1985
Supplement

The World Of Digital Typesetting

by John W. Seybold

Seybold Publications, Inc.

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Introduction to the 1985 Supplement

NO SOONER is *The World of Digital Typesetting* published than it is out of date. Technology continues to move forward with great strides and occasional leaps. It is economically impossible to revise the book every year. Consequently we have decided to include with each copy of the book this supplement, which will be revised every year. New purchasers will receive the current supplement. Those who have already purchased this book may receive a new supplement, if they so desire, by writing to the address shown below, and enclosing $3 for postage and handling. My plan is to issue a new supplement each July. The next one will be ready not later than August 1, 1986.

Such a supplement will be produced every year until this book is revised and republished, perhaps four years from now.

What is contained in this supplement? You will find no analytical material. What you will find is a list of all products or offerings in the field of composition and related pre-press activity that have come to our attention during the course of our publishing activity in preparing *The Seybold Report on Publishing Systems*.

I have deliberately included offerings that are out of date and can no longer be purchased because such equipment may well still be in the field and people need to know that it exists or that it existed. Even if no such equipment is presently used it may have involved important principles that are still alluded to. Moreover, the size and complexity of this listing should make it clear to the reader how difficult the task is to keep abreast of what is available. All of the products listed here have been developed within the last twenty years or so. Most of them have been developed or significantly enhanced during the last five years.

Categorizing the listings

I have chosen to list the various products in six categories, although any such classification is arbitrary and somewhat unsatisfactory.

The first heading is *keyboard-controlled typesetters*. Another term frequently used is *direct-entry typesetters* or *direct-input typesetters*. These devices consist of a keyboard and a typesetter, usually in the same cabinet, but sometimes in two pieces, one with the keyboard and video screen and the second comprising the typesetter.

Operators sit at the keyboard and enter their material. They may make their own end-of-line decisions while in a counting mode. They may let the "computer" make end-of-line decisions except if hyphenation decisions occur, or they may be able to let the computer handle the word-breaking as well.

The procedure may involve a preliminary keying before setting to measure takes place, in order to facilitate the making of corrections, but it is usually possible to handle corrections while either in a counting or a non-counting mode.

Increasingly, direct-entry keyboards are equipped to accept files which are already in machine-readable format, as from personal computers, whether on floppy disk or transmitted to the machine via telecommunications. Increasingly these machines are provided with supplementary keyboards. Increasingly they offer more and more disk storage. It becomes very difficult, therefore, to determine what is a "composition system" and what is only a direct-entry keyboard. The Compugraphic Modular Composition System is a case in point. It begins as a stand-alone one-person typesetter but it grows to become a multi-

user composition system. For this reason I have also listed this (and certain other products) in more than one category.

The second category I have listed consists of *second-generation typesetters*. They may be "slaves," or they may have their own "intelligence" and be capable of making their own end-of-line decisions. All of these machines use photographic masters for direct exposure onto photographic material. Many of them are no longer manufactured or even supported. Some of them are still quite viable.

The third category is *third-generation* or CRT *typesetters*. It is to be noted that there are now such typesetters which are also *direct-entry* typesetters.

The fourth category consists of *post-third-generation typesetters* (often laser devices, sometimes LED machines). Other technologies are possible. But I have grouped into this classification only those machines which require the use of photographic materials. Yet another category lists *plain-paper or non-photographic typesetters*, although it must be confessed that the paper isn't always "plain." It may need to be treated, as with a zinc-oxide coating. One might also quarrel with the notion of what is or is not a "photographic" process. These machines generally form characters by raster imaging. It is usually easier to "set" graphics. The resolution of the image may be excellent or may be limited to inferior work or for proofing purposes. I have made no effort in this brief listing to distinguish one from the other. Such devices could even have the capability of varying the outputting resolutions.

Then I turn to other categories—*stand-alone keyboards and text editors* is one such and *integrated or dedicated systems* is another. The latter would consist of a composition system only intended to drive the typesetter of the front-end system vendor.

Next, in considering *composition systems*, I make some effort to differentiate small, floppy-disk-based systems from larger rigid-disk systems. But I find that many vendors have virtually the same offering in both versions and thus the differentiation is somewhat arbitrary. I have chosen to lump together all kinds of composition systems, whether for newspapers, magazines, books or documentation, or even for specialized forms work.

But where the composition system merely consists of standard hardware which can be purchased directly from the hardware vendor, and a software package which is purchased elsewhere, I have prepared a separate listing, which appears at the very end of the listings under the heading *composition software*.

Next comes a category of *area composition/graphics systems* which were originally intended for the setting of display ads but are now used much more widely, for forms setting, for pagination and for the merging of text and graphics—even, in some cases, for editing the graphic images. Initially these devices were stand-alone systems, outputting directly to a typesetter. Increasingly they are interfaced to composition systems. They may become composition systems in their own right.

Then I turn to certain pre-press activities having to do with scanning and manipulation of illustrative matter, under the heading *cameras, scanners and color page make-up systems*. Originally I had intended to put color separation activities into a separate category but this now has become virtually impossible. Moreover, we are beginning to find that these devices are also taking over composition formatting functions, and, in some cases, going direct to plate, bypassing the typesetter. However, a separate category is shown to consider *platemakers*—only those devices which have the capability of digitizing images prior to platemaking. They may also be able to transmit these digitized signals to a remote platemaker.

Then at the end of the list I have included some additional categories. *Remote terminals, bureau systems, portable terminals and other devices* is followed by *interfaces and converters* and then a brief list of *text scanning devices* (optical character reading equipment). Finally, as previously mentioned, I have set forth the names of some vendors that specialize in providing *composition* (and related) *software* which can be purchased without having to buy a composition system, per se, to run on a computer you may already have in your own possession.

I hope this attempt to list all or virtually all known systems and pieces of equipment in logical categories will prove helpful as a reference tool to enable the reader to identify and classify some of the equipment he may read about or come across. Next year, when I update the list, it will no doubt be even more formidable.

Following the pages which list equipment, I have had the temerity to suggest relevant questions for each chapter of my book so that the reader may check himself or herself to assure that some of the central points, as I see them, have been sufficiently identified.

John W. Seybold, June, 1985

Seybold Publications, Inc.
Box 644, Media, Penna. 19063

Keyboard-Controlled Typesetters

Alphatype (founded 1950, went public 1970).
- AlphaComp I (1974-75), II and XWP (1977).
- AlphaComp 3 (1980).

AM Varityper
- Comp/Set 500 (1974); paper tape record/playback (model 503).
  - Floppy disk (1975) (model 504); 510, 520, 524, 510II (1980), 524II, 560II, 550, 560, 570.
- Comp/Set 3500 (1976); (reverse leading 1978), 3510, 3510W, 3520, 3550, 3560, 3560W, 4500 (1978), 4510, 4510W, 4520, 4550, 4560, 4560W.
- Comp/Edit (1978); 5310, 5410 (1981), 5510, 5810, 5900 (1981), 6300 (1983), 6400 (1982).
  - Comp/Edit 5618 Phototypesetting Terminal.
  - Communications capabilities introduced in 1980.
- Comp/Set.
  - Dry typesetter capabilities made available 1979.
  - Revision E software with automatic kerning (1980).
- Image previewer for Comp/Edit (1981).
- 6400 and 6300 CRT output (1982).
- Ruling features offered (1983).
- 15-MB Winchester disk available (1983).

Berthold
- Diatronic (1968).
- Diatext (1975).
- Diacomp.
- Dialine.
- acs 3200 (1980).
- fps-2000 (1978).
- ads 3000 (1977), (U.S., 1979).
- apu 3608.
- apu 6016.
- tpe 6001.
- mft 4000.
- tps 6000.
- gst 4000.
- sbs preview.
- dms 7000.

Bobst
- Varisetter 1, 2.
- Eurocat.
- Varicomposer (1976).
- (Bobst acquired Varisystems in 1978).
- Photoset (U.S. 1979).
- Variset 142, 143.

Böger
- Letterphot.
- Scantext 1000

Compugraphic
- 7200 (1968), I/L (1973).
- ACM 9001 (1973)
- ExecuWriter (1974) I, II, II/ML; ExecuWriter Display.
- CompuWriter (1972), II (1973), Junior (1973), II Jr. (1974), IV (1974), 48, 88.
  - CompuWriter MagSet.
- 4600.
- EditWriter 7500 (1977), 7100, 7100 Dry (1979), 7300, 7300 Dry, 7400, 7400 Dry, 7500, 7500 Dry, 7700, 7770 II (1980), 7800 Arabic (1980), 7900 (Universal); 2750 and 1750 keyboards.
  - Edit Writer Autokern Option.
  - EditWriter Intelligent Communication.
  - Interface Option—7300, 7500, 7770 II, 2750.
  - EditWriter Preview Option—7300, 7500, 7700, 2750.
  - EditWriter Printer Interface Option—7300, 7500, 7770 II, 2750.
  - EditWriter Ruling Option—7300, 7500, 7700, 7770 II, 2750.
  - PreView Monitor (Tektronix storage tube display) (1980).
  - Dry EditWriter introduced in 1979.
  - AutoKern (optional add-on kerning box) (1980.
  - Exception dictionary (1980).
  - Automatic ruling option (1980).
  - Intelligent Communications Interface (ICI) (1980).
  - Advanced Communications Interface (ACI) (1982).
  - AdVantage driver for EditWriter (1980).
  - EditWriter emulator for 8600 typesetter (1980).
- Compugraphic UniSetter with DEK keyboard.
- ACM 9000, 9001.
- Acquired by Agfa in 1981.
- Personal Composition System (Lisa) (1983).
- MCS—Modular Composition System (1981).
- PowerView workstation.
- *See also* Composition Systems section.
  - MCS 4 off-line work station (1983).

Itek
- Quadritek 1200 (1976), 1201 (1978), 1210, 1211.
- Itek Quadritek Editing Terminal (1977).
  - Dry process for Quadriteks introduced (1980).
  - IJET justification and editing—foreground/background (1980).
  - DCI Data Communications Interface (1980).
- Assumed Dymo/Photon product lines after acquisition.
- QuadQuick pre-stored format program (1980).

Multi-terminal system (1400 and 1600) (1981).
2100, 2200 (1983).
2110 typesetter and 2500 terminal (new 1985).
Digitek LED (1983).
Itek Composition Systems and graphic products in leveraged buyout from Litton, 1985.
Digitek 3000 offers greater font manipulation (1985).
Preview screen based on 68000 processor.

Mergenthaler
Linocomp 1 (1974).
Linocomp 2 (1976).
Linocomp Keyboard/(paper tape) Perforator.
Linoterm (1977).
Linoterm (High Speed) (1978).
Linotronic (sold in Europe primarily, 1976).
CRTronic (U.S. 1980), N or 150 (1982), 100 (1983), 200 (1983), 300 (U.S., 1984) with CRT output unit.
With Linotron 101 optional output (1984).
Linotronic 300 (*see also* Post-Third Generation classification).
CRTerminal (1982).
Omnitech 2000 (Nov. 1979).
WPI/2000 word processing interface.
Omnitech 2100 April, 1981).

Photon
Econosetter.

Quadritek
1200, magnetic cassette, to 36 points.
1201 (floppy disk).
1210, mag cassette, to 74 points.
1211 (floppy disk).

Varityper *see* AM Varityper.

Second-Generation Typesetters

Alphatype
AlphaSette, MultiMix, ML.

AM Varityper
725 (1969).
AM 707, 747 (1971).
AM 744, 748 (1972) (4 lens and 8 lens).
AMtrol logic (1973), 503.
AM 503.

American Type Founders
ATF B-8 (early 1960s).
ATF Photocomp 20 (1969).

Autologic
APS 313 & 301 (1982).
Formerly Bobst table-top phototypesetter.

Berthold
apu 3608 (1978).
Diatronic, Diatronic DC-3, Diatronic S.

Bobst
Eurocat 132-8, 133-8, 142-8, 143-8.
Photoset 222-8, 222-16 (1977); 132, 133, 142, 143 (1979).
Acquired by Autologic (May 1981).

Compugraphic
2900/4900. (1968-1970).
2961 & 4961 introduced in summer of 1968. Also 4962 slave.
2961 TL, 2961 HS and 4961 TL in summer, 1969.
2970 and 2971 TL introduced in early 1970.
ACM 9000 (1972)
TrendSetter 88, 812 (1978), re-worked UniSetter. Sold with Mini-Disk Reader as Mini-Publishing System).
Computape I, II (1974).
UniSetter (1975).
EditWriter 7900 (1979).
MCS 8200 (sold as part of Modular Composition System—1981).

