinson, "A model for the local area of a data communication network -- software organization", *Proc. of the ACM Sym. on Problems in the Optimization of Data Comm. Systems* (1st Data Comm. Sym.), ACM SigComm, Pine Mountain, Georgia, October 1969.
NPL system, basically terminals connected to a star.

[Wilkinson & Scantlebury, 1968]
P. T. Wilkinson and R. A. Scantlebury, "The control functions in a local data network", *IFIP Congress 68*, Edinburgh, August 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 Calivornia, 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*, Atlanta, November 1973, paper 38E.

[Willard, 1974]
David G. Willard, "A time division multiple access system for digital communication", *Computer Design*, June 1974, pp. 79-83.

[Wong, *et al.*, 1978]
J. W. Wong, J. A. Field, and S. N. Kalra, "Feasibility of a loop system for local data concentration", *Proc. of ICC '78*, Toronto, June 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]
R. M. Wu and Y. Chen, "Analysis of a loop transmission system with round-robin scheduling of services", *IBM J. of Res. and Dev.*, September 1975, pp. 486-493.

[Yajima, *et al.*, 1977a]
Shuzo Yajima, Yahiko Kambayashi, Susumu Yoshida, and Kazuo Iwama, "Optically linked laboratory computer network Labolink", *Proc. of the 10th Hawaii Int. Conf. on System Sciences*, Honolulu, January 1977, pp. 1-4.
Simple star topology, but uses fiber optic links.

[Yajima, *et al.*, 1977b]
S. Yajima, Y. Kambayashi, S. Yoshida, and K. Iwama, "Labolink: an optically linked laboratory computer network", *Computer*, IEEE Computer Society, November 1977, pp. 52-59.
Simple star topology, but uses fiber optic links

[Yao, 1978]
A. C. Yao, "On the loop switching addressing problem," *SIAM J. Comput.*, 7:4, November 1978, pp. 515-523.

[Yatsuboshi, *et al.*, 1978]
R. Yatsuboshi, T. Tsuda, K. Yamaguchi and Y. Inoue, "An in-house network configuration for distributed intelligence", *Proc. of the 4th ICCC*, Kyoto, September 1978.
2-level hierarchy of loops: 48 Kbps HDLC loops for terminals, 6.3 Mbps ring as a Data Highway, or backbone.

[Yuen, *et al.*, 1972]
M. L. T. Yuen, B. A. Black, E. E. Newhall, and A. N. Venetsanopoulos, "Traffic flow in a distributed loop switching system", *Proc. of the Symp. on Computer-Communications Networks and Teletraffic* (Polytechnic Institute of Brooklyn, April 1972), Polytechnic Press, 1972, pp. 29-46. (Reprinted in [Chu, 1974].)
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]
P. Zafiropulo. "Reliability optimization in multiloop communication networks", *IEEE Trans. on Comm*, com-21:8, August 1973, pp. 898-907.
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]
P. Zafiropulo, "Reliability -- a key element in loop systems", *Int. Zurich Seminar on Dig. Comm.*, March 1974, paper D2.
Assessment of techniques for using a stand-by loop, with bypass and self-heal actions; procedures for reconfiguration.

[Zafiropulo, 1974b]
P. Zafiropulo, "Performance evaluation of reliability improvement techniques for single-loop communications systems", *IEEE Trans. on Comm.*, com-22:6, June 1974.
Expanded version of [Zafiropulo, 1974a].

[Zafiropulo & Rothauser, 1972]
P. Zaafiropulo and E. H. Rothauser, "Signalling and frame structures in highly decentralized loop systems," *Proc. of the ICCC*, Washington, October 1972, pp. 309-315.
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.

Appendix: 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 multi-access 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.

