SABBATICAL REPORT

88-89

VIRGINIA L. McBRIDE

ENGLISH DEPARTMENT

SABBATICAL REPORT

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THE BEGINNING

VIRGINIA L. McBRIDE

MT. SAN ANTONIO COLLEGE
Salary and Leaves Committee

APPLICATION FOR SABBATICAL LEAVE

Name of Applicant ___Virginia L. McBride___

Address ___60 South Michillinda Avenue, Sierra Madre, CA 91024___

Employed at Mt. San Antonio College beginning ___September 1967___

Dates of last sabbatical leave:

From _____   To _____

Department ___English___   Division ___Humanities___

Length of sabbatical leave requested: Purpose of sabbatical leave:

   One semester _____   Study _____   Project _XXX_
     Fall _____ . Spring _____
                     Travel _____   Combination
   Two Semesters _XXX_   (specify) _____

NOTE: **Sabbatical periods are limited to contractual dates of the academic year.**

Effective dates for proposed sabbatical leave:

From ___September 1988___   To ___June 1989___

        and (if taken over a two school year period)

From _____   To _____

Attach a comprehensive, written statement of the proposed sabbatical activity(ies) including a description of the nature of the activity(ies), a timeline of the activity(ies), an itinerary, if applicable, the proposed research design and method(s) of investigation, if applicable.

Attach a statement of the anticipated value and benefit of the proposed sabbatical activity(ies) to the applicant, his/her department or service area, and the College.

Any change or modification of the proposed sabbatical activity(ies) as evaluated and approved by the Salary and Leaves Committee must be submitted to the Committee for reconsideration.

___Virginia L. McBride___ (signature)   November 24, 1987
Signature of Applicant   Date

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SABBATICAL LEAVE PROPOSAL

Virginia L. McBride

PROJECT DESCRIPTION

Today, higher education faces incredible difficulties in accomplishing its
instructional objectives and its institutional goals. In part, these difficul-
ties arise from the pressures and obstacles confronting a faculty trained in
another time for a vastly different world. For this newer world, technology
offers enormous possibilities for improving instuction. Yet, in many instances,
an overwhelmed and fearful faculty retreats from the technology. As a result,
the technology itself generates more problems and, in turn, expands the distance
between educators and technology.

Therefore, for my sabbatical, I propose to study/research three aspects of
educational, electronic technology pertinent to higher education and to the
community college in particular. The three are (1) Instructional Technology,
(2) Instructional Systems Development, and (3) Instructional Delivery Systems.
To determine the impact of technology on higher education, this study/research
will focus on the future uses of the telephone, the computer, and video in the
educational environment plus the strategies and methods for integrating these
future uses into the curriculum and the classroom.

Because the field of instructional technology sits on the cutting edge of the
major theories of educational design, no college in the country offers a formal
study program in integrated electronic-technologies. Therefore, this proposed
study/research must embrace others means of information gathering and interpre-
tation.

First, I will conduct a literature review from both the technology and education
perspectives. Using Southern California libraries (Pasadena City; Cal Poly,
Pomona; California Institute of Technology; Sony Institute; California State
University, Los Angeles; MSAC), I will review various issues of all of the
following periodicals which are available: (1) Data Communications, (2) E-ITV,
(3) Management Review, (4) English Journal, (5) Conference on English Education,
(6) AV Video, (7) Microtimes, (8) Unix World, (9) Unix Review, (10) Telemarketing,

(11) Business Software, (12) T.H.E. Journal, (13) Administrative Management, (14) Training, (15) High Technology, (16) Corporate Meetings, (17) American Journal of Distance Education.

In addition to the periodicals, I will review numerous books. This review will include the following: (1) Private Television Communications, (2) Teletraining, (3) Telecommunications for Management, (4) Innovative Management Using Telecommunication, (5) How to Develop Business Information Systems for End Users, (6) Handbook of Personal Computer Communications, (7) PostScript: Language Tutorial, (8) Unix Text Processing, (9) Unix Communications, (10) Unix System Administration, (11) CBASIC/CB86, (12) True Vision Image Processing Software, (13) Teleconferencing and Electronic Communications, (14) Writing Software Manuals, (15) Principles and Practices of Instructional Technology, (16) Designing and Delivering Cost-Effective Training, (17) Creating Courseware.

Second, I will conduct a hardware and delivery system review with an eye toward possible advantages and disadvantages, features and benefits, and potential integration into existing programs. This review will begin with trips to a number of trade shows. The probable shows will be Corpcon in September; Comdex, Telecom, and Lan Net in November; UniForum in February. At these shows I will be exploring various delivery systems and their appropriate audio, video, and computer hardware which are especially applicable to higher education settings which involve either or both collaborative learning or distance education.

In completing this aspect of my sabbatical research, I will, both pre-and-post trade shows, consult with one or more of the following MSAC personnel: David Mead, Director of Audio-Visual; Ronald Ownbey, Art Department Chair; Robert Ronketty, Art Department Graphics Instructor; Damon Day, Photography Instructor; Mary Powers, Mountaineer Advisor; Judy Wagner, Word Processing Instructor; Hal Roach, Manager of Computer Services; Mary Caroline Neal, Brenda Stokes, Lynette Hight, Keith Cole, and Robin Benedict --- all English Instructors. These consultations will focus on the possible future plans these individuals have for their own use of technology in their individual areas/programs and also on how those plans can be developed into integrated, cross-discipline programs.

After each show, I will conduct follow-up and detailed research on equipment
and systems with vendors who offer possible ways to address the issues raised
by the MSAC faculty consulted before the show. This segment of my sabbatical
research will involve an intensive review of product/service literature and
will, in some cases, involve detailed explanations, demonstrations, and hands-
on training. For this detailed segment, I will be working with individuals who
are actively using the systems or equipment on a regular basis. Some of these
individuals include the following: Kevin Gallagher, Vice President of Network
Technologies, Inc.; Bruce Motyer, Senior Video Editor, The Editing Company (a
George Schlatter Company); Muriel Spenser, Passport Software; Janet Palmer,
President of Communication Excellence Institute; Larry Bohn, Interleaf; Dr.
Diane P. Thompson, Assistant Professor of English at Northern Virginia Community
College; John W. McCutcheon, Assistant Professor of Curriculum and Instruction
in the College of Education at Ohio University; Marvin Bowman, Director of
Education Telecommunication at the Ohio University Telecommunication Center;
Donald Boehnker, Director of Instructional Media at the University of New Mexico;
Jayne Peterson, Western Regional Manager of Source Telecomputing Corporation;
Kathy Crowley, Western Manager of DaRome Teleconferencing; Kay Gilliland,
Director of the EQUALS Project at the Lawrence Hall of Science; Edward R.
Milstein, Technical Support at Sun Microsystems; Donna George; Director of
Instructional Television at California State University, Los Angeles; and Lorne
Parker, President of Parker Communications. Through all of this segment,
I will be alert to solutions which take the advantage of equipment and systems
already in place on the MSAC campus as well as open to solutions which expand
the educational capabilities of MSAC.

Third, I will conduct a technologies-applications assessment to address the
theory of developing instructional units for the managed use of technologically-
based instructional systems. For example, I will review a Still Video System
whose equipment components might include a still video camera, a portable still
video recorder, a still video player, a program editing controller, and a program
controller. This sytem which uses a video floppy disk can contain a maximum of
25 frames or 50 fields and can record audio on the disk along with the video.
The still video camera can shoot images just like a 35 millimeter camera.

However, these still images require no chemical processing and instantly recorded pictures can be viewed on a video monitor via any still video player. The applications of a still video system are broadened tremendously by the RS-232C interface back into the world of computers. Therefore, in a cross-discipline environment, photography plays a role in the production of the images; art plays a role in the design of the images to be shot; music and speech play the roles involved in the audio production; video plays a role in the shooting, editing and broadcast processes; English and journalism play the role of copy producers; and computer sciences plays the role of transmission designers.

Continuing with the integrated, cross-discipline approach, I will look at a variety of software packages which facilitate collaboration either on the development side of a project or on the user side. These packages include docuForum, eMemo, and eForum from Network Technologies; Instructional Workbench, Writer's Workbench, and Documenter's Workbench from AT&T; Accord from Global Information Systems Technology; C-Pilot and Tutor from The Pilot Group; and the Educator from Spectrum Corporation.

PROBABLE TIMELINE

SEPTEMBER
1. Begin "literature review"
2. Design all documentation and evaluation instruments and devices
3. Attend Corpcon

OCTOBER
1. Continue "literature review"
2. Conduct pre-trade-show consultations with MSAC faculty

NOVEMBER
1. Continue "literature review"
2. Attend Comdex, Telecom, and LanNet
3. Begin review of product/service literature

DECEMBER
1. Continue "literature review"
2. Continue review of product/service literature
3. Conduct post-trade-show consultations with MSAC faculty

JANUARY
1. Continue "literature review"
2. Continue review of product/service literature
3. Continue post-trade-show consultations

FEBRUARY
1. Continue "literature review"
2. Complete review of product/service literature
3. Attend UniForum
4. Schedule follow-up demonstrations, explanations, and hands-on training in audio-based systems
5. Begin applications-assessment for developing instructional units

MARCH
1. Complete "literature review"
2. Schedule follow-up demonstations, explanations, and hand-on training for computer-based systems

3. Continue applications-assessment for developing instructional units

APRIL
1. Schedule follow-up demonstrations, explanations, and hands-on training in video-based systems
2. Continue applications assessment for developing instructional units
3. Schedule consultations with MSAC faculty to present a status report and to identify any final issues which need to be addressed

MAY
1. Schedule follow-up demonstrations, explanations, and hands-on training in integrated systems
2. Complete applications-assessment
3. Begin final analysis of compiled data

JUNE
1. Complete follow-up demonstrations, explanations, and hands-on training
2. Complete final analysis of complied data
3. Prepare final presentation

ANTICIPATED VALUE AND BENEFITS

Currently, the College employs separate individuals with computer, video, and audio backgrounds. Yet, none of these specially trained individuals possesses training in curriculum design and development for the delivery of integrated, technologically-based programs. For example, individuals with a computer background fail to address the integration of video into their current courses or their future plans for new courses; and individuals with a video-conferencing background overlook the potential of audio-conferencing. Therefore, I see the future need for instructional technologists whose expertise cuts across all technological areas and all curriculum development skills in the re-design of current courses and the future design of yet-to-be-created courses. The research completed through this sabbatical study should provide a tremendous, timely foundation on which to build the necessary bridges between the various academic disciplines, between academic and vocational programs, and between faculty with diverse backgrounds. As a result, instructional programs which use the collective talents of diverse faculty can be developed in a collaborative environment which takes the greatest advantage of the current and emerging technologies.

In addition, this research will provide the opportunity for MSAC to establish a strategic marketing advantage in instructional delivery. For example, two of MSAC's competitors, Cal Poly and USC, already have electronic delivery systems in place which compete with our existing campus-based programs. Cal Poly's microwave system is already putting college classes directly onto high school campuses in the MSAC district. USC's microwave system is capable of delivering educational programming directly to worksites within the MSAC district. In video-delivery, the California State University Instructional Video system is capable of delivering nationwide educational programming to any down-link site in the state and has the collaborative capacity to develop educational programming to be up-linked into the system. KOCE and KVCR, both under the direction of Southern California educational institutions, deliver programming directly into the MSAC district. All of these systems are capable of pulling students from MSAC into the colleges and universities who operate the more visible delivery

systems. With this research complete, MSAC is now in a position to develop educational programs with the flexibilty to be delivered in a traditional campus-based setting or delivered electronically to widely dispersed sites throughout the district. Also, MSAC is in a position to take a leadership role in the development of electronically-delivered statewide-programs which serve small student populations with very specialized programming needs. Finally, MSAC is in a position to define a future which combines the talents of a traditionally trained faculty with the potential of an educational program delivered through technologically-based instructional systems.

TO: Sabbatical Leave Committee
         Walt Collins, Chairman,

FROM: Virginia L. McBride

DATE: January 7, 1988

RE: **RESPONSE TO RECOMMENDATIONS FOR REVISION OF SABBATICAL APPLICATION**

1. Have you received agreement from the interviewees listed in your proposal?

I have received agreement from the following MSAC personnel: Dave Mead, Ron Ownbey, Mary Powers, Mary Caroline Neal, Brenda Stokes, Lynette Hight, and Keith Cole. Judy Wagner had agreed to work with me on developing a pilot project involving computer-aided writing instruction for my writing classes; but I have not discussed this sabbatical application with her. Bob Ronketty, Damon Day, and Robin Benedict will be contacted after the Christmas holidays about their participation. I did not contact them earlier because their participation was not critical; but I included their names, nevertheless, because their perspectives would serve only to enhance the entire research.

I have received agreement from the following non-MSAC personnel: Kevin Gallagher, Bruce Motyer, Muriel Spenser, Janet Palmer, and Edward Milstein because they are critical to the research. Although Interleaf is critical to the research, no one person there is critical. If Larry Bohn is unavailable, I will find an equally qualified replacement within the company. Jayne Petersen, Kathy Crowley and Donna George, with whom I have worked on other projects, have been aiding me in other research that is tangential to the sabbatical's proposed research and their participation will be verified when the sabbatical application is approved.

The others in the application will be contacted after the sabbatical application is approved because their participation will not be needed until the Spring of 1989. Their help would be most beneficial when, and if, my research leads to need for the development of possible plans for implementation. Quite possibly, my research may show them to be the inappropriate individuals to contact. Were such to be the case, I would want the freedom to substitute other, qualified individuals.

2. Are you committing to including in your sabbatical report information on all of the extensive activities proposed? Is such feasible?

Now, I am committing to including information on the three major activities listed in the sabbatical --- the "Literature Review", the "Delivery System and Hardware Review," and the "Technologies-Applications Assessment." Omitting any of the three weakens the research considerably. With primary research, in contrast to secondary research, one cannot predict what the outcomes will be. Therefore, the specifics of the proposal may be subject to alteration for several simple reasons: an individual or a product is unavailable at the time I am ready for him/her/it; I discover information

unknown to me now --- information which may force me to go in a direction
different from what I plan. In primary research, one does not know all of
the answers before beginning the research. In my case, if the answers were
already known, why would I be interested in doing the research?

What may help the committee in its deliberation is information unknown to
them through my visible roles on campus. Although I have a Masters in English
and am a member of the English Department, my original training is in com-
munications --- radio, television, platform presentation, and theater.
Therein, my specialization was the technical side, particularly program
production through all phases from concept to actual presentation. In
addition, since my last sabbatical when I saw the increasing role of elec-
tronic education in the corporate environment and the advent of distance
education as a delivery mechanism at the state level, I have spent consid-
erable time becoming user-literate in electronic environments. Therefore,
to this proposed research, I bring considerable knowledge and training
which equip me to make the kind of research decisions my proposed sabbatical
demands.

3. How will you transport the knowledge gained to your campus colleagues?

As part of the sabbatical process, I agree to prepare a report according to
the Guidelines for Preparing Sabbatical Reports presented to me as part of
the Sabbatical Leave Informational Packet. This report would be available
to all my campus colleagues. In addition, the knowledge gained will aid me
in better performing my role as Chair of the English Department's committee
on computer hardware and software assessment.

4. As per your Department Chair's comment, indicate how your data will be directly beneficial to the English Department.

Because I anticipated this issue, I specifically asked Katie Gerecke, in
that preliminary meeting, if the sabbatical must show a direct connection
to what I teach in the classroom. Several Committee members reassured me
that the issues were personal development and benefit to the College. As
for the personal benefit, the work I plan to do in video, particularly with
Dave Mead and Bruce Motyer, will focus on up-dating my technical skills in
video production. After all, I have done little behind-the-camera work in
the video field professionally in twenty years because MSAC did not have an
arena in which my skills could operate. Now with the video studio operational,
the down-link almost in place, and the microwave transmission on campus in
the development stages --- I see the video research as personal, professional
enrichment.

As for benefit to the College, the research I will do provides the College
with a resource person capable of looking at the instructional design of
new programs particularly as those programs involve inter-disciplinary,
cross-departmental, or inter-divisional issues which relate to technology
components or distance education capabilities. The sabbatical research will
up-date my skills and fill-in the gaps in my understanding of the technology
as it relates to instructional design and curriculum development.

Finally, I serve as Chair of the Department's computer hardware and software assessment committee. Discussion held among the Committee members revealed some serious gaps in information/knowledge. The sabbatical will allow me to further define the information needed and identify sources for providing accurate and complete information to the Committee.

5. Please specify some end product, you might provide upon your return to MSAC.

With the kind of research I am proposing, to specify a deliverable end-product would mean I know the answers before I do the research. If I already knew the answers, I would not need to do the research. Nevertheless, my vision of the research suggests the development of a writing program which could be delivered electronically to the work site and which could be developed collaboratively among several departments. Until I complete the research, I have no concrete information on which to base the program. Likewise, the research may show that the program is possible but not yet cost-effective.

THE REPORT ITSELF

VIRGINIA L. McBRIDE

THE REPORT ITSELF

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THE REPORT ITSELF

INTRODUCTION

In September 1988, I began my sabbatical by designing the overall course of study to be undertaken. Early phases of my literature review suggested five major categories of investigation. The five were (1) Hardware, (2) Software, (3) Delivery Systems, (4) Distance Education, and (5) Future Implications. For data collection purposes, each category was, in turn, divided into (A) articles read, (B) product literature reviewed and demonstrations seen, (C) books and manuals read, and (D) education completed.

As the sabbatical progressed, three of the major categories had to be further divided because of the volume of information being studied. Hardware included Boards, Computers, Monitors, Printers, and Scanners. Software included Administrative and Management, Authoring, Communications, Database, Graphics, Hypercard, Imaging, Integrated, Operating Systems, Personal Information Managers, Presentation, Publishing, Spreadsheet, Word Processing, and Other. Delivery Systems included Computer-Based Training, Electronic Messaging, Optical Technology, Projection Systems, Telecommunications Networks and Office Automation, Teleconferencing (Audio/Audiographic), Teleconferencing (Video), Teletext or Videotext, and Video.

From the earliest days of my sabbatical, I quickly learned that technological arenas were changing so rapidly that, as I began to read books that possibly were several years old, I encountered information which was no longer accurate. For example, one book I read on Local Area Networks, in referring to leaders in the field, failed to even mention companies who are currently the leaders. Those companies which were not even created at the time the book was written are now multi-million dollar companies.

Because of my understanding of this rapid change, I decided to read the most current publications possible even though this decision prevented my selecting an area of study and then completing that study before moving to another as one would with static information. Rather, I found myself following a path that was being revealed to me only as a I walked the path. I could not anticipate what direction a new day might take me. The very dynamic nature of my sabbatical study forced me to seek publications and experts that presented the most recent information available, many times presenting information on products and systems not yet ready for the marketplace and many times presenting information that was too technical for me to understand on first encounter. Repeated encounters with similar information from a variety of sources, however, gradually brought seemingly disparate information into a whole body of knowledge by the end of the sabbatical.

Also, to remind me constantly of the technological mind-position of non-technical faculty, business people, and ordinary people, I reviewed publications which addressed those groups, I spoke with experts who delivered products and services to those groups, and I attended conferences and seminars directed at those groups. At no time did I wish to become so technologically immersed that I forgot these people; yet, at the same time, I wanted to explore the emerging opportunities so as to be prepared to help individuals in those groups to scale their technological barriers.

PURPOSE OF THE SABBATICAL

Today, higher education faces incredible difficulties in accomplishing its instructional objectives and its institutional goals. In part, these difficulties arise from the pressures and obstacles confronting a faculty trained in another time for a vastly different world. For this newer world, technology offers enormous possibilities for improving instruction. Yet, in many instances, an overwhelmed and fearful faculty retreats from the technology. As a result, the technology itself generates more problems and, in turn, expands the distance between educators and technology.

Therefore, my sabbatical studied three aspects of educational, electronic technology pertinent to higher education and to the community college in particular. The three are (1) Instructional Technology, (2) Instructional Systems Development, and (3) Instructional Delivery Systems. In determining the impact of the technology on higher education, the sabbatical focused on the future uses of the telephone, the computer, and video in the educational environment plus the strategies and methods for integrating these future uses into the curriculum and the classroom. Combining an extensive literature review with extensive consultations with product/system developers and educational technology specialists, I addressed the educational theories involved in developing instructional units for the managed use of technologically-based instructional systems.

Currently, Mt. San Antonio College employs separate individuals with computer, video, and audio backgrounds. Yet, none of these specially trained individuals possesses training in curriculum design and development for the delivery of integrated, technologically-based programs. For example, individuals with a computer background fail to address the integration of video into their current courses or the future plans for new courses; and individuals with a video-conferencing background overlook the potential of audio-conferencing. Therefore, I saw the future need for an educational technologist whose expertise cut across all technological areas and all curriculum development skills in the re-design of current courses and the future design of yet-to-be-created courses. The research completed through this sabbatical now provides a strong foundation on which to build the necessary bridges between the various academic disciplines, between academic and vocational programs, between faculty with diverse backgrounds, and between widely dispersed institutions of higher education in the development and enhancement of curricular offerings in traditional campus-based settings or in electronic, distance-learning environments to multiple, widely-dispersed sites. As a final outcome of this research, instructional programs which use the collective talents of diverse faculty can be developed in a collaborative environment which takes the greatest advantage of the current and emerging technologies.

PERIODICALS

The list below includes those publications I reviewed for possible articles and, subsequently, found articles pertinent to my sabbatical study. These publications also proved to be a valuable source of product information through the Reader Request cards provided with the publications. Unless specified otherwise, the publication dates refer to 1988 and 1989.

[NOTE: The titles and authors of the specific articles which I read appear in the various Appendices accompanying this report. Because of the tremendous volumes of information I was accumulating, I quickly stopped recording the full, correct bibliographic form for the articles. I do, however, have an extensive "morgue" which includes many of the articles read. Some of the articles read have already been sent to individuals who could benefit from those articles. Once this sabbatical report is approved, that "morgue" will distributed to individuals who can further use the articles or will be made available to the faculty computing center.]

1. *3B/Journal*
   - May/June 1987, November/December
2. *A-Vidd's Communicator*
   - January, February, 1989 New Products Supplement, May/June
3. *Advanced Imaging*
   - April, May
4. *Art Product News*
   - September/October, November/December, January/February, March/April, May/June
5. *Association Meetings*
   - April
6. *AT&T Dataline*
   - January/February, March/April
7. *AV Video*
   - August, October, November, December, January, February, March, April
8. *BME* (Broadcast and Management Engineering)
   - August, October, November, December, January, February, March, April, May
9. *Business Marketing*
   - October, December, January, February, March, April, May, June
10. *Business TV*
    - September/October, November/December, March/April, May/June
11. *Businessland Catalog*
    - September, October
12. *California Business*
    - November, December, January, February, March, April, May, June
13. *CBT Report*
    - September, November, January
14. *CD-ROM Review*
    - October
15. *CD-ROM (Special Report on CD-ROM Expo)*
16. *COMDEX Preview*
17. *Communications Week*
    - May 29, June 5
18. *Compact Disc: Buyer's Guide*
    - Summer 1989
19. *Computer Systems News*
    - November 28, December 5, 12, 19; January 2, 9, 16, 23, 30; February 6, 13, 20, 27; March 6, 13, 20, 27; April 3, 10, 17, 24; May 1, 8, 15, 22, 29; June 5
20. *Computer Technology Review --- Trends Edition*
    - Winter, Spring

21. *Computer Technology Review*
   ■ November, December, January, February, March, April, May
22. *Computer&Software News*
   ■ September 5, 12, 19, 26; October 3, 17; November 7, 14, 21, 28; December 5, 12, 19, 26; January 2, 9, 16, 23, 30; February 6, 13, 20, 27; March 6, 13, 20, 27; April 3, 10, 17, 24; May 1, 8, 15, 22, 29; June 5
23. *Corporate Meetings and Incentives*
   ■ October, November, December, January, February, March, April, May
24. *Corporate Video Decisions*
   ■ October, November, December, January, February, March, April, May
25. *Data Communications*
   ■ October, November, December, January, February, March, April, May, LAN Strategies Special Issue
26. *Data Connections*
   ■ October
27. *DBMS*
   ■ October, December, January
28. *Distance Education Network Report*
   ■ February 1988
29. *DOT Newsletter* (Division of Telecommunications of the Association for Educational Communications and Technology)
   ■ November, January
30. *Electronic Business*
   ■ November; December; January 9, 23; February 6, 20; March 6, 20; April 3, 17; May 1, 15, 29
31. *Electronic Learning*
   ■ November/December, January/February
32. *Electronic News*
   ■ May 29, June 5
33. *EMA Update* (Electronic Mail Association)
   ■ February
34. *Enfilog*
   ■ September
35. *English Education*
   ■ December
36. *English Journal*
   ■ October, February, March
37. *ESD* (Electronic Systems Design)
   ■ April
38. *ExperTips (A C and Unix Newsletter)*
   ■ March
39. *FAX Buyer's Guide*
   ■ Spring 1989
40. *Franchising World*
   ■ October, December, February, June
41. *General Physics Corporation Report*
   ■ November, December, January, February, March, April, May

42. ***High Technology Business***
    - October, December, January, February, April, May, June
43. ***High Technology Review***
    - September
44. ***Human Resource Executive***
    - September, December, January, March, April, May
45. ***IICS Reporter***
    - August/ September, October
46. ***Inbound-Outbound***
    - December, January, February, March, April, May
47. ***INC.***
    - October, November, December, January, February, April, May, June, Guide to International Business (Fall 1988), Inc. 500 (Special Issue)
48. ***Information Week***
    - October 10, 17, 24, 31; November 7, 14, 21, 28; November 28, December 5, 12, 19; January 2, 9, 16, 23, 30; February 6, 13, 20, 27; March 6, 13, 20, 27; April 3, 10, 17, 24; May 1, 8, 15, 22, 29; June 5
49. ***InfoText***
    - March, April, May
50. ***Infoworld***
    - September 5, 12, 19, 26; October 3, 17; November 7, 14, 21, 28; December 5, 19; January 2, 23, 30; January 9, 16; February 6, 13, 20, 27; March 6, 13, 20, 27; April 3, 10, 17, 24; May 1, 8, 15, 22, 29, June 5
51. ***Instruction Delivery Systems***
    - July/August 1988
52. ***Journal of Instructional Development***
    - Winter
53. ***Lake Avenue News***
    - Fourth Quarter
54. ***Los Angeles Business Journal***
    - October, December 19; January 9, 23, 30; February 13, 20; March 6, 13, 20, 27; April 3, 10, 17; May 1, 8, 15, 22, 29
55. ***MacUser***
    - May, June
56. ***Management Review***
    - January, February, March
57. ***Microtimes***
    - October, November, December, January, February, March, April, May
58. ***Minority Business Enterprise***
    - September/October, November/December, January/February, March/April
59. ***Office Systems '88***
    - September, October, November, December
60. ***Office Systems '89***
    - January, February, March, April, May
61. ***PC Accounting***
    - December, Winter/Spring 1989
62. ***PC Magazine***
    - September 27

63. *PC Resource*
    - October
64. *PC World*
    - March, April, May, June
65. *Personal Computing*
    - April, May, June
66. *Savvy*
    - January, April, May, June
67. *Small Press*
    - October, December, February, April, June
68. *Society for Applied Learning Technology Newsletter*
    - Fall 1988, Winter 1988
69. *Software Magazine*
    - October, November, November Extra, December, January, February, March, Software Industry Retrospective, April, May
70. *Successful Meetings*
    - November, December, January, February, March, April, May
71. *T.H.E. Journal*
    - August, September, October, Special Software Issue, November, December/January, IBM PCs and Compatibles Special Issue, February, March, April, May
72. *Tech Trends*
    - April 1986, May/June 1986, September, January/February, March/April
73. *Technology Review*
    - October, November, January, February/March, April, May/June
74. *Tele-Coms*
    - November, April/May
75. *Teleprofessional*
    - Spring
76. *True Imaging*
    - September/October, November/December, March, April
77. *TV Technology*
    - March
78. *UNIX Journal*
    - October, November, December, UniForum Edition, SCO Edition
79. *Unix Review*
    - October, November, January, May
80. *Unix World*
    - November, December, February, March, April, May, June, Special International UNIX Report
81. *USDLA News* (United States Distance Learning Association)
    - September
82. *VAR Business*
    - December, January, February, March, April, May
83. *Venture*
    - October, November, December, January, February, March, April, May
84. *Video Bookshelf*
    - Winter 1989

85. *Video Decisions*
   - ■ September
86. *Videodisc Monitor*
   - ■ August/September, October
87. *Women in Computing*
   - ■ October, November
88. *Women&Co.*
   - ■ February, April, May
89. *Working Woman*
   - ■ September, January, February, March, April, May, June
90. *Writer's Digest*
   - ■ October, December, March, April, May, June

PRODUCT LITERATURE AND DEMONSTRATIONS

To list the product literature I reviewed and the demonstrations I saw at trade shows, conference, and vendors' facilities would consume many pages. Instead I listed the specific literature/demonstration in the various Appendices accompanying this report. Also, I retained a fairly comprehensive "morgue" of the product literature. Once the sabbatical report is approved, literature in this "morgue" will be sent to individuals who may have further use of the literature. The remaining literature will be made available to the faculty computing center.

BOOKS AND MANUALS

The list below includes only those books and manuals which I used for in-depth study. Some of the specific books were identified in my sabbatical proposal. As the Mt. San Antonio College technology vision became more clear to me, some of the books identified in my original proposal were replaced by more recent or more appropriate publications. Other publications emerged as a special learning need arose in my study.

[NOTE: The books and manuals listed below are detailed more specifically in the various Appendices accompanying this report.]

1. **COMPUTER-BASED TRAINING**
   - ■ *Computer-Assisted Instruction in Composition: Create Your Own* (Cynthia L. Selfe) Urbana, Illinois: NCTE, 1986.
   - ■ *Teaching and Learning With Computers* (Barry Heermann) San Francisco, California: Jossey-Bass Publishers, 1988.

- *Teaching Writing with a Word Processor, Grades 7-13* (Dawn Rodrigues and Raymond J. Rodrigues) Urbana, Illinois: NCTE and ERIC, 1986.
- *Writing for the 21st Century: Computers and Research Writing* (William Wresch, Donald Patton, James Gifford) New York, New York: McGraw-Hill Book Company, 1988.

2. DISTANCE EDUCATION
- *Teletraining Means Business* (Lorne A. Parker) Madison, Wisconsin: Center for Interactive Programs --- University of Wisconsin-Extension, 1984.

3. FUTURE IMPLICATIONS
- *How to Develop Business Information Systems for End Users* (John L. Garland) New York, New York: John Wiley and Sons, 1986.

4. MESSAGING
- *Electronic Mailbox* (Ira Mayer) Hasbrouck, New Jersey: Hayden Book Company, 1985.

5. OPTICAL TECHNOLOGY SYSTEMS
- *CD-I and Interactive Videodisc Technology* (Steve Lambert and Jane Sallis --- Editors) Indianapolis, Indiana: Howard W. Sams & Company, 1987.
- *Optical Publishing: CD ROM Volume Two* (Suzanne Ropiequet, John Einberger, Bill Zoellick --- Editors) Redmond, Washington: Microsoft Press, 1987.

6. SOFTWARE
- *How to Use Quick Schedule Plus* San Mateo, CA: Channelmark Corporation, 1987.
- *PRODEX Manual* Seattle, Washington: Prodex Development Company, 1985.
- *Unison Author Language Reference Manual* (Thomas M. Schaefges) Champaign, Illinois: Courseware Applications, Inc., 1988.
- *Unison Author Language Tutorial* (Thomas M. Schaefges) Champaign, Illinois: Courseware Applications, Inc., 1988.
- *Unison Draw* (Thomas Schaefges, David A. Glenn) Champaign, Illinois: Courseware Applications, Inc., 1988.
- *Unison Font Editor* (David A. Glenn, Thomas M. Schaefges) Champaign, Illinois: Courseware Applications, Inc., 1988.
- *Local Area Network Book* (E. G. Brooner) Indianapolis, Indiana: Howard W. Sams & Company, 1984.
- *Deluxe Paint II* (Dan Silva) San Mateo, California: Electronic Arts, ND.
- *Org Plus Advanced* (Alma C. Rodoni and Kristin L. Dukay) Fremont, CA: Banner Blue, 1988.
- *ENABLE Database Management Manual* Ballston Lake, New York: The Software Group, 1987.
- *ENABLE Getting Started, Quick Reference Manual* Ballston Lake, New York: The Software Group, 1987.
- *ENABLE System Overview Manual* Ballston Lake, New York: The Software Group, 1987.

- *ENABLE Word Processing Manual* Ballston Lake, New York: The Software Company, 1987.
- *MS-DOS Quick Start* (Lois Sherman and Cheri Robinson, Editors) Carmel, Indiana: Que Corporation, 1989.
- *Using GrandView* (John Friend, Alice Lankester, Peter Moran and Dave Winer) Mountain View, California: Symantec Corporation, 1988.
- *Using Harvard Graphics* (Stephen W. Sagman and Jane Graver Sandlar) Carmel, Indiana: Que Corporation, 1989.
- *Using WordPerfect 5* (Charles O. Stewart III, Editor) Carmel, Indiana: Que Corporation, 1988.

7. **TELECOMMUNICATIONS NETWORKS AND OFFICE AUTOMATION**
   - *Innovative Management Using Telecommunications: A Guide to Opportunities, Strategies, and Applications* (Herbert S. Dordick and Frederick Williams) New York, New York: John Wiley and Sons, 1986.
   - *Data Communications for Business* (Gerald A Silver and Myrna L. Silver) Boston, Massachusetts: Boyd & Fraser Publishing Company, 1987,
   - *Introduction to Telecommunications: The Business Perspective* (Housel Darden) Cincinnati, Ohio: South-Western Publishing, 1988.
   - *Information Technology: The Trillion Dollar Opportunity* (Harvey L. Poppel and Bernard Goldstein) New York, New York: McGraw-Hill Book Company, 1987.
   - *Office Automation: Concepts, Technologies and Issues* (R. A. Hirschheim) Menlo Park, California: Addison-Wesley Publishing Company, 1985.
   - *Plugging In: The Microcomputerist's Guide to Telecommunications* (Sasha Lewis) Radnor, Pennsylvania: Chilton Book Company, 1984.
   - *Telecommunications for Management* (Charles T. Meadow, Albert S. Tedesco) New York, New York: McGraw- Hill Book Company, 1985.
   - *Telecommunications Networks: A Technical Introduction* (R. J. Murphy) Indianapolis, Indiana: Howard W. Sams & Company, 1987.
   - *Word and Information Processing: Concepts of Office Automation* (Marly Bergerud and Jean Gonzalez) New York, New York: John Wiley & Sons, 1987.

8. **TELETEXT OR VIDEOTEXT**

   - *Videotex and Teletext Handbook: Home Office Communications Using Microcomputers and Terminals* (Paul Hurly, Matthias Laucht, Denis Hylnka) New York, New York: Harper & Row Publishers, 1985.

EDUCATION

The list below includes only those individuals with whom I had repeated or extended contacts. These contacts included discussions by telephone, my participation in workshops/seminars presented by these individuals, and consultations in face-to-face meetings. The list does not include vendors with whom I discussed particular products or services at conferences or trade shows.