Discorp
Digiform (for forms setting) (1977).

Dymo
Pacesetter (also Photon Pacesetter. Introduced by Photon in 1970.)
Models from Mark 1 through Mark 5
Econosetter

Fairchild
PTS-4000 (1970)

Friden *(see* Singer)

Graphic Systems
Graphicset 4, 8 (also Singer-Friden Photomix 70, 7450, 8000, 8100, 8200,8400).
C/A/T-4 and C/A/T-8 (slave version 1970). Company sold to Wang in 1978.
Other model designations: C/A/T 454, 854; Graphicset 454, 854.

Harris
Fototronic 480 (1950), 1200 (1968), 600.
Fototronic TxT 2 disk (1971), 5 disk (1972).
Fototronic 4000 (1974).
3300 (slave version AM Comp/Set) (1979).

Intertype
Fotosetter *see* Harris.

Itek
1350, 1400, 1600 (Slave versions of Quadritek 1200) (1981).

Pacesetter series *(see* Dymo)

Mergenthaler
Linofilm (1956).
Linofilm Quick (1964).
Linofilm SuperQuick (1966).
V-I-P (1970).
One to three drum machines (1974) with or without base-aligning features).
High-speed and low-cost Comet machines (1974).
VIP/T (1978), ATP 1/54 (1976).
MVP editing system.
Linotronic.

Monotype
Monophoto,400/8, 400/31, 600.
Mark 2 (1955).
Mark 3 (1965), Mark 4 (1967).
Mark 5(1969).
400 (1973); 400/8 (1974).
System 2000 (1977).

Photon
200 (1951).
512 (1963).
540, 560 (1964).
Photon 713 (1964).
900 ("ZIP") (1964).
561, 532 (1970).
Pacesetter series.
Econosetter.

Singer
Justotext 70, 71 (1972).
See also Friden for Photomix line.
Discontinued graphic arts products 1975.

Star Parts
CompStar (1970).
150,190 HU & DL,191 (1971).
2008 (1974), Commercial 44, 88, 160.
2001, 2002, 2004, 2006, 2016.
Star products dropped by Dymo, 1975.

Varisystems
Varisetter or Variset 132-8, 133-8; 142-8; 143-8, 142A and 142C.
Acquired by Bobst in 1978.

Wang
Typesetter 44, 48. (Formerly Graphicset 4 and 8 line of Graphic Systems, Inc. *Acquired by Wang in 1978).*

3rd-Generation (CRT) Typesetters

Alphatype
CRS (1978).
Roll-fed version (1980).
CRS 8900, 8902, 8901.
CRS 9900 (1984).

Autologic
APS 4 (originally sold as the *Photon 7000* in 1970).
100-pica version (1973).
APS 5 (57, 70, 100 and 5U)(1975).
APS-View soft typesetter (1978).
Graphics option.
APS-TEC composition software.
Text 19 (1978).
TFMS editing system.
APS-11 (1982) based on Convergent Technologies hardware (1982) for placement of type and art, plus cropping.
Micro-5 (1980).
Graphics option.
Nano 5 (never released).
Plasma display system with APS-19 controller to edit fonts (1980).
APS-44 font digitizer for APS-5 or Micro-5.

Berthold
crs 6900.
crs 8900.
crs 9900.

Böger
Scantext 1000.

Compugraphic
VideoSetter (1973).
24/14/,(1974), Universal (1975), LTD (1977).
PreView terminal (1977).
8400 (output device for MCS System—1981).
8600 45 and 68 pica (1980).
ImageSetter (8600 w. graphics) 1983.
8000 (1985).

Crosfield
Magnaset 226 (1973), briefly became SunCom product.

Dymo *see* Itek

Goss *see* MGD

Graphic Systems France
Laserset 4000, 4100.

Guttinger (Swiss)
GSA 789 discontinued when Berthold (Ger.) acquired company in 1980.

Harris Corporation
Fototronic CRT (1968).
Fototronic 7400, 7450, (1975); 7600, 7650 (1976).

Repackaged in 1980 as 7500, 7550, 7700, 7750.

Hell
Digiset 50T1 (1966-1973).
Digiset 40T1 or 10, 20, 30, COM.
Digiskop 2048 (scanner).
Digiset 400T30.
Digiset 20T2.

High Technology Solutions
FastSetter Image Setter (1983).

Information International
VideoComp
500,(1974); 570 (1977), 590 (1976), Metroset 400 (1980).
Comp 80/2 (1978), 80/3.
InfoSet 400/A.
InfoSet 470 PageSetter.
(Note the VideoComp 500 evolved from the original RCA VideoComp 800-series machine.)

Itek (Photon, Dymo)
Mark VIII (1979), IX, (1983).
Transferred to Unitex, Inc., June 2, 1984.

Mergenthaler
Linotron 1010 (installed at GPO in 1967.) Lexical Graphical Composer Printer.
Linotron 505 (Purdy-McIntosh/K.S. Paul product, 1967-68).
Linotron 303 (1974), 303TC/11 or 24; (1974).
Linotron 404 (1978).
Linotron 606 (1976).
Linotron 202 (1978).
202N (1980).
5-MB rigid disk (1980).
Superfonts (1980).
Motorized cassette option (1980).
Graphic subsystem (introduced 1981, discontinued in 1983).
Mergenthaler CRTronic (1979)

MGD
Metro-set, Metro-set/2 (1973).
Metro-set/plus (1975).

RCA
VideoComp 820 (1965. Derived from Hell Digiset 50 T1).
Model 830 (1967). The 840 and 800-series followed later.
See also Information International.

Rockwell (Goss)
See MGD

Seaco
1600 (1972)

SunCom
Purchased fonts from LA Times (which in turn bought VideoComp fonts from Poole Bros.) (1973).

Unitex, Inc.
Mark IX CRT typesetter.

Varityper
Comp/Edit 6400.
CompEdit 6300.
Epics 6100.

Post-Third-Generation Typesetters

Autologic
Bit Blaster (raster adapter for APS-5s)

Camex
BitSetter, part of SuperSetter line.

DRS (Data Recording Systems)
DRS Laser Scribe (pre-viewed at '85 Seybold Seminar; first displayed publicly at Print '85).

Dymo
DLC 1000 (1976 dropped in 1977).

Harris Graphics
Digifom D3400 and D 3500 Formsetters

Graphic Systems France
Laserset 4000 (1983). Previously shown by Isys. Manufactured by CGK, a Siemens subsidiary.

Hell
LS210 laser.

Isys
Supplies Laserset 4000 to Graphic Systems France.

Itek
Digitek (keyboard-controlled, LED device).
Digitek 3000 (Print '85).

Mergenthaler
Linotronic 300 (laser).
Omnitech 2000 (1979-1981). Keyboard-controlled laser device outputting to zinc-oxide-coated "plain" paper.
2100 (1981-1983). Same basic device but outputting to photographic material.
Linotron 101 (laser, 1983).

Misomex AB
Flat-bed laser recorder for business forms output.

Monotype
Lasercomp (1976).
100-pica version 1978.
Mark 2.
Mark 2/70.

Mark 2i electronics as an OEM RIP.
Sprint (1983).

Purup
For forms composition.

Non-Photographic Typesetters

Agfa
Officier P400 laser printer (1982).
Switches from laser to LED's for 400 dpi printer (1983).

Apple
LaserWriter

Autologic
Bit Blaster.
Photoset 301 (Autologic SA).
Direct to zinc-oxide offset plates.

Camex
BitPrinter (1983), part of SuperSetter family.

Canon
LBP-10.
LBP-5/480 (1983).
LPB-CX (1983).

Datalogics
6380 laser printer.
Xerox XP12E engine with proprietary controller (1983).

Delphax
Ion deposition electronic printer.

Digital Equipment
LN01 laser prihter, based upon Xerox XP-12

Harris Graphics
Plain paper proofing machine prototype (Graph Expo 84, Print '85).

Hewlett-Packard
2680 Laser printing system (1980).

IBM
3820 Electronic printer (1985).
4250 (1982).
6640 ink jet printer.
6670 laser imaging onto belt at 240 dpi.

Imagen
Image Processor (Canon LBP-10).
IMP-10

Imteks
PTT-10 (Canon LBP-10).
Acquired by Information Displays Inc., May, 1983.

Information International
VideoPrint300, laser/xerographic plain paper typesetter.
DCT raster image processor (OEM to Crosfield).

Intran, formerly Mediamatics
Laserproof for 9700 output of simulated III (and other) output.
Metaform runs on Three Rivers PerQ-2 workstations (1983).

Mediamatics *see* Intran.

Minolta
SP50B (1983).

Purup
PE 0220 laser-based xerographic proof printer.

QMS (formerly Quality Micro Systems)
Lasergraphix 800, 1200, 2300

Sharp
Scanner, image processor and printer (1983).

Tegra
Genesis (built around Canon LBP-5/480) (Nov. 1984)

Titus Communications
Electrographic typesetter (1979).

Wang
LPS-12 laser printer (1982)

Xerox
9700 (1978).
5700 (1980).
8700.
2700 or OEM version XP12-E.
1050 supporting scanner.

Stand-alone Keyboards and Text Editors

AKI
Autocount series.
CIT-70, CIM-80, CIM-100, PCI-100.
Maxis (1976).
UltraComp (1973).
UltraCount.
Accu-Hyphen (for use with UltraCount and Pro-Count).
Pro-count.
Acquired by Atex in 1979.

Alphatype
FDTS, developed by Key Corp.

AM Varityper
Electro/Set 450/455, 460.
Edit/Set 490.

Bobst Graphic
Scrib terminal (portable).
Acquired by Autologic, May 1981.

Böger (Ger.)
Scantext 1000 terminal for input, editing, composition (1982).
Scantext 800 portable.

Compugraphic
AutoEdit (version of AKI UltraEdit) (1973).
Unified Composer.
Unified Terminal System.
MDT 350 MiniDisc Terminal (Intel 8080 micro).
Modular Composition System, MCS 4 for raw input to full MCS composition system (*See also* "composition systems," page 7).
Uniterm/NJ.

Computek
T-RB4 (1978) for Tal-Star systems.
Publisher 4.
Model 16A stand-alone terminal with two-way communications support (1980).
Terminated operations in 1985.

Computype
CompuEdit (1975).
CompuEdit/140 editing system.
CompuStor File Management System.
MiniStor.

Delta Data
7303 terminals with Z80-based clustered word-processing system/text editing (1981).
8303 (1985)

Dymo CPS-200
Model 11, 12, 21, 32 Editing Terminal (Varisystems).
Model 30/8, 30/16.

Editron
Input, editing and telecommunications terminals.
Editron 100 compatible with CRTronic 100/150
Editron 200 compatible with CRTronic 200
Editron 300 compatible with CRTronic 300.

EEText
ACT 4B, ACT 16B (1979-80).
Comprehensive Editing Terminal (1981).
Classified ad and circulation package (1982).
Terminated operations in 1983.

EIT
Editor (1981).

Graphic Systems
Graphic Ediset.

Harris
1100 (1972)

Hendrix
5200, 6100, 6200.

Imlac (*See* "composition systems", page 7).

Interface Mechanisms
Supplied dual image keyboards (codes and images) until 1973.

Key Corp.
Key II, Key III (1976).
Acquired by Alphatype 1978.

Mergenthaler
CorRecTerm.
CRTerminal 100, 200, 300.
Micomp.
MVP editing system (1976).
NJ/300 (1976).
MVP/2.
MVP/3 (1981).
Based on Delta Data 7000, software supplied by Amicus.

Monotype
NJ 400.

Morisawa
Input and editing terminals for Linotron 202E (1982).

Newspaper Electronics
Editerm 2000.

Omega Systems
Text editor (British).

Omnitext
Marketed by Mohr (1972).
1500 series.
1600.
Omnicomp 20.
Closed doors in 1978.

One Systems
One/tn.

Panda GmbH
Sharp microcomputer with Panda-specified keyboard and character generator.
P20 terminal of own design (1983).

Singer
9400 Text Editing System (Omnitext).

Sperry Univac
UTS-400TE.

Teleram
P-1800.

Teletype
Model 40.

Terminal Systems Corporation
Copy Control III (1982).
Wire Control IV (1982).

Titus Communications
1700Z terminal (Hazeltine 1500) (1978).

Typecraft
Commodore-based counting keyboard/editor for Linotron 202 (1982), and for EditWriter, VIP, 8600 and 8400 (1983).

Varisystems
Varicomposer I (1976).
1100, 2100, 3416.