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]

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]
- [Kobayashi, *et al.*, 1977]
- [Ferguson, 1977a]
- [Ferguson, 1977b]
- [Ng & Mark, 1977]

[Callender, 1977]
[Fayolle, *et al.*, 1977]
[Lam, 1977]
[Kleinrock & Scholl, 1977]
[Hansen & Schwartz, 1977]
[Schuchman, 1977]
[Sastry, 1977]
[Rothauser & Wild, 1977]
[Tobagi & Kleinrock, 1977]
[Rubin, 1977]
[Tobagi, 1977]
[McGarty & Singh, 1977]
[Gerla, *et al.*, 1977]
[Fukuda, *et al.*, 1978]
[Ng & Mark, 1978]
[Tobagi & Kleinrock, 1978]
[Borgonovo & Fratta, 1978]
[Szpankowski, *et al.*, 1978]
[Okada, *et al.*, 1978]
[Lam, 1978]
[Kleinrock & Yemini, 1978]
[Tobagi, 1978]
[Kleinrock & Gerla, 1978]
[Jacobs, *et al.*, 1978]
[Eaves, 1979]

Mobile/Cellular radio systems
[Schiff, 1970]
[Cox & Reudink, 1972]
[Bell, 1979]

References

[Abramson, 1970]
Norman Abramson, "The Aloha system -- another alternative for computer communications", *AFIPS Conf. Proc., FJCC*, 1970, pp. 281-285.

[Abramson, 1973a]
N. Abramson, "The Aloha system", in Abramson and Kuo, Eds., *Computer-Communication Networks*, Prentice-Hall, 1973, pp. 501-517.

[Abramson, 1973b]
N. Abramson, "Packet switching with satellites," Proc. NCC, New York, June 1973, pp. 695-702. Reprinted in Computer Communication Networks, ed. by Grimsdale and Kuo, Noordhoff, 1975, pp. 291-309.

[Abramson, 1977]
N. Abramson, "The throughput of packet broadcasting channels", *IEEE Trans. on Comm.*, com-25:1, January 1977, pp. 117-128.

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

[Binder, *et al.*, 1975]
R. Binder, N. Abramson, F. Kuo, A. Okina, and D. Wax, "Aloha Packet Broadcasting -- a

retrospect", *NCC Proc.*, May 1975, pp. 203-215.

[Binder, 1975]
Richard Binder, "A dynamic packet-switching system for satellite broadcast channels", *Int. Conf. on Comm.*, San Francisco, June 1975, pp. 41-1 - 41-5.

[Borgonovo & Fratta, 1978]
F. Borgonovo and L. Fratta, "SRUC: A technique for packet transmission on multiple access channels", *Proc. of the 4th ICCC*, Kyoto, September 1978.

[Burchfiel, *et al.*, 1975]
J. Burchfiel, R. Tomlinson, and M. Beeler, "Functions and structure of a packet radio station", *NCC Proc.*, May 1975, pp. 245-251.

[Callender, 1977]
G. S. Callender, "Contention resolution in an overlap poll communication system," *IBM Tech. Disc. Bulletin*, 19:11, April 1977, pp. 4314-4318.

[Carleial & Hellman, 1975]
A. B. Carleial and M. E. Hellman, "Bistable behavior of Aloha-type systems, *IEEE Trans. on Comm.*, com-23:4, April 1975, pp. 401-410.

[Cox & Reudink, 1972]
D. C. Cox and D. O. Reudink, "Dynamic channel assignment in two-dimensional large-scale mobile radio systems," *Bell System Tech. Journal*, 51:7, September 1972.

[Crowther, *et al.*, 1973]
W. Crowther, R. Rettberg, D. Walden, S. Ornstein, F. Heart, "A system for broadcast communication: Reservation-Aloha", *Proc. of the 6th Hawaii Int. Conf. on System Sciences*, Honolulu, January 1973, pp. 371-374.

[Eaves, 1979]
R. E. Eaves, "Aloha/TDM systems with multiple downlink capacity," *IEEE Trans. on Comm.*, com-27:3, March 1979, pp. 537-541.

[Fayolle, *et al.*, 1977]
G. Fayolle, E. Gelenbe, and J. Labetoulle, "Stability and optimal control of the packet switching broadcast channel", *JACM*, 24:3, July 1977, pp. 375-386.