[NOTE: Specific areas of education related to these individuals who contributed to my education are identified specifically in the various Appendices accompanying this report.]

1. COMPUTER-BASED TRAINING

- Nancy Kaplan --- Cornell University
- Myron Tuman --- University of Alabama
- Frank Stanton and Larry Byers --- St. Louis Community College, Florissant Valley
- Dixie Lee Davis --- Genesee Community College
- Gordon Taylor --- Yuba College
- Peter Myers --- Seneca College of Applied Arts and Technology
- Major James Parlett --- Brooks Air Force Base
- David A. Kaufer --- Carnegie Mellon University
- John Smith --- University of North Carolina, Computer Science Department
- Ilana Snyder --- Monash University
- John Kemeny --- Chairman, True Basic, Inc.
- Gail E. Hawisher --- Illinois State University

2. DISTANCE EDUCATION

- Roger L. Boston --- Rockwell Chair Instructor Data Processing, Houston Community College
- Julie Bertch --- Rio Salado Community College
- Andrea W. Herrmann --- University of Arkansas, Little Rock
- Lloyd Gentry --- Coordinator TV College, Belleville Area Community College, Illinois
- Charlanne Jelen-Nee --- Associate Dean of Instruction, Coastline Community College, California
- Eleanor Minich --- Director Center for Open Learning, Chicago City-Wide College
- Joyce Neilsen --- Special Assistant for Academic Utilization, The Annenberg/CPB Project
- Ginny Goldstein, Director, PBS Adult Learning Service
- Gary Scott --- AT&T Canada
- Bruce Stall --- University of Wisconsin
- Michael Steven Marx --- Skidmore College
- Joel Nydahl --- Babson College
- Ben Hambleton --- Director, Simplot/Micron Technology Center, Boise State University
- Christopher Trump --- Vice-President for Corporate Affairs, Spar Aerospace Limited
- Stephen Ehrmann --- The Annenberg/CPB Project
- Ralph Meuter --- Dean for Regional and Continuing Education, California State University, Chico
- Pat Portway --- President, Applied Business teleCommunications
- Ray Pirkl --- Director Instructional Support, Portland Community College, Oregon

3. FUTURE IMPLICATIONS

- John Knechtel --- Mohawk College of Applied Arts and Technology
- Ray Rodrigues, Vice President --- Colorado State University

- James McGuidwin, Charlotte Downing, Dale Swanger, Tom Proietti --- Monroe Community College
- Larry Winner --- Eastman Kodak
- Lisa Gerrard --- University of California, Los Angeles
- Michael Hiscox --- Director Interwest Applied Research
- Steve Ovel --- Kirkwood Community College
- Robert Gordon --- President, Humber College of Applied Arts and Technology
- Stuart Smith --- President, RockCliffe Research and Technology
- Helen J. Schwartz --- Indiana University-Purdue University, Indianapolis
- Diane Balestri --- Princeton University
- Brian Gallagher --- La Guardia Community College, CUNY
- Nancy Kaplan --- Cornell University
- Christine Neuwirth --- Carnegie Mellon University
- Tori Haring-Smith --- Brown University
- Rudy Gentry --- Johnson County Community College
- Ted Rohr --- St. Louis Community College
- Joe McGrath --- Santa Fe Community College
- Gary Klein --- Dallas County Community College District
- Peter Spina --- President, Monroe Community College

4. **MESSAGING**
- Bertram "Chip" Bruce --- BBN Systems and Technology
- Bradley Hughes, Jack Ladinsky, Gregory Galica --- University of Wisconsin, Madison

5. **OPTICAL TECHNOLOGY SYSTEMS**
- Perry Reeves --- Western Regional Market Development Manager, Pioneer Communications of America
- Ben Casados --- Vice President and Co-Founder, Optical Data Corporation
- Steven Glyer --- Educational Specialist, SUN Computers
- John Ittleson --- California State University, Chico
- Bruce Reynolds, Sony Institute of Applied Technology
- Brockenbrough Allen --- California State University, San Diego
- Roger E. Turner --- Interactive Technologies Corporation
- Cindy Elliott --- Manager Product Development and Distribution, Miami-Dade Community College
- Barry Mirkin --- Director Instructional Video Division, Wisconsin VTAE Foundation
- Ronald Nugent --- Group Director Nebraska Videodisc Group, KUON-TV University of Nebraska-Lincoln

6. **SOFTWARE**
- Judy Bradley --- Mt. San Antonio College
- Anita Milspaugh --- Mt. San Antonio College
- Rene Blalock --- Mt. San Antonio College
- Judy Wagner --- Mt. San Antonio College
- Jerry Davis --- Mt. San Antonio College
- James Benjamin --- University of Toledo

7. **TELECOMMUNICATIONS NETWORKS AND OFFICE AUTOMATION**
   - Christine Neuwirth --- Carnegie Mellon University)
   - Michael Palmquist --- Carnegie Mellon University)
   - Gary Scott --- AT&T Canada
   - Bruce Stall --- University of Wisconsin
   - Michael Steven Marx --- Skidmore College
   - Joel Nydahl --- Babson College
   - Michael Taggart and Nancy Putinski --- Cuyahoga Community College
   - Jerry Davis --- Mt. San Antonio College
   - Joanne Floyd --- Mt. San Antonio College
   - Bill Eastham --- Mt. San Antonio College
   - Hal Roach --- Mt. San Antonio College

8. **TELECONFERENCING (Audio, Audiographics, Slow-scan, Freeze Frame)**
   - William Drykos --- Vice-President Sales and Marketing, ConferTech International
   - Robert Stewart --- Area Vice-President, Darome, Inc.
   - Darrell Gibson --- Director of Training, Automation Services Division, Century 21 International
   - Steve Lumsden --- Alex Brown & Son
   - John Brockwell --- Deputy Director, Satellite Education Program, Army Management Logistics College
   - Dr. Sally M. Johnstone --- Director, Office of Instructional Telecommunications, University of Maryland-University College
   - Dr. Steve Eskow --- President, Electronic University Network
   - Cynthia L. Selfe --- Michigan Technological University
   - Glen Southworth --- President, Colorado Video
   - Jerome Bump --- University of Texas, Austin
   - Christine Neuwirth --- Carnegie Mellon University
   - Michael Palmquist --- Carnegie Mellon University
   - Michael Taggart and Nancy Putinski --- Cuyahoga Community College

9. **VIDEO (Cable, Interactive Cable, Broadcast, Cassette)**
   - Sarah A. Evans --- Director of Program for Adult College Education, Longview Community College, Missouri
   - Jacqueline C. Beulick, Coordinator Television Activities, St. Louis Community College, Missouri
   - Ronald J. Plummer, Learning Services Coordinator, University of North Carolina
   - Fred W. Friendly --- Edward R. Murrow Professor Emeritus, Columbia University's Graduate School of Journalism
   - Charles DeVault --- Manager Television Operations, Johnson County Community College, Kansas
   - Sandra Wilen --- Manager Alternative Education, Oakton Community College, Illinois
   - Sheryl Peterson --- Telecommunications Coordinator of Open Campus, St. Petersburg Junior College, Florida
   - Sue Commanday --- Coordinator Special Programs, Rockland Community College, New York
   - David Mead --- Mt. San Antonio College

APPENDICES IDENTIFICATION

1. APPENDIX A --- Detailed documentation of HARDWARE
2. APPENDIX B --- Detailed documentation of SOFTWARE
3. APPENDIX C --- Detailed documentation of DELIVERY SYSTEMS
4. APPENDIX D --- Detailed documentation of DISTANCE EDUCATION
5. APPENDIX E --- Detailed documentation of FUTURE IMPLICATIONS
6. APPENDIX F --- Detailed documentation of DELIVERABLES which were developed as a result of the sabbatical study and which were produced during the sabbatical year

OBSERVATIONS/CONCLUSIONS/RECOMMENDATIONS

1. HARDWARE

In Information Services under the management of Hal Roach, Mt. San Antonio College is extremely fortunate to have people of vision, commitment, and leadership. Hal Roach, in particular, was always willing to explain the college's plans for incorporating hardware into the management of the College and into the curricula of the College. Bill Eastham helped me tremendously in understanding the capabilities of the new telephone switch in delivering voice, text, data, and images across the campus and to the community and in understanding how the College could use both C-band and KU-band satellite technology together with microwave technology in bringing a wide variety of programming to the campus and subsequently delivering that information to various locations on the campus. Dave Mead guided me in understanding the potential of the Public Access Channel for delivering academic programming to West Covina. Scott Linder, at the very end of my sabbatical, explained in great detail how the College could use a Low Power Television system to deliver academic programming throughout the District. As I more fully understood the vision, I saw how specific programming could be produced and delivered.

RECOMMENDATION: *Because my sabbatical study showed that multiple technologies were moving toward a transparent interconnection with each other, I deeply sensed the need for all the technologies and their related hardware to come under one College manager.* What would have been my recommendation actually occurred toward the end of my sabbatical when all the technologies were brought under Hal Roach's management in the newly created Information Services. I applaud the College Administrative Council and the Board of Trustees for their vision, their accurate assessment of a real need, and their decisions to satisfy the need quickly.

2. SOFTWARE

In this area of my study, the IBM Regional Technology Transfer Center under the directorship of Judy Bradley became a second home. Again, I believe the College is extremely fortunate to have

a person such as Judy who is capable of taking the Technology Transfer Center concept and turning it into a Faculty Computing Center reality --- a reality which could address the needs of the most technologically fearful faculty as well as the needs of "techies" to explore new technologies such as "Windows" and their possible applications. The College is to be commended for her selection.

Regularly, Judy made herself available to me as I struggled to master each new software program. On repeated occasions I called her or her student assistants to "talk me through" a particular problem I was encountering. In addition, Judy always had time to show me a quicker way to work with a particular software so that I concentrated less on the software and more on the productivity the software ultimately afforded. As I would reach a particular plateau with a piece of software, Judy always had a way of encouraging me to stretch toward using the full power and capabilities of the software rather than allowing me to be content with low-level mastery. Finally, Judy suggested that I join the Faculty Computing Center Committee. This suggestion proved to be especially useful as I learned of the issues and concerns facing a variety of departments and individuals across campus. In turn, this participation allowed me to research, as part of my sabbatical, possible solutions to the issues raised. This participation also facilitated my thinking about curricular reform brought about through new course offerings which could be developed collaboratively across various disciplines.

In addition to Judy, Joanne Floyd and Jerry Davis helped me with a variety of software issues. Joanne, like Judy, was always available in person or by phone to help me understand software issues in her area of specialization. Joanne spent time helping me to understand the potential of desktop publishing and guided me in the planning and decision making for using the computers which the Humanities Division inherited from the Business Division this past summer. As part of that guiding, she helped me explore the possibilities for future courses which would involve cross-departmental and cross-divisional collaboration. Also, she worked with me in exploring a variety of software that might be used in both the Macintosh and the IBM environments so that students and faculty could be empowered in either or both arenas. Finally, she helped me evaluate software that might be used by faculty and students in the authoring of software.

Jerry, like both Judy and Joanne, made himself easily and regularly available to me. Along with Joanne, Jerry guided me in becoming a member of the Statewide Telecommunications Committee which is charged, by the Chancellor's office, with developing a curriculum in telecommunications to be delivered throughout the California community college system. Participation on this committee enabled me to gain a statewide perspective of what might be available to faculty and students in the near future. Also, Jerry helped me to understand the capabilities of communications software through a variety of delivery systems. His assistance in this area enabled me to develop plans for implementing an interactive messaging system so that my writing students would be able to communicate regularly with me and with each other in a telecommunications environment which could be available 24-hours per day. Jerry and I will begin implementing these plans with my English 1A students sometime during the Fall semester.

> [NOTE: The sabbatical documentation was maintained through two of the software programs I learned during the sabbatical. This final document --- the report --- was prepared using two other software programs I learned during the sabbatical.]

RECOMMENDATION: (1) *That the Technology Transfer Center continue to provide assistance to faculty who wish to learn different software programs.*

(2) *That a program be developed through which faculty could gain cross-over credit for mastering a desired software.* Short workshops are really insufficient for helping faculty develop the needed mastery of the software to gain significant productivity. Mastering a reasonably sophisticated program can consume hundreds of hours in learning the software and in the subsequent development of instructional or classroom management materials and tools. Long-term project proposals similar to those developed for the computer-learner program could, at least, be a starting point. As of its September meeting, the Faculty Computing Center committee seems willing to explore the possibility.

3. DELIVERY SYSTEMS AND DISTANCE EDUCATION

In this area of my study, my primary area of concern was systems which would bring the learning environment to the student rather than the student to the learning environment. Further, I wanted to explore systems which enabled the learner to assume the greatest responsibility possible for the success and the pace of his/her education. As a result, I explored systems which could deliver education electronically from a central distribution point to various locations on campus and explored systems which could deliver education electronically to the home or the work site.

Jerry Davis and Joanne Floyd, again, played a major role in my understanding. They helped my to understand local area networks, the operation thereof plus the benefits and problems associated with these networks. Through my participation in the Statewide Telecommunications Committee's work with local area networks, I was able to take a seminar in Netware local area network installation and management presented by Novell, the manufacturers of the networks and the accompanying software.

Jerry Davis, also, helped me acquire a greater understanding of the functioning and the potential of messaging systems such as electronic mail, bulletin board systems, facsimile, as voice mail. With great patience, he talked me through the hardware technology as we explored how I could establish various messaging systems for my students.

When these messaging systems become fully operational, my writing students will be able to deposit a question, a concern, or a comment to me or to another student in our respective voice mailbox or electronic mailbox. The system I studied has the capacity for 999 voice mailboxes. Therefore, each of my students could have a mailbox; each of the teams who are working collaboratively could have team mailboxes; and each class could have a public mailbox where global concerns could be discussed electronically. The minimum technological experience needed by the students will be touch-tone telephone technology because the messages can be digitized and stored to disk. Those messages would be available for access 24-hours a day both by me and by the students. As a result, students will no longer have to wait until the next class meeting to get a question answered. In my case now, a week's time may elapse between one class and the next.

In the area of optical technology systems, my greatest resources were Bruce Reynolds of Sony Institute, John Ittleson of California State University at Chico, Brockenbrough Allen of California State University at San Diego, Roger Turner of Interactive Technologies, Perry Reeves of Pioneer Electronics, and Ben Casados of Optical Data Corporation. These individuals, collectively and individually, helped me understand optical technology systems from features and benefits to production to marketing and distribution. In addition, these individuals helped me to learn how

to use authoring systems for the repurposing of existing videodiscs to create interactive learning tools and products for either classroom or individual use.

In my study of the existing teleconferencing systems, Bill Drykos' staff at ConferTech International and the staff at AT&T's Telelearning Center played a significant role in my understanding the potential and the capabilities of using telephone technology to deliver education programming. The system capabilities today allow for the transmission of voice and image across one telephone line. As a result, I could, in the future, be at the College to present my course to individuals located at widely dispersed sites throughout the district. At their sites, they could see images that were on a computer monitor where I was, they could manipulate those images on their computers, and they could interact with me by voice through the telephone.

I was particularly interested in telephone technology because it is a readily available resource as well as an understood technology. What I found in educational environments, surprisingly, was that educators saw only videoconferencing as the tool for teleconferencing. Video conferencing is a very powerful and still very expensive system. With the expense aside, I found few educators who really understood how the delivery system should or could be used. In fact, one teleconference in which I participated, the presenters sat around a table and read their presentations from printed copy in front of them. Some presentations just should never use video. Had the program producers fully understood audio teleconferencing capabilities, these presenters could have stayed at their local telephones and delivered their messages quite successfully and no one would have had to watch them read from a paper for approximately 20 minutes each.

My study of interactive computer-conferencing systems also revealed an under-used potential. These systems can range from the simplest electronic bulletin board systems to the most structured, topic-oriented systems which possess full documenting and tracking capabilities.

RECOMMENDATION:(1) *That the College expand the scope of the Faculty Computing Center to include technologies and delivery systems in addition to the computer.* Meetings this Fall with Hal Roach, Judy Bradley, and the FCC Committee convince me that this recommendation is already becoming reality.

(2) *That the College develop a program for becoming an active partner with faculty in the development of instructional materials with market potential.* In the past, a faculty member who wanted to write a book needed little more than a typewriter in his/her office. For technology-based products and programs, a single faculty member might lack the resources to acquire even a modest hardware setup. Also, these products and programs really require collaborative efforts because no one individual can master, or should be expected to master, all the technical aspects of producing a marketable product or program.

(3) *That the College establish a program of Collaborative Course Development which cuts across Department/Division lines.* For example, a Corporate Communications program could be developed to retrain learners for emerging opportunities for electronic creation and transmission of a variety of documents. These documents could include images, text and data; could require sophisticated desktop publishing, might require original sound creation. The products to be addressed in this program might range from a simple radio or television commercial, to a newsletter or brochure, to a four-color annual report which includes tables, charts, photographs, and enhanced drawings. To retain the teaching specialization of individual instructors, the data parts might be taught in Computer Information Systems, the page layout in Office Information Systems, the end-product's

design and specifications plus all drawings in the Art Department, the photography in the Photography Department, the copy writing in the English Department, and the actual document-production in Publications. Such a collaborative program would necessitate the re-thinking of existing programs for the purpose of having the students work in teams in the creating of an end-product.

(4) *That the College establish itself as a MultiMedia or Hypermedia Center with areas of function being dispersed, yet connected electronically, across the campus.* [SEE APPENDIX F for a CONCEPT PAPER] For example, the computers recently inherited by the Humanities Division might possibly be used to establish a Writing Center, staffed in part by English professors, for helping all College students to solve writing problems, including foreign language composition and multiple document production, or to conduct electronic research.

The Humanities Division could also establish an Audio Conferencing Center, under the guidance of the Communications Music and Foreign Language Departments, equipped primarily with audio cassette equipment, microphones, and telephones, to replace the existing Language Laboratory. In this center students could interact with language programs, hear audio tapes of presentations by faculty or other experts, practice speeches or radio broadcasts to be delivered, participate in interactive audio-teleconferences with students or experts from around the world.

The Humanities Division could also establish an Image and Sound Production Center, under the guidance of the Art, Music, and Photography Departments, equipped with hardware necessary for creating images ranging from simple photographs to full-fledged videography productions and for creating sound databases which could be used in the simplest musical compositions or used in the most complex electronic production.

Media Services, in addition to being the Technical Center of Operations for the other centers across campus, could establish a Video Center under the guidance of representatives from a variety of campus departments. In this center would be resources for viewing videotape, for interacting with videodisc, for participating in video conferences, and for creating video-based programming for broadcast through an on-campus network as well as through the College's existing cable system.

(5) *That the College aggressively pursue the establishment of a low power television system with the resources necessary for creating original programming.* As mandates arrive from the Federal government and the AQMD and as the parking needs rapidly exceed the existing space, the College could serve an even greater student population without existing valuable resources in creating new buildings on campus. Those same resource dollars when shifted into electronic delivery systems for distant learners will enable the College to provide easy-access education to currently under represented populations, to provide contract education directly to the work site where students can have electronic hands-on experience without leaving their offices to come to the campus, and to establish the 24-hour electronic College.

(5) *That the College begin to develop a full-scale television programming project which involves faculty in all phases of production.* As Scott Linder begins to develop long-range plans for television programming, faculty need to be involved in that development because television will increasingly be a College delivery system of the future. Beginning this long-range planning soon is essential because program development normally takes 1-2 years to move from concept to actual program.

(6) *That the College join nationwide and statewide, higher education networks to foster greater communication between the College's faculty and the innovators across the country.* Hal Roach informed me that at least part of this recommendation will become reality this fall when the College joins EDUCOM, BITNET, and CSUNET. These memberships will add to an already working membership which the College holds in the Southern California Consortium of Community Colleges. One final membership which the College might consider is that of the Instructional Telecommunications Consortium which is an affiliate of the American Association of Community and Junior Colleges and which is largely responsible for the founding of the Community College Satellite Network. Membership in the ITC would greatly facilitate the College's development of a series of continuing education courses which have videoconference components.

THE LAST WORD

As I finish this report, I must admit to a case of information overload. Certain ideas which will become future projects are still incubating in my mind, others are just now bubbling to the surface, still others have moved to the design stage, and a few have moved to the verification of the design. In the years to come, what has been poured into my brain in these sabbatical months will continue to emerge in a variety of ways which will serve the College well in the commitments in makes in implementing is long-range plan toward the year 2000.

APPENDIX A:

HARDWARE

VIRGINIA L. McBRIDE

APPENDIX A:
HARDWARE
TABLE OF CONTENTS

HARDWARE

BOARDS

ARTICLES

1. "Company Ships NTSC/VGA Card" (Barbara Darrow)
2. "Graphics from a New Perspective: Adding Color Boards to Add Value" (Rebecca Hurst)
3. "Hercules to Release No-Frills VGA Card" (Patricia J. Pane)
4. "High Performance Graphics Board for the Mac II Under Development" (Mark Brownstein)
5. "Image Capture Boards: TARGA and Alternatives" (Bob Gillman)
6. "In Search of the Ultimate VGA Display Adapter" (Steve Gibson)
7. "Matrox Unveils High-Res Graphics Boards" (Mark Brownstein)
8. "New Boards Can Export VGA Images to TV or VCR Recorders" (Jeff Angus)
9. "New Digitizing Offered by Gerber"
10. "QuickCapture Debuts on IBM Personal System/2"
11. "Software Overhead Equalizes VGA Adapters' Performance" (Steve Gibson)
12. "Super VGA Adopted by Consortium" (Patricia J. Pane)
13. "Tangent Redesigning PS/2 Appletalk Card"
14. "Targa Q&A Forum" (Bob Gillman)
15. "U.S. Video to Ship Broadcast Quality VGA Adapter" (Stuart J. Johnston)
16. "VGA --- The Next Generation for Graphics" (Stephen Wickham and the Diamond Software Technical Team)
17. "VGA Boards: Product Comparison" (Roberta Furger and Sally Price)
18. "Video Seven Has Free Upgrades for Graphic Adapters" (Patricia J. Pane)
19. "Video Seven's Fastwrite and V-RAM Leap Ahead in Speed" (Sally J. Douglas)
20. "Willow Peripherals Offers Publishers' VGA for IBM"

PRODUCT LITERATURE AND DEMONSTRATIONS

1. Acculink 3000 PC Board (AT&T)
2. ACL Advanced Communication Link (Stargate Technologies, Inc.)
3. Cluster Controller (Stargate Technologies, Inc.)
4. DIGI-TRAC (Interac Corporation)
5. Graphex Parallel Image Processor (American Data Systems)
6. High Resolution Color Graphic Controllers for PC/AT: TI/Color Graphics Series (IMAgraph Corporation)
7. Introvoice Ie, IIe, IIe/Echo + Voice Recognition Boards for the Apple (The Voice Connection)
8. Introvoice V and VI Speech Recognition for AutoCAD environment (The Voice Connection)
9. IntroVoice VI Circuit Board for Voice Recognition and Speech Synthesis on the IBM (The Voice Connection)

10. JLASER PLUS: Combines Scanning and Printing in One Board
11. MP2 Multi-Protocol Two Channel Card for PS/2 Communications (Stargate Technologies)
12. Multi-Channel COM-X and COM-Xi Series (DigiBoard)
13. Multi-Channel Ps-COM/X series (DigiBoard)
14. NuVision: Video-Rate Scientific Image Processor for Macintosh II (Perceptics Corporation)
15. Openender Intelligent Multi-Channel Communications Board (DigiBoard)
16. Plus 8 and Plus 8MC Communication Links (Stargate Technologies, Inc.)
17. QuickLink Boards for PC Network (Cubix)
18. STAGE: The Complete ATVista Development Environment (Truevision)
19. Universal Frame Grabber (IMAgraph Corporation)
20. Vega Deluxe (Video Seven)
21. Vega VGA (Video Seven)
22. VGA Color and Gray Scale Boards (Relisys)
23. VGA Video/Graphics Overlay System SMI-3081 (Sony)

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2. "Apple Banking on Diversity of Mac Applications to Foil NeXt Challenge" (Laurie Flynn)
3. "Apple Slates April Release for Quickdraw Driver" (Laurie Flynn)
4. "Array of Display Bring Color to the Mac" (Jeff Angus)
5. "Booming Market for Handheld Computers"
6. "Data on the Go: The Portable Data Terminal" (Gregory T. Pope)
7. "Eye-Openers: Software Developers View 80386 Capabilities" (Ann Lowe)
8. "Fancy Name for Terminals"
9. "IBM to Show Windows Workstation" (Alice LaPlante, Jeff Angus)
10. "IBM's New AS/400 Systems Fit the Needs of Schools" (Terian Tyre)
11. "Industry Emerges: Apple Shines in Seattle" (Roger Strukhoff)
12. "Intel's 80486 Chip Is the Key to Higher-Performance PC Systems" (George Morrow)
13. "Laptop Development Efforts Center on Color Displays" (Scott Mace)
14. "Laptop Update: Do We Need More?" (Mel Mandell)
15. "Laptops Cut Executives Loose from the Office" (John Dalzell)
16. "Laptops Revisited: Compaq's SLT/286 is Fast, Powerful" (Alex Kask)
17. "Mac IIcx --- the Core of the Future" (Lawrence J. Magid)
18. "Mac IIcx: Apple's Workhorse for the 1990s" (Sandra R. Reed)
19. "Making Sense of the SX" (Russ Lockwood)
20. "Microtouch Introduces First Touch Screen for Microsoft Windows"
21. "Moore: Quotations from the Chairman"
22. "NEC America and US Sprint Announce Joint Agreement"
23. "New Software in Laboratory --- Systems Software" (Evan Schwartz)
24. "New Workstation Compatible with EIDS"
25. "New Workstations Combine Slide Making and Video" (Ingrid Hutzel)
26. "Opus to Offer 88000-Based Line" (Martin Marshall)
27. "Portable Computers Expand Their Niche" (David Chalmers and Sally J. Douglas)
28. "Power Desk" (Michael McCarthy)
29. "Sailing Through Straits of Standards" (Mark Magel)
30. "Smaller Compaq System That Packs The Same Punch" (Stephen Satchell)
31. "Smart Machines, Smart People" (Shoshana Zuboff interview)
32. "Software Firms Port Office Automation to Sun Workstations" (Martine Marshall)
33. "Software for Schools --- AS/400"
34. "Some Software Developers Are Early Pledges to NeXt, Others Wait" (Nick Arnett, Peggy Watt)
35. "Sub-3.5-Inch Market Emerges" (Dave Webb)
36. "Systems Makers Try Voice/Data Integration" (Jim Duffy)
37. "There Isn't Much Left of My Good Old IBM PC XT System" (Steve Gibson)
38. "Toshiba Color LCD Seen" (Eric Nee)
39. "Tracking Trucks by Satellite" (Ron Schneiderman)
40. "Universities Praise NeXt Platform" (Mark Stephens)
41. "User Strategies: The Need for Speed" (Edith Myers)

42.   "Versatile ETs Offer Something for Everyone" (G. Gordon Long)
43.   "Visual Sees the Light from X-Windows Technology" (Rick Whiting)
44.   "What's Different about the New MAC?"
45.   "What's Going on at IBM?"
46.   "Will You Recognize Tomorrow's Computer?" (Don Picard)
47.   "Zenith's 33MHz Zips Along" (Russ Lockwood)
48.   "Zenith, AST, and Everex Hit 33" (Eric Knorr, Mike Hogan)

PRODUCT LITERATURE AND DEMONSTRATIONS

1.   Alternative Enhancement Products for the AT&T 3B2 (Congruent Technologies)
     3B2-DOS --- MegaMem --- SuperStore/170 --- DCM/300 and DCM/600 --- Superstream/120 --- CPU/500 and MAU/500
2.   Capacitive Touch Screen Kits (MicroTouch Systems, Inc.)
3.   Dual Processor 32-Bit Super Workstations NWS-1850/1830 (Sony Corporation)
4.   Epoch-1 InfiniteStorage Server (Epoch Systems, Inc.)
5.   Headline NEWS from Sony: NEWS Unix Based Workstations to Fill Your Network Needs (Sony Corporation)
6.   Mac286 (Apple Computer)
7.   MACWORLD Expo (Mitch Hall Associates)
8.   Printer-Specific Microprocessors: A Revolution in Imaging Electronics (Datek Information Services)
9.   Sony NWS-841 Workstation (Sony Corporation)
10. Touch WindowsDriver (MicroTouch Systems, Inc.)

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1. "Apple Introduces 2 MAC II Monitors" (Laurie Flynn)
2. "Everex's Vision 32 Captures and Displays Video Images" (Bob Ponting)
3. "Snap-on Touch Screen Designed for Mac SE"
4. "Sony CPD-1320: Trinitron Analog Monitor"
5. "Sony Multiscan's Image Quality Puts It Ahead of the Pack" (Steve Gibson)
6. "Sony Offers PS/2 Color Monitor and Trinitron Multiscan Monitor" (Patricia J. Pane)

PRODUCT LITERATURE AND DEMONSTRATIONS

1. BVM-1310 (Sony)
2. BVM-1315 (Sony)
3. BVM-1910 (Sony)
4. Cadvision CPD 2030 Color Monitor (Chugai International Corporation)
5. Cadvision CPD 2040 Color Monitor (Chugai International Corporation)
6. CM-1991 19" Color Video/RGB Monitor (NEC Professional Systems)
7. CM-2591A 25" Color Video/RGB Monitor (NEC Professional Systems)
8. DataSmart Monitors (NEC Home Electronics)
9. PM-1271A 12" Color Video Monitor (NEC Professional Systems)
10. PM-1971A 19" Color Video Monitor (NEC Professional Systems)
11. PM-2571A 25" Color Video Monitor (NEC Professional Systems)
12. PM-3071 Professional Color Monitor (NEC Professional Systems)
13. PM-971 9" Color Video Monitor (NEC Professional Systems)
14. PVM-1390 13" Color Video Monitor (Sony)
15. PVM-2530/2030 Trinitron Color Video Monitors (Sony)
16. Sony 13" Color Monitor (Sony Corporation)
17. TVM-V1300 Video System Monitor (Pioneer)
18. Vista 1600 Ultra High Resolution Display Subsystem for the Macintosh II (Cornerstone Technology)
19. Vista 1600 Ultra High Resolution Display Subsystem for the PC (Cornerstone Technology)

PRINTERS

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1. "Buyer's Guide to Non-Impact Printers" (Negash Abdurahman)
2. "Canon BJ-130: A Printer with Near-Laser Text Quality" (Mike Hildum)
3. "Computer Printers: How to Choose One" (Roger Hart)
4. "Create Color Transparencies on a Laser Jet" (William L. Coggshall)
5. "Delphax Reorganizes After Tough 1988, Readies Itself for Laser Battle"
6. "DeskJet Plus Gives HP Lift in Ink Jet Printer Market"
7. "Desktop Page Printers Dominate Market" (Bruce Thatcher)
8. "Device Can Produce Collated Documents at a Remote Site" (Sharon Fisher)
9. "Dot-Matrix Printers Resist Extinction" (John Lugveil)
10. "Driver Facilitates Mac Access to Laserjets" (Bob Ponting)
11. "Epson's Unique New Dual-Tractor DFX-5000: A Worthy Office Workhorse"
12. "Fast, Full-Color Printers Still Long Way Off" (Brad Krutchen)
13. "Hewlett-Packard Continues Laser Printer Market Reign" (Gregory Smith)
14. "Hewlett-Packard Deskjet Printer" (Ed Kahn)
15. "Hewlett-Packard Introduces Two Drafting Plotters"
16. "Hewlett-Packard LaserJet IID"
17. "How Laser Printers Work With PDLs for Desktop Publishing" (Paul Henry)
18. "HP Adds Two Midprice Devices to Its Pen Plotter Line, Unveils Price Cuts" (Bob Ponting)
19. "HP Laserjet Product Comparison" (Mike Hildum, Serge Timacheff)
20. "HP to Support Hybrid Nets --- In 2 Years" (Cassimir J. Medford)
21. "Laser Libraries"
22. "Laser Printer Explosion" (Christine Rivera)
23. "Laser Printers and Software Enhance Desktop Publishing" (Paul Henry)
24. "Laser Printers: An Inside Look" (Tom Jenkins)
25. "Lasergo Revises Interpreter for Faster, Cleaner Fonts" (Bob Ponting)
26. "LaserJet IID is Budget Friendly"
27. "LaserKey Software Aids Production of Overhead Transparency Presentations"
28. "Lasers Sear Printing Costs" (Pam Roberts)
29. "Laserwriter II SC Offers Good Print Quality for Small Price"
30. "Magnetographic Technology Is Heavy Duty Choice"
31. "PLP Graphics Approximate Quality of Postscript Output"
32. "Postscript Laser Printers Product Comparison" (Serge Timacheff, Mike Hildum)
33. "Postscript Machine Produces Beautiful, Vivid Color Output" (Vanlee Waters)
34. "Power of the Presses and Computer Chips" (Michael Hartnett)
35. "Printer-Sharing Units Eliminate Wasted Time in Business Education Classes" (Kymberly G. Dryer)
36. "Printer-Sharing Units Restore Order in Labs at Chicago Business School" (Kymberly G. Dryer)
37. "Printers and Their Sales Go Fast and Furious" (John Dalzell)
38. "Printers Show Green Thumb" (Shawn Willett)
39. "Printers without Controllers Hit Market" (Mark Brownstein)
40. "Product Converts Epson Printer into Image Scanner" (Bob Ponting)

41. "Quickdraw Printers Offer Postscript Alternatives" (Mary O'Donnell)
42. "Right Tool Is a 'Printer in Reverse'" (Richard O"Reilly)
43. "Roland Ships Desktop Pen Plotters with Improved Features" (Bob Ponting)
44. "Seikosha Adds 8 to Printer Line"
45. "Speed, Print Quality Continue to Improve in New Models from Top Printer Companies"
46. "Taking Charge of Your Printer" (Gene Head)
47. "Thermal Printers: They're Not What You Think" (Charles Reis)
48. "Users Turn to High-Quality Printers" (Alice LaPlante)
49. "Wait for Color Laser Printers" (Patrick Honan
50. "What's New in Color Printers and Plotters?" (Patrick Honan)

PRODUCT LITERATURE AND DEMONSTRATIONS

1. Advances in Thermal Printing (Institute for Graphic Communication)
2. Automatic Printer Sharing Unit ACS 6200 (PaceMark Technologies, Inc.)
3. Automatic Printer Sharing Unit ACS 7100 (PaceMark Technologies, Inc.)
4. Avery Overhead Transparencies (Avery)
5. Color Electro-photographic Technology (Datek Information Services)
6. Color Hard Copy (Institute for Graphic Communication)
7. Color Hard Copy Market Requirements Service (CAP International)
8. Colorgrafix 100 (QMS, Inc.)
9. DeskJet Printer HP2276A (Hewlett-Packard)
10. Dye Diffusion: Thermal Transfer Technology (Datek Information Services)
11. Electronic Impact Printer Market Requirements Service (CAP International)
12. Falcon Plus: The Ultimate Printer-Sharing Unit (PaceMark Technologies, Inc.)
13. Fancy Font (SoftCraft, Inc.)
14. Fancy Word (SoftCraft, Inc.)
15. Intelligent Copier/Printer Market Requirements Service (CAP International)
16. IRIS 3024 Color Printing System (Iris Graphics, Inc.)
17. IRIS Series 3000 Color Printing Technology (Iris Graphics, Inc.)
18. Laser Fonts (SoftCraft, Inc.)
19. Lasergrafix 1510 (QMS, Inc.)
20. Lasergrafix 2400 (QMS, Inc.)
21. Lasergrafix 800 II (QMS, Inc.)
22. LaserJet Professional Printer (Dav-Tech Computer Center)
23. LaserJet Series II Printer (Hewlett-Packard)
24. Mead Imaging's Cycolor Technology (Datek Information Services)
25. New Directions in Bar Code Printing (Institute for Graphic Communication)
26. New Directions in Wide Format Output Devices (Datek Information Services)
27. Printers in the LAN (Datek Information Services)
28. Printmaker 130 from Videoshow (General Parametrics)
29. Share the Power (PaceMark Technologies, Inc.)
30. Solid Ink Jet Color Imaging Technology (Datek Information Services)
31. Strategic Role of Imaging Models: Writing Graphics and Fonts to Displays and Printers (Summit Strategies, Datek Information Services)
32. TEK 4510A/CX4510A Color Graphics Rasterizers and Rasterizer Systems (Tektronix)

33. TEK 4693D Color Image Printer (Tektronix)
34. TEK 4696 Color Ink-Jet Printer (Tektronix)
35. TP-6490 Team Video Printer (Team Systems)
36. TPG-4300 Full Color Video Printer (Toyo Spectrum)
37. UP-5000 Mavigraph Color Video Printer (Sony Corporation of America)
38. Versacolor Thermal Transfer Plotter for Targa Images (Versatec, A Xerox Company)
39. Video Printer Comparison Kit (Toyo Spectrum)
40. Video Printer VP-3500 (Seikosha America Inc.)