Integrated Systems

An integrated system consists of a front-end composition system that will only run the typesetter of its manufacturer, generally supplied in the same package. The "front end" may be an inboard or an outboard computer.

Alphatype
FDTS workstation with AlphaComp 3 output unit.

AM Varityper
Epics (1982), with Comp/Edit output unit.

Autologic
Microcomposer, with APS-μ5 output unit.
Text 19 and Text 5 in conjunction with Autologic APS-5.

Compugraphic
MCS (Modular Composition System) (1981), with 8200, 8400 or 8600 output unit.
PowerPage (1983).
UTS (Unified Terminal System).
1210 upgrade option.

Graphic Systems
System 1

Information International
Aids

Itek
Quadritek, with 1400 or 1600 output unit.

Mergenthaler
CRTronic 200/300 (1983/1984), with 101, CRTronic or Linotron 300 output unit.
Linotron 303 (inboard version).
Systems 10, 20 30 for V-I-P.
MVP for V-I-P.

Star Graphic Systems
CPS 200 (1974)

Telex Terminal Communications
GAT (1977).

Composition Systems

Floppy disk systems

AKI (Automix Keyboards, Inc.)
Minibank
Maxis system with Optimix display terminal.
ULTRAsystem II
Ultrabank
Optimix One Composition and Layout System.
Ultrahyphen package
Acquired by Atex in 1979.
Ultratype 4000 and 3000
(Acquired by Atex, Atex acquired by Kodak, Kodak closes AKI, Aug. 1982).

Allied Linotype *see* Mergenthaler

Amicus
Solo
Floppy disk system built on Delta Data 7303 terminal and TI 9900 16-bit microprocessor, with network system. Had supplied terminal as MVP/3 to Mergenthaler (1981).
Marketed by Newspaper Electronics (1982-85).
See rigid systems.

Compugraphic
Mini-Publishing System (1978) built around Mini-Disk terminals (MDT 350).
Unified Composing System (UniScan OCR, Unified Composer, Unisetter via floppy disks).
Unified Terminal System (1977).
Mini Wire Recorder (1977).
Acquires One Systems (1981)
Introduces Modular Composition System (1981).
Self-contained input/editing/composition workstations which can be interfaced to separate slave outputting phototypesetters, including 8600, 8400 and 8200 typesetters.
PowerView 10 workstation (Aug. 1984).
PowerPage pagination program.

CompuScan
STaRT (floppy disk version).
ScanDisk.
ScanTerm.

Computek
Econotype (1978).
Publisher Four taken over from Tal-Star (1980).
Econotext 3 (1980).

Computype *(see also* Harris).
MiniStor.
CompuStor.
MicroStor replaces CompuStor and MiniStor (1977).
Acquired by Harris in 1976.
Micro-edit (1977) (Peripheral concentrator, up to four floppy disks, and Image III terminals).

Graphitek
German-based floppy disk system marketed by Compugraphic overseas (1981).

Harris
1250 MicroStor system (1980).

Keystor (UK)
Stand-alone video terminal with full Monotype keyboard, graphic display screen and two 8" floppies for math setting (1982).

Mergenthaler
Linoscreen 7000 (Datek product) introduced briefly in 1980.
Series 100 Macintosh software to drive Linotronic 300 or 101.
Series 200 IBM-PC software to drive Linotronic 300 or 202.

Mycro-Tek
Founded 1974, first system 1976.
1000 Newspaper system
1100 and 1100 Plus systems
Composition Plus software
AdTouch display ad terminal.
2000 commercial system. As of 1978 Intel 8080's in terminal, disk controller and printer thus provided intelligent terminal, disk controller, on-line interface and MC-80 controller switching box. Originally used only floppy storage, then added (1980) Winchester sealed-disk storage as an option, 8K storage in 1000 system terminal, 32K in 2000 system.
Acquired by Allied Chemical (1979).
Update 13 software (1980).
Business application software available.
AdComp Display Ad Terminal (1980).
Commodore system (MC-500 LCS) (1982).
See also rigid disk systems, below.
Spun-off by Allied, process begins June, 1984.

Newspaper Electronics
As of 1978, 16K of work storage inside Beehive terminal, file storage system with two dual density floppies. Then Beehive B-550 terminals were used (1979). Dual density floppies (600 characters with GSI drives and Zilog Z-80 controllers introduced in 1979.)
Also marketed **Amicus system** 1982-85.

Omega (UK)
Stand-alone composition system on Lynwood terminal, with Z8000 (1982).

Quadex (see also Compugraphic, below).
MediaFile System.
Q100 (1981).
Q210, Q280.
Acquired by Compugraphic in 1979.
MiniDisk 350 interface for Quadex systems (1980).
Quadex 500 system (April 1981) combines features of Q200 and Q300.

Spectron
Floppy-based stand-alone terminal/composition system marketed by Monotype (1981).

Varisystems
Varicomposer (1976), 1A (1978).
MTMS cluster system (1978).

Rigid disk systems

AKI (acquired by Atex in 1979).
Ultratype 4000:
One PDP-11/04 with 128K of 16-bit words, supporting four terminals (up to 8 terminals optionally), with two 80-MB disk drives (one fixed and one removable). Optional second system with 3 terminals, one 80-MB drive, 9600-baud communication link to first system.
Ultratype 4082 with two 80 MB disks, esthetic kerning expanded, Ultrameasure copyfitting (1980).
Ultratype 4022 low-cost system (1980)
Ultratype 4042 (more disk storage) (1980).
Ultratype 3000 system introduced in 1980
AKI closed by Kodak (August 1982).

Alfa System Partner *see* Autologic
Prime super-mini newspaper system with Megadata terminals (1982).
To be distributed by Autologic (1983).

Alphatype/AlphaKey (or Berthold/Alphatype).
MultiSet, MultiSet III.
Computer Automation LSI-4/30 with 96K of memory. Terminals have own Z-80 microprocessor.
Counting keyboard or h&j mode.
SoftView.
Logoscanner.
Pagination program (1980).
Dataphone communications (1980).
Linkage of two systems (1980).
Release of 2.7 software, followed by 2.8 (1980).

Proofreading package (1980).
Acquired by Berthold in 1980.
Intelligent Graphic Systems SoftVu preview terminal (1983).
Mini MultiSet (1983).
Mini 40, with 40-MB disk.

Amcomp (formerly Data Disc, then Datapoint, then Logicon-Intercomp), then Harris. *See* Logicon.

American Printing Technologies (APT)
Technical documentation system based on Motorola 68000, developed jointly with Electronic Machine Corporation.
Pagewright software.

Amicus (UK)
Rigid disk version built around TI 995 and Z-80 processors, Delta Data 7300 terminal (1983).
Marketed by Monotype and Delairco.

Arsycom
TEXOM-75 (several PDP-11/44 processors) (Holland) (1976).

Atex
Atex 8000 (PDP-11/05 or 11/35, or 04 and 34). Computer also serves as controller for Atex-built terminals.
9000 newspaper system.
7000 newspaper system (April 1981).
Models 7032, 7048 and 7064.
4000 (see also AKI).
4000S (with Release 4 software) 1984.
GT68 Graphics and pagination terminal. (Motorola 68000) (1982).
Classified ad pagination.
Release 3 introduced 1979.
Atex PC interface software supports virtually any PC running virtually any word processing and communication software.
Release 4 software (1981).
Spellcheck (1982).
5000 newspaper system (1982).
Atex 1000 remote terminal (1981).
Atex 1500 "full-function" remote (1981).
Atex 9080 remote cluster (1981).
Atex 500 remote terminal (1982).
Atex library or morgue system.
Electronic library system jointly with Infotex (1981).
Acquired by Eastman Kodak 1981.
TPE (Total Publishing Environment) products.

Autologic
APS Editorial system and APS classified (1976).
Microcomposer (1982).
Convergent Technologies hardware, floppy or Winchester disk. Software by Shevlin.
RAM memory increased to 640 KB, disk capacity from 10 to 20 MB (1983).
Alfa System Partner system (1982).
APPS-1 Photo-imaging System.
Editorial page make-up on a Perq workstation. Direct output to paper, film or 3M plates.

Bedford Computer
Real-Time Composition System uses one of the DEC PDP-11 family from 11/04 upward with proprietary hardware enhancements, disk drives and disk controllers appropriate to user requirements. Highly interactive "page" terminals refreshed by computer memory. Page terminals simulate type.
Public stock offering (1981).
Fileserver for LAN. (1982).
Electronic printer and drum plotter/typesetter under development (1982).
Quikview upgrade (of Motorola 68000 power painter board—1982).
Meteor system 1982.
Motorola 68000, one or two floppies.
Pagination terminal (1983).
Galley workstation.
Input workstation.
Meteor system II.
Winchester disk version.
Vision Network.

Berthold
"Magic" System with interactive text and graphics and raster scan image machine under development (1982).

Bobst Graphic Systems
Multi-terminal modular system (MTMS) consisting of linked Varicomposers 1A.

Caddex
Text and graphics system for technical publishing and other documentation applications.

Cerci (France)
PDP8-based Solstice-8.
PDP-11-based Solstice 11.
2000 system based on multiple DEC VAXes (780, 750, 730) (1982).
Uses DEC VMS operating system, Ethernet LAN, Serius 20 terminals, Perq-based page make-up terminal, called Sirius 4000 (1983).

Comap *see* EIT (Electronic Information Technology).

Composition Systems, Inc.
CSI 24/32 (PDP-8 with Megadata Terminals).

CSI 11/70 system (1976). (PDP-11/70 with Megadata terminals).
Four central processor systems, all based upon Digital Equipment PDP-11. The first a PDP-11/34 with 124K of 16-bit words. The second a PDP-11/44 which with memory management module offers up to 1 megabyte. The third a PDP-11/60 and the fourth a PDP-11/70. For commercial applications Edit 112 Megadata terminals used. Disk drives from 67 MB to 300 MB. Terminals are intelligent, containing own character generation, refresh and buffer. Operating system RSX11M.
Expanded Network multiprocessor systems.
Classified ad pagination.
CSI System 2000: 68000-based intelligent terminals, 11/44's serve as communication servers/concentrators, and VAX data base managers, linked through a high-speed network.
Also a personal computer interface.
Spelling checker.
VDT-resident depth estimation program.
Gateway program for library access.
Interface to Telcon Zorba portable terminals.
CT 79 and CT 112 terminals.
CSI network system.
112B terminal (68000-based) (1982).
Non-stop "Globalnet" architecture (1982).

Comprite *see* Software Sciences Comprite.

Compugraphic Modular Composition System
Introduced May, 1981.
Self-contained input/editing stations which can be interfaced to slave output phototypesetters (8600, 8400, 8200).
Release E software (1983).

Compugraphic Personal Composition System
Lisa by Apple to be used for composition with 8200 and 8400 typesetter output (1983).

Compugraphic One Systems
ONE/10 (dual Naked Minis supporting ONE terminals).
ONE/16 and ONE/80 added to ONE/40.
Has CAI 4/10 computer with CDC 8448 disk drive with 16 MB fixed and 16 MB removable—up to 8 terminals.
ONE/40 (three Naked Minis supporting ONE terminals).
Uses 40-MB removable disk packs and CAI 4/90 computer, with up to 36 terminals, 12 classified and 24 editorial.
ONE/80 uses 80-MB disk drives with 48 terminal maximum (1981).

Compugraphic Quadex
MediaFile (1976) (LSI-11, four floppy disks on master; two floppies each on up to six workstations).
Q200 system introduced Oct. 1979, with "production booster and memory management, with 128K.
Q300 systems (1980) rewritten software to run without memory management in 64K. No text programming option.
Typographer I, II and III packages with rigid disk on III).
Q5000 replaces Q500 with better ergonomics, using Winchester disks for data storage. 10-, 35- or 120-MB disks (up to two) with streaming tape for off-line back-up. Up to 8 terminals on single system. Two CPU's can communicate with each other (1983).

CompuScan
COMAP (1978) (Digital Computer Controls Nova copy, 64-96K, own terminals).
Later taken over by new company, EIT.

Computek *see also* Floppy disk category above.
Publisher Four with 16-bit GA computer and 40-MB rigid disk (1981).