[Ferguson, 1975a]
Michael J. Ferguson, "On the control, stability, and waiting time in a slotted Aloha random access system", *Int. Conf. on Comm.*, San Francisco, June 1975, pp. 41-6 - 41-9. Reprinted in IEEE Trans. on Comm., November 1975, pp. 1306-1311.

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

[Ferguson, 1977a]
M. J. Ferguson, "A bound and approximation of delay distribution for fixed-length packets in an unslotted Aloha channel and a comparison with time division multiplexing (TDM)", *IEEE Trans. on Comm*, com-25:1, January 1977, pp. 136-139.

[Ferguson, 1977b]
M. J. Ferguson, "An approximate anlysis of delay for fixed and variable length packets in an unslotted Aloha channel", *IEEE Trans. on Comm.*, com-25:7, July 1977, pp. 644-654.

[Fralick, *et al.*, 1975]

S. C. Fralick, et al., "Digital terminals for packet broadcasting", *AFIPS Conf. Proc*, vol. 44, May 1975, pp. 253-262.

[Fralick & Garett, 1975]+
S. C. Fralick and J. C. Garrett, "Technological considerations for packet radio network", *AFIPS Conf. Proc*, vol. 44, May 1975, pp. 233-243.

[Frank, *et al.*, 1975]+
H. Frank, I. Gitman, and R. M. Van Slyke, "Packet Radio system -- network considerations", *AFIPS Conf. Proc*, vol. 44, May 1975, pp. 217-231.

[Fukuda, *et al.*, 1978]
A. Fukuda, K. Mukumoto and T. Hasegawa, "Adaptive retransmission randomization schemes for a packet switched random access broadcast channel", *Proc. of the 4th ICCC*, Kyoto, September 1978, pp. 543-548.

[Gerla, *et al.*, 1977]
M. Gerla, L. Nelson, and L. Kleinrock, "Packet satellite multiple access: models and measurements," *Nat. Tele. Conf.*, 1977, paper 12:2.

[Gitman, *et al.*, 1974]
I. Gitman, R. M. Van Slyke, and H. Frank, "On splitting random accessed broadcast communication channels", *Proc. of the 7th Hawaii Int. Conf. on System Sciences. Supplement on Computer Nets*, Honolulu, January 1974, pp. 81-85.

[Gitman, *et al.*, 1975]
I. Gitman, R. M. Van Slyke, and H. Frank, "Routing in packet-switching broadcast radio networks," *IEEE Trans. on Comm.*, August 1976, pp. 926-930.

[Gitman, 1975]
I. Gitman, "On the capacity of slotted Aloha networks and some design problems," *IEEE Trans. on Comm.*, com-23:3, March 1975, pp. 305-317.

[Hansen & Schwartz, 1977]
L. W. Hansen and M. Schwartz, "An assigned-slot listen-before-transmission protocol for a multiaccess data channel", *ICC*, Chicago, June 1977, paper 22.2, pp. 112-116.

[Jacobs, et al., 1978]
I. M. Jacobs, R. Binder, E. V. Hoversten, "General purpose packet satellite networks," *Proc. of the IEEE*, 66:11, November 1978, pp. 1448-1467.

[Kahn, 1975]
Robert E. Kahn, "The organization of computer resources into a packet radio network", *AFIPS Conf. Proc*, vol. 44, May 1975, pp. 177-185. Reprinted in *IEEE Trans. on Comm.*, com-25:1, January 1977, pp. 169-178.

[Kahn, *et al.*, 1978]
R. E. Kahn, S. A. Gronemeyer, J. Burchfiel, and R. C. Kunzelman, "Advances in packet radio technology," *Proc. of the IEEE*, 66:11, November 1978, pp. 1468-1496.

[Kleinrock & Gerla, 1978]
L. Kleinrock and M. Gerla, "On the measured performance of packet satellite access schemes", *Proc. of the 4th ICCC*, Kyoto, September 1978, pp. 535-542.