SCANNERS

ARTICLES

1. "Apple Scanner Now Available"
2. "CAT to Ship Package for Desktop Scanners" (Stuart J. Johnston)
3. "Company Shows MAC High-Speed Color Scanner" (Bob Ponting)
4. "Copier Produces 200-DPI Images" (Patricia J. Pane)
5. "Far Out Peripherals: Scanners, Monitors" (John Edwards)
6. "Hand-held Scanner Features 200DPI" (Julie Webber)
7. "Image Scanners: Product Comparison" (Lauren Black, David Chalmers)
8. "Images as Information" (James P. McNaul)
9. "Marq Mouse Serves as Scanner, OCR Reader" (Bob Ponting)
10. "NCL Omniscan Hand-Held Scanner Offers 200-DPI Input" (Patricia J. Pane)
11. "Picture This: OCR Takes on Imaging" (Johanna Ambrosio)
12. "Ricoh Releases Desktop Image Scanner"
13. "SABA Page Reader: Getting Paper Files into Your PC" (Robert D. Athey, Jr.)
14. "Scanman" (Sally J. Douglas)
15. "Scanner Market Predicted to Grow as Machine Prices Tumble"
16. "Scanner"
17. "Scanners and TARGA-type Applications" (Bob Gillman)
18. "Scanners Cling to PC Software" (James Brunet)
19. "Scanners Fast Becoming Important Piece of Hardware"
20. "Scoop on Scanners" (Clay Gordon)
21. "Shades of Gray" (James Brunet)
22. "Sharp to Introduce Color Copier and Hand-Held Scanner"
23. "Thunderscan Readies Hand-Held Scanner" (Laurie Flynn)
24. "TrueScan Ups Affordability of Recognition Systems" (David S. Chartock)
25. "Truvel Expands Image Scanning Equipment Line" (Bob Ponting)
26. "Xerox Subsidiary Offers 6-Bit Scanner, Two Character-Recognition Scanners" (Nick Arnett)

PRODUCT LITERATURE AND DEMONSTRATIONS

1. AlphaWord III+ (CompuScan, Inc.)
2. AlphaWord Series 80 (CompuScan, Inc.)
3. Docuscan DS-2600 (TDC Corporation)
4. Forms Reader Data Entry System (CompuScan, Inc.)
5. From Paper to Computers in Seconds (CompuScan, Inc.)
6. Graphex Flatbed Scanner (American Data Systems, Inc.)
7. Laser III Forms Reader (CompuScan, Inc.)
8. OVERVIEW Scanner (AT&T)
9. ScanJet Desktop Scanner (Hewlett-Packard Company)
10. Scanman (Logitech)

11. Scanner Application Markets Market Requirements Service (CAP International)
12. Scanners, Copiers and Printers (Advanced Image Systems)
13. SMaRT STaRT OCR (Advanced Recognition Technologies)

APPENDIX B:

SOFTWARE

VIRGINIA L. McBRIDE

APPENDIX B:
SOFTWARE

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3 "Computer Power Aids Data Collection" (Tom Eisenhart)
4 "Computing the Different Costs of Downtime" (Gary Gonnella)
5 "Directory of PC-Based Sales and Marketing Applications Software" (Thayer Taylor and Bristol Voss)
6 "EIS Provides Critical Details Without Paper" (Edith D. Myers)
7 "Eureka! An Electronic Time Card" (Leon A. Wortman)
8 "Exhibitor Side: Using Computers to Help with Trade Shows and Exhibits" (Heidi Waldrop)
9 "Focus Groups Just a Phone Call Away" (Tom Eisenhart)
10 "Guidelines Endorsed by Key Organizations"
11 "High-Tech Show and Tell" (Tom Eisenhart)
12 "Learning the Lingo for Project Management" (Leon A. Wortman)
13 "Menu Maker Utilities --- Product Comparison" (Tom Bigley, Glen Tapanila)
14 "Menu Works" (Sebastian Rupley)
15 "Oracle Targets Office-Automation Arena" (Michael Puttre)
16 "PC Librarian Utility Fights Hard Disk Clutter" (Scott Mace)
17 "PC-Based Project Management Software Finds New Uses" (Bob Ponting)
18 "PC-to-Mac Package Transfers Complete Folders, Directories" (Robert Snowdon Jones)
19 "Politics of Executive Information Systems" (David Raths)
20 "Project Management Made Easy" (Leon A. Wortman)
21 "Project Management Software For That Really Big Project" (Mike Heck)
22 "Project Scheduler Updated" (Peggy Wyatt)
23 "Project-Tracking Software for Mac Is in Development" (Laurie Flynn)
24 "Sales Management Software" (Robert A. Mamis)
25 "SCO Announces Package for Its 'Office Portfolio'" (Paula S. Stone)
26 "Selecting Business Software" (Suzanna Musick)
27 "Six Rules that Create a Model for Distributed Databases" (Michael Stonebraker)
28 "Soft Library Ships Applications Collection" (Paula S. Stone)
29 "Spinnaker Program Juggles 8 Tasks" (Richard O'Reilly)
30 "Statistic Plan Garners Results" (Ives Brant)
31 "Statsoft Goes Corporate: Software Masters Numbers"
32 "Tech Institute Chooses Package for Versatility"
33 "Timeslips III" (Jo Rainie Rodgers)

34   "Updated Project Workbench Has Resource Management, Tracking" (Paula S. Stone)
35   "Utility Poll (File Transfer Programs)" (Ronald and John Donavan)
36   "Viewpoint: An Easy-To-Use Package for Large Projects" (Mick Heck)
37   "Win Time: Scheduling with Windows" (Woody Liswood)

PRODUCT LITERATURE AND DEMONSTRATIONS

1   Bibliography (OUTP ST Software)
2   Bibliotech (OUTP ST Software)
3   Convert: The On-line Database Importer (OUTP ST Software)
4   CustomGantt Plus (Softrak Systems)
5   DESIGNSOFT: Tracking, Billing and Managing Project Fees (Highgate Cross and Cathey)
6   Executive Training Wheels (Businessland)
7   Gofer: Text Retrieval Software (TigerSoftware)
8   Grant Manager (Niles and Associates)
9   Grant Manager II (Niles and Associates)
10   How To Write a Business Plan Using 1-2-3 (American Management Association)
11   Idea Generator (Businessland)
12   Lake Avenue (Lake Avenue Software)
13   LetterLibrary Plus (Businessland)
14   Market Planning Expert (SUCCESSware)
15   MECC Management Master (Minnesota Educational Computing Corporation)
16   Meeting Pro II (Peopleware, Inc.)
17   Microsoft Windows/286 v2.10 (Microsoft)
18   MicroTrak (SofTrak Systems)
19   MMM Helps Teachers Reach At-Risk Students (MECC)
20   NameTags Plus (Peopleware, Inc.)
21   Notebook II (OUTP ST Software)
22   On Schedule (Businessland)
23   ParSURVEY General Survey Tool (Economics Research, Inc.)
24   ParSURVEY Student Evaluation of Instruction (Economics Research, Inc.)
25   ParSURVEY Tabulator (Economics Research, Inc.)
26   Personnel Manager (Niles and Associates)
27   PloTrak (SofTrak Systems)
28   ProSelect (Peopleware, Inc.)
29   Software and Systems Engineering Courses Catalog (Integrated Computer Systems)
30   SPSS-X Data Analysis Software (SPSS, Inc.)
31   Statistical Analysis Software (P-STAT Inc.)
32   Statistics Made Easy with Microstat-II (Ecosoft, Inc.)
33   Tactician (SouthWindSoftware)
34   TIMESLIPS (Businessland)
35   Timeslips III (Northedge Software)
36   Utilities for the Macintosh (Symantec Corporation)
37   Venture's Business Simulator (Electronic Arts)
38   World's #1 Personnel Screening Company Revolutionized the Industry (Orion Systems)

BOOKS AND MANUALS

1 *How to Use Quick Schedule Plus*   San Mateo, CA: Channelmark Corporation, 1987.
  1) Quick Schedule in Action
     Getting Around --- Getting Help --- Exiting the Program
  2) Working with Quick Schedule
     Creating and Adjusting Task Bars --- Moving Task Bars --- Copying Task Bars --- Deleting Task Bars --- Restoring Task Bars --- Creating Task Note Cards --- Creating Line Headings --- Inserting and Removing Task Lines --- Changing the Time Scale --- Working with Schedule Files --- Printing Schedules and Reports
2 *PRODEX Manual*   Seattle, Washington: Prodex Development Company, 1985.
  1) Introduction
     Overview --- Things to do with PRODEX
  2) Installation
     System Requirements --- Installing on Floppy Disk System --- Installing on Hard Disk System
  3) Getting Started
     Loading PRODEX into Resident Memory --- Invoking PRODEX from Other Programs --- Invoking the Help Facility
  4) Main Menu
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  7) Folders
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  8) Set-Up Facilities Menu
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  9) Set-Up Facilities
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  10) PHONE Directory
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  11) TODO Directory
     Overview --- Field Names --- Function Keys --- Using as a Tickler File
  12) LOG Directory
     Overview --- Field Names --- Function Keys

II. AUTHORING

ARTICLES

1   "Albers Project: A Model for Multimedia Courseware" (Andrew Phelan)
2   "Authoring Systems for Developing Courseware" (John S. Camp, Marc Cogan, Molly Gordon)
3   "Authoring Systems Help a Teacher Offer More Personalized Education" (Terian Tyre)
4   "Businesses Turning to Courseware" (Laurie Flynn)
5   "Compressed Audio Increases Courseware Design Flexibility" (Frank Garber)
6   "Creating a Presentation on the eMedia Authoring System" (Robert Edgar)
7   "Creating Your Own Software Programs" (David S. Chartrock)
8   "Documentation: A Blueprint for Excellence" (Gene Head)
9   "Educator's Guide to Interfaces and Authoring Systems"
10   "Pioneer Introduces Affordable Level III Interactive Technology Authoring System"
11   "USC Teacher Uses Authoring Software"

PRODUCT LITERATURE AND DEMONSTRATIONS

1   ACT III (Informatics Group Inc.)
2   ASCIT (Interac Corporation)
3   Authology (CEIT Systems, Inc.)
4   AUTHOR (Daines Associates)
5   Best Course of Action (Actionware, Inc.)
6   C-Pilot (Intelligent CourseWare, Inc.)
7   CDS/Genesis: The Leader in Authoring Systems (Interactive Technologies Corporation)
8   Course Builder Color (TeleRobotics International, Inc.)
9   Course of Action (Authorware, Inc.)
10   EDUCATOR Authoring System (Spectrum)
11   ICONAuthor (Aimtech Corporation)
12   IDA (Interac Corporation)
13   Imsatt 2000 Advanced Authoring Software (Imsatt Corporation)
14   INTER-VIEW (Interac Corporation)
15   Learning System/1 Authoring and Presentation Systems (IBM Corporation)
16   MacAuthor (Edudisc, Inc.)
17   MacMentor (Edudisc, Inc.)
18   MacVideo (Edudisc, Inc.)
19   Portfolio (Edudisc, Inc.)
20   PROPI (Asys Computer Systems)
21   Propi: What an Authoring System Should Be (Asys Computer Systems)
22   Quest Authoring System (Allen Communication)
23   Random Test Generator (Computer Enhanced Interactive Technology)

24 Self-Paced Training Course Expands Training Capabilities (Computer Enhanced Interactive Technology)
25 Startup (Intelligent CourseWare, Inc.)
26 Summit Authoring System (Conceptual Systems, Incorporated)
27 TenCore (Computer Teaching Corporation)
28 Unison Author (Courseware Applications, Inc.)
29 Unison Draw (Courseware Applications, Inc.)
30 Unison Font Editor (Courseware Applications, Inc.)
31 Video Builder Color (TeleRobotics International, Inc.)
32 Video/PAssage Author (IBM Corporation)
33 Video/PAssage Presenter (IBM Corporation)
34 VIEW System Courseware and Authoring Guide (Sony)

BOOKS AND MANUALS

1 *Unison Author Language Reference Manual* (Thomas M. Schaefges)   Champaign, Illinois: Courseware Applications, Inc., 1988.
   1) Using the Unison Authoring Language
       Before You Start --- Unison Files --- File Search Strategy --- Command Line Options
   2) Basic Language Elements
       The Character Set --- Source Code format --- Comments --- Conditional Commands
   3) Lesson Structure
       Units --- Types of Units --- Execution of a Unison Lesson --- Execution of Response Analysis Commands
   4) Display Features
       Display Capabilities --- The Coordinate System --- Inverting the Y Coordinates --- Selecting Colors --- Standard Main Unit Display Options --- Displaying Text --- Embedded Display Commands --- Text Mode Displays --- Graphics Mode --- Using a Mouse
   5) Variable Allocation and Calculations
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   6) File Types and Operations
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   7) Command Descriptions
       Unison Commands By Function --- Individual Command Descriptions
   8) Appendices
       Key Codes --- System Limits --- "Zreturn" Values for File Operations --- Lesson Preparation Errors and Warnings --- Execution Errors --- Text Characters
2 *Unison Author Language Tutorial* (Thomas M. Schaefges)   Champaign, Illinois: Courseware Applications, Inc., 1988.
   1) Introduction
       Why Use An Authoring Language --- Creating a Lesson
   2) Using Unison
       The Format of Unison Programs --- Units --- The AT Command --- The WRITE Command --- The KBRANCH Command --- The Execution of Unison --- The PAUSE Command

3) Creating Displays
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4) Response Analysis
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    Command --- Lesson Execution During Judging --- The NO Command --- The WRONG
    Command --- The Order of Judging Commands --- A Sample Quiz Program --- Accepting
    Multiple Answers Using Synonyms --- Ignoring Unimportant Words --- The HOLDOK,
    HOLDNO, and LOWCASE Commands --- The LONG Command
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    On-Page Help
6) Data Handling and Calculations
    Variables --- Defining Variables --- The CALC Command --- Performing Calculations ---
    The Order of Operation in a Calculation --- The SHOW Command --- Example ---
    Conditional Commands --- Marking Completed Sections --- Repeating Yourself --- Judging
    Numeric Responses --- Alphabetic Information
7) Developing a Series of Lessons
    The Real World of Lesson Development --- The JUMPOUT Command --- Multi-Disk
    Courses --- The USE Command --- Programming a Router --- Making User Disks
8) Odds and Ends
    Saving Student Data --- Animation
9) The Unison Cookbook
    Now Your Cooking --- Making an Index --- Multiple Choice Questions --- True/False
    Questions --- Short Answer Questions --- Fill-In Questions
10) Glossary

3   *Unison Draw* (Thomas Schaefges, David A. Glenn) Champaign, Illinois: Courseware Applications,
    Inc., 1988.
    1) Introduction
        Unison Draw
    2) Getting Started
        What You Will Need --- Before You Start --- Starting Unison Draw --- The Editing Screen
    3) Drawing Basics
        The Pen --- Stroking and Painting --- Display Modes --- Selecting a Graphics Object ---
        Drawing the Object --- Object Markers --- The Selection

4   *Unison Font Editor* (David A. Glenn, Thomas M. Schaefges)   Champaign, Illinois: Courseware
    Applications, Inc., 1988.
    1) Introduction
        Introduction --- What You Will Need --- Before You Start
    2) Font Editing
        Font Terminology --- Preliminary Design: Grid size, Number of characters, Character
        mapping, Designing the individual characters, Composite characters --- Starting Unison Font
        Editor --- Creating a New Font --- Editing a Character
    3) Using Fonts in Your Lessons
    4) Display Override Switches
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III. COMMUNICATIONS

ARTICLES

41   "Seven Top LANs: A Hard Look at Ease of Use" (Robert Lauriston)
42   "Software Link's Changing PC-MOS/386"
43   "Software Links PCs, IBM 3270 Host, Dbase" (Mark Brownstein)
44   "Software that Makes LANs Work Better"
45   "Stevens Point Solution"
46   "Sun's TOPS Is a Simple Way to Integrate a Split Environment" (David Buerger)
47   "Sylvia Charp's Editorial"
48   "Systems Integration: Linking the Enterprise for Net Gain" (John Moore)
49   "Technology Licenses: New Law Closes Bankruptcy Loophole" (Marilyn Shea-Stonum, David Sloan)
50   "Telecommunications: I Believe in ....." (Brock N. Meeks)
51   "Understanding OSI Model Makes Networking Easier" (Mark Stephens)
52   "Users Choose 'Classic' Crosstalk XVI over MK. 4" (Robert Snowden Jones)
53   "VAL's Single-Slot Sure Shot: The State of the Interface" (Mark Magel)
54   "Virtual Networking" (Grant Kirby)
55   "VISTA: III Local Area Networks"
56   "Voice, FAX, and Modem in One"
57   "What a LAN Consultant Will Tell You" (Christine Strehlo)
58   "Why Everyone Works Smarter When They're Connected" (G. Berton Latamore)
59   "Will It Be PC LANs or PC-Based Multiuser Systems (Sam Spadafora)
60   "Wired: How PC Networks are Changing the Way We Work" (Mark Stephens)
61   "WordPerfect Office Aids Group Productivity" (Peter Stephenson)

PRODUCT LITERATURE AND DEMONSTRATIONS

1   Cost-Effective Network Solution --- INC-64 (Western Telematic, Inc.)
2   Electronic Previewing System Gives LA Unified a Peek at Software for Sale (Rainbow Telecommunications, Inc., Electronic Learning)
3   Enable/LAN (The Software Group)
4   EndLink (Niles and Associates)
5   Exchange Plus File Transfer (Commtech International, Inc.)
6   FOURtified LAN (Cubix)
7   LANtastic (Artisoft, Inc.)
8   Link Videonetworking System (Applied Computer Systems, Inc.)
9   Local Area Networking with TOPS (Singular Solutions)
10   MetroBridge (T3 Technologies)
11   Networking Products, Systems, and Services (Racal-Milgo)
12   Professional Seminars in Communications Technologies (Systems Technology Forum)
13   Rainbow Net (Rainbow Telecommunications, Inc.)
14   Reliable Modular Network Interconnect System (Reliable Electric/Utility Products)
15   Software Preview Distance Learning Software Service (Rainbow Telecommunications, Inc.)
16   TokenGate (T3 Technologies)
17   TOPS Network Software (Tops, Sun Microsystems)
18   Trends and Events in Educational Technology in the Southwest (Rainbow Telecommunications, Inc., Southwest Educational Development Laboratory)
19   VideoNet (Video Concepts, Inc.)

BOOKS AND MANUALS

1   *Local Area Network Book* (E. G. Brooner)   Indianapolis, Indiana: Howard W. Sams & Company, 1984.
    1) What is a Network?
       Network Defined --- Time Sharing Defined --- Kinds of Networks --- Media --- Transmissions --- Addressing --- Collision Avoidance
    2) What Networks Can Do For Us
       The Concept --- Network Benefits --- Network Features --- Cost Advantages --- Disadvantages --- Choosing a Network
    3) Network Components
       Collision Detection --- Token Passing --- CSMA/CD --- Network Software --- Servers --- Multiplexing --- Other Terms --- Cables --- Topology
    4) Standards and Protocols
       What Protocols Are --- Where They Come From --- The 7-Level Model --- The Effects of Standards
    5) Some Real Products
       Corvus Omninet --- Destnet --- Ethernet Components by 3COM --- Ethernet Components by Interlan --- Black Boxes --- Networks on a Chip --- DPC/NET --- CP/NET

EDUCATION

1   LAN Evaluation (Statewide Telecommunications Committee, AST Research and NOVELL)
    1) Introduction: Data Communications Standards --- Evaluating Standards --- Novell NetWare
    2) Elements of LAN configurations: The Movement of Data
    3) LAN Hardware: Introduction --- Cable Alternatives --- Cable Selection --- LAN Topologies --- Cable Access Schemes --- Network Interface Card --- NIC Performance Evaluation --- LAN Hardware Implementations
    4) Network Servers: Introduction --- Throughput Factors --- Server Evaluation --- Configurations Options
    5) Disk Channels: Introduction --- Opening the Channel --- Other Performance Factors
    6) The Network Evaluation System: Introduction --- A New Approach --- Description of User Types --- Sample Exercise --- Using the Graphs --- A Second Sample Exercise --- Conclusion
    7) Text Procedures and Formulas: The Details --- PERFORM Utility --- Maximum Working Bandwidth --- Performing the Calculations --- A Quick Performance Comparison

IV. DATABASE

ARTICLES

1   "Carving Out a Database Standard" (Don Crabb)
2   "Database Connectivity" (Robert Beauchamp)
3   "DB Publisher Has a Full-Featured Report Generator, Powerful Sorting" (Scott Mace)
4   "Workstations Key to Creating Database of Images at UC Berkeley"

PRODUCT LITERATURE AND DEMONSTRATIONS

1   20/20 (Access Technology, Inc.)
2   ACCELL Applications (UNIFY Corporation)
3   DBMS Interface (Southwind Software)
4   Solutions to 10 Critical Information Processing Issues (Oracle Corporation)

V. GRAPHICS

ARTICLES

1 "Adobe Announces Streamline"
2 "Adobe Illustrator: You Don't Have to be an Artist to Love It" (Mary Eisenhart)
3 "AdWriter 2.0 Introduced by Mycro-Tek"
4 "Aldus Enhances Freehand Program" (Laurie Flynn)
5 "Aldus Freehand Update Has Edge Over Adobe Illustrator" (Michael J. Ward)
6 "Aldus Markets Aldus Freehand 2.0"
7 "Are Computer Graphics Forever" (Clay Gordon)
8 "Are Computer Graphics Losing Their Punch? (Jeffrey Cohen)
9 "Art of the Graph"
10 "Arts and Letters Composer: Business Graphics Under Windows" (Woody Liswood)
11 "Astral Markets New Version of Software"
12 "Autocad 10 Is a Revolution for the Serious Draftsman" (Ken Milburn)
13 "Berol Features New Computer Software Package"
14 "By DESIGN" (Daniel W. Rasmus)
15 "CAD Meets Video" (Angela Torres Pate)
16 "CAD Software Finds a Home with Interior Designers"
17 "CAD Software: Packages Flex New Muscles" (Terian Tyre)
18 "CalComp Introducing Digitizing Tablet"
19 "Capture Real-Life Pictures with Computer Imaging Systems" (David Stanton)
20 "Capturing the Image for Less" (Inge Hutzel)
21 "Claris Finally Releases Forms Packages for Mac" (Laurie Flynn)
22 "Click and Clip 500 Now Available"
23 "Clip-Art Series Offers More Than 700 Images"
24 "Color in Computer Graphics" (Clay Gordon)
25 "Commodore's New Plan Targets Graphics Market"
26 "Companies Can Share Film Recorder" (Myron Haldun)
27 "Computer Graphics --- Professional Products for Input of Existing of Existing Images" (Bruce N. Goren)
28 "Computer Graphics and NYIT" (Chris Capone)
29 "Computer Graphics and the Smaller User" (Bob Cramblitt)
30 "Computer Graphics Editorial" (Sylvia Sharp)
31 "Computer Paint Program Announced"
32 "Conquering Complexity: How Winners Leverage Simpler Design" (John Hagel, III)
33 "Creating Computer Graphics for Video and Animation" (Sheldon Leibman)
34 "CSC Showcases Imaging Prowess" (John Moore)
35 "DAC Unveils Info Manager; PCSG Announces Update to Lucid 3-D" (Paula S. Stone)
36 "Dan Silva: The first American Interview" (Ben and Jean Means)
37 "DCA Unveils Graphics Emulation for the Mac" (Laurie Flynn)
38 "Design Center Targeted for CAD/CAM Use"
39 "Design Process as a Path" (John Derry)
40 "Designing Great Graphics --- More Than Meets the Eye" (Bill Howard, Gerard Kunkel)

PRODUCT LITERATURE AND DEMONSTRATIONS

4   Bit Pad Graphics Tablet (Summagraphics)
5   Bitfolio Art and Symbols Library (Coddbarrett)
6   Business Symbols (Software Publishing)
7   CAD/CAE (Compaq Computer Corporation)
8   Collector's Edition I (Adobe Systems, Inc.)
9   Communication by Design --- Graphic Design Software Catalog (Letraset --- Esselte Pendaflex Corporation)
10 Comstock Desktop Photography (Comstock)
11 CR Digitizing Tablet (Summagraphics)
12 DeluxePaint II (Electronic Arts)
13 DeluxeWrite/DeluxePaint II Bundle (Electronic Arts)
14 Design/2.0 (Meta Software Corporation)
15 DR. HALO III Paint Program (Media Cybernetics)
16 Draw Applause (Ashton-Tate)
17 Electronic Studio (St. Louis Community College at Florissant Valley)
18 Evaluating Computer Graphics (Step-By-Step Graphics)
19 EZGRAF (Southwind Software)
20 FONTASY (Businessland)
21 FormDesigner (Businessland)
22 Freehand 2.0 (Aldus)
23 Grafsman (SouthWind Software)
24 GraphPAD (ISI Software)
25 GridBook (Letraset)
26 Hitachi VY-55A Color Video Printer (Hitachi Sales Corporation of America)
27 Hyperanimator (Bright Star)
28 Illustrator 88 (Adobe Systems Inc.)
29 Image Manipulation and Graphic Enhancement Software Programs (i.m.a.g.e. Software)
30 In-house Imaging System (Management Graphics, Inc.)
31 Lotus Freelance Plus (Lotus)
32 MACdex (The Interface Group)
33 Macdraw II (Claris)
34 Macpaint (Claris)
35 Microgrid II Digitizing Tablet (Summagraphics)
36 Microsoft Chart Version 3.0 (Microsoft Corporation)
37 MM Digitizing Tablet (Summagraphics)
38 Next generation of Graphics Applications: Identifying and Driving New Markets (Summit Strategies, Datek Information Services)
39 Org Plus (Banner Blue)
40 Philip Pearlstein Draws the Artist's Model (Voyager Company)
41 PicturePower (PictureWare Incorporated)
42 Power Up software (Channelmark Corporation)
43 Publishing Packs (Adobe Systems, Inc.)
44 Quickcharts (Software Publishing)
45 Ready Set Go! (Letraset)
46 Scan Converter CVS-900: Converting for Computer RGB to Broadcast Video (James Grunder & Associates, Inc.)
47 SCANWARE Package with PC Paintbrush (AT&T)
48 Software Catalog: Winter-Spring (Micrografx)

49   Step-by-Step Graphics (Dynamic Graphics)
50   Studio/8 (Electronic Arts)
51   Summasketch (Summagraphics)
52   Summasketch Plus (Summagraphics)
53   Summasketch Plus/Autoease Template Promotion (Summagraphics)
54   Summasketch Professional (Summagraphics)
55   Ten Easy Steps to Designing and Producing Efficient, Productive Forms (FormTool, Bloc Development Corporation)
56   Type Library (Adobe Systems, Inc.)
57   US Mapmaker (Software Publishing)

BOOKS AND MANUALS

1   *Deluxe Paint II* (Dan Silva)   San Mateo, California: Electronic Arts, ND.
   1)   Introduction
        Why Computer Graphics? --- About this Manual
   2)   A Guided Tour
        Getting Started: Software, Hardware, Organizing your disks, Power up, Screen Format --- Getting Acquainted: The paint set, Painting with the mouse; The toolbox, The built-in brushes, The tools, Anything can be a brush --- Getting Going: Saving your work, Loading a picture, fixing the background
   3)   The Elements
        Custom Brushes: Creating a brush; The background color is transparent; Selecting complex shapes; A brush is a little picture; Additional features, Brush handle, Perspective, Fast feedback --- The Screen: Info bar; Hiding the tools and the menu bar; Magnifying and zooming; Grids, Customizing grid spacing; Symmetry; The pages, Switching pages; Fixing the Background; Stencils; Page Size; Screen Formats --- The Palette: The Palette and Screen Formats; The palette, OK, Undo, Cancel, Defining ranges, Range direction and cycle speed, Swap and copy, Spread, RGB and HSV color changes --- The Tools: Modifying Tools, The built-in brushes, The airbrush, Straight line, Curve, Unfilled shape tools, Fill and filled shape tools, Text tool, Brush selector, Grid and symmetry tools --- The Painting Mode --- Text
   4)   Tutorials
        Tutorial One: Gradient Fill and Color Cycling; Using gradient Fills; Defining color ranges; Animation with color cycling --- Tutorial Two: Logos Unlimited; Italicize, Bend, Resize, Changing colors, Pattern fill, Drop shadows, Outlining the Logo, Gradient fill --- Tutorial Three: Putting Things in Perspective; An area rug, A rug on the ceiling, Cubism revisited, A row of stately homes, Another point of view, Fixing axes and other mysteries, City planning
   5)   Reference
        Window Gadgets --- Menu Items: Question mark menu, File menu, Pref menu, Pict men, Mode menu, Brush menu, Color menu, Font menu --- Toolbox
   6)   Appendices
        Feature Differences in the Various Screen Formats --- Adjusting the Color Palette: CGA, EGA, MCGA, VGA --- Transferring Images to and from DeluxePaint: Convert, Camera --- Memory Management --- DeluxePaint Artwork: Pictures, Brushes --- Keyboard Commands: Brush commands, Perspective commands, Toolbox/paint set commands, General window

commands, Load windows commands, Save windows commands, Palette window commands, Special keys --- DeluxePaint Cursors

2   *Org Plus Advanced* (Alma C. Rodoni and Kristin L. Dukay)   Fremont, CA: Banner Blue, 1988.