Computer Composition International
CCI 400. Description as of 1979: Data General Nova 2, 3 or 4 or Eclipse models S130, S230, or C330. Minimum configuration is 64K of 16-bit words. One to four or perhaps five Lear-Siegler ADM-2 terminals can be connected to a single 64K CPU. Up to 30 terminals could be supported on 128K Nova 4 as long as only 12 are used for interactive h&j at one time. Mag tape optional. Additional memory optional. Runs on CCI COS operating system.
High-speed telecommunications interface.
New Ontel terminals (1980).
Book pagination (1980).
Typelink for remote communications (1980).
InfoMix data manipulation and general software package for code and string translation from Denmark introduced in U.S. (1980).
Page IV. New book pagination program 1983.
CX1000 small system with five terminals (1983).
Acquired by Aarhuss Stifts Bogtrykkerie, (Denmark) in 1976.
ActiView soft preview terminal and interactive version (1983).
400S revised CCI terminal, replacing 400E terminal.

CCI 4000
TechPage documentation package. (1983).
Typelink II enhanced version (1983).
Acquired by PSS Peripherals (1983).
"Laserpaste" electronic paste-up terminal.
PC-based Editor.
TechPage graphics subsystem.

Comtec *see* ND Comtec

Computype
MicroStor (*See also* Harris).
Z80 microprocessor, 600 K floppy drive.

Cybergraphic Systems
Runs on linked DEC computers, 11/24 or 11/44 with up to 40 VDT's per CPU or VAX, with up to 80 VDT's per CPU. Model CGS 250 terminals are 68000-based.
Classified software.
Layout-80 and page layout.
CGS interactive pagination and ad make-up terminal.
CGS 24/80 system with four CGS 250 terminals and one CGS 150 terminal.

Data Disc (1975)
Became Amcomp (1976).

Datalogics
Draft 8 (1975) (PDP-supporting Beehive SuperBee terminals).
Wiscomp (PDP-11/45 or 1 1/70 supporting Beehive SuperBee terminals).
Series 6300 Composition system. (1979) Digital Equipment models 11/45 and 11/70. IBM 3270 clusters could be interfaced. Terminals of Beehive variety, developed to meet Datalogic requirements usually interfaced at 9600 baud.
(Also the source of Digital Equipment DECset.)

Datox (France)
LAN composition system under development (1982).
Separate Z80 microprocessor modules for each function. Up to 128 clusters on 1M-bit/sec. LAN (1983).

deltaconsult
MOPAS (Data General Nova supporting Zentec terminals. *See* MOPAS.)

Demonics
Tech-pub system for plain-paper output including graphics.

Dewar Information Systems
Proprietary local network. File storage and interface to peripherals handled by network units called LANDs, each with 40 MB or more of data storage.
Class ad program.
Class ad management program.

Digital Equipment
See also Newspaper Systems, Support and Engineering Associates (NSSE).
DECedit.
32K PDP-8 (1976).
COMtype (PDP-8 commercial system with VT71 terminals).
DECset 8000 (1974) (PDP-8 supporting DEC 61/t or 71/t terminals).
DECedit (same configuration as above).
DECedit 620 (1978).
TMS-8 (1977) includes DECset, DECwire, DEC-edit.
CMS-11 (1977).
CPMS-11 (1978).
PMC-11 (1977).
DECset. DECedit, DECwire, class ad input and invoicing.
TMS-11 (PDP-11/45 or 11/70 supporting 61/t or 71/t terminals).
Version 5 of TMS-11 introduced in 1978.
TMS-11C for commercial. AS of 1979, would consist of 11/70 with 512K or more of memory and combination of VT-61 and 72 terminals. Disks would be any number of RM03's (67 MB) or RP06's (176 MB).
TMS11xe for small newspapers.
Typeset 10 (DEC System 10 supporting 61/ or 71 t terminals) (transferred to Hendrix).
CMS-11.
PMS-11 (page management system).
DECset II.
Typeset 11 changed to TMS-11 (1976).
VT71 terminal (1976).
VT173 terminals introduced. Includes LSI-11/2 microprocessor). Model VT171C for classified (1980).
Interface to Raytheon 100 (1981).
Library system with Batelle (1981).
ANPA spelling checker available (1982).
DEC makes agreement with Hastech to support Hastech PagePro on TMS-11 systems (1983).

Discorp
Forms setting equipment (founded 1976).

Dymo (*see also* Unitex and Itek).
Dymo Copy Processing System (CPS).
Digi-Vu soft copy device (1973)
CPS 200.
CPS 300.

CPS 320.
GRI computer with 48 K expandable to 64 K interfaced at 9600 baud to one or more intelligent Zentec terminals, with rigid disk storage and various peripherals.
CPS 500 (32 to 48 K 16-bit-word GRI computers).
CPS 730
CPS 7A20 (64K 16-bit-word GRI CPU).
Rev. 6 software (1978).
Series 40 GDT introduced 1978.
Zentec remote terminals, models 51 and 50.
Acquires Xylogics (1976).
VDS floppy-disk option for remote terminal systems (1980).
Graphic Display terminal add-on (1976).
Esselte acquired Dymo in 1978.
Itek acquired Dymo from Esselte in 1979.
Itek acquired by Litton in 1982.
New hardware introduced in 1981 to replace GRI product.
Models 1010, 1015, 1020, 1030 and 1040, from one to four CPU's, one or two disk controllers, from 24 to 96 terminals.
Unitex takes over LSO operation, June 1984.

ECRM (*see also* Xenotron).
7000 series (7200, 7600, 7800) (Two PDP-11/04's or 05's, one for editing and as controller for video terminals. The second is a 96-K data base manager, then 5 and 10 MB instead. Terminals refreshed from controller. Earlier systems had 2.5-MB drives.
Acquired by AM International in 1978, later by Xenotron (1982).

EIT (Electronic Information Technology).
Founded in 1980, from predecessor, CompuScan (STaRT) system and COMAP, and from earlier Emmo Publications.
Winchester disk offered on COMAP 12 model (1981).
Electronic Imaging Terminal (1982).
Spelling checker, mirrored disks (1982).
TS-1 low-cost system with up to 100 MB disk storage and six terminals (1983).

Ferranti Computer Systems (UK)
CS7 (early 1970s).
CS7-10 (1980). Ferranti computer, 5-MB disk, 2-8 terminals.
Used primarily in conjunction with Monotype Lasercomp.

Freeman-Mayhew Limited
Vax-based Text 1000 newspaper system.
Library system under development.

GB Techniques (UK)
Z80-based LAN composition system (1982).

Graphic Systems
System 1 (and OEM versions), mid-1970s.

Graphic Systems France
Microtexte (version of System 1 above) (1981).

Harris Composition Systems
2500 series (PDP-11/34's or 11/35's supporting Harris 1520 or 1720 or 1740 terminals).
2520, 2550, 2560, 2565.
System 90 newspaper system (1981).
8300 page layout system (1983)
To interface with System 90 or 2500.
2538 and 2558 (1980).
Release 5 software (1980).
DEC LSI 11/23 packaged to run Release 5.1 HNS2 2500 system software.
New 1760, 1770, 1780 terminals (1980).
System 95, one computer with 320K words of MOS memory and one or more 67-MB disks supporting up to 30 terminals.
System 96 dual configuration supporting 40 terminals.
Copy net local area network.

Hastech (created as a subsidiary of Hendrix in 1979).
Took over Hendrix composition line in March 1981.
PagePro.
Workstation with two video screens (one is Edit III terminal; the other for viewing pages). TI 9900 with Hastech memory management module plus interface to host computer.
NewsPro page layout system.
GraphPro software for handling graphics.
HS45, HS46, HS47.
Micro 40 entry level (1981). LSI 11/23 with 94K of MOS memory, and two double-density single-sided floppies.
HS46 and 47. 11/34-based systems supporting 16 terminals. Dual processor system supports 24 terminals with two 64-MB disks.
HS58 high-end product will handle PagePro terminals (1981).
NewsPro (1981) page make-up capability.
HS58 (1981) based on 11/44 processor.
HS54 with PDP-11/24, 80 or 300 MB, up to 24 terminals (1982).
Magician terminals (Motorola 68000) (1982).

Heighlin Ltd. (UK)
Founded by ex-Datek personnel.

System 88, CPU, 10-MB hard disk, 1-MB floppy.
See Itek.

Hell
Dosy System.
200 and 400 systems.
Sagep 2064 page make-up system (1982).
Sagep graphics (1982).

Hendrix Electronics or **Hendrix Worldwide**
(*See also* Hastech)
3400, 4030, 6400, 6420 (1976), 6404, 6440S, 6460, 6480S, 6500.
6400 series (PDP-11/34. Computer also served as controller for Hendrix reporter or 5700 terminals).
6490 80K PDP-11/34 and 24K PDP-11/04 for h&j.
6500 (PDP-11/34's supporting PDP-11/34-based terminal clusters).
3400 (PDP-8 computer supporting PDP-11/34 based terminal clusters).
Terminus 1 (similar to Hendrix-supplied Compugraphic UTS).
HS 43 (1978) uses PDP-11/04 with 76K of core and Version 2 editorial classified software, supporting four 250K floppies and four terminals.
HS45 uses PDP-11/04 plus 20 MB of rigid disk storage, two floppies, 12 video terminals, two 4/Sight displays.
HS46 uses 11/34 with 80K of memory and pseudo-unibus structure. Also 20 MB of hard disk storage, supporting 16 VDT's and two 4/Sight terminals.
HS47 uses 11/34 with 67-MB hard disk, supporting 24 VDT's. Each Edit III terminal has 4K of memory.
Hastech takes over Hendrix composition system line March, 1981.

High Technology Solutions
MPS 4000 graphics terminals and composition system networked with IBM PC's (1982).
Video screen offers preview and editing mode.
Some editing possible in preview or graphics mode (1983).
Graphic tablet added to enter irrregular shapes for text blocks (1983).

IBM
IBM 1130 software packages, including FDP.
Series/I Text Entry and Edit (TE/E).
PRINTEXT (System 370 computer if configured with ATMS or the user's own front-end system utilizing IBM hardware or a front-end system provided by another vendor).
Integrated Publishing System.

ICS *see* Information Control Systems.

Informatics
InfoPage typesetting system, based on Wang VS minicomputer
Optional Camex Breeze subsystem.

Imlac
Composer 15, 1500, 1550.
Imlac 1550 (Imlac PDS-4 controller terminals supporting up to three other PDS-4 Imlac terminals). Up to four 10-MB disk drives.
Pagemaker for 1550 (1976).
1510 low-cost terminals (1980).
Central Text Control Unit to support up to four 80-MB disk drives (1980).
Imlac-89 storage module.
Rules, forms capabilities (1980).
Acquired by Hazeltine.
Royce pruchased by Scitex, May 1985
Sells rights to Imlac Composer to Royce Data Systems (1982). *See also* Royce Data Systems.

Information Control Systems (ICS)
Astrocomp D1.
Closed in 1979.

Information International
4500 Ad Make-Up Station.
2020 Page Make-up Station, with Tektronix 617 storage tube display.
2001 file manager.
2021 PMS has own disk drives and file manager.
TECS-3300 (1978).
AIDS automated documentation system (1980) includes TECS 3300 editing, composition and make-up terminals, 3600 illustration scanner, 2,000 page make-up system, 2001 file manager, and COMp 80/2 typesetter.
Remote text entry by Micro-edit system acquired from MGD (1980).
(III 90 CPU with 64K bytes of memory, 5-MB disk storage (fixed and removable), two VDT's and ASR typewriter).
Tabular software for TEC 3300 (1980).

Intergraph
CAD workstations equipped with TEX for composition (1983).
Interpage tech-pub package with Mass-11 text editor from Micro Systems Engineering, outputting to GCI-equipped Autologic typesetter or other similar devices, plus Xerox 9700 and 8700.

Interleaf
System for creating and handling text and graphics for in-house editing and composition (1983).
OPS-2000, a spin-off of M.I.T. Etude, written in C and running under Unix on Motorola 68010 workstation. System offers bit-map display, 31-MB hard disk, 20-MB tape streamer, Canon laser printer (1983).
Financing by Eastman Kodak (1984).

Interset (UK)
Midas system shown in 1980 as front end for Monotype Lasercomp.
Protext 2010 (1982).

Itek *(see also* Dymo and Unitex)
Displays Heighlin system (1980).
New computer hardware introduced to former Dymo/Xylogics system, *see* Dymo.
Pagitek (formerly Heighlin).
Euro-Edit and Euro-Page terminals for CPS 1000 systems (1982).
Enhanced Composition Software (ECS III) 1982.
Minitek I with 192K ATP CPU, up to 12 Mod 40 terminals, dual 40-MB Winchester disks, plus 8″ double-density floppy (1983).
Minitek II dual computer system with double writing onto dual 40-MB Winchesters. Up to 24 terminals (1983).
Preview terminal for Quadritek, CPS and Minitek systems, used Motorola 68000, bit-mapped (1983).
Itek acquired by Litton in 1982.
Unitex, new company formed to take over Itek Large Systems Operations in 1984.