[Kleinrock & Lam, 1974]
L. Kleinrock and S. Lam, "On stability of packet switching in a random multi-access broadcast channel", *Proc. of the 7th Hawaii Int. Conf. on System Sciences. Supplement on Computer Nets*, Honolulu, January 1974., pp. 74-77

[Kleinrock & Lam, 1975]
L. Kleinrock and S. Lam, "Packet switching in a multiaccess broadcast channel: peformance evaluation", *IEEE Trans. on Comm.*, com-23:4, April 1975, pp. 410-423.

[Kleinrock & Scholl, 1977]
L. Kleinrock and M. Scholl, "Packet switching in radio channels: new conflitct-free multiple access schemes for a small number of data users", *ICC*, 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", *Int. Conf. on Comm.*, Minneapolis, June 1974, paper 21B.

[Kleinrock & Tobagi, 1975]
Leonard Kleinrock and Fouad Tobagi, "Packet switching in radio channels: Part 1 -- carrier sense multiple-access modes and their throughput-delay characteristics", *IEEE Trans. on Comm.*, com-23:12, December 1975, pp. 1400-1416.

[Kleinrock & Yemini, 1978]
L. Kleinrock and Y. Yemini, "An optimal adaptive scheme for multiple access boradcast communication", *ICC*, Toronto, June 1978, paper 7.2.

[Kobayashi, *et al.*, 1977]
H. Kobayashi, Y. Onozato, and D. Huynh, "An approximate method for design and analysis of an Aloha system", *IEEE Trans. on Comm.*, com-25:1, January 1977, pp. 148-157.

[Kunzelman, 1978]
Ronald C. Kunzelman, "Overview of the Arpa Packet Radio Experimental Network", *Compcon*, Spring 1978, San Francisco, pp. 157-160.

[Kuo & Binder, 1975]
F. F. Kuo and R. D. Binder, "Computer-communications by radio and satellite: The Aloha System," in *Computer Communication Networks*, ed. by Grimsdale and Kuo, Noordhoof, 1975, pp. 397-407.

[Lam, 1977]
Simon S. Lam, "Satellite multiaccess schemes for data traffic", *Int. Conf. on Comm.*, 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", *Int. Conf. on Comm.*, Toronto, June 1978, paper 27.3.

[Lam & Kleinrock, 1975]
S. S. Lam and L. Kleinrock, "Packet switching in a multiaccess broadcast channel: dynamic control procedures", *IEEE Trans. on Comm.*, com-23:9, September 1975, pp. 891-904.

[McGarty & Singh, 1977]
R. P. McGarty and K. J. Singh, "Multiple access techniques for low data rate satellite communications systems," *Nat. Tele. Conf.*, 1977, paper 5:2.

[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", *Int. Conf. on Comm.*, Montreal, June 1971, pp. 42-7 - 42-14.
Primarily a comparison of FDMA techniques; also SSMA and PAMA.

[Metcalfe, 1973a]
Robert M. Metcalfe, "Steady-state analysis of a slotted and controlled Aloha system with blocking", *Proc. of the 6th Hawaii Int. Conf. on System Sciences, Honolulu*, January 1973., pp. 375-378 Reprinted in *Computer Comm. Review*, 5:1.

[Metcalfe, 1973b]
Robert M. Metcalfe, *Packet Communication*, MIT Project MAC report TR-114, July 1973.

[Metzner, 1976]
J. L. Metzner, "On improving utilization in Aloha networks", *IEEE Trans. on Comm.*, April 1976, pp. 447-448.

[Ng & Mark, 1977]
S. F. W. Ng and J. W. Mark, "A multiaccess model for packet switching with a satellite having processing capability", *IEEE Trans. on Comm.*, com-25:1, January 1977.

[Ng & Mark, 1978]
S. F. W. Ng and J. W. Mark, "Multiaccess model for packet switching with a satellite having processing capability: delay analysis", *IEEE Trans. on Comm.*, com-26:2, February 1978, pp. 283-290.

[Okada, *et al.*, 1978]
H. Okada, Y. Nakanishi, and Y. Igarashi, "Analysis of framed Aloha channel in satellite packet switching networks", *Proc. of the 4th ICCC*, Kyoto, September 1978, pp. 617-622.