    1) Introduction to Org Plus Advanced
What Org Plus Advanced Can Do --- Using the Guide --- What You Need

    2) Getting Started
The README Program --- Installing Org Plus --- Starting Org Plus --- Printer/Setup --- When You Are Not Sure What Printer to Use --- Logical Printer Ports --- Using Org Plus on a Network --- Exiting Org Plus

    3) Building a Chart
Some Essential Terms --- General Rules for Making Organizational Charts --- Tutorial --- Using the Program --- Work on Chart --- Chart: Preview Chart --- Save Chart --- Retrieve Chart --- Clear Chart --- Erase Chart

    4) Printing a Chart
Print Chart Commands --- Default Print Settings --- Printing to the Screen --- Print Chart: Titles and Annotations --- Spec'l Prnt Ctrl/Format --- Reprint --- Print Part --- Reprint Part --- Printing with Plotters --- Printing to Disk --- Printing Through Sideways --- Custom Drawing --- Batch Printing

    5) Editing a Chart
Selecting Ranges --- insert Position --- Move Position --- Delete Position --- Copy Information --- Copying Information Using the Clipboard --- View Clipboard --- Copying Information without the Clipboard --- Sort Subordinates --- Marking Positions --- Find & Mark --- Assign Mark --- Unmark Positions --- Review Marked

    6) Advanced Chart Making
Features that Shape Your Chart --- Selecting Ranges --- Set Option --- Clear Option --- View Option --- Draw Auxiliary Line --- Modify/Delete Line --- Part-Time Codes --- Hidden Positions --- How to Make Your Chart Fit on One Page --- Special Chart Layout Situations --- More Advanced Features --- Chart: View Chart Status --- File: Append chart, Save branch, Exchange data, Name chart/report spec, Use chart/report spec

    7) Tables and Reports
Tables/Reports: Setup, View table, Headers & titles, Print --- Sorting Last Name First --- % (Date Print-Time Code) --- Printing a Report to Disk

    8) Amounts
Amounts: Display amounts, Labels, Number format, Adjust amounts, Print control, Special print control, Mode of Calculation, Calculate --- Printing Amounts --- Suppress Amount Print --- Exclude from Amount --- Using Hidden Positions with Amounts --- Consolidated Amounts --- Setting the Consolidation Type --- The Consolidation Types --- Formulas --- Errors in Entering Formulas --- Order of Calculation --- Functions --- The Format for a Function --- # (Count Print-Time Code) ---Numeric Limits in Calculations --- A Product Cost Accumulation Example

    9) Drawing
Custom Drawing --- When to Use the Drawing Board --- Getting to the Drawing Board --- Print Chart: Custom Drawing --- Create Drawing --- Retrieve Drawing --- Create Part --- Getting to the Drawing Board from DOS --- The Drawing Board Display --- Moving Around the Drawing --- Adding Text Anywhere in the Drawing --- the Drawing Board Commands --- Edit Drawing: Move block, Copy block, Delete block, Justify Text --- Draw: Solid lines, Dotted lines, Erase lines, Cleanup lines/boxes, Boxes, Other symbols --- Options: Enhance text, Clear enhancements, Xpanded text, Clear Xpanded text, Plotter pen/color,

Clear pen/color --- Layout: Format/drawing area --- Print/Reprint Drawing ---Window
Control: Toggle rulers, Open window, Close window, Jump between windows, Window
synchronization --- File: Save drawing, Clear drawing
10)   Key Assignments
Editing Text in a Field --- Selecting Menu Items --- Selecting Items on a Form --- Moving
Between Fields --- Moving around a Chart/Drawing --- Using Wordstar Commands --- Chart
Menu Tree --- Draw Menu Tree
11)   Troubleshooting
Text is out of Boxes --- Chart is Wrapping --- Chart is Not Centered on the Page --- Printer
Prints Garbage --- Plotter Problems --- Printer Spoolers and Switch Boxes --- Not Printing
Correctly with Sideways --- Error Messages
12)   Memory Utilization and Other Org Plus Limits

VI. HYPERCARD

ARTICLES

1   "Another Firm Readies HyperCard Clone" (Laurie Flynn)
2   "Apple Eyeing Intermedia Project" (Scott Mace)
3   "Apple Will Showcase Multimedia Products" (Nick Arnett)
4   "Bible in HyperCard" (Birrell Walsh)
5   "DISC Announces a HyperCard Instructional Stackware Exchange"
6   "Historical HyperCard at the Expo" (Birrell Walsh)
7   "Hyperbook" (Birrell Walsh)
8   "Hypercard Gives MAC An Advantage as EIS" (Laurie Flynn)
9   "HyperCard Makes Mac Interact" (Priscilla Burgess)
10   "HyperCard Meets Total Information Overload" (Birrell Walsh)
11   "HyperCard Stacks"
12   "HyperCard-Like Package Comes to the PC"
13   "HyperCard: Apple's Illuminated Manuscript" (Stephen L. Michel)
14   "Hyperpad Brings Power of Mac HyperCard to DOS" (Bob Ponting)
15   "HyperPAD Offers Stackware Capability for DOS-Based PCs"
16   "HyperSpace '101 Scripts and Buttons'" (Laura Johnson)
17   "Hypertext Adds Non-Linear Thinking to Computers" (Michael J. Kleeman)
18   "Hypervision Software Puts Video into Hypercard Stacks" (Jeff Angus)
19   "Hyperworks Organizer Tracks Time, Expenses" (Scott Mace)
20   "Mac Recorder to Push Horizons of Hypercard Sound" (Jeff Angus)
21   "MacroMind Shipping MacroMind Director"
22   "MIT Hypercard Uses Full-Motion Color Video Icons" (Barbara Darrow)
23   "Multimedia Technology Is Not Just the Buzzword of the Year" (Michael J. Miller)
24   "Oracle Meets HyperCard" (Steve Roti)
25   "Pathfinder Now Offers Features Like INTERMEDIA"
26   "PC to Get HyperCard-like Features" (Laurie Flynn)
27   "Talk Hyper to Me" (Richard Landry)
28   "What HyperCard Can Do ..."
29   "Xearch Hypercard Speed-Up Utility Available to End-Users" (Jeff Angus)

PRODUCT LITERATURE AND DEMONSTRATIONS

1   Fusion (All-American Software Development Corporation)
2   HyperCard (Apple Computer)
3   HyperCard Software (Voyager Company)
4   HyperCard Stacks --- City to City, Business Class, Hyperda, Reports (Apple Computer)

5   Hypermedia Development (Software Applications Group)
6   Tabularium (All-American Software Development Corporation)
7   Total Tools (All-American Software Development Corporation)
8   What HyperCard Can Do (Businessland)

VII. IMAGING

ARTICLES

PRODUCT LITERATURE AND DEMONSTRATIONS

1   Acquisition Processor/Digitizer Board Set (Vicom Systems, Inc.)
2   Alice Type-120 Image Compression System (Telephoto Communications, Inc.)
3   Canopener --- The Indispensable Macintosh Utility for Retrieving Text, Pictures, and Sounds (Abbott Systems)
4   Capture and Display TV-Quality Images: Truevision Image Capture Board (Truevision, Inc.)
5   Collage Plus (Inner Media, Inc.)
6   Computer Animation Show (Expanded Entertainment, Inc.)
7   Computer Publishing Systems Market Requirements Service (CAP International)
8   Concept Modeller (Wisdom Systems)
9   DGS 2.0 (Digital Arts)
10 DGS 2.0 Software Options (Digital Arts)
11 DGS-Animate (Digital Arts)
12 DGS-Build (Digital Arts)
13 DGS-Render (Digital Arts)
14 Electronic Darkroom (Astral Development Corporation, Byte)
15 Graphex Parallel Image Processor (American Data Systems, Inc.)
16 HALO '88: A Library of Graphics Subroutines Used By Programmers and Software Developers (Media Cybernetics)
17 HALO Window Toolkit: Versatile Windowing Tools for the Software Developer (Media Cybernetics)
18 HALOVision: Created to Address Software Requirements in Real Imaging Inout from Any Video Source (Media Cybernetics)
19 Image Pro (Media Cybernetics)
20 Image Station (Software Clearing House, Inc.)
21 Image-Pro: The Software Standard for PC-Based Image Processing Applications (Media Cybernetics)
22 IMAGESTATION for Freehand Drawing and Video-Captured Color Images (SoftVisions, AT&T Computer Graphics Software Labs)
23 ImageStudio (Letraset)
24 INPrint (Mathematica, Inc.)
25 Introduce Your Targa to a PRO...VideoShow Professional (General Parametrics Corporation)
26 Logo Editor (Videotex Systems, Inc.)
27 MacroMind Director (MacroMind Incorporated)
28 MVP-AT: Real-Time Imaging on the IBM PC AT (Matrox Electronic Systems, Ltd.)
29 Optimas: Optical Measurement and Analysis Software (BioScan Incorporated)
30 Overscan for TARGA (Truevision)
31 Picture Publisher (Astral Development Corporation)
32 Profitable Opportunities for Hardware Manufactures Using Imaging and Graphics Technology (Media Cybernetics)
33 Propel Print Enhancement System (Telephoto Communications, Inc.)
34 Publisher's Partner: The Most Amazing Gray-Scale Editor Ever (Media Cybernetics)
35 Real Time Digital Video Disk (Vicom Systems, Inc.)
36 Red Electric Crayon (Video Graphic Systems)
37 RGB/Videolink 300: The Link Between PC of PS-2 Graphics and Video Tape (RGB Technology)
38 RGB/Videolink 1400: The Link Between High Resolution Computer Graphics and Video Tape (RGB Technology

39 RGB/Videolink: The Link Between Macintosh II Computer Graphics and Video Tape (RGB Technology)
40 RIO 1.3 Resolution-Independent Object-Oriented Software (SoftVisions, AT&T Graphics Software Labs)
41 RIO Font Libraries (Bitstream, Flamingo Graphics, AT&T Graphics Software Labs)
42 RIO Production Center (SoftVisions, AT&T Computer Graphics Software Labs
43 Single Channel Display Processor (Vicom Systems, Inc.)
44 T-EGA 1.3 (Videotex Systems, Inc.)
45 T-Scan 2.0 (Videotex Systems, Inc.)
46 T-View (Videotex Systems, Inc.)
47 TARGAPLOT: Color Hard Copy Exclusively for TARGA Users (Seiko Instruments USA)
48 Tempra Means Color Power (Mathematica, Inc.)
49 TGA Compress File Compression Program (SoftVisions, AT&T Computer Graphics Software Labs)
50 Topas 2.2 Object Processing and Animation Software (SoftVisions, AT&T Graphics Software Labs)
51 True Image Processing Software: TIPS (Truevision, Inc.)
52 Truevision Advanced Raster Graphics Adapter: TARGA (Truevision, Inc.)
53 Truevision PicturePower: Integrated Software System for Incorporating Pictures in Databases (Truevision, Inc.)
54 Truevision Slide Presentation Software: Presenting a Series of TV-Quality Images (Truevision, Inc.)
55 TrueVista Videographics Series (Truevision, Inc.)
56 Video Display Adapter with Digital Enhancement (Truevision, Inc.)
57 Video Imaging Applications (Telephoto Communications, Inc.)
58 Video Inscriber (Videotex Systems, Inc.)
59 VideoCAD (Mathematica, Inc.)
60 VIPS 4.0 Image Processing Software (Vicom Systems, Inc.)
61 Virtual Video Producer (Videotex Systems, Inc.)
62 VME-2 Image Processing Peripheral (Vicom Systems, Inc)

VIII.   INTEGRATED

ARTICLES

1   "Decathlon Releases Integrated Packages for DOS and UNIX"
2   "Enable and Symphony Face Off" (Bill Jacobson)
3   "Microsoft Works 2.0 Gets Audio, Disk Training Series" (Paula S. Stone)
4   "Software Group Publishes ENABLE User Development Guide"
5   "What's New in Integrated Software" (Russ Lockwood)
6   "Word Processors in Integrated Software" (Don Crabb)

PRODUCT LITERATURE AND DEMONSTRATIONS

1   Enable Database Management (The Software Group)
2   Enable Graphics Including Perspective (The Software Group)
3   Enable LAN (The Software Group)
4   Enable Spreadsheet (The Software Group)
5   Enable Telecommunications (The Software Group)
6   Enable Version 2.0: Major Features (The Software Group)
7   Enable vs Smart (The Software Group)
8   Enable vs Symphony (The Software Group)
9   Enable Word Processing with Enable/Check (The Software Group)
10 Enable-OA (The Software Group, Inc.)
11 Enable: Our Users Applaud (The Software Group)
12 Enable: Things Your Should Know About Enable (The Software Group)
13 Enable: Your Business Software Solution (The Software Group)
14 Smartware: 1988 Applications Catalogue and Consultants Registry (Informix Software, Inc.)
15 Smartware: Using Smart and Smart Tips, Tricks, and Traps (Innovative Software, Que Publishing)

BOOKS AND MANUALS

1   *ENABLE Database Management Manual*   Ballston Lake, New York: The Software Group, 1987.
    1)   Overview
         Introduction: definition of DBMS, an example, other DBMS applications --- Using
         ENABLE's DBMS: design and definition, build and interact, display and report, graph ---
         Planning your database organization
    2)   Design and Definition
         Database description: the database definition screens,how to save your database description
         --- Field definition: quick method, detailed method, error messages, how to save your field
         definitions --- How to modify a field definition before adding records: revising, renaming,
         deleting --- How to print your database definition --- Creating a database definition for

dBASE II and dBASE III files --- Designing an "input form": "input form" definition screens, "Put It Here!", filed attributes, how to save your "input form" design, how to use word processing to enhance your "input form"

3) Building Databases
The ADD command --- An example

4) Selecting Records
How ENABLE works --- WHERE clauses --- Logical operators: the AND operator, the OR operator, the NOT operator --- Wild cards --- The index search --- The select set --- The error set --- The FIND command --- The DISPLAY command --- THE BROWSE command --- The SORT command

5) Revising Databases
Revising a database definition after adding --- The INDEX command --- The RENAME command

6) Revising Records
The EDIT command --- The VERIFY command --- The REPLACE command --- Editing records using the DISPLAY command

7) Importing and Exporting Data
Preparing data for import: preparing spreadsheet data for import, preparing text data for import --- Importing data as a "Read-Only" database: the DATABASE NAME prompt, the INDEX prompt, the WHERE and FIELDS prompts --- The UPDATE command --- The COPY command --- The MERGE command --- The EXPORT command

8) Maintaining Databases
The DELETE command --- The UNDELETE command --- The ARCHIVE command --- The BACKUP command --- The RESTORE command --- The DESTROY command

9) Producing Reports
Introduction: organizing your reports, creating and generating your report --- ENABLE's columnar report: breaks, an example --- "Put It Here!" report form: initial "report form" screen, field position and attributes, how to revise your "report form" design, generating your report

10) The Procedural Language
The procedural language commands: introduction, listing of commands --- Designing report forms with procedural language commands: designing the form, generating your report, an example --- Using the procedural language in WHERE and FIELD prompts --- Using the procedural language in and "input form" macro: example of a postfield macro procedure, the .UPDATE and .CHECKKEY commands --- Using the procedural language to link databases: the .DEFINE command, the .OPEN and .READ commands

11) Constructing a Customer Database
Defining your database and fields --- Designing an "input form" --- Designing a "report form" --- Adding records to your database --- Displaying records --- Creating a report

12) APPENDIX A: Function Keys
Arranged by function --- Arranged by key

13) APPENDIX B: Keyboard commands
Cursor commands --- Expert commands --- Keystroke commands

14) APPENDIX C: Functions

15) APPENDIX D: Mathematical operators

16) APPENDIX E: Error messages

2   *ENABLE Getting Started, Quick Reference Manual*   Ballston Lake, New York: The Software Group, 1987.

  1)   The Keyboard
  2)   Word Processing
       Function keys --- Expert commands --- Cursor commands --- Keystroke commands --- Text enhancements/embedded commands --- Special Character --- Mathematical operators
  3)   Spreadsheet
       Function keys --- Expert commands --- Pointer commands/keystroke commands --- Operators/modes indicators
  4)   Graphics
       Function keys/expert commands --- Keystroke commands
  5)   DBMS
       Function keys/expert commands --- Cursor commands --- Keystroke commands/operators --- Procedural language
  6)   Telecommunications
       Function keys/expert commands --- Keystroke commands
  7)   System-wide Features
       Macro keystroke commands/codes --- Reserved word list/functions

3   *ENABLE System Overview Manual*   Ballston Lake, New York: The Software Group, 1987.

  1)   Overview
       The ENABLE user manual: individual guide organization, text format conventions, text examples --- Help: tutorials, customer service, additional help
  2)   Files
       Working with files: creating files, naming files, the end-of-file marker, saving files, revising files, printing files --- The directory of files: displaying the directory of files, available file maintenance functions from directory of files --- Using files created by other programs
  3)   Working with Windows
       Windows: opening windows, sizing and positioning windows, other size options, closing windows, system status screens --- Copying information between windows: word processing to word processing, spreadsheet to word processing, graphics to word processing, DBMS DISPLAY to word processing, DBMS DISPLAY to spreadsheet
  4)   Macros
       Recording and executing a macro --- recording without executing --- creating a macro using the MCM/MACROS option --- Revising macros --- Macro programming commands: wait for input, wait for keystroke, wait for specific key, timed pauses, sound a tone, freeze and restore screen display, name a window, go to named window, display message in the status line, remove message displayed in the status lines, change default menu, display named menu, perform named macro, trap errors --- Canceling macro execution --- Obtaining a list of existing macros --- Printing macros
  5)   The ENABLE Menu Generator
       Designing a menu --- Displaying the characteristics of the menu operations: displaying menu design prompts, entering message text, defining additional menu options --- Setting the menu color --- Revising a menu option --- Deleting a menu option --- Saving a menu --- Using a menu created with ENABLE menu generator --- Using data entered into a menu: %FIELDNAME date replacement command, example using %FIELDNAME command, MNU.fieldname data replacement command --- Revising a menu: editing a menu using the MCM/TOOLS/REVISE option, editing a menu using word processing --- Testing a menu:

testing your menu after designing it, testing your menu after editing it --- An example: using menus to simply office procedures

6) High-Level Language Interface
Using the HLI: configuring your system to use HLI, writing an HLI program, using HLI programs --- Simple HLI programs: HLI examples using macro commands, HLI examples designed to manipulate DBMS data, HLI example providing Library of C functions, simplifying the use of HLI

7) APPENDIX A: Reserved Word List
8) APPENDIX B: ENABLE Compatible Printers
9) APPENDIX C: Additional Peripheral Hardware
10) APPENDIX D: Computers on Which ENABLE Runs
11) APPENDIX E: Macro Codes and Keystroke Commands
12) APPENDIX F: Error Messages

4 ***ENABLE Word Processing Manual*** Ballston Lake, New York: The Software Company, 1987.

1) Overview

2) Fundamentals of Word Processing
Creating a File: naming a file, setting the initial ruler, creating a title page --- Entering Text: releasing margin settings, inserting a ruler, hanging indents --- Saving a File --- Quitting Word Processing --- Printing a File: modifying the print form, modifying the page form

3) Designing the Document Layout
Layout Options Menu: inserting a ruler, inserting the default ruler, setting line spacing, inserting a page break, inserting headers, inserting footers --- Automatic Page Numbering in Headers and Footers --- Automatic Date in Headers or Footers --- Alternating Headers and Footers --- Aligning Text: right justification, numeric tabs, additional methods for aligning text --- Special Formats: outlines, proportional spacing, multiple columns, hyphenation, hard space

4) Editing a File
Revising a File: inserting text, creating a paragraph from existing text, overstriking, correcting Transpositions, deleting text, changing text to upper- or lowercase --- Editing Options Menu: turning On and Off screen displays, switching modes, turning automatic reformat ON and OFF, reformatting a paragraph, displaying the Attribute Help screen, inserting a comment, inserting a paper clip, block options, retaining blanks while formatting --- Finding and Replacing: FIND only, FIND and REPLACE, FIND and MARK, wild cards --- Copying and Moving Text: setting a block, setting a column as a block, marking text, copying and moving text using menu options, clearing markers --- Editing Files Created by Other Word Processors

5) Text Enhancements
Text Attributes: using attributes, using multiple attributes, applying text attributes to keyed text, showing attributes, removing attributes --- Graphics Mode --- Special Characters: using special characters, turning Off special characters

6) Creating Reference Features
Footnotes: automatic numbering, user-supplied characters, entering footnote text, displaying footnotes in final and printed form, deleting footnotes, using footnote text already cited --- Table of Contents: setting up a Table of Contents, printing the Table of Contents with a file, editing Table of Contents entries, omitting sequence or page numbers, outline format, inserting Table of Contents headings into text, deleting a Table of Contents entry, editing the Table of Contents .WPT file --- Indexes: setting up an Index, printing the Index with

a file, suing subheadings, deleting an Index entry, editing the Index .WPI file ---
User-Defined Shorthand

7) Advanced Topics
Mail Merge Function: creating a list, creating a Mail Merge letter, creating and revising
labels, merging and printing --- Calculator --- Embedded Commands: INCLUDE command,
PAUSE command, LINES command, DATE command, CONTROL command --- Top Line
Menu Option-DBMS --- The File Summary Screen

8) Constructing a Form Letter
What You Need To Create This Sample Form Letter --- Creating the Mail Merge Letter:
displaying the LETTER.TSG file, modifying the LETTER.TSG file, entering the text of the
letter --- Building a Mailing List: displaying the INPUT form, filling in the INPUT form
--- Merging and Printing

9) APPENDIX A: Function Keys
By function and by key

10) APPENDIX B: Keyboard Commands
Cursor, Expert, and Keystroke commands

11) APPENDIX C: Functions

12) APPENDIX D: Mathematical Operators

13) APPENDIX E: Error Messages

IX. OPERATING SYSTEMS (LANGUAGES)

ARTICLES

PRODUCT LITERATURE AND DEMONSTRATIONS

1 EngLan Computer Language (Gentry Software, Inc.)
2 EZ-DOS 4.0 Plus (2001 Sales, Inc.)
3 Just Enough Pascal (Symantec Corporation)
4 Sentry Desktop Scanners (National Computer Systems)
5 THINK's Lightspeed Pascal (Symantec Corporation)
6 THINK's LightspeedC (Symantec Corporation)
7 Thinking of a Mac C Environment? Think of C (Symantec Corporation, BYTE)
8 UNIX and 'C' Course Catalog (Computer Technology Group --- Telemedia, Inc.)
9 UNIX: The ASCII Difference (ASCII Group)

BOOKS AND MANUALS

1 ***MS-DOS Quick Start*** (Lois Sherman and Cheri Robinson, Editors)   Carmel, Indiana: Que Corporation, 1989.
    1) Personal Computers
        Introductions --- Components of Computer Systems --- the computer Display --- Keyboard Variations --- The System Unit and Peripherals --- How Computers Work with Data
    2) Disk Operating Systems
        Introduction --- The Three Parts of DOs --- What DOS Does
    3) Booting the Computer
        Introduction --- Booting DOs the First Time --- The Two Faces of DOS V4.0 --- Completing the Boot
    4) Using DOS Commands
        Introduction --- Important Concepts about Commands --- Issuing Commands --- Using DIR to Look at Files
    5) Preparing Disks
        Introduction --- Formatting a Floppy Disk --- FORMAT's Switches --- Understanding FORMAT and the Logged Drive --- FORMAT's Error Messages --- Formatting a Hard Disk: Cautions
    6) Hierarchical Directories
        Introduction --- the Directory Structure --- Paths in the Tree Structure --- Sample Subdirectory Setups --- Hierarchical Directory Commands
    7) Copying and Deleting Files
        Introduction --- Copying and Comparing Disks --- Copying Files with COPY --- Deleting and Renaming Files
    8) Protecting Data
        Introduction --- Avoiding Data Loss --- Preparing for the Backup

X. PERSONAL INFORMATION MANAGERS

ARTICLES

1 "$395 Lotus Agenda: The 1-2-3 of Personal Information Managers" (Bill Howard)
2 "Agenda: Free-Form Database" (Jon Pepper)
3 "Are More Views Grander?"
4 "Everyone's Getting Personal" (Eric J. Adams)
5 "Getting Personal with Databases" (Eric J. Adams)
6 "Grandview Offers More Than Its Outline Predecessors (John Walkenbach)
7 "Grandview Offers More Than Its Outliner Processor" (John Walkenbach)
8 "GrandView: Great Outliner Takes on Personal Information Management" (Birrell Walsh)
9 "Lotus Agenda: Evaluating the Father of Personal INformation Managers" (Birrell Walsh)
10 "Lotus Steps into Information Manager Contest" (John Walkenbach)
11 "Lotus' New Agenda" (Mary V. Campbell)
12 "Personal Information Managers --- Product Comparison" (John Walkenbach)
13 "Personal Information Managers for the Macintosh" (Michael J. Miller)
14 "PIM Vendors Must Educate, Then Sell" (Ann L. Zevnik)
15 "Software That Battles Chaos: Personal Information Management Programs" (Jon Pepper)
16 "Towering PIM Inferno: The Battle of Splitters vs. Lumpers" (Jeff Angus)
17 "Updated Focal Point Ships with Network Support, Timed Alarms --- PIM" (Jeff Angus)
18 "Vendors Plan Network Support for PIMs" (Rachel Parker)
19 "Videocassette Vendor Offers Agenda Training" (Paula S. Stone)

BOOKS AND MANUALS

1 *Using GrandView* (John Friend, Alice Lankester, Peter Moran and Dave Winer)   Mountain View, California: Symantec Corporation, 1988.
   1) Welcome to GrandView
       Desktop Planning: Outline View --- Writing: Document View --- Information Management: Category View
   2) Installing Grandview
       Getting Started --- First, Check the Package --- Prepare to Start --- The Setup Program --- Starting Grandview --- Some Fine Tuning --- If You Want Assistance
   3) GrandView Tutorials
       Getting Started With Grandview --- Working with Grandview Outlines --- Organizing with Grandview --- Formatting and Printing with Grandview --- Working with Categories --- Customizing GrandView
   4) Menu Command Summary
       File Menu --- Edit Menu --- Window Menu --- View Menu --- Reorganize Menu --- Print Menu --- Layout Menu --- Categories Menu --- Special Menu

5) General Topics
    Autosave and Backup --- Categories --- Clipboard --- Cloning Headlines --- Dialog Boxes
    --- Directories --- Editing Headlines and Documents --- Expanding and Collapsing Outlines
    --- Grandview's Screen --- Help in Grandview --- Macros --- Marking and Gathering ---
    Menus --- Moving and Reorganizing --- Naming Headlines --- Opening Menu --- Outlines
    --- Printing Outlines --- Starting Grandview --- Windows
6) Appendices
    Keyboard Commands in GrandView --- Information for ThinkTank & Ready! Users ---
    Using a Mouse with Grandview --- Grandview Specifications --- GrandView Error Messages

XI. PRESENTATION

ARTICLES

1   "Aldus Announces Desktop Presentation Software"
2   "Aldus Enters Desktop Presentation MKT..."
3   "Aldus Persuasion Facilitates Professional Presentations" (Doug and Denise Green)
4   "Aldus Releases Persuasion 1.0 for Mac" (Stuart J. Johnston)
5   "Aldus to Launch Desktop Presentation Program" (Laurie Flynn)
6   "Aldus' Persuasion: Desktop Presentations for the Non-Artist" (Mary Eisenhart)
7   "Art of Persuasion and MORE II" (Robert R. Wiggins)
8   "Artful Power for Presentation Graphics"
9   "Ashton-Tate Adds Features to Byline" (Scott Mace)
10 "Avery Product to Make the Creation of Presentation Graphics Easier" (Michael J. Miller)
11 "Back to Basics" (Ron Marans)
12 "Cricket Launches Support Program for Presents"
13 "Diagraph's Symbol Library Makes Presentation Graphics Easier"
14 "Digital Darkroom: Image Manipulation Tools from the Wizards at Silicon Beach" (Mike Markowitz)
15 "Driver Sends Powerpoint Files Out for Conversion" (Laurie Flynn)
16 "Entering the Third Dimension: Giving Your Presentations a New Dimension by Tapping the Power of 3D Graphics" (Thierry Castro)
17 "Graphics Programs to Draw Upon" (Richard O"Reilly)
18 "Harvard Graphics Gets Five Presentation Tools" (Peggy Watt)
19 "Harvard Graphics: The Winner for Presentations" (Stephen Wickham, The Diamond Software Technical Team)
20 "Image Libraries for Freelance Plus" (Woody Liswood)
21 "Improved Device Drivers Provided by A-T's BYLINE"
22 "INFO-XL --- Package Shows Promise, Problems" (John Walkenbach)
23 "It's Show Time! --- InfoWorld Evaluates 13 Presentation Graphics Packages for the PC" (Ken Milburn)
24 "Kodak Unveils ColorEdge Slide Copying Accessory"
25 "Mac Presentation Software: Features vs Price" (T.C. Doyle)
26 "Meeting Technology: Facing the Challenge" (Vincent Alonzo)
27 "Microsoft Adds Slide Imaging Pack to Upgrade"
28 "More II Bring Outlining, Desktop Presentations Together in One Package" (Michael J. Miller)
29 "More II Is a Versatile Outliner as Well as Desktop Presentation Package" (Doug and Denise Green)
30 "New Power of Presentation Graphics: Product Comparison" (Ken Milburn)
31 "PC Film Recorders: Product Comparison" (Tracey Capen and Sally J. Douglas)
32 "PC Presentation Package Offers Integrated Outliner" (Bob Ponting)
33 "Portable Presentation" (Kristi Coale)
34 "Presentation Graphics Imaging Workstation" (William Bottorff)
35 "Presentation Graphics Market Gets Crowded" (T.C. Doyle)
36 "Presentation Manager Offers Surprises" (Michael J. Miller)

37   "Presentations That Spell Pizzazz" (Tom Eisenhart)
38   "Prodigious Presentation Power from Xerox" (Lisa Kleinman)
39   "Screen Recorder" (Jake Paden)
40   "Showdown at the PC Corral: Show Pro, CAMI, and OPUS" (Pete Putman)
41   "Slides by Modem"
42   "Software Clearing House Updates Imagestation Package" (Paula S. Stone)
43   "Symantec's 'More' Mac Presentation Software Updated" (Laurie Flynn)
44   "Top Macintosh Outliner is Made Even More Powerful" (Doug and Denise Green)
45   "Video Connection"
46   "Videographics: A Special World"
47   "When Black and White is Better Than Color" (R. Darrell Boyle)
48   "Xerox Presents: PC Desktop Presentation Comes of Age" (Michael J. Miller)
49   "Xerox Takes the Wraps Off Desktop Presentation Package"

PRODUCT LITERATURE AND DEMONSTRATIONS

1   Bitfolio (Coddbarrett)
2   Bravo Slide Maker (Poloroid)
3   Colograph 691 Overhead Transparency Film (Poloroid)
4   Desktop Imaging: A Burgeoning Market (ASCII Group)
5   FR1 (Presentation Technologies)
6   FreezeFrame (Poloroid Corporation)
7   Generating Management Graphics Using Personal Computers (International Management Services, Inc.)
8   Gold Seal 35mm Express (Poloroid)
9   Harvard Graphics (Software Publishing)
10   High Contrast Polachrome 35mm SlideFilm (Poloroid)
11   Image Processing Software Products (Videotex Systems, Inc.)
12   More II (Symantec)
13   Overnight Slide Service (Autographix)
14   PalettePlus Computer Slide Maker (Poloroid)
15   Persuasion (Aldus)
16   Persuasion 1.0 for the Macintosh Facts and Figures (Aldus Corporation)
17   Polacolor ER Type 669 Instant Print Film (Poloroid)
18   PowerPoint (Microsoft)
19   Presentation Chrome 35mm Slide Film (Poloroid)
20   Presentation Graphics: Promises and Pitfalls (Datek Information Services)
21   Presentation Pro --- Presentation Graphics for the Macintosh (Strade Corporation)
22   Professional Desktop Presentation System (Photo & Sound Company in cooperation with Compaq Computer Corporation)
23   Slidestop Starter Kit (Coddbarrett)
24   Turbo Palette (Poloroid)
25   XROFF (Image Network)

BOOKS AND MANUALS

1   *Using Harvard Graphics* (Stephen W. Sagman and Jane Graver Sandlar)   Carmel, Indiana: Que Corporation, 1989.
   1)   Learning the Basics
       Introducing Harvard Graphics: Making text charts, Creating graph charts, Creating organization charts, Drawing and Enhancing charts, Creating screenshows, Mixing chart types on a page, Examining the benefits of using Harvard Graphics, Learning about competition, Understanding the Harvard Graphics approach --- Getting Started: Installing Harvard Graphics, Starting Harvard Graphics, Using the Harvard Graphics menus, Using a mouse, Navigating through Harvard Graphics, Setting up defaults, Getting on-line help --- Quick Start to Harvard Graphics (Taking a Guided Tour: Selecting from the main menu, Using a mouse or the keyboard, Checking the default settings, Creating a text chart, Creating a bar chart, Creating a pie chart, Using draw/annotate to enhance a chart, Printing your charts
   2)   Making charts
       Creating Text Charts: Creating a title chart, Making a simple list, Preparing a bullet list, Making column charts, Creating free-form charts, Setting up organization charts, Importing ASCII files, Modifying existing text charts
   3)   Adding Pizzazz
       Drawing with Harvard Graphics (Draw/Annotate): What is draw/annotate, Sizing and placing a chart at the main menu, Adding elements to a chart, Deleting and copying and moving elements, Using Harvard Graphics Symbols, Importing CGM files, Using special drawing tools, Setting draw/annotate defaults --- Using Step Savers: Templates, Macros --- Producing Stellar Output: Printing and plotting and making slides, Multiple charts, Slide shows, Screenshows, Exporting a file

EDUCATION

1   Harvard Graphics (Judy Bradley, Anita Milspaugh, Rene Blalock --- Mt. San Antonio College)
   1)   Charts in a Hurry
       Creating a Title Chart, Bullet List, Pie Chart, Bar or Line Chart, Chart from a Chartbook --- Saving a Chart --- Printing a Chart --- Plotting a Chart
   2)   Creating Text Charts
       Enhancing with Annotations --- Changing the Current Chart Options --- Summary of Keys: Moving the cursor, Entering and editing text, Function keys
   3)   Creating Organization Charts
       Summary of Keys: Moving the cursor, Entering and editing text
   4)   Creating Pie Charts
       Changing Two Pies to a Bar/Line --- Summary of Keys: Moving the Cursor, Entering and editing data
   5)   Creating Bar/Line Charts
       Summary of Keys: Moving the cursor, Entering and editing data
   6)   Drawing
       Summary of Keys: Target-moving keys, Function keys, Other drawing keys, Mouse Buttons
   7)   Preparing a Slide Show
       Summary of Keys: Create/Edit slide show, Practice cards, Screenshow effects screen, Giving a screenshow

XII. PUBLISHING

ARTICLES

1   "Adobe Font Folio Now Featured"
2   "Adobe Plans to Launch 1st DOS Product" (John McMullen)
3   "Adobe Pushes Display Postscript as Standard" (Bob Ponting)
4   "Adobe Type Library Adds Six Typeface Packages"
5   "Aldus Exploring New Markets to Build on Desktop Publishing Success Story" (Stuart J. Johnston)
6   "Aldus Releases PC Version of PageMaker 3.0"
7   "Aldus Updates Imaging Program"
8   "Archetype Releases Publishing Software"
9   "Books for the Trade: Desktop Publishing Guides" (John Kremer)
10   "Byline 2.0: Desktop Publishing for Non-Desktop Publishers" (Michael J. Miller)
11   "C-to-Postscript Translator for News Developed" (Martin Marshall)
12   "Changes in the Typesetting Industry" (Ron Painter)
13   "Company Cuts Prices of Fonts 50 Percent"
14   "Composition and Layout Come to the Desktop" (Steve Rosenthal)
15   "Confessions of a Desktop Publisher" (Hal Smith)
16   "Confusion Reigns in the Press As a New Rival to PostScript Emerges"
17   "Creating Business Documents with Byline" (Eric J. Adams)
18   "Creating Your Own Newsletter"
19   "Database Publishing Comes On Strong" (Cheryl J. Goldberg)
20   "DB Publisher Turns Database Files into Snazzy Documents" (Barbara Assadi)
21   "Desktop Documents: The Brave New World of Presentations" (Jay Pinkert)
22   "Desktop Presentation is Redrawing the PC" (Tim Bajarin)
23   "Desktop Publishing Equipment Guide" (Julian Lloyd)
24   "Desktop Publishing Fad: New Corporate Publishers Need Expert Help" (Andrew M. Seybold)
25   "Desktop Publishing For Meetings Management" (Judith Mathews)
26   "Desktop Publishing on the PC" (Galen Gruman)
27   "Desktop Publishing: A Guide for the Beginner" (Amy Lindgren)
28   "Desktop Publishing: Trend or Fraud?" (John C. Dvorak)
29   "Docucomp Document Comparison Program Uses Pattern Recognition" (Yvonne Lee)
30   "DOS Systems Leading in Desktop Publishing: But Macintosh Still Best-Suited (Bob Ponting)
31   "DRI Ships GEM Desktop Publisher 2.0"
32   "Electronic Publishing Reduces Typesetting Costs"
33   "Fonts Made Easier" (Eric J. Adams)
34   "Frame Maker, Write Go International"
35   "GEM Desk Top Publisher" (Lenny Bailes)
36   "GEM Desktop Publisher 2.0 Upgrade"
37   "Get in the Picture with Desktop Publishing" (William M. Cowan)
38   "High-Resolution Game of Composing and Designing" (Jerry Cashin)
39   "How Desktop Publishing Cuts Costs and Buys Time" (Debra Bulkeley)
40   "How Fontware 'Fudges' Bit Maps to Make Typefaces Clear" (Steve Gibson)
41   "How to Learn the ABCs of Desktop Publishing" (Peg Cady)

PRODUCT LITERATURE AND DEMONSTRATIONS

1   Advanced Aldus Classroom: Designing with PageMaker (Aldus Corporation)
2   Advanced Electronic Design and Illustration for Desktop Publishing (Data Graphics, Inc.)
3   Aldus PageMaker Classroom (Aldus Corporation)
4   Design Sense: A Desktop Publishing Design Course on Videotape (Invision, Inc.)
5   Designing for Desktop Publishing Workshop (Data Graphics, Inc.)
6   Desktop and Electronic Publishing Seminar Series (International Management Services)
7   Desktop Publishing Reference Publications (Data Graphics, INc.)
8   Electronic Document Systems Video Minicourse (Institute for Graphic Communication)
9   Eroff Desktop Typesetter 2.2 (Elan Computer Group, Inc.
10   Eroff for MS-DOS (Elan Computer Group, Inc.)
11   Eview/Sun and EviewX (Elan Computer Group, Inc.)
12   Frame Maker (Frame Technology Corporation)
13   Frame Writer (Frame Technology Corporation)
14   Graphic Design for Desktop Publishing Learning Package (VideoTutor)
15   Guide to Electronic Publishing Solutions (NBI)
16   HALO-DPE: Desktop Publishing Editor (Media Cybernetics)
17   How to Use Pagemaker (FlipTrack Learning Systems)
18   How to Use Xerox Ventura Publisher (FlipTrack Learning Systems)
19   Interleaf Products for Mainframes, Workstations, PCs (Interleaf, Inc.)
20   Interleaf Publisher 1.0 (Interleaf, Inc.)
21   Interleaf Publisher 1.0 for the Macintosh II (Interleaf, Inc.)
22   Introduction to Design for Desktop Publishing (FlipTrack Learning Systems)
23   Learn Desktop Publishing Series (VideoTutor)
24   Legend Document Processing Package (NBI, Inc. and Passport Software, Inc.)
25   N-ROFF/PC for MS-DOS (Elan Computer Group, Inc)