Key Corp.
MultiSet III (later Alphatype MultiSet III).
CA LSI 48K 4/30 computer as file manager with Z80's in each terminal with 32K. Standard system with CDC 80-MB disk plus one Shugart floppy for archival storage.

Krohm International
Entry-level system two terminals, with TI hardware, 10-MB Winchester, 1.4-MB floppy, basic typographic features with profile kerning.
PC's can interface.
Spelling checker (1983).
See also under *Software.*

Liber Systems (Sweden)
TIPS system (1981-3).
Text-100 PDP-11 Typlan editorial system.
Ads-2000, class ad system (from Typlan).
File-300 library system.
Image 500, image processing system.
EPM-600 videotext output.
Page-700 interactive page make-up system using same hardware as Image 500.
Plate-900 raster image processor.
Uses true, not generic, fonts.

Linotype
See Mergenthaler Linotype

Logicon
Logicon-Intercomp Logigraphic System, IBM 1130 (1973) and then Digital Scientific Meta 4 computer or Logicon 1000E computer supporting Logicon's Ontel-built terminals. Later EE/80's.
Lear-Siegler terminals for reporters.
Mini-Edit (1976) (PDP-11 which also serves as a controller for up to eight proprietary terminals.
EE/80 cluster terminals.
Acquired TPS 6000 system from Data Disc via Datapoint (1976).
TPS 6000.
Developed by Data Disc, acquired by AmComp, then Datapoint, then Logicon and finally Harris (1981). Uses one or more PDP-11/34, 35 or 11/70's with LSI-11 (6800) cluster controllers.
Washington Star installation prototypical system (1980).
Offered NewsWhole (Human Computing Resources Corp.) newspaper layout system (1981).

Mergenthaler Linotype
System 5 (Honeywell 316, then Prime 100, 200 or 300 computer supporting Linoscreen 2 terminals. Enlarged memory with up to 96K of 16-bit words with various rigid-disk options, linked to one or more concentrators, each of which supports up to eight Linoscreen 400 terminals). Earlier Linoscreen 300 terminals. Model 400 an improved version of 33. Intelligence located in concentrator. Supports a variety of rigid disks.
System 4.
System 325 introduced in 1980, using Prime 200 with software enhancements.
System 5500.
Mergenthaler PageView terminal 1975 (with Tektronic 4014 storage tube) for soft-copy display.
Linoscreen terminals.
Acquired by Allied (Chemical) Corp. in 1979.

System 3 and 4 developed in Germany (1980), consist of one or two Prime computers, each with 24- or 80-MB disk. Intelligent microprocessor terminals with high-level (HIT) interprocessor data transfer. Uses new T1 terminal. Cora software.
System 2, smaller version of System 4 (1983).

MGD
Edit-text (1977) (Data General computer, peripheral concentrator, Image II terminals).
Metro-text (1976) (3 Interdata Model 70 computers with Image V terminals and/or Image III terminal clusters).
Acquired by Information International in 1979, products mostly discontinued.

Miles 33 (UK)
Split from Penta (1980).
Stock offering (1982).
System 300. Network system with Nova and Eagle page make-up terminals.
Eagle terminal contains two Z80's (1982).
Nova works as resource manager to decide whether processing takes place in Eagle or Finch workstation (with Z8000) of a separate Z8000 batch processor (1983).
Opens office in U.S. (1984).

Mopas (deltaconsult)
Nova computers, Zentec terminals.
Release II software (1980).
Includes new terminal with split-screen features, editorial system software, enhancements to queue and directory structure, stand-alone remote terminal for remote departments.
Digitype 50, 150, off-line terminals.
Imagen Canon LBP-10 for output (1982).

Mycro-Tek
1000 Newspaper system.
Distributed microprocessor system with Intel 8080 and 32K bytes of RAM memory in each terminal, linked to an intelligent disk controller also with 8080 and 16K of RAM.
2000 commercial system (MycroComp).
1100 Plus system.
Editorial h&j in terminal.
Composition Plus enhancements (1984).
Class ad software.
AdTouch display ad terminal (1984).
4010 class-ad terminal (1981.)
CRTronic interface (1980).
Higher speed data transfer rate introduced in 1981—115.1K baud instead of 9600.
550 low-cost system (1985).
Interface to LaserSetter (1985).

Acquired by Allied Chemical and tied to Mergenthaler in February 1980.
Spun off as independent company (1984).

ND Comtec
Comtec was acquired by Norsk Data (Norway).
See also Norsk Data.
Nortext 100 front-end systems
Nortext Editing Terminal (Tandberg) with Graphic Option board

NEC Nederland
Spin-off from Newspaper Electronics (1982).
System built around an Intel multibus pending Ethernet (1983).

Newsmate
Newspaper composition system based on Texas Instruments 990 minicomputers.

Newspaper Electronics
(*see also* Floppy disk systems)
N.E.W.S. 8 (1976) with Beehive Super Bee terminals, then B500.
Amicus (1982-85)
Delta Data 7000 with 32K (16-bit) TI 9900 processor.
News II.
Micronews system.
Editerm E2308 (8K) and E2316 (16K) terminals with 560K or 1.2-MB floppy disk drives. Larger systems with rigid disks (1983).
News III. News II linked to an Amicus system (1983).
New ownership (1982).

Nihon Information Center (Japan)
Motorola 68000 architecture, text and graphics, special keyboard to input Japanese characters. Autokon used as output typesetter (1983).

Norsk Data (Norway)
Nord 100 Computer system. Sintran III software. Nortext composition system. 16-bit, 128K.
Nortext system uses TDV 2200 terminal with 8085 microprocessor (1980).
Purchased Comtec (Norwegian) in 1980.
Originally PDP-8 system. Then PDP-11/34, 44, 60. Moved from RSX-11B to own operating system. Use DEC VT-72 terminals (1980).
Comtec paste-up system with CRT 13B software, called ISF, with Tektronix storage tube, 11/03 CPU and RL02 disk for font storage.

NSSE (Newspaper Systems, Support and Engineering Associates).
Formed to meet needs of DEC TMS/11-CMS/11 users.

Omega
UK company offering Omega 4 and 10 systems based on Z8000.

One Systems
ONE/tn, ONE/te, ONE/2, ONE/10, ONE/12 (1975).
ONE/15-ONE/26.
ONE/32-ONE/65.
ONE/80-ONE/140.
System reconfigured in 1979 around Computer Automation LSI 410 and 490.
Acquired by Compugraphic (March, 1981).

Pagitek commercial system
Marketed in U.S. by Unitex.

Penta Systems International
PentaWare (1975). As of 1979, Data General Nova 2, 3, 4 or Eclipse models supported Beehive SuperBee terminals. Later (1979) PentaVues replaced Behive B300 terminals. One to four PentaVue (custom-designed Data General) terminals could be cable-connected to one 32K microNova which in turn interfaced to host by direct memory access. Disk storage 10 MB up. PentaMatic file management system operating under Data General RDOS.
PentaPair (1980) (twin configuration sharing same data base).
PentaPlus (1980) second minicomputer linked to first by MCA multiple communications adapter, with own Winchester-type 12½ MB storage.
PentaPage (1980) using "try" table approach in batch mode.
Miles 33 (British distributor) disassociates and develops own system (1980).
PentaVision (1981) soft-copy representation, becoming more interactive.
Displays graphics (1983).
Redesigned as Motorola 68000 (1982).
PentaQuick introduced (1980) involving machine language rather than FORTRAN.
PentaComm (1980).
PentaNet (1981).
PentaPro (1980).
PentaPac (phototypesetting automatic controller) (1982).
Penta sells stock publicly (1983).
Announces editorial system, linked at 19.2K baud serial, use of 68000-based terminals, two levels of hierarchy in file management, license to use Writer's Workbench (1983).
CEO "Comprehensive Electronic Office" product of Data General (1983).
ALPS language translation package.
PentaView II production terminal, and entry-level production system.

Press Computer Systems Ltd. (UK)
PDP-11/20. Developed initially for Wolverhampton *Star*.
Moved to 11/70's and standard DEC operating system, then returned to 11/23 and 11/24 with an enhanced version of its own "Exec." Terminals linked in bit serial fashion. News 11 editorial system with Delta Data 7303 keyboards.
Joint activity with Xenotron and Monotype (1983).
New editorial system (1983).

Publishers Data Systems
PDS integrated small newspaper systems, not performing h&j.

Purup Electronics (Denmark)
PE 4000 system (IBM Series 1 computer) for input and correction for forms work (1982).

Quadex
Acquired by Compugraphic (1979).
See also Floppy disk systems.
Q260 and 280 systems consist of processor with three components, an LSI-11 microcomputer, a proprietary language processor, and a memory management module to expand the LSI's capability up to 256K of memory. Quadex 260 system uses two or more floppy disks. 280 system uses rigid disk as well as floppies.
Multi-level math package option. (1981).
Readability software (1983).
See also Compugraphic.

Qubix
Drafting-table-like workstation for tech-doc market. Cluster controller with multiple workstations with several Motorola 68000's. Software written in C under Unix 4.2 (1983).

RayPort Systems
Founded by ex-CSI employees to develop new composition system (1983).
Renaissance system on DEC 11/73, using proprietary operating system.
RP2200 interactive display WYSIWYG terminal (in three versions) to be added (Print '85).
Two-way communications with IBM-PC and Autologic Bit Blaster.

Raytheon
Ray-Edit System (1978).
Washington Post order calls for seven interconnected Tandem computers, with two

primary systems sharing dual 300-MB disk drives and five composition processors, each with dual 10-MB disk drives.
Raycomp News
RayPubs
RayEdit 2000 system with RayEdit 2000 terminals (1981).
Raytheon withdrew from publishing systems (1983).

Royce Data Systems
Supports Imlac system, in process of developing new commercial system (1983).
Video Digital System at Print '85.
In late April '85 Royce experienced financial difficulties and laid off virtually all employees.

Siemens *see also* Hell.
Cosy Version 3.0 running under operating system 2000 (1983).
Class ad program built around SESAM data base program (1983).

Sim-X (Norway)
First company to use general-purpose high-speed raster image processor to present text on screen, drive proof printer and a variety of raster output devices.
First steps at processing graphics, including rotation of line art (1983).
To sell raster image processors and page make-up stations to Muirhead (1983).

Software Consulting Services
TPS 6000 system (1984).

Software Sciences Comprite
Newsmaker system based on Data General Nova 3, dual computers for editorial and classified.

Sperry/Univac *see* Univac

SPESI
Former Imlac distributor, offering Vax-based products on DEC VMS operating system.

STaRT
See Electronic Information Technology.

Syntext
Early name for "Real-Time" composition system developed by N. Edward Berg, marketed by Circle Graphics, 1978.

System Development Corporation
(1971-1980).
Text II, Text I.
System/55.
Text III documentation system (1978).
Acquired by Burroughs (Sept. 1980).
Halts sale of Text II system (March 1981).

System Integrators
Originally IBM 1130 or, later, CHI 3230 supporting Delta Data, then Ontel terminals.
Micro System IV (1976).
Minisystem 4 cluster editing system (1977).
System/22, System/33, lower-cost System 22 STD all use CHI 2130 with 64 to 72K, ET/960 terminals, from 25-MB to 300-MB disk drives; General Automation 220 as videocontroller.
ET/2304 terminals introduced (1979).
Newspaper System (CHI 2130 supporting Delta Data or Ontel terminals).
Introduced ET/960 terminal in 1976 (cluster supported by GA 220).
System/55.
2 to 16 Tandem computers per node. Originally TNS-1, later TNS/2. Dynabus linkage with DMA. Mirror-imaged pairs of disks. Guardian operating system. TAL language for programming. Coyote terminals. (Motorola 68000) (1982).
Spellbinder spelling checker.
New 32-bit TXP Tandem computer.
Coyote R remote terminal.

Tal-Star
T-410 (1976), GA 18/30 with an SPC-16 front end with Computek terminals.
T-410C for commercial applications.
T-410S (1977), GA 18/30 with 32K.
T-1000 (General Automation 18/30 supporting Delta Data terminals).
T-4000 (GA SPC 16/65's supporting several SPC-16-based TRB-4 Computek terminals).
Acquired by General Automation.
Folded into General Automation January 1980.
Went out of business 1982.

Texet
Motorola 68000 microprocessors, local area network.
"Document Machine." Interactive composition terminal with generic fonts (graphic VDT's), proof printer. Can display CAD/CAM line drawings. Document Design file approach (1983).