[Roberts, 1972]
L. Roberts, "ALOHA packet system with and without slots and capture", ASS Note 8, June 1972. Reprinted in *Computer Communications Review*, 5:2.

[Roberts, 1973]
L. Roberts, "Dynamic allocation of satellite capacity through packet reservation," *Proc. NCC*, June 1973, pp. 711-716. Reprinted in *Computer Communication Networks*, ed. by Grimsdale and Kuo, Noordhoff, 1975, pp. 329-344.

[Rothauser & Wild, 1977]
E. H. Rothauser and D. Wild, "MLMA -- a collision-free multi-access method", *Information Processing 77* (Proc. of IFIP 77), pp. 431-436.

[Rubin, 1977]
I. Rubin, "A group random-access procedure for multi-access communication channels," *Nat. Telecomm. Conf.*, 1977, paper 12:5.

[Sastry, 1977]
A. R. K. Sastry, "A simple reservation scheme to improve excess capacity of slotted Aloha channels", *Int. Conf. on Comm.*, Chicago, June 1977, paper 22.3.

[Schiff, 1970]
L. Schiff, "Traffic capacity of three types of common-user mobile radio communications systems", *IEEE Trans. on Comm.*, com-18:1, February 1970, pp. 12-21.

[Schuchman, 1977]
L. Schuchman, "Broadcast-multi-point-satellite-packet communications", *Int. Conf. on Comm.*, Chicago, June 1977, paper 38.5.

[Szpankowski, *et al.*, 1978]
W. Szpankowski, K. Ono, and Y. Urano, "Simulation and analysis of satellite packet switching computer networks", *Proc. of the 4th ICCC*, Kyoto, September 1978, pp. 609-615.

[Tobagi, 1977]
F. A. Tobagi, "Performance analysis of packet radio communication systems", *Nat. Tele. Conf.*, 1977, paper 12:6.

[Tobagi, 1978]
F. A. Tobagi, "Analysis of slotted Aloha in a centralized two-hop packet radio network", *Proc. of the 17th IEEE Comp. Soc. Int Conf.* (Compcon Fall '78), Washington, 1978, pp. 19-26.

[Tobagi & Kleinrock, 1975]
F. A. Tobagi and L. Kleinrock, "Packet switching in radio channels: Part II -- the hidden terminal problem in carrier sense multiple-access and the busy-tone solution," *IEEE Trans. on Comm.*, com-23:12, December 1975, pp. 1417-1433.

[Tobagi & Kleinrock, 1976]
F. A. Tobagi and L. Kleinrock, "Packet switching in radio channels: Part III -- polling and (dynamic) split-channel reservation multiple access," *IEEE Trans. on Comm.*, com-24:8, August 1976, pp. 832-845.

[Tobagi & Kleinrock, 1977]
F. A. Tobagi and L. Kleinrock, "Packet switching in radio channels: Part IV -- stability considerations and dynamic control in carrier sense multiple acess", *IEEE Trans. on Comm.*, com-25:10, October 1977, pp. 1103-1119.

[Tobagi & Kleinrock, 1978]
F. A. Tobagi and L. Kleinrock, "The efffect of acknowledgment traffic on the capacity of packet-switched radio channels", *IEEE Trans. on Comm.*, com-26:6, June 1978, pp. 815-826.

[Yasuda & Tasaka, 1976]
Y. Yasuda and S. Tasaka, "A packet radio random access communication system", *ICC*, Philadelphia, June 1976, pp. 38-24 - 38-29.

File: b.ack Last updated: April 18, 1979 6:08 PM john f. shoch

Acknowledgements

A large scale bibliographic effort such as this one can only succeed through the use of a well equipped library, and with the assistance and help of some very skilled librarians. Special thanks go to Giuliana Lavendel, Natalie Yount, and the staff of the Library at the Xerox Palo Alto Research Center, as well as the staff in the Computer Science Department Library at Stanford University -- with their help, we have been able to accumulate original copies of almost every entry in this bibliography.