26   Pagemaker 3.0 (Aldus)
27   PageMaker Facts and Figures --- Version 3.0 for the Macintosh (Aldus Corporation)
28   PageMaker Facts and Figures --- Version 3.0 for the PC (Aldus Corporation)
29   PostScript: Introducing the Magic Behind Desktop Publishing (Adobe Systems, Inc.)
30   PrintSpec: Software for the Development of Printing Specifications, Bid and Revision Tracking, and Production and Cost Management (StraightEdge Software, Inc.)
31   Quark Style (Quark, Inc.)
32   Quark XPRESS --- Tools of the Trade (Quark, Inc.)
33   Scenic Writer Personal Publishing Software (ScenicSoft, Inc.)
34   Spellbinder and Laserjet+ (Lexisoft, Inc.)
35   Spellbinder Desktop Publisher (Lexisoft, Inc.)
36   Tools for Freedom of Expression in Publishing (Frame Technology Corporation)
37   Transcript (Adobe Systems Incorporated)
38   XPress 2.0 (Quark, Inc.)
39   XPress Yourself (Quark, Inc.)
40   Your Adobe Type Catalog is Here (Adobe Systems, Incorporated)
41   Your Productivity Connection '89 (National Computer Graphics Association)

XIII. SPREADSHEET

ARTICLES

1   "Add-In Enhances Lotus 1-2-3's Analytical Power" (Mike Heck)
2   "Macintosh Puts Wingz on UNIX" (Vanessa Schnatmeir)
3   "Time Shuttle 'Rides' Put Informix's Wingz into (Pro)motion" (T.C. Doyle)

PRODUCT LITERATURE AND DEMONSTRATIONS

1   20/20 Spreadsheet (Access Technology)
2   20/20 Spreadsheet Training Video (Access Technology)
3   Lotus Position on a Spreadsheet for UNIX Software (Access Technology)
4   Tactician (Southwind Software)

XIV. WORD PROCESSING

ARTICLES

1   "Advanced Software Wins Patent for Document Tracking" (Rachel Parker)
2   "Ami Version 1.0" (Woody Liswood)
3   "Connectivity, Graphics and WordPerfect" (Robert Beauchamp)
4   "Desk Accessory Helps Develop Bibliography"
5   "EndNote: Useful Tool for Researchers" (Steve Guttman)
6   "Firm Releases Linguistics for Windows" (Robert Snowdon Jones)
7   "For Simple Documents, WRITE NOW 2.0 is a Great Choice" (Michael J. Miller)
8   "Grammatik III Forges Ahead As Best Product in Its Field" (Gloria Morris)
9   "IBM Broadens Its Displaywrite Family" (Paula S. Stone)
10 "If You Ain't Writin Right, Read This"
11 "Long-awaited WordPerfect for the MAC is Finally Here" (Ives Brant)
12 "Mac Quickletter Program to Handle Letter Writing, Envelopes" (Jeff Angus)
13 "MAC Software Tames the Bibliography" (Scott Mace)
14 "Mac Text-Retrieval Program is Released"
15 "New WordPerfect is Once Again King of the Hill" (John Lombardi)
16 "PC Cum Scriptwriter" (Tom LeTourneau)
17 "PC Write --- A Great Software Value for End Users" (Ives Brant)
18 "PC-Write 3.0 Offers Array of Features at a Great Price"
19 "PC-Write, Shareware Have Specific Appeal" (Ives Brant)
20 "Processed Words: Answers to the Most Frequently Asked Questions about Word Processing" (Cary Lu)
21 "Quest for Style" (Robin Raskin)
22 "Readability Analyzes Your Writing Style" (Jennifer Zaino)
23 "Real World Adventures with WordPerfect 5.0" (Lenny Bailes)
24 "Rich Outliner Adds Extensive Word Processing" (John Walkenbach)
25 "RightWriter v3.0 from RightSoft Is End User's Tool for Good Writing"
26 "Rightwriter, Version 3.0 To Ship Soon" (Robert Snowdon Jones)
27 "Samna Word Processor Is Based on Windows" (Robert Snowdon Jones)
28 "Samna's Word Processor Enters 386 Fray" (Alan Southerton)
29 "Scriptwriting Software: Shifting Sands" (George Patay and Andrea Boardman)
30 "Search Product Adds Notepad Capabilities" (Robert Snowdon-Jones)
31 "Sprint: Chameleon of Word Processing" (Ralph Roberts)
32 "Style Sheets for Technical Documents" (Tyla L. Jernigan)
33 "Syntactics-Crystal Document Management System"
34 "Two Programs Take Different Tacks But Both Expedite Text Retrieval" (Richard O'Reilly)
35 "Two Refined Programs Are Major Step Toward Text Editing By Computer" (Peter McWilliams)
36 "Unique WordBench Program Aimed at Creative Writers" (Gloria Morris)
37 "Utility Poll: Reviews of Three 'Utility' Programs That Allow You to Transfer Files from Computer to Computer"
38 "Word Processing Focuses on Graphics, Simpler Interfaces" (Paula S. Stone)
39 "Word Processor Gives College Mainstream Capabilities It Desired" (Kymberly G. Dryer)

40 "Word Processors in Integrated Software" (Don Crabb)
41 "WordPerfect Connection" (Christopher O'Malley)
42 "WordPerfect for the MAC Slated to Draw Converts" (Ives Brant)
43 "WordPerfect Macro Library Now Shipping" (Paula S. Stone)
44 "WriteNow 2.0: Quite Possibly, The Software Buy of the Century"
45 "Writer's Helper Stage II" (Larry Pogue)

PRODUCT LITERATURE AND DEMONSTRATIONS

1 Author's Apprentice (Think Network, Inc.)
2 Creative Writer (Think Network, Inc.)
3 docuFORUM --- Document Library: Management and Review System (Network Technologies International, Inc.)
4 EndNote (Niles and Associates)
5 Fullwrite Professional (Ashton-Tate)
6 Grammatik III (Reference Software)
7 Headliner (Business Software)
8 How Better Writing Can Make You a Happy Camper (Reference Software)
9 Macwrite (Claris)
10 Microref Quick Reference Guide to Leading PC Software Templates (Education Systems, Inc.)
11 More II (Symantec)
12 Mycro-Comp AdWriter (Mycro-Tek)
13 Network Building for Fiction and Content Areas (Think Network, Inc.)
14 Nota Bene (Dragonfly Software)
15 PC-Write Campus License Programs (Quicksoft)
16 Quality Software (WordPerfect Corporation)
17 Readability Program (Scandinavian PC Systems, Inc.)
18 Reference File (Reference Software)
19 Reference Set Library (Reference Software)
20 Right Writer (RightSoft, Inc.)
21 ShowScape Software (Lake Compuframes, Inc.)
22 Software Bridge: Convert Documents from One Word Processing Program to Another Quickly and Easily (TigerSoftware)
23 Sprint: The Professional Word Processor's Scholar Program and Campus Site License Program (Borland International)
24 Word Challenge (Think Network, Inc.)
25 WordBench: The Tool for People Who Write (Addison-Wesley Publishing Company)
26 WordPerfect for UNIX Systems (WordPerfect Corporation)
27 WP Interface (Southwind Software)
28 WriteNow 2.0 for the Macintosh (T/Maker Company)
29 Writer's Helper Stage II (Conduit --- The University of Iowa)

BOOKS AND MANUALS

1 *Using WordPerfect 5* (Charles O. Stewart III, Editor)   Carmel, Indiana: Que Corporation, 1988.

1) Preparing to Use WordPerfect
What is WordPerfect? --- What is WordPerfect 5? --- What Hardware Do You Need to Run WordPerfect? --- Starting WordPerfect on a Dual Floppy System --- Starting WordPerfect on a Hard Disk System --- Troubleshooting Problems with Starting WordPerfect --- Restarting WordPerfect --- Understanding the Editing Screen --- Using the Keyboard --- Understanding WordPerfect's Hidden Codes --- Using the Help Feature --- Taking the Tutorial --- Exiting WordPerfect

2) Creating a Document
Writing with a Word Processor --- Understanding Word Perfect's Built-in Settings --- Entering Text --- Inserting Blank Lines --- Moving the Cursor --- Inserting Text --- Using Typeover --- Using Both Document Windows --- Switching Between Document Windows --- Splitting the Screen --- Using Cancel (F1) --- Printing an Unsaved Document --- Saving a Document to Disk --- Clearing the Screen and Exiting WordPerfect --- Using WordPerfect to Develop Ideas --- Quick Start; Creating a Short Letter

3) Editing a Document
Retrieving a Document --- Revising and Editing Your Text --- Deleting Text --- Using the Undelete Command --- Inserting Text --- Overwriting Text --- Understanding Hidden Codes --- Adding Simple Text Enhancements --- Searching and Replacing --- Document Comments --- Quick Start: Editing a Document

4) Working with Blocks
Block Operations and Revision Strategies --- How Block Works --- Enhancing Text with Block Commands ---- Moving and Copying Text Between Documents --- Working with Rectangular Blocks --- Using the Block Command with Styles --- Quick Start: Working with Blocks

5) Formatting and Enhancing Text
Formatting Lines and Paragraphs --- Enhancing Text --- Using Document Preview --- Quick Start: Formatting and Enhancing Text

6) Formatting Pages and Designing Documents
Formatting Pages --- Designing Documents --- Using Other Format Options --- Checking Document Format with View Document --- Quick Start: Formatting a Document

7) Using the Speller and Thesaurus
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8) Printing and Print Options
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9) Printing with Laser Printers
Learning the Laser Printing Vocabulary --- Comparing LaserJet and PostScript Printers --- Surveying Improvements in WordPerfect 5 for Laser Printers --- Configuring WordPerfect to Work with Your Laser Printer --- Using WordPerfect with LaserJet Printers --- Getting the Most from Your PostScript Laser Printer --- Other Considerations

10) Using List Files

Discovering List Files --- Understanding the Heading --- Understanding the File Listing --- Using the List Files Menu --- Marking Files --- Using Word Search

11) Creating Macros

Understanding Types of Macros --- Creating Permanent Macros --- running Permanent Macros --- Creating Temporary Macros --- Running Temporary Macros --- Stopping Macros --- Replacing Macros --- Controlling How Your Macros Run --- Creating Some Useful Permanent Macros --- Managing Your Macro Files

12) Using Styles

Deciding to Use Styles --- Defining Open and Paired Styles --- Selecting a Style --- Editing a Style --- Changing Styles --- Deleting Styles from a Document --- Saving Styles with a Document --- Deleting a Style from the Style List --- Creating a style Library --- Reviewing Sample Style Libraries --- Using Macros with Styles --- Assessing Style Limitations

13) Using the Master Document Feature for Large Projects

Creating Master and Subdocuments --- Expanding the Master Document --- Creating a Table of Contents, List, Index, or Table of Authorities --- Printing the Master Document --- Condensing the Master Document --- Saving the Master Document --- Using Other Features in a Master Document --- Creating Subdocuments with Subdocuments --- Finding Other Uses for Master Documents

14) Integrating Text and Graphics

Choosing the Types of Box --- Choosing the Box Options --- Creating the Box --- Viewing the Document --- Editing a Box --- Importing Graphics --- Editing a Graphic Image --- Creating Graphic Lines --- Using Line Draw --- Assessing Hardware Limitations

15) Producing Publications

Realizing the Potential of Desktop Publishing --- Considering Design Guidelines --- Enhancing Your Publication --- Understanding Types of Graphics --- Using WordPerfect as a Desktop Publisher --- Creating a Newsletter --- Creating a Two-Fold Brochure --- Creating a Form --- Creating an Annual Report

EDUCATION

1 Use of PC Style Programs to Teach Business Communication (James Benjamin --- University of Toledo)

XV. OTHER

ARTICLES

1. "Apparel Industry and Imaging: CAD/CAM Is Here" (William Van De Bogart)
2. "Best of UNIX Software --- And the Winners Are ..." (Alan Winston)
3. "Curve Digitizer for CAD" (Larry Pogue)
4. "How to Buy Software"
5. "InfoWorld Products of the Year 1988"
6. "Literature Software" (Frank Madden)
7. "UNIX-Based Accounting Software" (Rich Bilancia)

PRODUCT LITERATURE AND DEMONSTRATIONS

1. Academic Software Library (Wisc-Ware)
2. Accounting System Requirements Chart
3. Affinity (SouthWind Software)
4. All These Ways to Map Your Data (MapInfo Corporation)
5. Answers to Your Software Purchasing Questions (ASAP Software Express, Inc)
6. Better Business Software for IBM and Apple Macintosh Personal Computers (Symantec)
7. Black's Law Dictionary (Reference Software)
8. Businessland Fall Software Catalog (Businessland)
9. Buyer's Guide to Discount Software, Peripherals, and Hardware (800-Software National Account Program)
10. CAL Software Project (Center for Applied Linguistics)
11. CAP --- Computer Aided Production Engineering and Manufacturing from ICAT (Innovative Computer Aided Technology, Inc.)
12. Computer-aided Facilities Engineering (Palette Systems, Inc.)
13. CUB --- Computer Aided Design and Drafting from ICAT (Innovative Computer Aided Technology, Inc.)
14. Current Contents Connection (ISI Software)
15. DES-3 --- Computer Aided True 3-D Geometric Modeling and Analysis (Innovative computer Aided Technology, Inc.)
16. Equations Made Easy with Expressionist 2.0 (Allan Bonadio Associates)
17. High Productivity Drafting and Design Software (Palette Systems, Inc.)
18. Home Computing Catalog
19. IQ: Intelligent Query Information Retrieval and Analysis Tool (Programmed Intelligence Corporation)
20. Just Enough Pascal (Symantec)
21. Macsyma: The Most Powerful Math Software in the World of Mainframes, Now on PCs (Symbolics)
22. Magic Mirror (Soft Logic Solutions)
23. MasterLink 3.1: Master the Micro Mainframe Environment (Performance Software, Inc.)

24   Microcomputer Software Catalog (CA Career Aids)
25   Mindviewer (Dexxa International)
26   Music Sampler (Interac Corporation)
27   Nutritionist III (N-Squared Computing)
28   OMNI (Interac Corporation)
29   Palette Drafting Module (Palette Systems, Inc.)
30   Personal Computer Products (CompuAdd)
31   Plug Into the Power (Dunamis, Inc.)
32   Resources Catalog (Educational Resources)
33   SCENARIO Educational Products (Techbyte, Inc.)
34   Seen (Conduit --- The University of Iowa)
35   Software for Education Catalog (IBM Corporation)
36   Software Guide (Computer Associates)
37   Steadman's Medical Dictionary (Reference Software)
38   T.E.S.S. --- The Educational Software Selector (EPIE Institute)
39   Technology Store Catalog (Radio Shack)
40   Tenth International High Tech Show for the Design and Construction Industry (A/E/C Systems '89)
41   The Clearinghouse Catalog of Academic Software (Iowa State University)
42   Think's Lightspeed C (Symantec)
43   Think's Lightspeed Pascal (Symantec)
44   Thinking of a MAC C Environment? Think of Think C (Symantec and Byte)
45   Trades Calculations: Math on the Shop Floor (Canadore College)
46   Training and Development (Britannica)
47   UNIX Applications You Need Most (SAS Institute, Inc.)
48   Utilities for the Macintosh (Symantec)
49   Visions of Discount Software (Egghead)
50   WISC-WARE (University of Wisconsin-Madison, Academic Computing Center)
51   Words of Wisdom (Wisdom Systems)
52   World Atlas on Diskette of CD ROM (Electromap, Inc.)
53   Xenix Solutions for Personal Computers (SCO --- The Santa Cruz Operation)

APPENDIX C:

DELIVERY SYSTEMS

VIRGINIA L. McBRIDE

APPENDIX C:
DELIVERY SYSTEMS
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37   "Microsoft Releases Update to Learning DOS Training Program"
38   "Name That Place: 'Atlas Explorer'" (Laura Johnson)
39   "New Memory Chip May Revolutionize Computers"
40   "New Study Calls for Increased Investments in Training"
41   "PC/Terminal Network Updates Teaching of English and Journalism"
42   "Power to Change the Writing Classroom" (Gallaudet ENFI Project)
43   "Resellers Grapple with Educational Software Market"
44   "Seeing is Believing" (Bob Yeager)
45   "Some Common Mistakes When Starting Your Fist CBT Initiative"
46   "Teacher Sweat = Student Learning" (Gallaudet ENFI Project)
47   "Teaching and Learning of English Revitalized Via Writing Activity Disks"
48   "Teaching Teachers to Use Computers as Writing Tools" (Andrea W. Herrmann)
49   "Technology Literacy Training --- The ACTT Method" (Harry C. DeBourcy)
50   "Testing CAI Courseware in Fifth- and Sixth-Grade Math" (Mike Goode)
51   "Tiny-Cost Site Licenses for Vocational Instruction and Cost-Effective Promotion"
52   "Training Magazine's Survey of Computers in Training"
53   "Trends in CBT"
54   "Try a New Writing Formula" (Frank Grazian)
55   "Two New Hypercard-Like Programs for IBM Microcomputers"
56   "View from the 'U'" (Susan Markle)
57   "View from the Crystal Ball" (Tom Cothran)
58   "View from the Marketplace" (Stan Cipkowski)
59   "Will You Ever Use Interactive Video?" (Judson Smith)
60   "You Now Have a Choice" (Gallaudet ENFI Project)

PRODUCT LITERATURE AND DEMONSTRATIONS

1   Academic Software Exchange: Low Cost Software for Higher Education (Kinko's)
2   Aldus Classroom Series Training Courseware (Aldus Corporation)
3   Basic Skills Courseware (Computer Systems Research, Inc.)
4   CCC MICROHOST Instructional System (Computer Curriculum Corporation)
5   COMPress Educational Software Catalog (COMPress)
6   Compu-English Program 1985 (Irvine Valley College)
7   Computer Based Training (Weingarten Publications)
8   Computer Based Training Programs (Videolearning Systems, Inc.)
9   Computer Books (Applied Resources, Inc.)
10   Computer Technology: Applications and Implications for Clinical Nursing Practice (American Rehabilitation Educational Network)
11   Computer-Based Training on WordPerfect (DSI Micro, Inc.)
12   Computerized Assessment of Teaching Systems (Intercollegial Consortium for Software Development)
13   Computerworks (Southern California Consortium)
14   Cyberlearn Version 1.0 for Apple (Cyberlearn, Inc.)
15   dBase Workout Tape (Data Based Advisor)
16   Educational Products Guide (Radio Shack Computer Centers --- Tandy Corporation)

17   Educational Software Evaluation Project (Modern Language Association)
18   Educational Software Reference Guide (Radio Shack Computer Centers)
19   English Grammar Skills for Apple (Peter Bien of Dartmouth College, COMPress)
20   EPOCH PC Software Programs (Spiritus, Inc.)
21   Experimental Mechanics of Composite Materials (ISC Educational Systems, Inc.)
22   Family Guide to Educational Software (L.F. Garlinghouse)
23   First Draft (Scholastic Software)
24   Hands-On Education (American Institute's DATACOMM GROUP)
25   Improving Your Writing: Obscurity (Priscilla Sears and Shelby Grantham of Dartmouth College, COMPress)
26   Improving Your Writing: Wordy, Common Forms of Wordiness (Priscilla Sears of Dartmouth College, COMPress)
27   Intelligent Query (Programmed Intelligence Corporation)
28   Interactive Courseware for Reading and Writing (Thinking Networks)
29   Interactive Mathematics (ISC Educational Systems, Inc.)
30   InterCom Workbook in Computer-Based Training Self-Study (InterCom, Incorporated)
31   Just Touch CBT System (Spiritus, Inc.)
32   Knowledge Center Courseware Library (Learncom)
33   LITterms: A Tutorial for Enjoying LITERATURE AND DEMONSTRATIONS (University of North Carolina)
34   Making CBT Happen (DSI Micro, Inc)
35   MECC Educational Computing Catalog (Minnesota Educational Computing Corporation)
36   MECC ETC. Emerging Technologies in the Classroom (Minnesota Educational Computing Corporation)
37   Metatron and Metatron 870 CBT Systems (Spiritus, Inc.)
38   P.A.C.E.: The Complete Writing Process on a Disk (Scholastic Software)
39   Performance Analyzer to Evaluate Knowledge of WordPerfect (DSI Micro, Inc.)
40   PLATO Computer-Based Training (Control Data)
41   Pre-Tech Training (Unified Technologies Center, Cuyahoga Community College)
42   Programs in Educational Computing (San Diego State University, Educational Technology Department)
43   Raptor Systems: The AUTHOR PLUS Color (DSI Micro, Inc.)
44   Raster Technology: Expert Series (DSI Micro, Inc.)
45   Robotics and Automation Literacy (Advanced Center for Technology Training)
46   Skills Bank II (Softwriters Development Corporation)
47   Softsell (Educational Computing Council of the International Communications Industries Association)
48   Total Training Solution (ValCom Learning Centers)
49   Training and Support Products for Personal Computers (American Training International)
50   Training Source: On-line Database and Catalog of Packaged Training Courses (DISCatolog)
51   Trainware: A CBT Series on Instructional Design" (DSI Micro, Inc. and Spectrum Training Corporation)
52   Wordbench (Soft-Kat)
53   Writing Lab Newsletter (National Writing Centers Association)

BOOKS AND MANUALS

1   *Computer-Assisted Instruction in Composition: Create Your Own* (Cynthia L. Selfe)   Urbana, Illinois: NCTE, 1986.
- Introduction
  Some History --- What Can Computers and CAI Do? --- What Can't Computers and CAI Do? --- Computers in the Writing Classroom --- Why Write Your Own CAI? --- Suggestions for Using the Book --- Overview of the Book --- Sources Cited
- Identifying Assumptions about Writing and Pedagogy
  What Are My Students' Writing Problems --- What Are My Assumptions about Writing and Composing --- What Are My Assumptions about Teaching Writing
- Getting Started on a CAI Project
  Choosing a Topic to Address in a CAI Lesson --- Adjusting the Focus of the CAI Lesson --- Completing a Task Analysis of the CAI Lesson --- Examining the Lesson in Light of Assumptions about Writing and Pedagogy --- Fitting the CAI Lesson in a Writing Program --- Creating a Lesson-Overview Flowchart for the CAI Instruction --- Beginning a Script of a CAI Lesson --- Notes of Caution
- Working with a Design Team
  How Does a Design Team Work? --- Who Should Lead the Design Team --- Who Should Be Included on the Design Team --- Choosing a Programmer --- Choosing an Educational Specialist --- Choosing a Marketing Specialist
- Making Pedagogical Decisions about a CAI Lesson
  Defining Instructional Objectives --- Identifying Possible Screen Types --- Considering Pedagogical Approaches in a CAI Lesson
- Integrating Response and Evaluation into a CAI Lesson
  Responding to Student Input --- Scripting Responses --- Response and Evaluation
- Thinking about Screen Displays
  Identifying Functional Areas --- Planning Functional Areas --- Identifying Special Effects in a CAI Lesson --- Planning Special Effects for a CAI Lesson
- Field Testing a CAI Lesson
  What Lesson Components Should Be Field Tested --- When Should Field Testing Take Place --- How Should Field Testing Be Undertaken? --- Who Should Be Involved in Field Testing
- Spreading the Word About CAI Software
  Demonstrate CAI Software Locally --- Talk about CAI at Professional Meetings --- Write about CAI Lessons in Professional Publications --- Explore the Possibility of Publishing CAI Software

2   *Teaching and Learning With Computers* (Barry Heermann)   San Francisco, California: Jossey-Bass Publishers, 1988.
- Computers for Teaching and Learning: Promises and Problems
- Enriching Instruction with Computers
  Deciding When and How to Use Computers in a Course --- The Computer as Teaching Machine: Enhancing Informational Skills --- The Computer as Simulator: Developing Problem-Solving and Integrative Skills --- The Computer as Resource: Fostering Investigative Skills --- The Computer as Tool: Improving Analytical Skills --- Acquiring and Implementing Educational Software
- Creating an Environment for Computer-Enriched Instruction
  Planning an Institutionwide Computer Environment --- Overcoming Resistance and Building Support for Computer Use in Instruction --- Organizing and Managing Academic Programs

--- New Technology and the Future of Teaching and Learning with Computers
■ Resources
Glossary of Common Computer Terms --- Sources of Information and Assistance for Academic Computing

3 *Teaching Writing with a Word Processor, Grades 7-13* (Dawn Rodrigues and Raymond J. Rodrigues) Urbana, Illinois: NCTE and ERIC, 1986.
■ Theory and Research
Teaching composition --- Research on Using Word Processing --- Some Interim Conclusions
■ Practice
Assumptions about Teaching Writing with Word Processors --- Part One: Preparing to Teach Writing with a Word Processor --- Part Two: Using New Techniques in the Word Processing Classroom

4 *Writing for the 21st Century: Computers and Research Writing* (William Wresch, Donald Patton, James Gifford)   New York, New York: McGraw-Hill Book Company, 1988.
■ Research Writing: The Problem, the Purpose, and the Process
A New Problem --- New Tools --- The Purpose of Research Writing --- The Undergraduate Research Paper --- The Research Writing Process
■ Research Situations
Types of Research Writing --- The Persuasive and Argumentative Essay
■ Gathering Information
Tools for Gathering Information --- Locating and Retrieving Information --- Recording Information
■ Analyzing and Interpreting Research Information
General Questioners --- Analysis of Authority --- Computer Analysis Tools
■ Writing the First Draft
Developing Your Ideas about a Subject --- Organizing Your Ideas
■ Revising
Revising for Coherence --- Revising for Clarity --- Revising for Sufficiency
■ Editing
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■ Presentation
Format Considerations --- Graphics --- Illustrations --- Documentation --- Abstracts --- Final Presentation
■ Appendices
Examples of Student Papers --- MLA and APA Documentation Formats --- Glossary of Computer Writing Terms

EDUCATION

1 As We May Teach: Some Problems with Computer-Supported Collaboration in the Writing Curriculum (Nancy Kaplan --- Cornell University)
2 Caverns Measureless to Man: The Prospects for Post-Typographic Literacy (Myron Tuman --- University of Alabama)
3 Computer-Based Learning: Issues and Strategies for Faculty Development (Ontario College of Applied Arts and Technology's Computer-Based Learning Project and IBM Canada)

4   Computers in Art Instruction (Frank Stanton and Larry Byers --- St. Louis Community College,Florissant Valley)
5   Computers in Writing Instruction (Dixie Lee Davis --- Genesee Community College; Gordon Taylor --- Yuba College; Peter Myers --- Seneca College of Applied Arts and Technology)
6   CONFER: A Prototype System for Knowledge-Based Prewriting (Major James Parlett --- Brooks Air Force Base)
7   Design and Implementation of a Computer-Supported Collaborative Writing Curriculum: Theory and Practice (David A. Kaufer --- Carnegie Mellon University)
8   Framework for Developing a Cognitively-Based Writing System (John Smith --- University of North Carolina, Computer Science Department)
9   Genre Approach to the Evaluation of Computer Writing (Ilana Snyder --- Monash University)
10   How to Integrate Software into the Curriculum (John Kemeny --- Chairman, True Basic, Inc.)
11   Writing, Technology, and the Activity of Teaching (Gail E. Hawisher --- Illinois State University)

II. ELECTRONIC MESSAGING

ARTICLES

181   "Videofax is a Blend of Two Technologies" (Tom Jenkins)
182   "Votan's 16 Channel Voice Management System"
183   "Voxmail Allows Users to Access Electronic Mail Via a Telephone" (Yvonne Lee)
184   "Westinghouse Opens One Stop Comm Shop" (Julia King, Karen Gullo)
185   "What to Consider in PC-FAX Systems" (G. Gordon Long)
186   "What's New in Voice Mail"
187   "Where PC-FAX Pays Off" (Christopher O'Malley)
188   "Who will Answer?" (Bruce Keppel)
189   "Wide Area Networks --- The Expanding World of Communications Technology" (Leslie Epstein and Associates)
190   "X.400 Sets the Stage for Worldwide E-Mail System" (John Stidd)
191   "X.400 Standardized as Interconnector of E-Mail" (James E. White)

PRODUCT LITERATURE AND DEMONSTRATIONS

1   ADR/eMail (Applied Data Research, Incorporated)
2   ADR/eMail - CallText Voice Gateway (Applied Data Research, Incorporated)
3   ADR/eMail - DISOSS Interface (Applied Data Research, Incorporated)
4   ADR/eMail --- Enhanced Communications Throughout Your Organization (Applied Data Research)
5   AT&T 800 Readyline (AT&T)
6   Bridge Modem (AT&T)
7   CFAX and CFAX/9600 Release 2.1 (The Complete PC)
8   CFAX/9600 Now Features Voice-Messaging, Modem Options) (The Complete PC)
9   Complete Answering Machine (The Complete PC)
10   Complete Communicator (The Complete PC)
11   Complete FAX (The Complete PC)
12   Complete FAX/9600 (The Complete PC)
13   Complete Modem/2400 (The Complete PC)
14   Facsimile and Image Communications Conference 1989 (CAP International)
15   FirstFAXts: A Report on the Facsimile Industry (Dataquest, A Dun and Bradstreet Corporation)
16   FO-700 Facsimile (Sharp Electronics Corporation)
17   GammaFAX Communications Professional (GammaLink Graphics Corporation)
18   Hello Direct --- a catalog of Telephone Accessories
19   How Telemail Speeds the Flow of Business Communications (GTE Telenet)
20   How to Use Telenet (GTE Telenet)
21   IBM Special Needs Exchange (IBM)
22   Line-One Automatic Line Switch (Extel Corporation)
23   Line-One FAX Protector (Extel Corporation)
24   Line-One FAX/Voice Switch (Extel Corporation)
25   McGraw-Hill Information Exchange --- MIX (McGraw-Hill)
26   Message Manager (TRT Telecommunications Corporation)
27   MIX (McGraw Hill)
28   PC eMail File Transfer (Applied Data Research, Incorporated)
29   PortaFax III (OfficeCom Inc.)
30   Proto.Call Board (TRT Telecommunications Corporation)
31   Source Electronic Mail (The Source Information Network)

32   Special Needs Exchange (IBM Corporation
33   Teleconference Reservations (ITS, Inc.)
34   Telemail Quick Reference Guide (GTE Telenet)
35   Telemail: The Instant Electronic Link) (GTE Telenet)
36   Telex Interface for HP3000 via Easynet (TRT Telecommunications Corporation)
37   TestBed 9600 (OBS Computer Services)
38   TransFAX V High-Speed Facsimile Transceiver (Trans-Lux Corporation)
39   Ultra Miniature Short Range Modem (Patton Electronics Company)
40   V.32 in a Compact 8-port Multiplexer (Data Race, Incorporated)
41   Voice-Too Modem (Optel Communications, Inc.)
42   Zoom HC 2400 Internal Modem (Zoom Telephonics, Incorporated)

BOOKS AND MANUALS

1   *Electronic Mailbox* (Ira Mayer)   Hasbrouck, New Jersey: Hayden Book Company, 1985.
   - What E-Mail Is All About
     What is Electronic Mail? --- Reaching the World from an Electronic Mailbox --- Security --- How Electronic Mail Can Save You Money --- Setting Up for E-Mail
   - The Information Utilities
     The Source --- Delphi --- CompuServe
   - The Public Access E-Mail Specialists
     MCI Mail --- Federal Express ZapMail --- Western Union EasyLink --- RCA Telextra
   - The Business-Oriented E-Mail Vendors
     ITT Dialcom --- General Electric Quick-Comm --- ADP Automail --- GTE Telenet Telemail and RCA Mail --- Infoplex
   - Voice Mails, LANs, and the Big Decision
     Voice Mail --- Local Area Networks --- Looking Ahead --- "But What Should I Buy?"
   - Appendices
     Further Reading --- Vendor Addresses --- A Nontechnical Glossary

EDUCATION

1   Evolution of Writing Communities (Bertram "Chip" Bruce --- BBN Systems and Technology)
2   Extending the Discussion: A Bulletin Board System for Integrating Informal Writing Into Classes (Bradley Hughes, Jack Ladinsky, Gregory Galica --- University of Wisconsin, Madison)

III. OPTICAL TECHNOLOGY

ARTICLES

1   "1500 Ford and Lincoln-Mercury Dealers Go Interactive" [Press release from Sony]
2   "Adeum Offers Programmable Level III Controller, Designs Museum Exhibit" (Dwight Sabourin)
3   "AEU, DLS Produce Training Disc in UK"
4   "AIT's Portable Hardware System: A Low-Cost Solution to the Delivery of Laser Videodisc Courseware"
5   "AL Converts Courseware to PAL"
6   "Alphatronix Introduces Optical Storage Units" (Jerry Lazar)
7   "Alphatronix Introduces Standard 5 1/4 Inch Erasable Optical Systems" (Patricia J. Pane)
8   "American Journal of Nursing Offers Results of Videodisc Survey"
9   "Another in LMSI's [Laser Magnetic Storage International] Camp"
10 "Apple Overlay Update: ISC Educational Systems" (Geoff Davis)
11 "Apple Tops CD ROM Announcements" (Stuart J. Johnston)
12 "Apple, Micro D, Egghead Push CD-ROM into Retail Market"
13 "Applications Provide CD-ROM References, Network Links, Glossary"
14 "Applied Acumen Debuts Disc-based Video Duplicator"
15 "AT&T Readies It Imaging Campaign" (John Moore)
16 "ATMs Go After Interactive Market" (Ron Marans)
17 "BIB CD and Videodisc Polish"
18 "Book Contains Insight on CD-I Technology"
19 "British Bureaucracy Develops Employee Appraisal"
20 "Buyer's Guide to CD-ROM Drives"
21 "Cambridgeshire College Offers Physics Disc"
22 "Case Study of a Student-Developed Educational Videodisc"
23 "CBIS CD ROM Server to Provide Storage for Its Network-OS LAN" (Robert Snowdon Jones)
24 "CD ROM and Its Descendants: An Introduction" (Les Cowan)
25 "CD ROM Conference Will Show Latest Multimedia Technologies" (Stuart J. Johnston, Mark Brownstein)
26 "CD ROM Developer's Lab Ships" (Stuart J. Johnston, Mark Brownstein)
27 "CD ROM Disc Library Offers Many Business Applications" (Mark Brownstein)
28 "CD ROM Explosion: Is It Real or Is It Vapor?"
29 "CD ROM Portable with Touch Screen Ships" (Jeff Angus)
30 "CD ROM System Allows In-House CD Protection" (Stuart J. Johnston)
31 "CD ROM System Designed for Software Distribution" (Mark Brownstein)
32 "CD-Based Encyclopedia Allows Many to Access"
33 "CD-ROM Based Index of Newspapers Debuts"
34 "CD-ROM Disc Contains Mac Product Listings, Reviews" (Mark Brownstein)
35 "CD-ROM Explosion: Is It Real or Vapor?"
36 "CD-ROM XA Partners Release Professional Spec"
37 "CD-ROM" (Chuck Botsford)
38 "CD-ROM-Based Index of Newspapers Debuts"
39 "Chemeketa Community College Adult Literacy Laser Videodiscs"