Titus Communications
Systems based on Titus-produced personal computers, including Z80 with Sword PC's. Swordstar Network Controller.

Typlan (Finland)
Text-80.
Usually DEC PDP-11/44 with MegaData terminals. Pageplan software (1981).

TIPS project with Liber Systems of Sweden (1982).
See also Liber Systems.

Typographix
Subsidiary of Datalogics for a short period around 1981.

Unitex *see also* Dymo and Itek
Itek LSO becomes Unitex, Inc. (June 2, 1984)
Large Systems Operation included CPS 1000, Viewtex terminals, Mark IX CRT typesetter, and Minitek system in leveraged buyout.
Minitek system
Viewtex page dummying station.
Also markets Pagitek commercial system.

Univac (Sperry/Univac)
Linco, Linco II software in early 1970s.
Newscomp (Univac 9000-series computer with UTS 400-TE terminals) (1976).

ViewTech
Text and graphics system, with tools for creating graphics as well as text. Laser printer and typeset output.

Xenotron *formerly ECRM Text Processing System*
XPTS
See ECRM.

Xerox Special Information Systems (XSIS)
EELS electronic editing and layout system for *NY Times*.
Xerox 1100 workstation with 23-MB hard disk and Ethernet interface.

Xylogics *see* Dymo, Itek and Unitex

Xyvision
Established Feb. 1982 as Xytex, by key Xylogics founders with significant amounts of venture capital.
Xyview screen displays generic text and graphics.
Motorola 68000 with local area network.
Canon proofprinter.
Beta test site at William Byrd Press, Richmond, Va.

Stand-Alone Area Composition/ Graphics Systems

AM Varityper
4800 (a Harris 2200 product).

Aristo Graphics
Ikarus type design terminals and system.
Signus lettering system.

Autologic
APS-22 (1975, 1976 demo product).

Berthold
"Magic" system concept introduced (1982).

Camex
135 (1975) (Models 1 and 2).
Camex 1350.
ProFormer forms composition (1980).
Full-page composition (1980).
Easy Pager (1982).
Camex 1351.
SuperSetter.
Breeze terminal.
2351.
2352 handles scanned artwork.
BitCaster RIP.
Release 2 software (1982).
Developing a Page Element Data Base.
(PEDB) for newspaper market—a storage and file management system for text and graphics (1983).
Round cornering capability, circles, screens, diagonals, reverses added (1982).

Compugraphic
AdVantage (1978), AdVantage II, AdVantage III.
AdVantage to 8400 driver package (1982).

Harris Composition Systems
2200 (1972), 2220 LSI-11 architecture (1978).
2230, 2240, 2250.
2222 on-line to MicroStor system (1981).

Hastech
AdPro version of PagePro (1981).

Impres
CAD/CAM Publishing Workstation (1982).

Information Displays, Inc.
Vector-to-graphic data manipulation, plus text processing using Amgraf software on Sperry-Univac minicomputer (1980).

Mergenthaler Linotype
Linoscreen Composer (1979)
Linokey 2 floppy disk input terminal (1980).
Graphic tablet option (1980).
Rules and boxes and other procedures (1980).
Rev. 4 and interface with system 325.
Driver program for 202 (1981).

Mycro-Tek
AdComp (first shown 1980).
AdComp Jr. (1981).
4010 ad-entry terminal.

Raytheon/Autologic
Raycomp
AdSet (Raycomp III)

Raycomp 100
Raycomp 100G (for graphics) 1981.
Raycomp II
Raycomp 3 (1982).

Sim-X *see* Composition Systems.

Xenotron
VideoComposer XVC (1976)
XVC-II (1978), XVC-SP (1980), XDS-100, XDT.
PageMaster (1982), ArtMaster (1983).
TMS-11 interface (1980).
Interface with Quadritek (1981).
With CG MiniDisk Reader (1982).

Cameras, Scanners & Color Page Make-up Systems

Alphatype
Logoscanner

Autologic
APS-43 (Muirhead) flatbed laser scanner.
APS-22 display screen.

Coulter
Camera Platemaker (1980).
KC Digital Litho System (1980).
KC Manual Color Proofer (1980).
APC-3 color proofing system.

Crosfield
ProEdit page layout system (1982-3).
550-570 color separation, editing and electronic stripping.
Crosfield MagnaScan 616 (higher-resolution two-up output) (1980).
510 and 515 lower-cost models (1980).
Acquires LogEscan (1981).
Studio 800 color page make-up systems (820, 840, 860) (1982).
Model 640 scanner system (1982).
Large-format 630. (1983).
610E and 625E Magnascan digital color-separation scanners for entry-level users.

Datacopy
CCD cameras and PC image-manipulation software

DS America (Dainippon Screen).
Input Station PS-2000 (1982)
Make-up Station MS-2000 (1982).
Output Station OS-2000 (1982).
Satellite stations.
Sigmagraph 2000 system first shown at Graph Expo '84.

ECRM
8200.
8400 dual mode camera.
Autokon II
Acquired by A M International, then spun off as independent company in 1983.
Autokon 1000 (Aug. 1984).

Eikonix
Input scanning and output writing systems, b/w and color.
Designmaster 8000 (color separation scanner).
Designmaster 9000 (aimed primarily at textile industry).
Local area color correction and multi-image output (1983).

Gerber Scientific Instrument Co.
(Note also Gerber Scientific Products).
Autoprep 5000 (1981).
5641 plot station (Print '85)
Acquires Eocom (1984).

GraConsult (Denmark)
Digiscan drum scanner for line work and halftones (1982).

Hazeltine
1620 Color Separation Previewer (1978).

HCM/Hell (now Hell Graphic Systems in U.S.)
DC 350 scanner.
CP 340 scanner.
C100 scanner.
CR 401 recorder; 403 proof recorder.
Chromacom.
Combiskop.
Scan/Reco station for Chromacom.
Layout Design Station (Print '85).
Chromograph CP340 (44 × 50″ jumbo) 1980.
CMS 306 Chromacom Compact.
Helioklischograf *(gravure cylinders).*
Scan programmer SP 3534 (1982).
Layout programmer CLP 307 (1982).
CR 401 automatic recorder (1982).
CR 402 full-size recorder.
CR 403 proof recorder.
Chromograph CN 420 flatbed laser scanning system.
P-1912 Pressfax system.
Scanskop preview screen (1983).
Pressfax P1912 high-resolution flatbed facsimile system.

IDI (Information Displays Inc.)
Graphic Design/Illustration (1980).
Bankrupt in 1985.

ImagiTex
Workstation for scanning and manipulating images.
Level 1 is scanner.
Level 2 is scanner plus disk storage.
Level 3 workstation with display processor Imagitizer (1983).
Image 1000 basic scanner.
Image 2000 with image storage.
Image 3000 with graphic manipulation workstation (renamed in 1985).

Information International
3600 scanner.
InfoScan 3700.
InfoColor I, and II with 3600 scanner and Triple-I typesetters.

InterCAD
Illustrator's workstation (1984).

Isomet
Color separation scanner (successor to Time Inc. PDI scanner, sold to Japan and licensed back to Isomet).
Model 355 records all 4 colors at once.
Model 155C expected at ANPA '85.

Itek *see* Mergenthaler.

Klimsch
Versatron-P flatbed scanner/recorder (1982).
Colorpager (Scitex Response 310 system) (1982).

Mergenthaler (Linotype-Paul)
Linoscan 3040.
Model 4050 (1982).
To be handled by Itek (1983).

Microtek International
Microcomputer scanner for 200-lpi output

Muirhead
Electronic Picture Desk.
K663 Reader.
K664 Writer.
Viewfax-3 for preview and selection.

Optronics (1974)
Colormation (1976).

PDI
Prototype monochrome scanner (1984).

Photocom
Color page make-up (1981).

Purup (Denmark)
Internal drum scanner and output unit for forms work and other uses (1982).
PE 3000 smaller format scanner.
PE 0220 laser-based xerographic proof printer.
PE 1000 Interactive Graphic System.

Rachwal Industries
Photocomposer Camera (projection platemaker) for imposed platemaking (1982).

Ricoh Image Scanner
200-lpi resolution for output on Ricoh printer.

Scangraphic Dr. Böger GmbH
Scantext 1000 scanner and Scantext 950 input terminal.

Scitex
Response 300 (1979) automates pre-press color processing.
Pixet.
Vista page layout console. (1982).
Vistager mode on Imager console.
RayStar typesetter (Argon laser) (1982).
Satlight scanner.

Tecnavia (Switzerland)
Picture Store and Forward/Two system to capture, digitize and print out wire photos (1983).

Visutek (UK)
Logoscanner 512 (1983).

Xerox
1050 flatbed CCD scanner.

Platemakers

Agfa
Electroplater (1982) paste-up to plate.

Autologic
Autologic/3M Laser Platesetter

Chemco
Licensed from Dow Jones.
News-Scan 2500 laser imager and platemaker.
Newsplater 2000 (camera).
News-Scan 2000 (facsimile receiver and electrostatic plate writer).
News-Scan 1000, 1500.

Crosfield Data Systems
Datrax Platemaker (760 scan unit).

Eocom/Gerber
Laserite platemaker (formerly independent and then owned by American Hoechst).
Laserite 100A, E and F, FLUV (facsimile local, ultraviolet exposure).
5C and wide-bed version.
692 camera platemaking system (1981).
Laserite HQF (1981).
Laserite V (1981).

EPIC "Eocom Page Imaging Composing System (1982).
Joint venture with Hastech for direct-to-plate applications.

LogEtronics
Now Crosfield Data Systems
Laser platemaker.
Acquired development activity from Perkin Elmer in 1974.
LogEscan systems.
3600 laser platemaker (1982).

Muirhead
Laser platemaker; Page/Fax

Remote Terminals, Bureau Systems, Portable Terminals, Other Devices

AM Varityper
VTR Magnetic Tape Cassette.

Atex
1000 Bureau Terminal.
9080 Bureau Subsystem.

Autotype
Single- and multi-user text-entry stations (1983).

Bobst
Scrib.

Graphic Products Corp.
Teleprinter.

Intelligent Graphic Systems
Preview display terminals.

Logicon
6800R remote bureau cluster.
EE/80 bureau subsystem.

Peripheral Systems (PSI)
Lobbyist portable terminal.
Bureaucrat bureau system.
Bubble-memory archival storage option (1981).

Sports/Comm *see also* Peripheral Systems.
Input and editing cluster (1976).

Telcon Industries
Ambassador I, II.
VCS-300, VCS-780 (Bubble memory), (1981).
Newsman (1982).
VCS-780D (1982).
GC-100 (1982).

Teleram
Bureau 2227 terminal.
Bureau 1800 (1974)
Sports 1881 (1976).
2227MKII replaced 2277 in 1980.
Portabubble/81.
P-1888.
Portaram/91 (1981).
Teleram 3000.

Terminal Systems Corp.
Copy Control III, IV terminals.

Texas Instruments
Silent 700 portables.
Model 765 typewriter printer with non-volatile bubble memory.
Model 763 non-portable.

Titus Communications
System Z.
Mini/Z floppy-disk storage unit (1980).

Varisystems
Multi-terminal system (1976).

Xitron
XPT (Xitron Portable Terminal), (1981); XPT II.

Interfaces and Converters

Altertext
Disk Reader I (read only).
Model II (writes to floppy disk).
New utility program for code translation (1982).
Version 4 software (1983).
ACS (Altertext Conversion System, 1984)

Antares
Media Converter.

Applied Data Communications
Trans/Media 500 floppy disk conversion system.
10-MB removable disk available (1983).

Baber Enterprises *(see also* Itek)
MultiDisk Reader (also called Converter).
Flexis Conversion System (1985)

Compugraphic
Mini Wire recorder (1977); writes wire service input to floppy.
WordCom.
ACI (Advanced Communications Interface) (1981).
ICI (Intelligent Communications Interface) (1978).

Cromwell Graphic Systems
Context disk converter (1983).
Context V (1985)
Textran interpretive code-conversion program for typesetting.

DataChange (Datalantic)
Floppy disk converter.

Data Frontiers
El Cid interfaces to connect PCs to Comp/Set, EditWriter.

Gandalf Data
Short-haul modems, multiplexers and interface converters
Model 444 synchronous 4800-baud modem (1982).
Model 454 asynchronous 4800-baud modem (1982).
SuperModem II 9600-baud modem (1982).
IFC200 Series Interface Converter (1982).

GO Graphics
Micro-Tape Reader.
GO Comm, Multi-Comm communications interfaces.
Universal Word Processing Interface (1976).
MDT interface (1980).
CW/CI CompuWriter computer interface. (1983).
ICI interface to CG EditWriter.

Graphic Products Corp.
Typoverter (mag cartridges to paper tape, 1977).
DC-100 5- to 6-level pari-mutuel data conversion (1978).
GPC interface (1981).

Hendrix Technologies, Inc.
Wire Wizard.
Itek/Baber conversion unit (Converter)
Konnect 2 data collection and conversion device (from Interset)

Information Design
Communication interface for Comp/Set or Comp/Edit.

Intergraphics
InterCom 100 (1980).

InterMedia (UK)
Data conversion system.

Interset Computer Systems Ltd. (UK)
Konnect2 interface from word processors to cassette.

Itek
MultiDisk Reader (or Converter). (Product of Baber Enterprises).
Other products: DCI Quadritek (Data Communications Interface), and IDC (Itek Data Communications).

Linotype *see* Mergenthaler.

Mergenthaler Linotype
WPI 2000 for Omnitech 2000.
LCI (Linotype Communications Interface) for CRTronic.

Microtext Systems
Communications interface for Comp/Set.

Phoenix Services Company
PII (Programmed Intelligent Interface).

Ral Data Systems
Great Imposter, interfaces Redactron WP cassettes (1976).

Shaffstall
V2030-1 & 3. OCR scanner input to floppy disk (1976).
MDS20 (1976), MDS30.
MediaCom family of disk-conversion devices.
3300 (1980).
5000 (1982).
4000 (international version of 5000).
DataView Terminal (1982).
Penta acquires Shaffstall (1983).

TeleTypesetting Co.
Microsetter (Apple II) interface to CompuWriter (1982).

Tycom Systems Corporation
Video Information Processor (magnetic card to paper tape).

U.S. Lynx
InterMedia (UK) disk converter marketed in U.S. along with other U.S. Lynx PC software
Started by U.S. Lithographers typography shop in New York.

Wang
Interface between WP's and 2200's and 5584Z typesetter.

Xitron
Family of interfaces.

Text Scanning Devices

Compugraphic
UniScan.
Text Saver from Dest (1984).

CompuScan
Alpha.
AlphaWord (1978).
ScanTerm.
AlphaWord III (1980).

Datatype
Bar code readers.

Dest Data
OCR/Word.
CR16A.
Desk-top scanners: Models 201, 202 (1982).
Format processor (1982).

ECRM
Autoreader.

Concept 1 (1979), Concept 2, 3, 4 (1980).
Scanner products sold to Lundy Electronics (1983).

Graphic Systems
System One Reader

Hendrix
OCR1, OCR2.

Kurzweil
Data Entry Machine.
Reading Machine.

Linotype *see* Mergenthaler.

Logos Development Corporation
Logoscan II (1980).

Mergenthaler Linotype
OCR 100 (model of CompuScan Alpha).

Composition Software

Adobe
PostScript software raster image processor in C (Unix) for 68000 or VAX to drive Xerox XP-12 or other print engines (1983).
TRoff interface.

Aldus Corporation
A start-up company with graphic-arts quality composition software *and page make-up (PageMaker)* for Macintosh LaserWriter and Linotype typesetters.

American Printing Technolgies
PageWright batch pagination program for technical documentation.

APT *see* American Printing Technologies

ANPA Layout-80 *see* Layout-80

Aregon (UK)
Videotex software.

Autodesk
AutoCAD system for PC hareware.

Autologic
APScomp (APS-73 computer).
TFMS—text file management system to prepare files for APScomp.

Bestinfo
Type Processor One and Superpage WYSIWYG programs running on IBM PC.

B.I. Kahn & Associates
Photext (1973) for IBM mainframes.

Bull (Cii Honeywell Bull)
Symphonie typesetting typesetting program for Bull Mini-6.

Composition Software (Chicago)
TextMaster and TableMaster software running on microcomputers; disk-reading program for Comp/Edit (1984).

Composition Software Systems *see* Xerox.

Composition Technology
PC-based programs to drive APS typesetters.

Computype (formerly American Computype).
JCP for IBM 360/370-compatible machines.

Concept Publishing
Newspaper editorial software running on Apple microcomputers.

Concept Technologies
High resolution graphics board ("Graphcard") plus graphics and word processing software. Acquired by QMS.

Coopers & Lybrand
GPF (for IBM mainframe or Univac 1100).

Cromwell Graphic Systems
Microcomputer composition software: Pagewell micro-based (mostly batch) composition software.

CText
Newspaper editorial, classified and wire service programs running on IBM PC, using XyWrite editing features (1983).

Cybertext
Composition software for TRS-80 and S-100 bus machines (1983).

Datafusion
Full-text retrieval software with "Colossus" hardware.

Datalogics
CMS for 360 or 370 under OS.
Composition software for VAX, PDP-11.

Digital Equipment
DECset software package for VAX (1981).

Dissly *see* Info-Ky.

Expert Technologies
Spin-off from Perq Systems to develop special software for composition-related activities (1985).

G O Graphics
Composition WorkStation running IBM PC composition software.
IBM/MCS composition software and disk conversion.

Comp/Edit and Mergenthaler editor/driver packages for IBM PC and Leading Edge.

Hampstead
PC-TS software for IBM PC simulating Compugraphic MCS.

IBM
1130 software. First package developed in 1965.
TCP (Type Composition Program) 1965
PCMP (Photo Composition Master Program) 1967
ATMS (Advanced Text Management System).
FDP (Field Developed Program) (1971).
Document Composition Facility.
Hyphenation 360.
Integrated Publishing System (IPS).
Pagination 360.
Termtext.
Printext/370 (1976).

Info-Ky
Newspaper library hardware and software (1980).

Informatics
On-line composition software for Wang VS computers.

Information International
PageComp and other software derived from RCA Graphic Systems Division.

Interactive Typesetting Systems (UK)
Typesetting package for Victor 9000 (Sirius 1) microcomputer (1983).

Interleaf
RIP hardware software.
Runs on Sun Microsystems workstations, with ImagiTex scanner and output to Monotype Lasercomp (Seybold Seminar and Print '85).

Intran
MetaPage and FormBuilder (graphics) software on Perq workstation, driving Xerox 9700, Apple LaserWriter, CG 8600, APS-5, etc.

Kramer, Henry
Plot 97, Flowchart programs to typeset digitized line art.

Krohm International
Composition software for TI minicomputers and TI 99000 32-bit microprocessor.

Layout-80
Software for positioning of ads in newspaper pagination developed and supported by Software Consulting Services.

Linotype
Series 200 PC system (composition software for IBM PC)

Logidec
For IBM or IBM-compatible mainframes under OS, MVS or VS2.

LROFF *(Lasercomp version of TROFF)*

MacPublisher
Page make-up software for Apple Macintosh written by MicroCosmos.

McDonnell Douglas
Software for estimating, job management, technical documentation.

MCI/Quantel
Electronic "paint" systems with graphic arts applications.

MicroCosmos *see* MacPublisher.

Micro Print-X
Batch composition program running on TRS-80 microcomputer.

Modtek
Composition software running on CP/M or MS DOS microcomputers.
Classified and wire service programs for newspapers.
Software supplied to Computek.
FontEditor software to build logical fonts.
Modtek Electronic Librarian (1985).

MSB
Input and counting keyboard composition program for TRS-80.

NewsWhole
Software for newspaper page make-up by Human Computing Resources Corp. (1978).

One Stop Copy Shop
WordStar files from Kaypro to drive Varityper Comp/Set, also EditWriter and Comp/Edit applications, including IBM PC

PageMaker *see* Aldus.

PagePlanner Systems
See also Westminster Software.
CP/M and MS-DOS PC-based composition programs plus AdSet.
Scanalyzer 2000 interface from color-separation scanner.

Pagetec
Versacomp for IBM OS or DOS. 360, 370, 3033.

Pagewright
See American Printing Technologies.

PostScript
Page description language developed by Adobe, adopted by Apple and Linotype.

Prefis (UK)
Book Machine for composing book pages on microcomputers.

QL
Software and systems for newspaper library (morgue) applications (1981).

QMS *see* Concept Technologies.

RCA
Page 1, Page 2.
Filecomp.

Real Time Associates
Display ad tracking for PDP-11/03.

Software Consulting Services
Sire free-text library system.
Layout-80.

Studio Software
Do-It layout designer software running on IBM PC.

TeleTypesetting Co.
Apple II-based counting program for CompuWriter (1983).

TEX
Offered by Donald Knuth's group at Stanford University.

Turin Sanamat
Shadow II developed by Oy Typlan Ab.

Typecraft Software Ltd. (UK)
MicroSet program running on microcomputers (Commodore micros driving Linotron 202.)

TypeSource
STL counting keyboard program running on CP/M and MS-DOS microcomputers.

Tyx
Tyxset program based on TEX (program developed by Donald Knuth) running on Victor and IBM microcomputers.

Unilogic Ltd. (Pittsburgh, Pa.)
SCRIBE for DEC-VAX and System 20.

U.S. Lynx
Founded by U.S. Litho, marketing a disk converter called InterMedia and computer programs running on Kaypro.

Volt Technical Corporation
Comp-2, for 360 under DOS with Power II.

Wakefield
WSSI/Comp2 composition program for IBM Series/1 (1980).

Westminster Software
PagePlanner page layout composition program for Z80 Cifer and IBM PC (1983).
See also PagePlanner, (new company name 1984).
Development and marketing taken over by PagePlanner Systems (1984).
AdSet software also available (1984).
Software sold by Linotype as Series 200.

Xerox
XICS (formerly Composition Software Systems product).
Introduced by Xerox in 1980 for 9700, 5700.

The World of Digital Typesetting

Review Questions

Chapter 1:

1. What is the difference between the Chinese alphabet and the English alphabet? If the English alphabet is made up of letters what is the Chinese alphabet made of?
2. Where did the English alphabet come from?
3. What is the basic difference between a pictographic or ideographic "alphabet" and one made up of "letters"?
4. Describe the tools for writing. What has been used as the writing instrument? What has been used to write on? Have these tools affected the design of our letters? If so, why?
5. What role did the monasteries play in our intellectual history? Why do you suppose they played that role?
6. Prior to the invention of printing as we know it, were other methods of reproduction available? What were they?
7. What was the nature and significance of the Gutenberg invention?
8. What was the impact of the printing process on the evolving culture of our civilization?
9. How does the publisher differ from the printer? How has this situation changed over the years?
10. Why would governments and other authorities seek to control the printing process?

Chapter 2:

1. Why do you suppose the author decided to write about typewriters in this book about typesetting?
2. When did the typewriter first appear? What accounted for its rapid growth in popularity?
3. What were the principles applied to determine the arrangement of keys?
4. Why call a typewriter a "direct-entry machine"?
5. What do we mean by "escapement"?
6. What does "monospaced" mean? Why was the typewriter initially designed as a monospaced instrument?
7. What do we mean by character repertoire? How would you change the character repertoire of a typewriter?
8. Once the character repertoire has been determined how are characters selected?
9. Why has the author discussed line-ending and page-ending "decisions"?
10. How can you go from typewriter output to "print" (printed product)?

Chapter 3:

1. Why is it important for individual pieces of type to be absolutely square?
2. What is meant by distribution of type? Where does it go?
3. What is justification? How is it accomplished?
4. What alternatives does a hand compositor have when the words in the line do not fit?
5. What is the difference between a chase and a galley?
6. What is the difference between a pica and an em?
7. What is leading? How can you determine whether or not it is present in a block of text and how much there is?
8. What is the difference, if any, between the point size of type and its set size?
9. When type is handset what do you do with areas within the page that do not contain type?
10. How many points are there to a pica? How many picas to an inch?

Chapter 4:

1. What were the drawbacks to hand composition that led people to strive so hard to develop a machine composing device?
2. What principles underlie the Mergenthaler invention?
3. How do you set smaller and larger point sizes on a Linotype machine?
4. How do you set wider and narrower measures on a Linotype machine?
5. How do you change type faces on a Linotype machine?
6. How do you make corrections?
7. Describe the flow of work in the Linotype composition process.
8. What is a circulating matrix?
9. How do you determine when a line will justify on a Linotype machine?
10. What does "duplex" mean in typesetting?

Chapter 5:

1. How does Monotype composition differ from Linotype composition?
2. Where is the keyboard located?
3. Where does the type-casting process take place?
4. How does the operator make end-of-line decisions?
5. What information is on the type ribbon and how does it get there?
6. Is it necessary to duplex fonts, as with Linotype? Why or why not?
7. How can changes in "set" be produced?
8. How are errors corrected?
9. Why is the type actually cast from end to beginning?