40   "Chinon to Show CD ROM Drive, 300-DPI Scanner at Comdex" (Mark Brownstein)
41   "Chip and Compiler Team Comprise New System"
42   "Commercial CD-ROM Titles"
43   "Commodore Introduces 80286 Bridgeboard"
44   "Compact-Disc Companies Test New Frontier"
45   "Company Ships 16 Specialized CD-ROM Titles" (Stuart J. Johnston)
46   "Compatibility Will Spur Demand for Optical Disks" (David J. Kalstron)
47   "Comprehensive CD-ROM Product Catalog in Print" (Jeff Angus)
48   "Conference Shows CD ROM Impact" (Mark Brownstein, Stuart J. Johnston)
49   "Cooperative Learning Using Laservision Videodisc Technology"
50   "Credit Union's Transition to Optical Storage and Retrieval" (Richard A. Comber, Jr.)
51   "Critical Mass and Interactive Videodisc" (Curt A. Knoppel and Stephen M. Edelson)
52   "Dallas JFK Museum Recreates History Via Videodisc" Conover Hunt)
53   "Databases on CD-ROM: A Tales of Two ERICs" (Robert K. Bane, Dennis F. Tanner)
54   "Dataware Plants CD-ROM Seeds" (Evan Schwartz)
55   "Delicate Balance" (Rockley L. Miller)
56   "Digipress Optical Discs Use Glass as a Medium" (Mark Brownstein)
57   "Digital Paper Sets New Storage Standard" (James A. Ackerley)
58   "Digital Video Interactive Rates 'Thumbs Up' for Filmmaking" (George Morrow)
59   "Disc o' Campaign: 'The 88 Vote'" (Russell Ito)
60   "Disk Wiz 1.3" (Sally J. Douglas)
61   "DTI INTROS Single-Board Multi-Media" (Peter Dikeman)
62   "DVI Development Heralds New Era of Computer Use" (Stuart J. Johnston)
63   "Dynabook Toolkit Announced" (Stuart J. Johnston, Mark Brownstein)
64   "E-ITV Interactive Videodisc Focus Group" (James A. Lippke)
65   "EARTH AND SCIENCE Course Melds Curriculum Content with Language Acquisition"
66   "Eastman House Installs Disc System" (Anne Miller)
67   "Enhanced Version of the LD-4200 Laserdisc Player"
68   "Erasable Optical Disc Drive for Mac Stores Up To 650MB" (Mark Brownstein)
69   "Erasable Optical Discs Challenge Market"
70   "Erasable Optical Media Is Closer to Being Real" (Terian Tyre)
71   "Erasable Optical No Hard Disk Replacement" (David Kalstrom)
72   "Erasable Optical No Market Threat" (Fred Meyer)
73   "Erasable Optical Products Finally Reach Industry" (Mike Ferelli)
74   "ETDS Offers 'Quick Disc' Program, Markets Courseware" (Jim Greiner)
75   "Expect Advances in Portable Storage Devices and Displays" (George Morrow)
76   "External Optical Drive Plays CD-ROM Discs"
77   "Fijitsu PC Includes Built-In CD ROM" (Stuart J. Johnston)
78   "FileNet Leads the Pack in Networking Optical Jukeboxes"
79   "Firm to Put Catalog on CD-ROM for Mac"
80   "FITNET Distributes Nursing Program" (Julie McAfooes)
81   "Fourth International Conference of CD-ROM" (Vicki Reeve, John Sayers)
82   "Frost and Sullivan Releases New Market Report"
83   "Futuremedia Strikes Distribution Deal with Viacomp"
84   "Generic Videodisc: Having Your Cake and Eating It Too?" (Ron Marans)
85   "Getting a Handle on Document Storage"
86   "Goddard Announces Video Image Medium" (Robert Snowdon Jones)
87   "Hard Disk VS. Erasable Optical Storage" (David Kalstrom)

88   "Hewlett-Packard Set to Introduce Two Optical Drives" (Bob Ponting)
89   "High Sierra on Apple"
90   "High-Tech Rx for Malpractice" (Ron Marans)
91   "Hitachi Optical Disc Subsystem Targets Mass Data Storage Needs" (Patricia J. Pane)
92   "How Magneto-Optical Disks Work"
93   "HP Optical Drives Debut"
94   "HP's CD ROM Interface Offers Search, Organization Features" (Bob Ponting)
95   "HyperCard: Apple's Illuminated Manuscript" (Stephen L. Michel)
96   "Hypertext Hyperdoc Features Multimedia Database Authoring" (Stuart J. Johnston, Mark
      Brownstein)
97   "IBM 'Not Ready;' Withdraws its CD-ROM Pack"
98   "IBM and Intel in DVI Pact" (David House, Doug DeLay)
99   "IBM and Microsoft to Develop PC Standard for Multimedia Systems" (Doug DeLay)
100   "IBM, Disney in Multimedia Pact?"
101   "IBM, Intel Co-developing DVI Multimedia Products" (Stuart J. Johnston)
102   "ICI Introduces Storage Medium" (Mark Brownstein)
103   "Imperial War Museum Puts WW II on Disc"
104   "Industry Emerges --- 3rd Microsoft CD-ROM Conference" (Roger Strukhoff)
105   "InfoWindow Courseware Helps Students Cope With Drugs"
106   "InfoWindow Delivers Interactive Video on a Touch Screen"
107   "Intel Debuts DVI Development Platform"
108   "Interactive Course Covers Math Skills"
109   "Interactive Fiction Is Put onto a Videodisc"
110   "Interactive Video Will Train Ford's Personnel"
111   "Interactive Video: The Standards Game" (Theodore Iacobuzio)
112   "Interactive Videodisc Courseware from MindBank: The Name Game"
113   "Interactive Videodisc Takes to the Air with CBITS" (Ted Olson)
114   "Is There a CD-ROM in Your Future?"
115   "IVD Course Gets to the Heart of Emergency Training"
116   "Knowledgeset Program Locates CD-ROM Graphics"
117   "Kodak Installs 140 InfoWindow Systems" (Lauren McClure)
118   "LaserDek 1000 Easy to Use" (Ives Brant)
119   "LaserDisc Corporation Completes Relocation to Carson" (Michael Stremfel)
120   "LaserFlex Becomes DVI Test Site" (Bruce Cameron)
121   "LCDA Changes to PLDC"
122   "Lessons Learned in Porting Videodisc Courseware" (James Whinfield)
123   "Lighting It Up in the Windy City --- CD-ROM" (Steve Smith, Roger Strukhoff)
124   "Lights, Camera, Reaction! The Interactive Videodisc: A Tool for Teaching Chemistry" (Loretta
      L Jones, Stanley G. Smith)
125   "Mac to Get Line of Optical, Magnetic Storage Systems" (Nick Arnett)
126   "Macworld of CD-ROM"
127   "Magnetic Storage Systems Keeping Pace Too" (David Radoff)
128   "Make a CD-ROM in 10 Minutes"
129   "Man Who Made an 'RS-232' for Optical Fiber Links" (Wallace Carlisle)
130   "Matsushita Shows Cavalcade of Technology"
131   "Matsushita, Philips, Sony Join in CD-I Drive Effort"
132   "Meridian Data, Optical Media Put CD Recording on the Desktop" (Allen Adkins)
133   "Microsoft Bookshelf: Out of the Race" (Janet M. Tiampo)

181   "Rasterops Bundles Videoworks II and Graphics Card"
182   "References on Demand"
183   "Report from the Exhibit Hall at the Microsoft CD-ROM Conference"
184   "Rewritable Optical: Here at Last" (Beth Jacques)
185   "Seeing is Deja Vu" (Mark Heyer)
186   "Sim City Could Teach U.S. Managers Independent Thinking" (Jeff Angus)
187   "Solutions to SCSI Incompatibility Emerge" (Mark Brownstein)
188   "Sony Announces CD-ROM XA Products"
189   "Sony Faces Uphill Drive" (Jeanne Brokaw Iida, Stephen Sabatini)
190   "Sony Intelligent Systems Group Introduces 'The Voyager Videostack'" [Press release from Sony]
191   "Sony to Ship Erasable Opticals, While VARs, Distributors, OEMs Wait" (T.C. Doyle)
192   "SONY VIEW TOOLS Graphics Utility Software Available" [Press release from Sony]
193   "Sourcebook Answers Questions on CD-ROM"
194   "Squeezing Archives onto Optical Disks"
195   "State Begins a Push to Put Videodiscs in Class"
196   "Storage Cornucopia" (Donald Luzzatto)
197   "Storage Dimensions Premiers MacinStor" (T.C. Doyle)
198   "Storage System Now Supports CD Jukebox"
199   "Study Confirms Better Learning Via Videodisc"
200   "Sweden to Promote Videodisc in Schools"
201   "Teacher Center's Educational 'Trail-Blazing' Efforts Spotlight Pioneer Laser Videodisc Players"
202   "Teacher-Developed IV Courseware: A Basic Approach" (James D. Lehman)
203   "Techno-Heaven Can Wait" (Gloria Gery)
204   "Teleconferencing Systems, Inc. Introduces HIRET Color System"
205   "Ten Uses of Videodisc in Public Schools"
206   "Three Firms Agree to Develop Extended CD ROM Format" (Stuart J. Johnston)
207   "Toe Tappin' Data Storage" (Steve Smith)
208   "Toshiba Announces CD ROM Drive That Runs with Mac or PC" (Mark Brownstein)
209   "Training with Interactive Video" (Judy L. Geisman, Dana Eggert)
210   "True Interactivity Down Under" (Robert Edgar)
211   "Under the CD-I Banner"
212   "Understanding Media, Hyper and Otherwise" (Jan Lewis)
213   "US West Tests Multimedia Info-to-Go Kiosks"
214   "UVC Unveils Real-Time Video Compression Technology" (Gil Davenport)
215   "Vendors Offer Large-Capacity Drives, WORM Device for Macs"
216   "Video Hits the Assembly Line: Computer Integrated Manufacturing Systems Give Factory Workers On-Site Video Training" (Lawrence Henry)
217   "Video Media Offers Award-Winning Programs"
218   "Videodisc and CD-ROM Applications Gain Momentum in Educational Market" (Doris Seitz --- Report of National Education Computing Conference in Dallas on June 15-17, 1988)
219   "Videodisc Applications Bring New Promise to Schools" (Perry Reeves, Steve Glyer)
220   "Videodisc Development in the Health Sciences" (Thomas Singarella)
221   "Videodisc Players: A Multi-Purpose Audiovisual Tool" (John Phillipo)
222   "Videodiscs: Training, Not Entertaining"
223   "Visage Introduces V:Link 1910, V:Exec 3.2"
224   "VTAE, Inc. Has the Right Answer: VTAE Interactive Modumath"
225   "Why the IVDT Market is Finally Hot"
226   "Wide Range of Users Eager to Plug Into CD-ROM" (Peggy Watt)

227 "Window Book: A View of Something New --- CD-ROM" (Janet M. Tiampo)
228 "WORM Disks Are Here to Stay" (Kathleen Yochum)
229 "Write-Once and Erasable Alternatives" (Mark Magel)
230 "Yamaha Electronics Introduces Write-Once CD System" (Kay Ishihara)

PRODUCT LITERATURE AND DEMONSTRATIONS

1 CD-ROM
- CD Master (Meridian Data, Inc.)
- CD Net (Meridian Data, Inc.)
- CD Publisher (Meridian Data, Inc.)
- CD ROM Databases (SilverPlatter Information, Inc.)
- CD ROM Expo (IDG Conference Management Group)
- CD ROM Personal Software Library (PC-SIG)
- CD ROM Strategies Workshop (CD ROM Strategies)
- CD ROM/WORM Hardware and Software (Compact Disk Products, Inc.)
- CD Server (Meridian Data)
- Clip Art 3-D CD-ROM (NEC)
- Encyclopedia of Associations Family on CD-ROM (Gale Research, Inc.)
- Half Height 5 1/4" CD ROM (Sony)
- Interactive Application of Videodisc and CD-ROM (The Institute for Graphic Communication)
- Laser Memory: Optical Storage with Internal Hard Drive Performance for MS-DOS, UNIX, VAX, MAC, and NETWARE (Pioneer Electronics)
- PD-ROM --- Public Domain Software and Shareware for the Macintosh (BMUG)
- Seeing is Believing: Fourth International Conference on CD ROM (Microsoft Corporation)
- Silver Platter CD-ROM Databases (SilverPlatter Information, Inc.)
- XM-3100 CD-ROM (Toshiba America, Inc.)
- XM-3200 Series 5 1/4 Inch CD ROM Cartridge Drives (Toshiba)

2 VIDEODISC
- 1988 Guide to Interactive Videodisc Products and Services (Instruction Delivery Systems)
- 1989 Catalog of Publications (Future Systems Inc. --- The Videodisc Monitor)
- 1989 Document Processing and Optical Disk Systems Conference (CAP International)
- Advanced Interactive Video Design (Knowledge Industry Publications)
- AGRICOLearn: An Interactive Videodisc Training Program on the Use of the AGRICOLA Online Database (The National Agricultural Library and The Center for Instructional Development and Evaluation)
- Andrew Wyeth: The Helga Pictures (Videodisc Publishing)
- Apollo 17 CAV Laserdisc (Optical Data Corporation)
- APX-4000 Optical Disk Subsystem (Maximum)
- Biotechnology: Learning the Techniques (University of Nebraska-Lincoln, Nebraska ETV Network, and Nebraska Videodisc Design/Production Group)
- Building an Interactive Solution (U.S. Productions, Inc.)
- Cell Biology Videodisc (Videodiscovery)
- CMX 6000 LaserDisc Based Audio and Video Editing System (Pioneer Electronics)
- Compact Master Disc Recorder 530 (Optical Disc Corporation)

- Computing Technology Videodisc (Sunbelt Technologies)
- Courseware in Math, Physics, and Chemistry (General Physics Corporation)
- Designing Interactive Computer/Video Materials (Michigan Technological University)
- DISConnection (Knowledge Industry Publications)
- Earth Science Videodisc System (Optical Data Corporation)
- Educational Videodisc Catalog (Videodiscovery)
- Educators' Handbook to Interactive Videodisc (Association for Educational Communications and Technology)
- EECODER Level IV Interactive Solution (EECO Incorporated)
- EECODER Still Frame Audio Decoder (Convergence Video Products --- EECO, Incorporated)
- Electronic Information Delivery System --- LV-2001/AT Interactive Video Training Workstation (Matrox Electronic Systems)
- Encounters CAV Laserdisc (Optical Data Corporation)
- Greetings from Earth CAV Laserdisc (Optical Data Corporation)
- Guide to Interactive Video Communication (C.A.V. Productions Incorporated)
- How to Produce and Edit for Videodisc (LaserVideo, Inc.)
- Infocenter Videodisc Kiosk (Marketdisc Corporation)
- InfoCourse: Principle of the Alphabet Literacy System --- A Literacy Program Using Interactive Videodisc Technology (IBM Corporation)
- InfoWindow Courseware Catalog (IBM Corporation)
- InfoWindow Presentation Editor (IBM Corporation)
- InfoWindow Presentation Interpreter (IBM Corporation
- InfoWindow System (IBM Corporation)
- Interactive Mathematics (ISC Educational Systems, Inc.)
- Interactive Media Center (Cornell University)
- Interactive Video Directory (Applied Video Technology
- Interactive Video Systems (Interac Corporation)
- Interactive Videodisc Catalog (Interactive Videodiscs)
- Interactive Videodisc Courseware (Health EduTech)
- Interactive Videodisc Science Instruction (Annenberg/CPB Project and GPN)
- Interactive Videodisc Systems (Wilson Learning)
- Laser Learning Communication Arts Center (Hoffman Educational Systems)
- Laser Magnetic Storage International (Philips and Control Data Joint Venture)
- Laserdek (Amdek Corporation)
- LaserDisc LaserVision System Guidebook (Pioneer Electronic Corporation)
- Laserview Display System (Apple Computer)
- LD-V2000 Laserdisc Player (Pioneer Electronics)
- LD-V3000 8-inch Laserdisc Player (Pioneer Electronics)
- LD-V4200 Industrial Laserdisc Player (Pioneer Electronics)
- LD-V6000 Laserdisc Player (Pioneer Electronics)
- LD-V6000 Series of Industrial Laserdisc Players (Pioneer Electronics)
- LD/VS 1 LaserDisc Video System (Pioneer Electronics)
- LDP 1200 Videodisc Player with Character Generator (Sony)
- LDP 1500 Videodisc Player (Sony)
- LDP 2000 Series of VideoDisc Players (Sony)
- Life Science Videodisc System (Optical Data Corporation)
- Living Textbook (Optical Data Corporation)

- Louvre Videodisc (Voyager Company)
- LV-200 Series Laser Videodisc System (TEAC Corporation, Information Products Division)
- MacAuthor (Edudisc, Inc.)
- MacMentor (Edudisc, Inc.)
- MacVideo (Edudisc, Inc.)
- Management Skill Development Series Interactive (Wilson Learning)
- Management Skill Inventory (Wilson Learning)
- Mars and Beyond CAV Laserdisc (Optical Data Corporation)
- Mastering Still Images for Videodisc (Image Premastering Services, Ltd.)
- Microsoft Programmer's Library (Microsoft)
- Multi-User Archival and Retrieval Systems (Microdynamics)
- Nebraska Interactive Videodisc Design/Production Group (Nebraska Interactive Video, Inc.)
- New Electronic Encyclopedia (Grolier)
- NEWS Network Station (Sony)
- Optical Build (Optical Publishing)
- Optical Convert (Optical Publishing)
- Optical Disk Utilities for Unix and Xenix (Sysnet, Incorporated)
- Optical Disks for Novell Lans (Corel Systems Corporation)
- Optical HSG Build (Optical Publishing)
- Optical Prep (Optical Publishing)
- Optical Tree (Optical Publishing)
- PCAT-300 Still Frame Audio Decoder (EECO Incorporated))
- PCAT-300 Still-Frame Audio and Digital Data Decoding) (EECO Incorporated)
- Physical Science Videodisc System (Optical Data Corporation)
- Pioneer DiscTopics (Pioneer Communications of America, Inc.)
- Presenter: A Videodisc Utility (MECC)
- Private Tutor --- EIDS Third Party Catalog (Matrox Electronic Systems)
- Private Tutor: Hybrid Videodisc Premastering Service (Matrox Electronic Systems, Ltd.)
- Producing and Editing for Videodiscs (Disctronics)
- Pulling Gs CAV Laserdisc (Optical Data Corporation)
- Raven Videodisc Controller (Infotronics, Inc.)
- ScriptMaker for Interactive Courseware Design (InterCom Incorporated)
- Shuttle Downlink CAV Laserdisc (Optical Data Corporation
- SilverPlatter Information System (SilverPlatter Information, Inc.)
- Situational Leadership: America's Most Influential Leadership Program (Leadership Studies, Inc.)
- Sony Intelligent Systems (Sony)
- Sony Video Workshops (Sony Institute of Applied Video Technology)
- Sony View System VIW-3015 and VIW 3020 (A-Vidd and Sony)
- Space Shuttle CAV Laserdisc (Optical Data Corporation)
- Still Frame Audio Postproduction Guide (EECO Incorporated)
- Study Guide II --- A Videodisc Utility
- Trades Calculations Level Three Interactive Videodisc (Canadore College)
- Video DiscWriter (MECC)
- Video Laserdisc Catalog (Sun Computers)
- Videodisc Monitor (The Videodisc Monitor)
- Videodisc Monitor Catalog of Products (Future Systems Inc.)
- Videodisc Recording System 610A (Optical Disc Corporation)

- VideoLessonWriter 42 (MECC)
- Videoworks II (Broderbund)
- Voyager Videostack (Voyager Company)
- Windows/On the World, GEOdisc U.S. Atlas (Geovision)
- World of Work Videodiscs (Tecnivision, Inc.)

3   OTHER
- FileNet Brings the Efficiency of Data Processing to Document-Image Processing
- Mavigraph Printer (Sony)
- Multi-User Archival and Retrieval System (MicroDynamics, Ltd.)
- NEWS Erasable Optical Disk System (Sony)
- ProMavica Still Video System (Sony)
- Raven Videodisc Controller (Infotronics, Inc.)
- Sony VIEWsystem (Sony)
- Still Video Floppy Disk (Kodak)

BOOKS AND MANUALS

1   *CD-I and Interactive Videodisc Technology* (Steve Lambert and Jane Sallis --- Editors) Indianapolis, Indiana: Howard W. Sams & Company, 1987.
- An Overview of the Interactive Market (Rockley L. Miller)
  Not a New Idea --- The Coming of Optical Media --- Interactive Markets --- The Future
- Parameters for the Design of Interactive Programs (David Hon)
  Interactive Communication --- The Human Component --- Hardware --- Memory Size --- Storage Parameters --- Speed --- Size and Cost --- A Caveat
- Interactive Design Strategies (Steve Holder and Rod Daynes)
  Some General Notes on Interactive Design --- Interactive Feedback Strategies --- Adding Audio and Motion --- Simulations --- Combining Interactions
- Level II Videodisc: Some Considerations for Programmers (Rick Kent, M.D.)
  Why Use Level II? Why Not? --- The Controlling Program --- Level II Disc Geography --- Beyond the Basics --- A Parting Comment
- A Survey of Level III Videodisc Delivery Systems (Richard Haukom and Eric Malone)
  Laser Videodisc PLayers --- Computers and Integrated Systems --- Control and Graphics Interfaces --- Authoring Languages and Systems --- Compressed Audio and Data --- Hybrid Controllers --- Networking --- Level III Applications --- Conclusion
- CD-I: The Medium of the Future (Larry D. Lowe)
  A General Discussion of the CD-I Standard --- A Technical Overview of the CD-I System --- Designing for CD-I --- CD-I Application Development Methodology --- Publishing the Application
- Controlling CD-I: Languages and Authoring Systems (Marc Canter, Erik Neumann, and Jay Fenton)
  Programming Languages: Inappropriate for the Task --- Authoring Languages: A Step in the Right Direction --- CD-I Authoring Systems: The Theory --- CD-I Authoring Systems: An Example --- The Future: Zorro and Zardoz --- In Closing
- Interactive Information Technologies and Their Potential in Education (Gabriel D. Ofiesh, Ed.D.)
  The Potential in Education --- High-Fidelity Interactivity --- Emphasis on Feedback --- New Developments --- New Opportunities

■ Appendices
   Glossary --- Resources
2 *Optical Publishing: CD ROM Volume Two* (Suzanne Ropiequet, John Einberger, Bill Zoellick ---
   Editors)   Redmond, Washington: Microsoft Press, 1987.
   ■ The CD ROM Environment
      Changing the Publishing Paradigm (Bill Zoellick) --- Information Delivery Systems (Leonard
      Laub) --- CD ROM Characteristics (John Einberger)
   ■ Text Preparation and Retrieval
      Preparing Text (Raymond Bridge, James Morin) --- Selecting an Approach to Document
      Retrieval (Bill Zoellick) --- Full-Text Retrieval and Indexing (Jerry Fand) --- Database
      Retrieval and Indexing (Gregory Colvin)
   ■ Image and Sound Preparation
      Displaying Images (Gene Apperson, Rick Doherty) --- Using Audio (Bryan Brewer)
   ■ Disc Production
      Disc Origination (Bill Zoellick) --- High Sierra Group Format Description (John Einberger,
      Bill Zoellick) --- Premastering and Mastering (Anne Armstrong)
   ■ Data Protection and Updating
      Data Protection (Joe Bremner) --- Updating CD ROM Databases (David Roux)
   ■ Case Studies
      The First CD ROM Publication (Brian Martin) --- A Clinical Medical INformation System
      on CD ROM (Marilyn G. Winokur, Leonard S. Rann, William Thornburg
   ■ Appendices
      Glossary --- Resources

EDUCATION

1 Comprehensive Overview of Laser Video Disc Systems and Applications in Education (Perry
   Reeves --- Western Regional Market Development Manager, Pioneer Communications of America;
   Ben Casados --- Vice President and Co-Founder, Optical Data Corporation; Steven Glyer ---
   Educational Specialist, SUN Computers)
   ■ Systems
      Basic Laserdisc Terminology --- Applications of CAV & CLV Format --- Features of the New
      Pioneer 4200 Laserdisc Player --- Samples of Discs Available Today --- Level I, II, and III
      --- Hypercard as a Multi-Media Driver --- Digitized Sound and Video
   ■ Applications
      Teaching with Laserdiscs --- Elementary and Secondary Science Curriculum Products --- The
      Cost Effectiveness of Utilizing Laserdisc Technology as an instructional tool --- Appleworks
      and Laserdisc Classroom Applications
   ■ Uses of Videodisc in Public Education
      Archive --- For Control of Demonstrations --- For Illustration of Lecture Material --- As a
      Dynamic Textbook for Student Study and Review --- For Desktop Publishing --- As a Tool
      for Creating Videotapes --- By Teachers to Give Tests --- For Interactive Instruction --- By
      Students for Student Projects --- To Introduce Students to Programming

2   Interactive Video 1: Producing Videodiscs (John Ittleson --- California State University, Chico; Bruce Reynolds, Sony Institute of Applied Technology)

■   An intensive overview studying every aspect of interactive video production. GOAL: students will gain confidence to duplicate the interactive process at their place of work using experience gained during the course. Class instruction is presented by a team of specialists and followed by individual hands-on assignments in which students perform the tasks of each production phase. Topics include: design and pre-production, premastering, authoring, and delivery. Work is performed in teams using state-of-the-art Sony Intelligent Systems equipment and software. Students design, product and author an interactive videodisc production, presented at the end of the course for evaluation.

■   Manufacturers' Information

How to Produce and Edit for Videodisc, LaserVideo --- Interactive Scotch Laser Videodisc, 3M --- Interac Corporation, Media in Touch With Tomorrow --- Sony View System Courseware and Authoring Software --- An Introduction to Touch Technology, Carroll Touch --- Designing Your Application Program, Carrol Touch --- Whitney Educational Services

■   Assignments

"Envisioning the Problem" --- "Creating Text for the Class Videodisc" --- "Using CDS/Genesis for the Class Roster" --- "Demon Dialer Problem Statement" --- "Demon Dialer Decision Needs" --- "Videodisc Geography and Demon Dialer Script" --- "Random Access Audio Segments" --- "Detailed Design Document for Demon Dialer"

■   Readings

"The Development of Computer Assisted Instruction" --- "Videodisc and Microcomputers Applications and software" --- "General Approach to the Development of an Interactive Video Project" --- "Toward a Taxonomy of INteractive Design Strategies" --- Five Basic Patterns to Use in INteractive Flow Charts" --- "Space INvaders, Video Discs and the 'Bench Connection'" --- A Pragmatic Introduction to Courseware Design" --- Hierarchy of Learning" --- "Videodisc Production: A Cost Comparison" --- "Ten Strategic Commandments for Videodisc" --- "Ten More"

■   Production Overview

Instructional Design: The Five Elements --- Instructional Design: The Process --- Envisioning the Problem: The Idea Stage --- What is the TV Signal? --- What is the Video Signal? --- Color Framing --- Interactive Videodisc Development and Management --- Interactive Videodisc Graphics --- LaserVision System --- Summary of Optical Videodisc --- Features of Optical Videodisc --- Applications of Optical Videodisc System --- Applications in the Educational Field --- Applications for Videodiscs as Information Recording Media --- Optical Videodisc Structure --- Videodisc Standards --- CAV and CLV Discs --- Detailed Design Documentation --- Production and Post-production of the Master Videotape --- Videodisc Production --- Premastering --- Standards for the Edit Master --- Recording of Videodiscs --- Overview of the SFA (Still-Frame Audio) System --- What is Still-Frame Audio --- Instruction to Producers for Sony Still-Frame Audio Encoding --- CDS II/Genesis Authoring Language for the Sony VIEW System --- Field Testing --- CDL: A Real World Authoring Prototype --- Cost Factors in Interactive Production --- Cost Estimation --- Integration with Training

■   Hardware and Software Descriptions

Sony View System --- Sony Videodisc Players --- Sony Monitors and Projectors --- Carroll Touch Smart-Frame --- LaserVideo LaserMaster Videodiscs --- Sony Software for SMC-2000 Microcomputer --- Sony CDS II/Genesis Authoring System --- CDS II/Genesis Menus --- Sony Graphics Creation Software Programs --- Sony Picture Drawer Menus

■ Other
International Interactive Communications Society --- The Society for Applied Learning Technology --- Publications --- Educational Technology Publications

3 Interactive Video 2: Program Design (Brockenbrough Allen --- California State University, San Diego; Bruce Reynolds --- Sony Institute of Applied Technology)

■ An advanced course providing the necessary techniques used to create and manage successful interactive video. GOAL: in a step-by-step approach, students "analyze the interactive environment and relative communication needs based upon training education, and information systems. Students review numerous design techniques and their value to interactive applications."

■ Assignments
Groups were "assigned problems that explored the various methodologies used to direct the development of interactive courseware and point-of-purchase displays. Each assignment was examined in detail "to reveal perspective treatments of content and structure in interactive courseware" and was used "to illustrate management of the diverse resources required to create sophisticated interactive programs."

■ Agenda
Design management and team organization --- Interactive environment, audience utilization --- Analysis of design methodologies, content and structure --- Instructional and informational design strategies --- Sequencing the order of a presentation

■ Content --- Principles and Methods of Instructional Disc Design
1) Introduction
Review of Interactive Capabilities: The Tube versus The Book --- Learner Control versus System Control
2) Design Issues
IVD As a Multi-Media System --- Permutations and Combinations
3) Algorithm Design
Limitations on Human Processing --- Communications Strategy as a Stream of Information Chunks --- Communication Strategy as a Set of Interactions
4) Message Design
Messages Delivered through Various Media Systems --- Single Message Combines Elements from Various Subsystems --- Separate Elements of a Message to be Added, Subtracted, Varied
5) Purpose of Interactive Video
Information? --- Instruction? --- Instrumental (Tool Oriented)?
6) Frame-Based Instructions Versus Simulations
Advantages of Frame-Based Instruction --- Limitations of Frame-Based Instruction --- What's in a Frame? Problems with the Unit of Analysis and Synthesis
7) Mastery-Based Learning Systems Versus Other Contexts for Learning
Instruction --- Information --- Instruments (tools) --- Instilled Values
8) Workshop Skills Mastered
Describe a systematic approach for instructional design --- Recognize clearly stated learning outcomes --- Describe various types of learning --- Describe how learning outcomes can be sequenced --- Construct instructional strategies --- Analyze strategies contained in existing tapes --- Describe applications and advantages of authoring systems ---Represent strategies as flowcharts --- Construct instructional messages --- Represent instructional messages as storyboard frames --- Describe how project plans are developed

9) Developing Instructional Design Systems
   1. Instructional Systems Development (ISD Model): Analysis of front-end issues, learner needs, subject matter, goals, project management --- Design: Instructional objectives, Instructional analysis, Instructional strategies, Test items, Planning devices --- Development: Video production, Computer programming, Debugging --- Implementation: Integration with learning environment, Training for staff, Evaluation
   2. The Instructional Development Institute Model
   3. The Design Integrity Model
10) Instructional Outcomes
    Overview of Instructional Disc Design: Learner as information processor, Subject matter analysis, Specification of learning outcomes (Describing learning outcomes, Sequencing prerequisites)
11) Outcomes and Strategies
    Types of Content: Facts, Concepts, Procedures, Rules, Principles --- Relating Types of Content to Semantic Networks --- Disadvantage of Using Objectives as Outcome Measures --- Typical Use-Level Learning: Fact learning, Concept learning, Rule learning, Procedure learning, Principle learning --- Remember, Use, and Find Levels --- Integrating Procedural and Declarative Knowledge
12) Instructional Strategies
    Typical Remember-Level Strategy: Motivate learner, Describe learning outcome, Present facts or generalities, Make information meaningful to learner, provide for practice in recalling information from memory, Arrange for feedback on correctness of recalled information --- Typical Use-Level Strategy: Motivate learner, Describe learning outcome, Present generality, Show examples, Provide helps, Provide for practice with examples, Arrange for feedback --- Find Level Outcome: Discovering/Creating Ideas and Methods

■ Content --- Design Documentation
   1) Instructional Strategies and Messages
      Designing Instructional Messages --- Component-Based Instructional Design
   2) Interactivating Linear Video
      Interaction: Interactive vs Linear Video --- Practice Analyzing Existing Video --- Improving Existing Strategies
   3) Flowcharting
      Planning Instructional Algorithms and Instructional Messages --- Functions of Flowchart: Specification of program logic, Designation of media subsystems, Development of instructional strategy --- Flowchart Symbols --- Information Represented in Flowcharts: Media designators, Message designators, Instructional strategy components, Content notes, Videodisc frame numbers
   4) Storyboarding
      Functions of Storyboards --- Storyboard Information: Cross-referencing storyboards to flowcharts, Storyboard form
   5) Planning Algothrims and Messages
      Systematic Approach: Analyze learner needs, Analyze subject matter content, State instructional outcomes, Develop sample test item(s), Develop instructional strategy, Write narrative description of algothrim, Lay out flowchart to represent algorithm, Develop storyboard pages

- Content --- Designing an Interactive Video Program
  1) Analyze Learner Needs and Subject Matter Content
  2) Specify Outcomes, Measures, and Strategies
  3) Develop Design Documentation: Rough Treatment
     Write Narrative Description of Algorithm and Messages
  4) Develop Design Documentation: Flowchart
  5) Develop Design Documentation: Storyboards
     Develop Storyboard Pages and Message Detail
- Readings
  1) "Training Interactive Videodisc Designers" (Brockenbrough S. Allen and Debra M. Erikson)
  2) "EDTEC 653 Interactive Videodisc Instruction" (Brockenbrough S. Allen and David M. Sharpe)
  3) "Theoretical Framework for Interactivating Linear Video" (Brockenbrough S. Allen)
  4) "Designing and Classifying Instructional Strategies/Objectives: Review and Expansion" (Brockenbrough S. Allen)
- Product Review
  1) DISCourse from Edudisc: Finding Your Way to a Negotiated Agreement
     DEMO Version: Program Structure --- Menu-Driven Simulation --- Design and Development --- Design Documentation --- Running DISCourse --- Setting Up Your Interactive Videodisc System --- Overview and Editing Suggestions --- Sample Flowcharts --- Sample Storyboards --- course Printout --- Clip file Printout --- PERT Chart --- Reference Articles
  2) World of Sandwiches Manager Training
  3) Taming Tomatoes: An Interactive Video Lesson for Restaurant Workers (Brockenborough S. Allen and California State University, San Diego)
     Lesson Descriptions: Description of learner, Goals and Objectives, Subject matter description, Narrative description, Instructional analysis, Production equipment, Disc layout --- Flowcharts --- Appendices: Storyboards, Computer program code

4 Interactive Video 3: Authoring (Roger E. Turner --- Interactive Technologies Corporation; Bruce Reynolds --- Sony Institute for Applied Learning)
- "In-depth study of 'control programs' in interactive video." GOALS: Students learn the "programming aspect of production developed from detailed design documents."
- Assignments
  1) Work with both high-level menu-driven and low-level command-driven authoring on Sony VIEW using CDS II/Genesis Authoring Language
  2) Review interactive courseware process
  3) Practice in operating authoring workstations
  4) Problem solving for specific applications
- Content
  1) Sony View System
     Hardware and System Notes
  2) Courseware Design System (CDS)
     CDS/Genesis Overview --- Main Menu Commands --- Lesson Filing Operations Commands --- Low-Level Authoring Operations Commands --- Low-Level Editor Commands --- Command Listing --- Command Specifiers --- System and User Variables --- System Functions --- Low-Level System Operations Scenario --- Files Accessed by CDS --- Disk Storage Requirements --- Memory Requirements

3)   CDS Editor
     Beginning Lessons --- Text Display --- Graphic Display --- Video Display --- Input
     Processing --- Datasets --- High-Level Authoring Commands
4)   The Genesis Authoring Environment
     Overview --- Notes on Genesis --- High-Level System Operational Scenario --- Lesson
     Structure Editor Commands --- Set-Up Options Commands ---   Element Editor
     Commands: DIS, Edit text and graphics option, INP, VSF, VMS, SFA, VID, EXT
5)   Genesis Authoring Environment: Features
     Beginning Lesson --- Text Display --- Graphic Display --- Video Display --- Input
     Processing --- Creating a Video Preview Editor --- Creating a Randomly-Generated
     Point-of-Purchase Display
6)   CDS and Genesis Utilities
     Charset Editor (CSEDIT) --- Shape Set Editor (SEDIT) --- Lesson Structure Printer
     (LSP) --- CDS/Utilities
7)   CDS Commands, Variables and Functions
5   Interactive Videodisc: How Does It Happen (Cindy Elliott --- Manager Product Development and
    Distribution, Miami-Dade Community College; Barry Mirkin --- Director Instructional Video
    Division, Wisconsin VTAE Foundation)
6   Is There a Disc in Your Future? (Ronald Nugent --- Group Director Nebraska Videodisc Group,
    KUON-TV University of Nebraska-Lincoln)

IV. PROJECTION SYSTEMS

ARTICLES

1   "Image Projector Supports EGA Displays" (Mark Brownstein)
2   "Kodak and Epson in Court"
3   "Kodak Shipping Portable Color LCD Video Projector"
4   "More-Portable Presentations"

PRODUCT LITERATURE AND DEMONSTRATIONS

1   DataSmart Projectors (NEC Home Electronics)
2   Projecting Your Future (JOS Projection Systems)
3   Selecting a Large Screen Video is No Small Task (GE Projection Display Products)

V. TELECOMMUNICATIONS NETWORKS AND OFFICE AUTOMATION

ARTICLES

1   "IBM Links Data Voice" (Karen Gullo and Stephen Sabatini)
2   "Notes from the Hinterlands: Why Stop at Companywide Networks When We Can Shoot for Nationwide or Worldwide Networks?" (Louise Kohl)
3   "Partners in Technology: The Union of PBXs and Computers" (Saroja Girishankar)

PRODUCT LITERATURE AND DEMONSTRATIONS

1   BreadNet (Unison Telecommunications Service)
2   Image Networking (GEC Plessey Telecommunications)
3   Link Systems ---Video Networking System for Your Computer Lab (Applied Computer Systems, Incorporated)
4   Link Systems Magic Pointer (Applied Computer Systems, Incorporated)

BOOKS AND MANUALS

1   *Innovative Management Using Telecommunications: A Guide to Opportunities, Strategies, and Applications* (Herbert S. Dordick and Frederick Williams)   New York, New York: John Wiley and Sons, 1986.
■   New Opportunities for Innovative Executives
     Put the Telecommunications Revolution to Work for You --- An Executive Tour of the New Telecommunications --- Management Innovations Through telecommunications
■   New Telecommunications for Managing Better
     The Intelligent Telephone --- The Voice/Data PBX --- Long Distance Networks --- Personal Computer Communications --- Local Area Networks --- Mobile Phones and Paging: Transforming Travel Time to Productive Time --- Facsimile Transmission
■   New Services and Applications
     Telebanking --- Telesearching (Databases) --- Telemailing --- Teleconferencing --- Telecommuting --- Telemarketing --- Teletraining
■   Getting Your Edge on the Future
     Six Steps to Better Management with the New Telecommunications --- References --- Glossary --- Appendix A: A Checklist for Planning New Telecommunications --- Appendix B: Suggestions for Managing the Use of Video Display Terminals

2   *Data Communications for Business* (Gerald A Silver and Myrna L. Silver)   Boston, Massachusetts:
Boyd & Fraser Publishing Company, 1987,

■   Introduction
Introduction to Data Communications: Increasing usage of data communications, The
domains of telecommunications, The evolution of information transmission, The need to study
data communications, Some important definitions, Demands for data communications, Typical
data communications applications, Key terms --- Evolution of Data Communications: The
beginnings, Enter electronics, The growth of the telecommunications industry, The
Carterphone decision, The impact of personal computers, The future, Key terms

■   Data Communications Hardware
Communications Fundamentals: The Basic Communications Model, Analog and digital
communications, Transmission rate, Communications channels, The basic telephone system,
Private branch exchanges, Teleprocessing, Computer fundamentals, Computer systems, Key
terms --- Data Communications Hardware: Voice transmission equipment, Data transmission
equipment, Microcomputer hardware, Key terms

■   Data Communications Software
Data Transmission Codes and Protocols: Information codes, Error detection schemes,
Protocols and handshakes, The Open Systems Interconnection model, Key terms ---
Communications Software Packages: Mainframe packages, Front-end processors, Front-end
software, Microcomputer communications packages, Smartcom II, Mite, Crosstalk XVI, Other
microcomputer communications packages, Remote bulletin boards, Key terms ---
Fundamentals of Communications Channels: The frequency spectrum, Evaluating transmission
channels, Hybrid circuits, Serial and parallel transmission of data, Transmission Modes, Data
encoding, Modulation, Multiplexing principles, Data concentrators, Key terms

■   Data Communications Facilities
Modulator/Demodulators (Modems): Modems, Types of telephone lines, Data access
arrangements, Universal asynchronous receiver/transmitter, Industry standard modem
designations, Modem features and design, Modem hardware, 300 bps modems, 1200 bps
modems, 300/1200 bps modems, 2400 bps modems, 4800 bps modems, 9600 bps modems, Key
terms --- Data Communications Media: The communications link, Hard-wire circuits, Radio
circuits, Microwave relay systems, Satellite transmissions, Fiberoptic transmission, Laser light
transmission, Key terms --- Local Area Networks (LANs): The LAN environment, Distributed
data processing, Media, Media bandwidth, Basic components of a local area network, Example
of local area network in use, Network topology, Protocol standards, Message collision, Carrier
sense multiple access/ collision detection, Token-passing access, Gateway functions, Key terms
--- Value Added Networks (VANs): The changing network environment, Networks defined,
Packet-switching concepts, Public networks, Private networks, Key terms

■   Data Communications Systems
Planning Data Communications Systems: Need for planning, The telecommunications
department, Overview of systems analysis, Preliminary study and planning, Communications
feasibility study, Key terms --- Analyzing Communications Systems: Systems analysis,
Distortions in analyzing a system, Key terms --- Designing Communications Systems:
Designing the system, Use of consultants, Computers in systems design, Steps in a new
design, Data security and systems integrity, Systems documentation, Key terms ---
Implementing Communications Systems: Lease versus buy decision, Hardware and software
selection, Vendor selection, The pilot installation, Overseeing the installation of the new
system, Evaluations and Follow-up, Preparation of final documentation, Systems management
and control, Key terms

- Applied Systems in Action
  Telecommunications Applications: Personal computers with communications systems, Computerized telephones with call accounting, Electronic mail system, Facsimile transmission system, Teleconferencing network, Local area network, Integrated voice and data network, Electronic banking system, Distributed data processing system, Value added network, Key terms
- Appendices
  ASCII Code --- EBCDID Code --- RS-232-D Standard --- Glossary

3 *Introduction to Telecommunications: The Business Perspective* (Housel Darden) Cincinnati, Ohio: South-Western Publishing, 1988.

- Historical Issues: Past and Present
  Before Telephone --- Postal and Telegraph Services --- After Telephone --- Major Technological Breakthroughs --- Radio Communications --- Regulating Telecommunications
- Basic Telecommunications Concepts
  Dimension 1, Technology --- Dimension 2, Applications --- Dimension 3, Fundamental System Components
- Terminal Equipment
  Voice --- Data --- Image --- Text --- Hybrids
- Network Services
  Fundamental Concepts --- Network: Provisioning and Control --- Network Topologies --- Network Trade-offs --- Universal Network
- Business Concerns
  Fundamental Concepts --- Management Issues --- Procurement Strategies --- Accounting for Telecommunications Services --- Security --- Market Segmentation
- Telecommunications Regulations and Policies
  Fundamental Concepts --- Landmark Regulatory/Policy Decisions --- Federal Regulation --- State Regulation --- Suppliers: Influence on Regulation and Policy --- User Influences on Regulation and Policy --- Difficulties in Regulating New Services --- Effects on Deregulation
- New Applications and Services
  Voice Applications --- Data Applications --- Image Applications --- Text Applications --- Hybrid Applications --- Lessons to be Learned
- Social and Organizational Impacts
  Fundamental Concepts --- User Expectations for Quality --- Organizational Impacts --- Social Impacts of Automation --- User Resistance --- Societal Impacts --- Opportunities in Telecommunications --- International Impacts of Change
- Future of Telecommunications
  Short-Term Changes --- Long-Term Trends --- International Trends --- Human Communication
- GLOSSARY

4 *Information Technology: The Trillion Dollar Opportunity* (Harvey L. Poppel and Bernard Goldstein) New York, New York: McGraw-Hill Book Company, 1987.

- Infotrends: Why IT's Happening
  The Five Infotrends: Go for IT: Content, Interoperability, Disintermediation, Globalization, Convergence --- Content: The Substance of IT: Knowledge work: What's in IT for me?, Home: Can't get away from IT all --- Interoperability: Making IT Happen: The IT-integrated factory, Standardizing IT --- Disintermediation: IT Power: Connecting to IT, Paying for IT now --- Globalization: Thinking the World of IT: North American and Japan: Racing for IT, Europe: Lagging IT --- Convergence: Homing in on IT: IT Grid, Getting IT on

■ Clusters: The Winners and Losers of IT
Communications Services: Going IT Alone: Surviving the aftershocks of divestiture, Five strategic challenges --- Information Services: Getting with IT: High-tech IMS market evolution, IMS competitive structure, Critical success factors --- Entertainment Services: For the Fun of IT: Segmenting the market, Video performance media, traditional broadcasting, Cable TV, Participative video media, Segmenting in the changing video marketplace --- Consumer Electronics: Home Is Where IT's At: Infotainment: Is IT there?, Home computers: Proving IT, Playstations: Having your cake and eating IT --- Office Equipment: IT's Wonderful, IT's Marvelous, But.....: Lessons learned, Roadblocks, What can user do about IT?, IT's urgent, What can IT suppliers do? --- Business Operations Equipment: Embedding IT: Getting to the Heart of IT, Network telecommunications suppliers: Getting IT out there, Industry-specific marketing segmentations: Taking IT apart

■ Succeeding at IT
Measuring IT: Shareholder rewards, Stakeholder perceptions, Perceptions versus performance, Success attributes --- Doing IT Right: The Strategic Management Challenge: Managing IT, Different views of IT --- Humanizing IT: The People-Culture Challenge: On top of IT, What is in IT for the rest of them? --- What's IT All About: The Product Quality and Technology Challenge: Wanting IT, Innovating IT --- Working IT IN: The Marketing and Sales Challenge: Analyzing IT, Getting more out of IT

5   *Office Automation: Concepts, Technologies and Issues* (R. A. Hirschheim)   Menlo Park, California: Addison-Wesley Publishing Company, 1985.

■ Appendices
Storage Technologies: Cassettes, Floppy disks, Winchester disks, Bubble memories, Optical media/video disks --- Telecommunications Networks: Voice communications, Data communication, Integrated service digital networks (ISDNs) --- Software: Software applications

■ Office Automation Technologies
Input Technologies: Electronic typewriters, Portables text entry devices, Handwriting capture devices, Character recognition techniques, Multifunction intelligent workstations, Dictation devices, Office graphics, Voice/Speech input --- Processing Technologies: Word processors, Personal computers --- Distribution Technologies: Electronic mail, Telex and teletext, Facsimile, Videotex, Specialized databases, Audio- and video-conferencing, Voice store and forward, Private automatic branch exchanges (PABX), Local area networks --- Output Technologies: Printers, Computer output microfilm, Copiers and intelligent copiers, Photocomposition --- Office Automation Architectures/Approaches: Office automation architectures, Comparison

■ Planning and Implementation Issues
Planning for Office Automation: Stages of growth of office automation, Information technology approaches, A composite theory of office automation growth in organizations, Setting objectives and analyzing constraints, Responsibility, Levels of planning, The process of planning, Other planning issues --- Implementing Office Automation: Socio-technical systems, A participative approach to implementation, Additional implementation considerations, Ergonomic considerations, Checklist of key questions

■ The Office
An Introduction to Office Automation: Prologue, Introductions, History of office automation --- The Office Automation Explosion: Reasons for the growth in office automations, Office automation benefits --- Understanding the Office: History of the office, Types of offices, Nature of the office, Views of the office

6   *Plugging In: The Microcomputerist's Guide to Telecommunications* (Sasha Lewis)   Radnor, Pennsylvania: Chilton Book Company, 1984.

- ■ As Near As Your Phone
  Stranger in a Strange Place --- Solving Medical Mysteries --- A Growing Community --- Welcome On Line! --- How to Use this Book
- ■ Networks from Inside Out
  George Boole's Algebra of the Mind --- Converting Volts to Bits to Data --- Communicating Over Long Distance --- From Computer to Outside Universe --- Protocols for Communication --- Where Does the Data Begin --- Talking to the Non-Digital World --- Which Way Are You Talking --- Different Bell Standards --- Common Modem Standards --- Packet Switching
- ■ Evaluating and Buying Hardware
  Terminal Drawbacks --- What to Look for When You Buy: Basic hardware building blocks, Computers that have everything, Keyboard features, Interfaces, Connections and cables, Baud rates, Communications standards, Duplexing: full/half/both?, Answer/originate/both/more?, Direct or acoustic coupling, Touch tone or pulse, Power sources, Surge and noise and interference suppressors, FCC standards, Automatic modes and luxurious modems
- ■ Evaluating and Buying Software
  Program Types --- Features to Evaluate: Automatic dial and sign on, speed and other troubling specifications, Capture and Download Functions, Special protocols, Print buffers, Upload functions, Electronic mail, Remote control, translation tables, Breaking, Voice calling --- Special Programs --- Backups, Pirates, and Updates --- Documentation --- Ease of Use
- ■ Hardware and Software Checklists
  Computer or Terminal --- Interfaces --- Modems --- Software: Compatibility, technical flexibility, File transfer facilities, User support
- ■ Dial-A-World
  Time-Sharing Services --- Electronic Data Bases --- Consumer and Specialized On-Line Services --- Information Utilities --- Mixed-Bag Services --- Accessing Services: Fee structures, Free networks
- ■ An On-Line Sample
  Comp-U-Store --- Electronic Banking --- Abstracting Service: Management Contents --- Numeric Databases --- Delphi to Source: Iterutility Mail
- ■ Information Utilities
  Electronic Mail --- Interservice Mail --- Mail to Non-Subscribers --- Electronic Conferencing --- Bulletin Boards, Books, and Clubs --- On-Line Newswires --- Newspapers On-Line --- Business and Investment News --- Electronic Databases --- On-Line Encyclopedias --- And Something for Everyone --- An Old Standby: Games --- Compuserve Consumer Information Service --- Compuserve Executive Information Service --- Delphi --- Dow Jones News/Retrieval --- the source
- ■ Bargain Basement Data Bases
  Vendors --- News Bases --- General References --- Business Bases --- Computing and computers --- Science Bases --- Psychology --- Education and Social Sciences
- ■ Caviar Data Bases
  Vendors Catering to Microcomputerists --- Dialog Information Retrieval Service --- Bibliographic Retrieval Services --- SDC/ORBIT --- I.P. Sharp, Numeric Vendor --- Dow Jones News/Retrieval --- NEXIS: Full-Text Mammoth --- NewsNet: On-Line Newsletters --- And the Rest

■ Sign On!
All Keyboards Are Not Created Equal --- Protocols --- Logging On --- Strategies to Save You On-Line Money --- The Three Step Approach to Free Time --- Commands for The Source --- Avoiding Page Breaks

■ Ten-Point Searching Guide
The Step-By Step Search: Write it down, Why?, Key words, Related concepts, Separating references, Where to look, Write it down, begin the search, Check and revise, File it --- The Logic of Searching --- George Boole Revisited --- Other Helpers

■ Bulletin Boards: Telecomputing's Free Press
Functions and Capabilities --- Signing On --- Acronyms and Abbreviations --- BBS Strategies --- A Model Log Book --- A Sad Warning --- Starting Your Own Bulletin Board --- Conference Tree vs BBS --- Liabilities --- Buying Your BBS System

■ A BBS Sampler
Downloading for IBM PCs --- UFO News --- Outreach

■ On the Horizon
Communications Technology --- Hardware Revolutions --- Software Revolutions --- Expanding Services: Information utilities, electronic education, Specialized newsletters, Vendor service --- Applications

■ Appendices
ASCII Codes --- Dialog Data Bases --- Resources --- Glossary

7 *Telecommunications for Management* (Charles T. Meadow, Albert S. Tedesco) New York, New York: McGraw- Hill Book Company, 1985.

■ Elements of Communication
Introduction (Charles T, Meadow): What is communication, Communication in management, Communication technology, The social effect of telecommunications --- The Basics of Communication (Charles T. Meadow): The nature of communication, Symbols and codes, The electromagnetic spectrum, Transmission of Signals, Noise, Switching, Multiplexing, Networks --- Communication Between People and Machines (Charles T. Meadow): The concept of human-machine communication, The basic mechanics, Styles of interaction, The social impact of human-machine communication

■ Basic Technology
Transmission Systems (Herbert S. Dordick, Ronald E. Rice): Introduction, Basic transmission factors, Modulation and multiplexing, Networks and switching, Current major transmission media, System comparisons --- The Telephone System (Howard R. Tuttle): The telephone, The switched network, Telephone services, Regulatory environment, Telephone companies, Future of the telephone system --- Digital communication networks (Alan E. Negus): Historical introduction, Packet switching, More about ARPAnet, The telenet network, The Euronet Network, Other public networks, Standards for packet-switched networks, Local area networks (Juan Bulnes): The motivations, The requirements, The characteristics of LANs, Ethernet, Functional integration, Open systems Interconnection, The future of LANs

■ Applications
Television in the Corporate Environment (Albert S. Tedesco): Introduction, The scope and development of corporate television, A taxonomy of electronic visual transmission transmission, Motivations to use electronic visual transmission systems, An overview of specialized EVT technologies, Television (The dominant EVT technology), The technology of television, Trade-off analysis (Video versus other media), Institutional perspective, Television in the management environment --- Electronic Mail (Ruann Pengov): Historical introduction, Electronic mail, Electronic mail delivery systems, Comparison of systems, The

Future --- Teleconferencing (Pat Portway): The growth of teleconferencing, Types of teleconferencing, Allstate leads the way --- Mobile Communication (Jeff Orloff): Historical introduction, The system, Classes of mobile communication service, The users, The capabilities of mobile communications equipment --- Videotex (Albert S. Tedesco): Historical introduction, Videotex system components, Viewdata system design and architecture, Teletext system design and architecture, Retrieval characteristics (What the user confronts), Image-creation characteristics, User applications, Barriers to adoption, Business and public policy issues

- Management of Telecommunications

  Cost-Benefit Analysis in Telecommunications Management (Lawrence F. Young): Cost and benefit impacts on the organization --- Regulation of Telecommunications in the United States (Michael Botein, Michael J. Sprague): Prelude to regulation of the electronic mass media, The parameters of federal jurisdiction, The jurisdiction of the Federal Communications Commission, Players in the communications policy game --- International communications (Alan E. Negus): Introduction, Provision of domestic services, International telecommunications, Technical issues, International regulatory issues, Agencies dealing with regulations --- Managing a Telecommunications Facility (Charles J. Schweis): Organization of the telecommunications facility, Voice and data system design, Traffic and network engineering, Financial analysis group, System service and implementation, Managing and measuring performance

- Case Histories

  A Management Information System (Roger L. Schelm): Background of the INA Corporation, Data communications, Electronic insurance system, Growth, 1978, 1979, 1980 and 1981, Planning for the future --- Telecommunications and the News (Elizabeth Loker, Donald Till): Background, Overview of newspaper production, Telecommunications and newsgathering, Constructing the appropriate communications complex, Managing the communications complex, Production and distribution of the newspaper, Distribution of the news service, The electronic library, Emerging issues

- The Future

  Management and Telecommunications in the Future (Charles T. Meadow, Albert S. Tedesco): INtroduction, Some trends and observations on management and telecommunications, Management in the telecommunications world, Is it utopia?

8 *Telecommunications Networks: A Technical Introduction* (R. J. Murphy)   Indianapolis, Indiana: Howard W. Sams & Company, 1987.

- History of the Information Age

  Telecommunication History: Early telecommunication, Post-World War II history --- Start of the Information Age: Background, Architecture, Building block, Theory, Present and Future --- Basic Elements of the Network

- Switching

  Switching elements --- Switching Systems Operation: Time-Division and Space-Division Switching --- Switch Blocking --- Switching Plan: General, Numbering plan --- Routing Plan: Alternate routing, Hierarchical switching, Economical routing, End-to-end signaling --- Stored Program Control --- Switch Control: Distributed processor control, Software --- PBXs

- Traffic Engineering

  Theory of Traffic Engineering: Introduction, Switch traffic, Traffic parameters, Types of congestion --- Traffic at the Zenith --- Service Versus Economics --- Traffic Understanding and Administration Background: Other functions of traffic --- Conducting a Traffic Study --- Switch Calculation: Traffic characteristics of lines, Line calculation for the network, Impact

on the computer, Calculations for a remote --- Developing Clusters --- Network Distribution

■ Transmission

Information --- Transmission Media: Decibels, Bandwidth, Cable, Microwave radio, Satellite communication --- Fiber Optics: Introduction, Principles of fiber optics, Light transmission in telecommunications, Integrated transmission facilities --- Transmission Requirements: Signaling protocols, Interoffice signaling, Transmission interface, Synchronization, System interface

■ Data

Introduction --- Data Information: Serial and parallel, Control procedures --- DTE/DCE --- Transmission of Data: Information coding, Bit and baud, Synchronous versus asynchronous, Half-duplex and full-duplex transmission --- Modems --- Multiplexing Techniques: Frequency-division multiplex, Time-division multiplex --- Pulse Code Modulation --- Hierarchy: Frequency-division hierarchy, Time-division hierarchy --- Voice/Data Integration --- Special Digital Services

■ Data Configurations

Introduction --- X... Series --- Data Networks Applications --- Types of Data Networks: General data networks, Systems network architecture, Digital data system --- Local Area Networks: How it works, Internetworking, Market view, Application of LANs, PBX and LAN comparison, Future of LANs --- Multiplex or Concentrator Networking: Multiplexers, Configurations --- Terminal Interface on Data Networks: Data terminal, The workstation --- Data Network Planning: Incorporating the packet network, Data communication planning, Characteristics of data networks

■ Telecommunication Services

Standards Organizations: INternal organizations, Local organizations --- Equal Access --- Bypass: Examples of bypass --- Training --- Cellular Mobile Radio: Method of operation, System design --- Teleconferencing: Audio teleconferencing, Video conferencing, How it works, Implementation --- Storage Systems: Voice mail, Electronic mail --- Facsimile Service

■ Current Network Environment

Network Needs --- Determining Requirements --- Integration of Voice and Data --- PBX Concepts --- Line Features --- Planning Voice and Data Communications Systems --- Types of Networks: Data networks, Voice networks --- Network Functions: User's functions, Switching and transmission functions, Traffic control functions, Operation and maintenance, Routing --- Examples of Network Communication --- Features of PBX, LAN, and Centrex: Digital PBX or Centrex, The LAN as a switching device, Centrex --- User Interconnection

■ Integrated Services Digital Network

Introduction --- Services with ISDN: Facsimile service, Electronic service, Videotex service, Network impact --- Network Architecture --- Protocols: Channel, Reference configurations, Interface structure, Protocol reference model --- Network Access: Line access, Network access --- The Road to ISDN: Integrated Digital Network, Channel types --- Evolution of the Network: Network access evolution, Data network evolution, The compression years --- Advantages of ISDN

■ Network Management

Objective --- Key Functions --- Network Control Center: Center services, Center controls --- Major Network Services: Service order/recent change, Message detail recording, Traffic data analysis, Failure detection and alarm system, Trouble log, Centralized testing, Automated directory, Other services --- Testing: Line testing, Switching systems diagnostics --- Local Network Management --- Centralized Management --- Control Center Interface

- Planning a Private Network
  Need for a Private Network --- Major Network Services --- Network Standards --- Network Design Considerations: MERS, Other routing Options --- Network Routing Structures: Voice networks, Data networks --- Planning Considerations: Traffic planning, Other planning considerations --- Private Telecommunication Networks: Requirements, Essential PBX features, Routing, Network access, Centralized Attendant, Data access, Line interface
- Network Illustrations
  Objective --- System Sizing and Placement: Network modeling, PBX versus Centrex versus bypass --- Voice Network Configuration --- Data Configurations --- Example of Fiber Optics --- Putting It Together: Data network, Voice network, Facility
- Networks of the Future
  Future Configuration --- Network Nodes: Switching node, Routing node, Feature node --- Network Services --- User Control: How it will work, Characteristics of a digital subset --- Artificial Intelligence --- Global Telecommunication
- Glossary

9   *Word and Information Processing: Concepts of Office Automation* (Marly Bergerud and Jean Gonzalez)   New York, New York: John Wiley & Sons, 1987.
- Introduction to Word and Information Processing
  Development of Word and Information Processing
- Technology
  Software and Its Uses --- Hardware Components: Displays, Keyboards, Processors, and Storage --- Hardware Categories and Their Evolution --- Voice Processing --- Peripherals: Printers, OCR, and IMage Processors --- Technology for Electronic Distribution/Communication --- Distribution/Communication --- Information Retrieval --- Integration of Office Automation
- Managing the Change to Information Processing
  Planning the Change --- Organizing the Change --- Staffing the Area --- Directing the Staff

EDUCATION

1   Creating the Dialogue: Using the Network to Initiate Collaborative Learning and Writing (Christine Neuwirth --- Carnegie Mellon University)

2   Extending the Dialogue: Using the Network to Evaluate and Support Student Writing (Michael Palmquist --- Carnegie Mellon University)

3   Networking the Global Classroom (Gary Scott --- AT&T Canada: Bruce Stall --- University of Wisconsin)

4   Peer Critiquing Through Telecommunications: The Intercollegiate Collaborative Writing Class (Michael Steven Marx --- Skidmore College; Joel Nydahl --- Babson College)

5   Pre-Technical Skill Building Through Resource Networking (Michael Taggart and Nancy Putinski --- Cuyahoga Community College)

VI. TELECONFERENCING (Audio/Audiographic)

ARTICLES

1 "Agency for Public Telecommunications (North Carolina) Expands Open Public Events Network"
2 "AT&T's Audiographic Conferencing Advances Information Sharing"
3 "AT&T's Client Teletraining Network: Using Multiple Systems"
4 "AT&T's Teletraining Networks Provide Training for Employees and Clients"
5 "Audioconferencing: The Party Line is Back" (Thomas M. Jenkins)
6 "Audiographic Meetings" (Heidi Waldrop)
7 "Audiographics Come On Strong in Growing Teleconferencing Market"
8 "Audiographics: A Market Destined to Grow" (Lorne Parker)
9 "Bargain in Bandwidth"
10 "Better Meetings Through Technology" (Heidi Waldrop)
11 "Colorado Video Cuts Price of Freeze-Frame Video Line"
12 "Conferencing Get a New Look: PC to PC" (David Needle)
13 "Count Announced a Program to Encourage 'Telecommuting'"
14 "Databeam Now 'HiJaaks' Computer-Generated Data, Images"
15 "DEC: The Unlikely Hero in Telecom" (Anne Knowles)
16 "Digital Radio: When Will It Finally Pay Off?"
17 "Education Roundtable Joins Genie"
18 "Electronic Meeting in the Year 2000: The Future Is in Your Hands" (Lorne A. Parker)
19 "Facilitating Teleconferences" (Vicki A. Hanrahan)
20 "FCC Plan to Unify 800 Numbers Puts Spotlight on AT&T Patent"
21 "Fifteen Tips to Help Your Electronic Meetings" (Alice L. Beckham)
22 "Hello, Are We On" (Gwen Kelly)
23 "Illinois Healthnet: A Case Study in Audio Teletraining" (James M. Broadway)
24 "Immediacy of FAX: Quadrum's Line of Facsimile Products Offers Excellent Value" (Ives Brant)
25 "Key Ingredients for Successful Teleconferencing" (Lorne Parker)
26 "Learning to Crawl: AAA Wisconsin Sets Up Audio Teleconferencing"
27 "Linking America's Hospitals" (Martin Hersh)
28 "Making Graphics that Work"
29 "Man with a Vision for Audiographics and Video Teleconferencing"
30 "Marketing Audiographics: An Approach for Vendors" (Lorne Parker)
31 "MultiLink Announces New Conference Bridge"
32 "New Color Photophone Sends High Resolution Pictures with up to 16 Million Colors"
33 "PBXs Enhance Day-to-day Business Transactions (Jeffrey Rosenwald)
34 "Peat Marwick Uses Teleconferencing to Instruct Its Professionals"
35 "Primer on Audiographics Teleconferencing"
36 "Projects Combine Still Frame TV and Satellite Transmission" (Glen Southworth)
37 "Research Gives Insight into Electronic Meetings" (Lorne A. Parker)
38 "Senator Lauds Slow-Scan TV" (David W. Swift)
39 "Significant Developments Seen in Audio Equipment" (Steven R. Hanrahan)
40 "Teacher on a Tape: Audiotutorials for Computer Literacy" (Ron Zemke)
41 "Telcos Should Distribute Video: FCC"

42   "Telecommunications Takes Off" (William H. Davidson)
43   "Teleconferencing Gets Down to Business"
44   "Teleconferencing: A Conference Call is an Effective Way to Meet"
45   "Teleconferencing: Electronic Bridges over Intellectual Isolation" (David K. McIntosh)
46   "Teleconferencing: Nobody's Baby Now" (Lorne Parker)
47   "Teleconnect USA Long Distance Company Expands Conference Calling"
48   "Telephones and the PC Connection" (Ed Kahn)
49   "Today's Images, Yesterday's Sound: Will Audio Catch Up to Video" (Fred Cohn)
50   "Videoconferencing Making Inroads" (Steve Usdin)

PRODUCT LITERATURE AND DEMONSTRATIONS

1   Acoustic Echo Canceller --- AEC-400 (NEC, Incorporated)
2   Acoustic Echo Canceller --- AEC-700 (NEC, Incorporated)
3   Agenda (PBS)
4   ALLIANCE Teleconferencing (AT&T)
5   AT&T Education and Training Catalogs of Courses
6   Audio-Cassette/Workbook Catalog --- Winter 1989 (American Management Association)
7   Cause for Listening (Unisys Corporation)
8   Community College IBM Information Sharing System (League for Innovation in the Community College plus Computer and Information Systems Division of Johnson County Community College)
9   ConferCall Service (ConferTech International)
10   Conference Calling (Teleconnect Company)
11   E-MAX Conferencing Device (A.T. Products)
12   Easy Connection Conferencing (JEP Systems)
13   eFORUM: The Electronic Meeting Manager (Network Technologies International, Inc.)
14   Enhanced Conference Calling (Teleconnect)
15   FAXCOM 1000 (Biscom, Inc.)
16   Feedback Forum (Multi-Link Incorporated)
17   History of Radio (Southern California Consortium)
18   Inbound Express (TRT Telecommunications Corporation)
19   Integrated Facsimile Service (TRT Telecommunications Corporation)
20   ITA Publications Catalog (International Teleconferencing Association)
21   Joint Runner (Optel Communications, Inc.)
22   Microprocessors, Microcontrollers, ASIC Videoconference (IEEE)
23   MIX (McGraw-Hill)
24   MultiLink Bridges (MultiLink)
25   Optel --- For All Your Audio/Visual/Graphic Needs (Optel Communications, Incorporated)
26   Optel PC-Conferencing (Optel Communications, Inc.)
27   Practical Applications of Artificial Intelligence Videoconference (Institute of Electrical and Electronics Engineers --- IEEE)
28   Project Management: Computer Aided Communications Using eFORUM (Network Technologies International Inc.)
29   Quorum Conference Phone (AT&T)
30   Satellite Antennas (Microdyne Corporation)
31   Satellite Broadcasting Network Systems (Microdyne Corporation)

32   Scan Net   (Colorado Video)
33   Seminars by Satellite (American Management Association)
34   Show and Tell ... Over the Phone (NEC America, Inc.)
35   Sony Conference System (Sony Corporation of America)
36   ST 6000: The Corporate Link (Shure Teleconferencing Systems)
37   Telecommunications Planning Guide for Educators (McGraw Hill)
38   Teleconferencing Meeting Model (Parker Communications Corporation)
39   Teleconferencing Notes (MultiLink)
40   Teleconferencing Services and Equipment (ConferTech International)
41   Teleconferencing: Technology and Applications (ConferTech International, Inc. and Parker Communications Corporation)
42   Telewriter 2PC Audio/Graphic (Optel Communications, Inc.)
43   Telewriter 3PC Audio/Video/Graphics (Optel Communications, Inc.)
44   Telewriter PC System (Optel Communications, Inc.)
45   tPost E-Mail and File Transfer (Coker Electronics)
46   tPost FAXforward (Coker Electronics)
47   VIC --- The Voice/Image Communicator (Ricoh Corporation, Audiographic Business Center)
48   Video Briefcase (Colorado Video)
49   Video Communications Systems (Colorado Video)
50   Video Memories: The 490 Series (Colorado Video)
51   Video Multiplexing Instruments 496/497 Series (Colorado Video)
52   Video Positioning, Measurement, and Analysis Tools (Colorado Video)
53   Video Teleconferencing (Portland Community College)
54   Video Transceiver 250 (Colorado Video)
55   Video Transceivers 290 and 290c (Colorado Video)
56   Writer's Service   (Phoenix Writer's Service)
57   ZL-10 System --- Quick Random Access Language Learning System (Sony Corporation of America)

EDUCATION

1   Audio: The Rest of the Picture (Chairs: William Drykos --- Vice-President Sales and Marketing, ConferTech International; Robert Stewart --- Area Vice-President, Darome, Inc.)
Presenters: Darrell Gibson --- Director of Training, Automation Services Division, Century 21 International; Steve Lumsden --- Alex Brown & Son; John Brockwell --- Deputy Director, Satellite Education Program, Army Management Logistics College
2   Audiographic: Study on the use and effectiveness of PC-based audiographic systems for course delivery (Dr. Sally M. Johnstone --- Director, Office of Instructional Telecommunications, University of Maryland-University College)
3   Computers: Presentation on for-credit courses delivered by computer conferencing (Dr. Steve Eskow --- President, Electronic University Network)
4   Creating Computer-Based Forums for Academic Discourse: Electronic Spaces for Community, Dissent and Learning (Cynthia L. Selfe --- Michigan Technological University)
5   Slow Scan: Exploration of the history and future trends and applications of slow scan technology (Glen Southworth --- President, Colorado Video)
6   Testing Computer-Assisted Class Discussion (Jerome Bump --- University of Texas, Austin)