Chapter 6:

1. What does "TTS" mean?
2. Why was the process invented? What was its purpose?
3. How does the operator make end-of-line decisions?
4. What information does the paper tape convey?
5. Is the code for a capital "A" the same as for a lower-case "a"?
6. What are the meanings of upper and lower rail?
7. How does the keyboard of the perforating device compare with the keyboard of the Linotype machine in terms of character locations?
8. What are the advantages, if any, of using this process?
9. How many codes are available? What determines the limit to the number?
10. What is a precedence code?

Chapter 7:

1. Why did changes in the printing process tend to encourage the use of photocomposition?
2. What is a "first-generation" typesetter? Why is it so called?
3. How did justification take place on the Intertype Fotosetter?
4. How does the Intertype Fotosetter justification process differ from that on the Photon 200?
3. Why is the Photon 200 called a "second-generation" phototypesetter?
4. What is the output medium of a phototypesetter?
5. What is the significance of the unit system? Does it matter how many units are assigned to an em?
6. Why did the Mergenthaler Linofilm offer A, B, and C masters?
7. How were errors corrected in the output of these early phototypesetting devices?

Chapter 8:

1. What are the six principles used in this chapter to analyze the way second-generation phototypesetters work?
2. Where are the characters located that are used by the phototypesetters discussed?
3. How are these characters selected?
4. How are they "laid down"?
5. What arrangements are available to provide characters of different sizes?
6. What is the relationship between character escapement and sizing? Does width of the character matter to the escapement process?
7. How does the phototypesetter know what the width values of the characters are?
8. What is the difference between a unit count font and a unitized font?
9. How does the justification process take place—at machine or keyboard?
10. What is meant by the "flexibility" of a phototypesetting device?

Chapter 9:

1. What do you suppose are the advantages of third-generation phototypesetters over second-generation ones?
2. How does a cathode ray tube set a line of type?
3. What are two ways in which character images may be stored on CRT typesetters?
4. Which of the two ways proved to be the most popular?
5. How does the escapement process take place on various models? Compare two different ways in which this happens.
6. What typographic effects can be created by electronic manipulation?
7. When images are stored digitally, how are type images sized? Is character resolution always constant?
8. Are there any moving parts to these phototypesetters (besides film advance)? If so, identify the ones that qualify.
9. What is a full-face CRT typesetter? What is dynamic leading? What is the "window"?

Chapter 10:

1. What does binary mean?
2. What is a "bit" and what is a "byte"?
3. How many different codes can be described by six bits? By eight bits?
4. Describe the difference between octal and hexadecimal.
5. What is ASCII and what is EBCDIC?
6. Describe the essential components of a computer.
7. When were computers first developed? How have they changed over the years? What are their underlying principles?

Chapter 11:

1. What is a computer program?
2. What is a higher-level language?
3. What is multi-processing?
4. What is the difference between a device-dependent program and one that is portable?

Chapter 12:

1. Think of different environments in which typesetting may take place and describe the principal features: location and activities of author, editor, layout artist, page designer, craftsman, keyboarder or others who may be involved.
2. What changes do you suppose have taken place at the *Farm Journal* since 1970, and why?

Chapter 13:

1. What is or was "idiot" tape? What function did the computer perform on that tape?
2. How does a computer make end-of-line decisions as a result of the justification process?
3. What are set width tables and how are they used?
4. Describe some of the features needed for a "good" justification program.
5. What kind of basic information does the computer program require in order to perform its justification task?
6. What are stored formats? Explain how they can be used.

Chapter 14:

1. Why is hyphenation important to the justification process?
2. How can a computer program which "looks" at a stream of text determine where a word begins and ends?
3. How does the program cope with codes within a word which interfere with the hypenation process?
4. What are the arguments pro and con on including capitals and lower case letters in the hyphenation logic routine and in the (exception word) dictionary?
5. Describe some of the alternative approaches to hyphenation programs.
6. What are the arguments for a "total" dictionary as opposed to an exception word dictionary?
7. If a "total" dictionary can't ever be all-inclusive how can a hyphenation program that uses both logic and dictionary look-up inform the reader which path led to a solution in a particular case?
8. What kind of a procedure would you recommend for updating the hyphenation dictionary? Should it be done by individual users whenever they encounter a new word or a word "improperly" divided? Why or why not?
9. Try to imagine how you would write a computer program that sought to handle multi-line hyphenation and justification in order to get the best distribution of white space within successive paragraphs. Explain how you would go about it.

Chapter 15:

1. In designing an overall composition system, what assumptions would you make about the way input enters the system and where and how the correction cycle takes place?
2. Should the author do his own input? Should he or she proofread and correct as the writing proceeds? Should he or she examine a playback (on screen or hard copy) which is hyphenated and justified, or should this be done later? Whose responsibility should it be to determine where illustrations and tables are positioned?
3. How does a batch correction program work, as opposed to one which is said to be interactive?
4. Do you think the author (or the editor) needs to see the composed story in "true type"? Why or why not?
5. Should we have a convention which established a universal character set?
6. What is hard copy? Soft copy? What is a "blind" keyboard?
7. What is a counting keyboard?
8. What is an OCR device and how does it work?
9. In the OCR world, what is "post-recognition logic"?
10. What are the arguments for operator intervention during the OCR scanning process?

Chapter 16:

1. Trace the evolution of the video terminal in the graphic arts industry—its use in input, h&j, page make-up, and editorial control of copy flow.
2. What are some terminal design options available today (*e.g.*, stand-alone, cluster, on-line to mainframe)? Give pros and cons of each design option.
3. What is wordwrap? What happens to the screen when characters are inserted or deleted? What is the "tidy" function which is sometimes used?
4. What useful functions can be implemented on a video terminal?
5. Some video terminals are "dedicated" while some of them permit the user to carry on non-composition functions. What are the trade-offs?
6. How does scrolling work? What is its relation to the screen buffer, memory within the terminal, and interface to a host system?

Chapter 17:

1. What are the differences, if any, between page make-up and area composition?
2. For book composition, set forth all of the pagination criteria you think are relevant, as they pertain to the appearance of the book.
3. Describe some of the problems you might encounter in seeking to apply the criteria you have just set forth.
4. Examine several magazines and see if you can figure out what the best way would be to handle pagination of those particular magazines. Explain why.
5. What is vertical justification? How is it similar and how does it differ from line or horizontal justification?
6. What is the difference between a "soft-copy" video display and an interactive display for page make-up or area composition?
7. Under what circumstances would you prefer to see "true type" and when would diagrams, blocks and other representations be sufficient for your purposes?
8. Describe some of the practical problems inherent in newspaper pagination. Examine your local newspaper and see if you can figure out how it does it.
9. How should graphics be handled in the context of pagination?
10. Why does the author discuss the concept of reprocessibility in connection with page make-up and area composition problems?

Chapter 18:

1. What is the relationship between file management and copy flow?
2. Why should we expect the computer composition system to provide sophisticated methods of file management?
3. What is a directory? How and when is it used?
4. Of what importance are file routine procedures in a newspaper environment? Do you think the same problems and challenges present themselves in the design of a computer system for the "office of the future"?
5. Describe and explain the concepts of a front-end system, an editorial system, a production system, and a back-end system.
6. What does on-line mean? If every workstation had its own floppy disk drive, with no interface to the typesetter, what functions would you want that workstation to be able to perform, and what responsibility would this mean for the workstation operator?

Chapter 19:

1. How does a word processing system differ from a composition system?
2. Why are people interested in being able to interface word processors with composition systems?
3. If typesetting programs need certain codes and parameters, where should they be put in? At the word processor, or at the typesetter?
4. What does the term "black box" mean in the context of this chapter?
5. How can telecommunications play a part in the modern composing room?
6. At what stage, in the preparation of an author manuscript on a word processor, should the author or his secretary communicate with the publisher or the typesetter? Should the author be concerned to deliver to the publisher or typesetter a "machine readable" manuscript? What are the arguments pro and con?

Chapter 20:

1. In what different ways might a trade composition shop address the problem of data base typesetting?
2. Do you think that the customer would prefer to maintain his or her own data base?
3. Does it matter how frequently the data base is going to be updated?
4. Just what is a data base in the context of this chapter? Give some examples. Visit your local library to see if you can find some data bases that would need to be updated and typeset frequently. Can you tell, or find out, how these products are actually produced?
4. How does the problem of character repertoire relate to data base publishing?
5. If the typesetter is to convert an "outside" data base so that it will run on his system, what are the problems he will need to discuss with his supplier (*e.g.*, how to read the medium)?
6. In constructing a data base, when would you use fixed field and when would you use variable length records? Why?
7. What is the difference between word-by-word and letter-by-letter sorting?
8. Get hold of a sort routine, such as an ASCII sort, and examine the way it handles upper- and lower-case characters. What can be done about this?

Chapter 21:

1. What is artwork, as distinguished from type? What are the different categories of artwork you might encounter in the publishing process?
2. Visit your local art supply shop and examine some of the tools available to the artist for creating artwork for publication (such as pressed type). Look at the display ads in your local newspapers and see if you can figure out whether any of these ads were partially composed with the aid of such techniques.
3. Just how much can a typesetter do in creating art? Charts, diagrams, rules, borders, round corners?
4. Can a second-generation typesetter "typeset" any art forms? If so, what kind?
5. What is the difference between a line drawing and a halftone?
6. What does a scanner do in the process of scanning a piece of art? What is its output?
7. What can some typesetting devices do with this scanned artwork? How can they "typeset" such pictures?
8. What is a pixel? What is the difference between a pixel and a halftone dot?
9. What is a CAD/CAM device and how can its output be used in the publishing process?
10. What does image enhancement mean, and how can computer workstations help in this process?
11. Why is the problem of data storage relevant to the handling and typesetting of art?
12. Why are we interested in data transmission of artwork, and why is data compression important in this context?

Chapter 22:

1. Evidently the author considers the 1980's to represent a new watershed in the process of composition, and hence includes a chapter to summarize developments and indicate changes on the horizon. What changes have occurred to create this new watershed?
2. Do you think these changes will be more profound at the upper end of the market or the lower end, or will they be equally profound throughout all markets. Why?

Chapter 23:

1. Nobody seems to be able to define a raster image processor. Why don't you take a crack at it? Is the image on your television screen created by this process? What about the image created by a dot matrix printer?
2. What current typesetters use the RIP approach? Does this make any difference in the way fonts are designed, stored, sized or manipulated? Why or why not?
3. What are some of the advantages of the RIP approach to typesetting? Are there any disadvantages?
4. Are there significant differences between the character resolution required or possible on a video screen and that required to reproduce good quality images (or type) on paper?
5. The RIP process has special advantages in direct-to-plate printing. Why is this the case?
6. Is it true that you would need a laser imaging device to be able to create rasterized type and graphics? If not, what other techniques are currently available that you know of?
7. What are "jaggies" and how can they be avoided?
8. If RIP devices can output to plain paper at sufficient speeds to produce entire books from an office-like plain-paper copying machine, what might be the consequences for the book publishing industry?

Chapter 24:

1. Why did the author include a chapter on computer-aided editing? Why is this subject relevant to our book? What other functions might computers perform in connection with the publishing process? What do you think about using computers to monitor reading difficulty and sentence structure?
2. Do you feel that in this so-called "Knowledge Age" technologies are merging? Are you content for the computer to use its "artificial intelligence" to monitor your writing style? Can you think of various ways in which such computer programs could be constructive? How can a structural analysis assist in the typographic coding which computer typesetting programs require?
3. What is generic coding? How much of the typographic information that computer programs require can be imputed from the structure of text? How much is independent of that structure? Do you think the same programs that can analyze spelling and style could also be relied upon to introduce the typographic information needed for composition and even for page make-up?

Chapter 25:

1. Obviously many of the possibilities inherent in future systems require more powerful computer memories, faster processing times and greater storage capacities. But these things are happening very rapidly. Under these circumstances what further steps can you anticipate that bear upon the writing and publication processes and upon the communication of information? What bearing does this technology have upon "alternative publishing" opportunities—that is, ventures that do not rely upon printing presses and paper?
2. What kind of training is necessary to be equipped to deal with tomorrow's opportunities in the printing and publishing industries? If you were in the printing or publishing businesses today how would you keep up with the technology? What is your forecast as to the rate of change? Will these changes obsolete present skills? Will they introduce new opportunities and open up new careers? How should owners and managers lay plans to benefit rather than to suffer from these changes?