7   Creating the Dialogue: Using the Network to Initiate Collaborative Learning and Writing (Christine Neuwirth --- Carnegie Mellon University)
8   Extending the Dialogue: Using the Network to Evaluate and Support Student Writing (Michael Palmquist --- Carnegie Mellon University)
9   Pre-Technical Skill Building Through Resource Networking (Michael Taggart and Nancy Putinski --- Cuyahoga Community College)

VII. TELECONFERENCING (Video)

ARTICLES

37 "IEEE and Video Conferencing: Six Years of Growth"
38 "Incomplete Guide to Videoconferencing Jargon" (Ron Zemke)
39 "Laurie Zube: She Gives the Picture"
40 "Linking Business to the Campus Today: The College Relations Network"
41 "Low Tech High Tech: NTU Does Operational Amplifiers" (David W. Shively)
42 "Management Training on the Air: Two Different Views" (David W. Shively)
43 "N-Way Video: The Video Conference Call Everybody's Talking About" (Arthur Hill)
44 "National Technological University Adds Sixth Master's Degree Program"
45 "New Television Network Debuts for Bankers"
46 "No Full House for Public Networks: The Growth of Business Television" (Stephen J. Shaw)
47 "NUTN Presents"
48 "Oklahoma State University Announces 1988/1989 Program Schedule"
49 "On the Road with DPSN" (Scott Chase)
50 "Orienting Users to Video Conferencing"
51 "Phone for Show and Tell"
52 "Potential for Video Teleconferencing Utilizing a VSAT System" (Peter C. Lowten)
53 "Power of Desktop Video" (Ben and Jean Means)
54 "Private Networks Directory"
55 "Private Networks: AREN/Executive Communications Lead Way in Video Programming"
56 "Program Networks for Business Television --- Patterns Emerge"
57 "Program Sharing --- Lots of Work to Do" (Elliot M. Gold)
58 "Projects Combine Still Frame TV and Satellite Transmission"
59 "Rediscovery of Video Teleconferencing" (Ron Zemke)
60 "Satellite Communications at Down-to-Earth Prices" (Rick Cook)
61 "Satellite Theater Network: Full House Means Empty Balcony" (Stephen J. Shaw)
62 "Slow-Scan Television Systems are Useful in Many Applications" (Glen Southworth)
63 "St. Louis Students to Get Farther from Teachers and Closer to TV"
64 "Supporting Marketing with an Interactive Television Network" (J. Carl Masi)
65 "Taking the Conference Plunge" (Lorne Parker)
66 "Teaching Research Center Promotes Distance Teaching Competence" (David J. Wydra)
67 "Technical Viewing Information on Program Providers"
68 "Telecommunications: CSU Chico" (Ralph F. Meuter, Leslie Wright)
69 "Teleconferencing --- With Room Service, Too) (Sherli Evans)
70 "Teleconferencing Merger Mania"
71 "Teleconferencing Replaces Face-to-Face Meetings"
72 "Teleconferencing Users and Vendors: Building Bridges Between Applications and Technology" (Lorne Parker)
73 "Teleconferencing's New Market: China" (Lynn E. Manthei)
74 "Teleconferencing: Taxiing for Take-Off" (Lorne Parker)
75 "Television Classroom: Bringing a New Instructional Format to Rural America" (Gregory Jordahl)
76 "Transmission Options --- Getting the Picture From Here to There"
77 "Understanding Video Teleconferencing Transmission"
78 "Very Small Aperture Terminals" (Joseph Freitag, Jr.)
79 "Video Conferencing in the United States: Trends in Technologies and Applications"
80 "Video Conferencing: Rooms for Rent" (Ron Marans)
81 "Video PR: Business Television Taps a Rich Vein" (Stephen J. Shaw)
82 "Video Reviews" (Dan Steele)

83   "Video Speeds Datacom: Apple Relies on Videoconferencing in Attempt to Globalize" (David Leland)
84   "Videoconference Planning Meeting" (Parker and Associates)
85   "Videoconferencing Expands its Horizons (Sam Diamond)
86   "Videoconferencing Goes One on One" (Jeffrey Cohen)
87   "Videoconferencing" (Steve Usdin)
88   "VideoTelecom Announces Patent Award for Interactive Video Equipment"
89   "Virginia College Expands Learning Facilities with Videophones" (Larry Buerk)
90   "Who are the Networks? --- Technical Viewing Information on Program Providers"
91   "Who's Watching Business Television?" (Gwenn Kelly)
92   "Zeke Osburn, Teletraining Manager, U.S. Postal Service Technical Training Center"

PRODUCT LITERATURE AND DEMONSTRATIONS

1   Advanced Computer Applications Narrowcast (PBS National Narrowcast Service)
2   Advanced Seminar on Government Applications of Teleconferencing and Distance Learning with Special Emphasis on FTS-2000 (Applied Business teleCommunications and Virginia Tech)
3   Business Television: Changing the Way America Does Business (Private Satellite Network)
4   Coast Telecourse Catalog (Coast Community College)
5   Comprehensive Education Programs (AREN/Executive Communications)
6   Computer Literacy AND Applications Narrowcast (PBS National Narrowcast Service)
7   Continuing Legal Education Network (Private Satellite Network)
8   Datapoint on Advanced Video/Voice/Data
9   Definitive "How To" Teleconference on Teleconferences (Applied Business TeleCommunications)
10   Eastern's Telecommunications
11   Effective Communications Narrowcast (PBS National Narrowcast Service)
12   Four Port Feed KU-Band System (Bonneville Satellite Corporation)
13   How the Computer Channel Operates (Computer Channel, Inc.)
14   Institutional Research Network (Private Satellite Network)
15   Instructional Telecommunications Consortium (American Association of Community and Junior Colleges)
16   Instructional Television Fixed Service (Cal State, Los Angeles)
17   Leading Consultants Delivered Live to Your Office Every Week (Computer Channel, Incorporated)
18   Management and Supervision Narrowcast (PBS National Narrowcast Service)
19   Meeting Channel Location Guide (US Sprint)
20   National University Teleconference Network
21   National Videoconferences by Catellite (American Management Association)
22   Private Networks and Videoconferencing Services (Bonneville Satellite Corporation)
23   Private Television Networks (Private Satellite Networks)
24   REALTIME: Focus Segments (Computer Channel, Inc.)
25   Sales and Marketing Narrowcast (PBS National Narrowcast Service)
26   Satellite Broadcasting Network Systems (Microdyne)
27   Satellite Programming Directory (New Technology Consultants)
28   Satellite Transmitted Academic Resources (TI-IN Network)
29   Target: Accountants Narrowcast (PBS National Narrowcast)
30   Target: Law and Business Narrowcast (PBS National Narrowcast Service)

31   Technical Skills Narrowcast (PBS National Narrowcast Service)
32   Tele-Education Via Satellite Network: Interactive Video and Audio (NEC Satellite Pedagogical Network for Advanced Creative Education)
33   TeleCon IX (Applied Business TeleCommunications)
34   Training Showcase Narrowcast (PBS National Narrowcast Service)
35   Video Dial Tone Public Network (Private Satellite Network)
36   Video Teleconferencing for Meetings, Seminars, Workshops, Training Programs, Information (Portland Community College)
37   Videoconferencing Applications: Finance (The Meeting Channel)
38   Videoconferencing Applications: Government Contractors (The Meeting Channel)
39   Videoconferencing Applications: Insurance (The Meeting Channel)
40   Videoconferencing Applications: Manufacturing (Meeting Channel)
41   Videoconferencing Service (The Meeting Channel)
42   Vision Plus Mini Videoconferencing (VideoTelecom Corporation)
43   Xerox Team Vision Full Motion Videoconferencing (Xerox Corporation)

EDUCATION

1   Gloria Allred video teleconference --- 40+ Woman
2   Home Economics Professional Development Units video teleconference --- "Future of Home Economics"

VIII. TELETEXT OR VIDEOTEXT

ARTICLES

1   "AT&T Mail"
2   "BOCs Slate Videotex, MAN Trial"
3   "Houston Homes Plug into Videotex" (Jason Forsythe)
4   "Minitel and Infonet Join to Offer Services in US" (Scott Mace)
5   "New Technology to Allow Mass Home Audience Interaction in Broadcast Programs and Direct Sales"
6   "PAC Bell Say New '900' Plan Balances Consumer Protection, Opportunity"
7   "Radio Stations Cash in on High-Tech" (Margret McNelis-Ahern)
8   "Videotex Takes INteractive Video Across and Distance" (Anthony and Kathryn Ferralli)
9   "Welcome Mat Out For AT&T in Videotex" (Steve Sabatine, Karen Gullo)

PRODUCT LITERATURE AND DEMONSTRATIONS

1   900/800 Services You Can Afford (LO-AD Communications)
2   First Conference on 900 Services (Institute for International Research)
3   Frame Creator System 1000 (Sony)
4   How Those 900 Services Work (InfoText Magazine)
5   How To Workshop for 900 Services (InfoText Magazine)
6   KTX-1350N Videotex Workstation (Sony)
7   MultiQuest: A Whole New Way to Provide Information, Advice or Consultations by Phone (AT&T)
8   Telesphere 900 Services Product Information (Media 4)
9   UP-103 Video Graphic Printer (Sony)
10   VDX-1000 Videotext Unit (Sony)

BOOKS AND MANUALS

1   *Videotex and Teletext Handbook: Home Office Communications Using Microcomputers and Terminals* (Paul Hurly, Matthias Laucht, Denis Hylnka)   New York, New York: Harper & Row Publishers, 1985.
   ■   Videotex Primer
        Introduction: Videotex Communication, What is videotex/teletext? --- The Basics: Communication and society, Types of videotex services --- Context and History: Contributing factors, A brief history of videotex
   ■   Videotex Applications
        Applications in Education and Training: Scenarios, Types of services, Designing videotex CAI, Implications --- Applications in Business: Scenarios, Types of services, Implications ---

Applications in the Home: Scenarios, Types of services, Implications --- Applications in Government, Social SErvices, and Non-Profit Organizations: Scenarios, Types of services, Implications

■ Understanding and Using Videotex Technology
Telematics: Introductions, Computers, Terminals, Communication facilities --- Videotex: Introduction, Viewdata systems, Teletext systems, Video presentation level protocol --- Content Design and Presentation: Introduction, Videotex as a medium, Videotex page components, Types of videotex pages, Information retrieval strategies and mechanisms, Layout and editorial features, Page creation (Hardware and mechanics)

■ Considerations and Implications
The Business of Videotex: Market development, Market size, Residential market characteristics, Market strategies, Conducting market analysis, Regulatory issues, Market factors --- The Promise and the Peril: The information society, Individual dimension, Sociocultural dimension, Political dimensions, Economic dimension --- Conclusion: Decision and Doubts

■ Appendices
Videotex Publications and Consulting Firms --- Videotex Industry Association Model Privacy Guidelines --- Box Score --- Microcomputer-based NAPLPS Products

IX. VIDEO (Cable, Interactive Cable, Broadcast, Cassette)

ARTICLES

PRODUCT LITERATURE AND DEMONSTRATIONS

1. Business of Management: A Telecourse for the Future (Southern California Consortium)
2. Caption Master (Instant Replay, Incorporated)
3. ComputerWorks (Southern California Consortium)
4. D-2: The Producer's Point of View (The Video-It Monitor)
5. Education for the Future (Southern California Consortium)
6. Gateways --- 21st Annual International Television Conference (International Television Association)
7. Great Camera Shootout (A-Vidd Electronics)
8. Image Translator (Instant Replay, Incorporated)
9. ImageSmart IDC-1000 Improved Definition Converter for DataSmart Monitors and Projectors (NEC Professional Systems Division)
10. National Cable Television Association
11. New Literacy: An Introduction to Computers (Annenberg/CPB, Southern California Consortium)
12. Personal Finance and Money Management (Southern California Consortium)
13. Producing and Editing for Videotapes (Distronics)
14. Professional Monitor/Receiver PR-2600S (NEC Professional Systems Division)
15. Professional VHS VCR PV-1200A (NEC Professional Systems Division)
16. Professional VHS VCR PV-1400A (NEC Professional Systems Division)
17. Programming in Basic: A Supplement to the New Literacy (Southern California Consortium)
18. RGB/Videolink 400 (RGB Technology)
19. S-Video Converter SVC-10 (NEC Professional Systems Division)
20. Sunburst Video 1989 (Sunburst Corporation)
21. Technical and Craft Books for Film/Video (Alan Gordon Enterprises)
22. Video and Audio Catalog (Annenberg/CPB Collection)
23. Video Briefcase (Colorado Video)
24. Video Expo and the North American Television Institute (Knowledge Industry Publications)
25. Video Multiplexing Instruments 496/497 Series (Colorado Video)
26. Video/Film/Filmstrip Training Programs (National Educational Media)
27. Videotape Training Catalog --- UNIX System Curriculum (AT&T)
28. VIV-3015AND 3020 Sony View System (Sony)
29. What is a Telecourse? (Southern California Consortium)

EDUCATION

1. Promotion That Works (Sarah A. Evans --- Director of Program for Adult College Education, Longview Community College, Missouri; Jacqueline C. Beulick, Coordinator Television Activities, St. Louis Community College, Missouri; Ronald J. Plummer, Learning Services Coordinator, University of North Carolina)
2. Public Television: More Than Wires and Lights in a Box (Fred W. Friendly --- Edward R. Murrow Professor Emeritus, Columbia University's Graduate School of Journalism)

3   Telecourse Students Don't Have to Watch Broadcast Television (Charles DeVault --- Manager Television Operations, Johnson County Community College, Kansas; Sandra Wilen --- Manager Alternative Education, Oakton Community College, Illinois; Sheryl Peterson --- Telecommunications Coordinator of Open Campus, St. Petersburg Junior College, Florida)

4   Telecourses: How I Got Started (Sue Commanday --- Coordinator Special Programs, Rockland Community College, New York)

APPENDIX D:
DISTANCE EDUCATION

VIRGINIA L. McBRIDE

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DISTANCE EDUCATION
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DISTANCE EDUCATION

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1. "Blinkered Horses Do Not Shy: An Open Letter to Distance Educators" (Doug Widner)
2. "Book Review" (Alan Quigley)
3. "Broadening the Definition of Distance Education in Light of New Telecommunications Technologies" (Bruce O. Barker, Anthony Frisbie, Kenneth R. Patrick)
4. "CBT Moves Up To Management Training"
5. "Changing Face of Technology in the 1990's" (Ray Wise)
6. "Company Provides CAI/CMI for Distant Learning"
7. "College Faculty Tell What Works, What Doesn't"
8. "Computers in Instruction Plan"
9. "Computers Turn Homes Into Classrooms" (Jennifer Liebrum)
10. "Continuing Professional Development in Distance Education" (Harold Markowitz, Jr.)
11. "Corporations Consider Training Options" (Paula S. Stone)
12. "Designing Gateways in Metropolitan Area Networks" (Terence D. Todd)
13. "Developing Teletraining Skills"
14. "Does Personality Influence Self-Paced Learning Efficiency?"
15. "Editorial --- Distance Learning" (Sylvia Charp)
16. "Electronic Meetings: Ready for Prime Time" (Shawn Hartley Hancock)
17. "Electronic Networking"
18. "Epistemological Justification for the Role of Teaching in Distance Education" (Morris Sammons)
19. "FAX, TV and the Remote Classroom" (David Czech)
20. "Fourth Generation Distance Education System: Integrating Computer-Assisted Learning and Computer Conferencing" (Allan C. Lauzon, George A.B. Moore)
21. "Future According to Pogo --- Distance" (Smith L. Holt)
22. "Guidelines for Implementing Teletraining Systems" (Alan Chute)
23. "Implications of Instructional Technologies for the Future of Education" (Frederick G. Knirk)
24. "Influence of an Instructional Design Upon Learning of Distance Education Students" --- Book Review" (Grover E. Diehl)
25. "Instructional Designers in Public Schools and Higher Education: Predictions for the Year 2001" (Robert A. Reiser)
26. "Instructional Strategies for Older Employees"
27. "Integrated Telecommunications Systems and Instructional Transaction" (Farhad Saba)
28. "Interactive Distance Learning Technologies" (David K. McIntosh)
29. "Issues in the Management of Distance Education" (Stephen Murgatroyd, Andrew Woudstra)
30. "It's Keillor Calling: Conversation and Learning Across Old-Fashioned Party Lines" (Bill Nelson)
31. "Learning from Teletraining" (Alan G. Chute, Lee B. Bathazar, Carol O. Poston)
32. "Long Distance Computing with International PSTN" (David Buerger)
33. "Long Distance Education" (Stephen B. Jones, David K. McIntosh)
34. "Media Review" (Kay W. Gilcher)
35. "Meeting Needs of Church Musicians by Audioconferencing in Wisconsin" (Edward O. Hugdahl)
36. "Methodological Issues in Distance Educational Research" (Dan O. Coldeway)
37. "Michigan Colleges Pool Resources to Enhance Faculty Development"
38. "Never Underestimate the Value of Play as an Instructional Strategy"

84. "What Price Technology?" (James Kaminsky)
85. "What's a Government Contract Worth"

PRODUCT LITERATURE AND DEMONSTRATIONS

1. Adult Learning Satellite Service (PBS)
2. Advanced Technology Centers: Support Industry for Economic Growth (National Coalition of Advanced Technology Centers)
3. Agenda (PBS)
4. American Journal of Distance Education (Pennsylvania State University)
5. AT&T Education and Training Catalog of Courses
6. Business and Education: Partnerships for Growth (Monroe Community College, State University of New York)
7. Certificate Programs in Instructional Technology (San Diego State University, Educational Technology Department)
8. Coast Communicator (Coastline Community College)
9. College and Adult Catalog (Great Plains National Instructional Television Library --- GPN)
10. College by Television: Your Way to a Better Education (Coastline Community College)
11. Community College IBM Information Sharing System (League for Innovation in the Community College plus Computer and Information Systems Division of Johnson County Community College)
12. Community College Instructional Network (Southern California Consortium)
13. Conference Express Videoconferencing (US Sprint)
14. Courses by Television and Cassette (Chicago City-Wide College)
15. Dallas Telecourses (Dallas County Community College District)
16. De Anza College Independent Study Program (De Anza College)
17. Disney, Tropics and Telecourse Topics (Miami Dade Community College and the Instructional Telecommunications Consortium)
18. Distance Education Masters Degree Program Catalog (South Australian College of Advanced Education and Parker Associates)
19. Education for the Future (Southern California Consortium)
20. Educational Program: Extending Beyond Tradition (Miami-Dade Community College)
21. Educational Technology: A Master's Degree Program (San Diego State University, Educational Technology Department)
22. Executive Communications Videotape Series (Executive Communications)
23. How to Establish and Market a Teleconferencing Service (University of Southern California)
24. How-To Conference on Distance Learning and Distance Training" (Applied Business Telecommunications)
25. INFOCOMM International (Infocomm International)
26. Instructional Telecommunications Consortium (American Association of Community and Junior Colleges)
27. Interactive Instruction Delivery Conference (Learning Technology Institute)
28. International School of Information Management
29. Introduction to Biology:Instructional Television Student Handbook (Coastline Community College)
30. Learn Through Television (Southern California Consortium)
31. M.A.T. Automated Terminal (Microdyne Corporation)

32. Management Seminar Series (Coastline Community College)
33. Management Vision Video Teleconferences (Executive Communications)
34. Mass Media College Courses Catalog (Instructional Telecommunications Consortium, AACJC)
35. Masters Curricula in Educational Communications and Technology (Association for Educational Communications and Technology)
36. MECC Educational Technology Catalog (Minnesota Educational Computing Corporation)
37. Michigan Colleges' Consortium for Faculty Development (The University of Michigan-Dearborn)
38. Position Description: Center for Open Learning, Chicago)
39. Scan Net   (Colorado Video)
40. Telecourse People Catalog (Telecourse People)
41. Telecourse Student Survey (Instructional Telecommunications Consortium, AACJC)
42. Teletraining Today and Tomorrow (AT&T)
43. Use Telecourse As Part of Degree Package (Longview Community College)
44. Video Expo (North American Television Institute --- Knowledge Industry Publications, Inc.)
45. What is a Telecourse? (Southern California Consortium)
46. WISCGATE (TRT Telecommunications Corporation)

BOOKS AND MANUALS

1. *Teletraining Means Business* (Lorne A. Parker)   Madison, Wisconsin: Center for Interactive Programs --- University of Wisconsin-Extension, 1984.
   a) Understanding Teletraining
   Benefits --- Choosing Teletraining --- Implementing Teletraining --- Teletechniques --- Results
   b) Modes of Teletraining
   Audio Teleconferencing: System options --- Audio Applications in Business and Industry: Training applications --- Audiographics: System options, Audiographic applications in business and industry --- Video: System options, Video application in business and industry

   c) Design Factors in Teletraining
   Developing a Design Strategy --- Developing a Design: A Teletraining Design Model, The research matrix --- Using the Teletraining Design Model: Needs Phase, Objectives phase, Program design phase, Evaluation design phase, Pretest design phase, Program production phase, The teletraining model (A hypothetical application)
   d) Human Factors in Teletraining
   Humanizing: A close look at humanizing, "Getting to know someone" process, Expectation setting, "Hip pocket" humanizing techniques, Expanding humanizing techniques --- Participation: A close look at participation, "Hip pocket" participation techniques, Expanded participation techniques --- Message Style: A close look at message style, "Hip pocket" message style techniques, Expanded message style techniques --- Feedback: A close look at feedback, "Hip pocket" feedback techniques, Expanded feedback techniques --- Human Factors in a Typical Program
   e) Enabling Factors in Teletraining
   Assessing Physical Needs of Teletraining Environment --- Reservations --- Room Operations

   f) Checklists for Teletraining Success

Design Checklist: Decision-making process --- Planning Your Schedule

g) Outcomes

Teletraining Success Stories: Accounting-finance training, Continuing education, Customer education, Data, Engineering, Follow-ups, In-house training, Management training, New product introduction, Sales training, Update training --- Ten Basic Benefits of Teletraining

h) Selected Case Studies

Travelers Companies --- St. Paul Company --- Century 21 Real Estate Company --- Montgomery Ward --- General Electric Company

i) References

Books and Manuals --- Articles

EDUCATION

1. Computer Connection (Roger L. Boston --- Rockwell Chair Instructor Data Processing, Houston Community College)

2. English Composition on the Conference: Creating a Community of Distance Students with CoSy (Julie Bertch --- Rio Salado Community College)

3. Evaluation in the Electronic Classroom: A Double Edged Sword --- Or is it? (Andrea W. Herrmann --- University of Arkansas, Little Rock)

4. Faculty is Basic (Lloyd Gentry --- Coordinator TV College, Belleville Area Community College, Illinois; Charlanne Jelen-Nee --- Associate Dean of Instruction, Coastline Community College, California; Eleanor Minich --- Director Center for Open Learning, Chicago City-Wide College)

5. Getting Your Faculty Involved: A Workshop Model (Joyce Neilsen --- Special Assistant for Academic Utilization, The Annenberg/CPB Project; Ginny Goldstein, Director, PBS Adult Learning Service)

6. Networking the Global Classroom (Gary Scott --- AT&T Canada: Bruce Stall --- University of Wisconsin)

7. Peer Critiquing Through Telecommunications: The Intercollegiate Collaborative Writing Class (Michael Steven Marx --- Skidmore College; Joel Nydahl --- Babson College)

8. Planning and Implementing a Distance Learning Program (Ben Hambleton --- Director, Simplot/Micron Technology Center, Boise State University)

9. Space --- A Metaphor for Canada's Future in Advanced Technology (Christopher Trump --- Vice-President for Corporate Affairs, Spar Aerospace Limited)

10. Teaching Writing in a Distance Learning Environment (Stephen Ehrmann --- The Annenberg/CPB Project)

11. Telecourses, Telelearning, Teleconferences: What's the Difference? (Ralph Meuter --- Dean for Regional and Continuing Education, California State University, Chico; Pat Portway --- President, Applied Business teleCommunications; Ray Pirkl --- Director Instructional Support, Portland Community College, Oregon)

APPENDIX E:

FUTURE IMPLICATIONS

VIRGINIA L. McBRIDE

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40. "Different Drummers: Adapting Occidental Steps to Fit Oriental Tunes" (Mark J. Estrin)
41. "DiNardo Cajoles MIS Into the '90s" (Charles Pelton)
42. "Diverse Groupware Packages Struggle to Find an Identity" (Yvonne Lee)
43. "Doctors Targeted for ISDN Services"
44. "Does Everyone Need an 80386 Computer?"
45. "Education for Emergencies" (Bruce Marshall)
46. "Educational Assistance Plan"
47. "Education School Prepares for the Future" (Joseph P. Lounge, James E. Walker)
48. "Educators Must Create Their Future" (John Madian)
49. "Egghead Balancing Act" (Carla Lazzareschi)
50. "End Users, Unite!" (Jeffrey A. Sonenshine)
51. "Fess Up: Are You Too Proud to Learn?" (John Kerr)
52. "Fiber's Fabulous Future: In the Long Run It Will Conquer Short-Haul Transmission" (Sanford Bingham)
53. "Fighting for Free Global Private Nets" (Karen Gullo and Ellen Messmer)
54. "Fighting High School Illiteracy: The PALS Project in Brooklyn" (Patricia J. Karlstein)
55. "First-Year Teacher's Technology Experience"
56. "Free Speech Is Where You Find It" (Brock N. Meeks)
57. "Future Teachers: Are They Prepared?" (Isabelle Bruder)
58. "Glimpse at Tomorrow's Technology" (Mike Bowker)
59. "Global Education for the 21st Century: The GU Consortium" (Takeshi Utsumi, Parker Rossman, Steven M. Rosen)
60. "Green Slime and High Tech" (Frank Burge)
61. "Group IV Facsimile Technology Could Be the Wave of the Future" (David Buerger)
62. "Groupware Is Best Management Tool" (Len Heller)
63. "Groupware to Disappear" (Fred Gibbons)
64. "Groupware's Trivial, Causes More Chaos" (Mark Templeton)
65. "Groupware: The Next Generation"
66. "Groupware: The Search is on, But What Does It Look Like?"
67. "Guidelines for a Model Preservice Technology Course"
68. "Hot New Technology to Guide Course of World Trade" (Chip Jacobs)
69. "Human Form"
70. "Hypermedia: More Than the Next Buzzword" (Randall Stickrod)
71. "IBM Looks to Make Grade at Colleges" (T.C. Doyle)
72. "If It Works, Why Not Share It?" (Heidi Waldrop)
73. "In the Shadow of Educations Reform" (David R. Murray)
74. "Instructional Technology: The Third Wave" (Terry L. Holcomb)
75. "Investing in the Future with Comprehensive Competencies" (Irma Novoa)
76. "Is Next's Lack of a Floppy Based on Religion or Economics?" (Jerry Pournelle)
77. "Isaac Asimov Talks about Computers and Education..."
78. "ISDN Is Challenging the Face of Telecommunications --- Slowly" (H. Paris Burstyn)
79. "It's Great Business to be a Communicator" (David K. Martin)
80. "Let's Aim to Eliminate Both Power Users and Pencil Pushers" (Steve Gibson)
81. "Licensing Agreements that Protect" (Edward C. Saltzberg)
82. "Look into the Future: What Can We Expect in the Next Decade?" (John Derry)
83. "Looking Forward: The Entire World Is Struggling with the Transition to 32-Bit Computing" (John Thompson)
84. "Lowdown on Meta-Analysis" (Kenneth W. Wachter)

85. "Manufacturing Focuses on Training" (Diane Feldman)
86. "Michigan Colleges Pool Resources to Enhance Faculty Development"
87. "Multimedia: It Could Revolutionize the Way Information is Presented" (Nick Arnett)
88. "Office Works Groupware May Be Ahead of Its Time" (Peter Stephenson)
89. "Opportunities for Women Managers"
90. "Perception Question: Despite AT&T's Push Into Computers, Customers Continue to Focus on Its Communications Reputation" (Julia King)
91. "Planes, Trains, and Automobiles: Custom Training for Auto and Aerospace Industry" (Michael Brody)
92. "PR Enters the Video Age" (Fred Cohn)
93. "Preservice Computer Education: Introductory Requirements a Must to Train Teachers Properly" (Gary G. Bitter)
94. "Proof That PR Works" (Tom Eisenhart)
95. "Providing Continuing Educations: Are Association Execs Up to the Task?"
96. "Providing Support for Higher Education" (Herbert E. Cotter)
97. "Riding the Fourth Wave" (Jeff Angus)
98. "Riper Apple" (Arthur Lipper III)
99. "Saturn School of Tomorrow"
100. "Small Shops Slow to Use Back-Office Computers" (Tom Eisenhart)
101. "Smart Card Surge May Start"
102. "Some Insights into IBM's Motives" (Pat Motola)
103. "Sources of Innovation" (John Case)
104. "Spot the Creative Tiger by Its Stripes" (Shell R. Alpert)
105. "Statewide Approach to MS-DOS Compatibility" (Jerry Niebaum)
106. "Study Finds IS Managers Are More People-Oriented" (Alice LaPlante)
107. "Study Probes Group Thinking" (Tom Eisenhart)
108. "Study Shows Workers Underuse Software" (Peggy Watt)
109. "Support Crisis"
110. "Synervision II Increases Creative Capabilities"
111. "Talking to TV's Children" (Fred Cohn)
112. "Technical Training: Slow in Coming" (Diane Feldman)
113. "Technology Trends: A Match Made in Heaven" (Diane Feldman)
114. "Technology, Tenacity, and Training" (Thomas R. Horton)
115. "Telco Casts a Shadow"
116. "Telecommunications Takes Off: While the U.S. Dithers, Other Nations Are Aggressively Modernizing to Compete" (William H. Davidson)
117. "Three New Programs That Are Revolutionary" (Lanny Hertzberg)
118. "Three Products Will Lead 1989 to Be Year of the Brain-Worker" (Jeff Angus)
119. "Three Wishes for Comprehensive Workgroup Software" (Don Crabb)
120. "To Manage Technology: Misconceptions, Warnings, and a Prescription" (Mark J. Estren)
121. "Trends in Educational Use" (William D. Gattis)
122. "Turning Technology into a Successful Business" (James T. Hammock)
123. "University Donations are a Corporate Challenge" (Barbara N. Berkman)
124. "User Object Programmings" (Roland J. Code)
125. "Users Not Inspired by Latest Technologies" (Alice LaPlante)
126. "Vote for U.S./U.S.S.R. Communications Glasnost" (Richard W. Herzfeld)
127. "Weighing Standards" (Clay Gordon)
128. "What's the Latest Twist in Telephone Up-grading?" (Kim Peckman)
129. "Who Are the Power Users?" (Alice LaPlante)

130. "Why is Bill Gates Frowning?"
131. "Winners and Losers"
132. "With Scull at Helm, Paperless Office is Wave of the Future" (T.C. Doyle)
133. "Workgroup Augmentation: The Next Massive Micro Application" (Jim Warren)
134. "Writing to Read: A Program for Literacy" (Sylvia Charp)

PRODUCT LITERATURE AND DEMONSTRATIONS

1. Business Outlook '89 (Computer Systems News)
2. Educational Software Evaluation Project (Modern Language Association)

BOOKS AND MANUALS

1. *How to Develop Business Information Systems for End Users* (John L. Garland)   New York, New York: John Wiley and Sons, 1986.
   a) The Business Information Systems Environment
      Changing Times in Business Computing --- References
   b) Putting End User Systems to Work
      Business Measurement Systems --- Business Planning Systems --- Text Retrieval Systems --- Office systems --- Decision Support Systems --- Information Centers --- Computer Graphics Systems --- Personal Computers --- References
   c) Organizing Business Information Systems for End User Support
      Developing the Mission Statement --- Setting Goals and Objectives --- Organizational Elements --- References
   d) Charting a Course for the Future
      Developing an End User Computing Strategy --- Defining the BIS Architecture --- References
   e) Understanding End User Requirements
      Management Responsibilities --- Enterprise Analysis --- Information Quality Analysis --- Joint Application Design --- Establishing a User Council --- References
   f) Justifying BIS Expense
      Business Case Overview --- User Justification --- Information System Justification --- Financial Justification
   g) Managing Business Data
      Managing Data As an Asset --- Data Administration --- Tools for Effective Data Management --- References
   h) Developing End User Applications
      Project Development Methodologies --- The Application Development Schedule --- Risk Assessment --- Application System Testing --- Application Documentation --- User Training and Support --- References
   i) Evaluating Application Software
      Buy Versus Make Tradeoffs --- Selection Methodologies --- Dealing with Software Vendors --- Sources of Software Information --- References
   j) Interacting with Computer Services
      Computer Services Organization --- Ensuring Service Quality --- Negotiating the

Service-Level --- Agreement --- Protecting the Computer Asset --- references
k) Measuring Productivity and Quality
Measuring Work Effort --- Measuring Work Product --- Tangible Versus Intangible Benefits --- References
l) A Business Information Systems Work Plan
The Planning Session --- The First Project --- Expanding Business Data Horizons --- A Vision of the Future of End User Computing
m) Bibliography

EDUCATION

1. Advanced Technology and Training Culture Partnerships (John Knechtel --- Mohawk College of Applied Arts and Technology)
2. Alice in Writing Land; Through the Administration Glass (Ray Rodrigues, Vice President --- Colorado State University)
3. Business and Education --- Partnerships for Growth (James McGuidwin, Charlotte Downing, Dale Swanger, Tom Proietti --- Monroe Community College; Larry Winner --- Eastman Kodak)
4. Competition for Excellence: Instructional Software Development for Community Colleges (IBM)
5. Computers, Writing Faculty, and the Politics of Marginality (Lisa Gerrard --- University of California, Los Angeles)
6. Decisions, Decisions (Michael Hiscox --- Director Interwest Applied Research)
7. Economic Development and the Community College: An Organization and Job Training Perspective (Steve Ovel --- Kirkwood Community College)
8. Institutional Effectiveness in a Changing Society (Robert Gordon --- President, Humber College of Applied Arts and Technology)
9. Post Secondary Education in an Information Society (Stuart Smith --- President, RockCliffe Research and Technology)
10. Report from the National Panel on Writing Instruction (Chair: Helen J. Schwartz --- Indiana University-Purdue University, Indianapolis)
(Presenters: Diane Balestri --- Princeton University; Brian Gallagher --- La Guardia Community College, CUNY; Nancy Kaplan --- Cornell University; Christine Neuwirth --- Carnegie Mellon University; Tori Haring-Smith --- Brown University)
11. Special Publication: Planning Guide for Instructional Computing Resources (Rudy Gentry --- Johnson County Community College; Ted Rohr --- St. Louis Community College; Joe McGrath --- Santa Fe Community College; Gary Klein --- Dallas County Community College District)
12. True Cost of Tomorrow's Educational Technology --- Money Isn't Everything (Peter Spina --- President, Monroe Community College)

APPENDIX F:

OTHER DELIVERABLES

VIRGINIA L. McBRIDE