PEGASUS TROTS

Late last month Texas Instruments announced its version of the proliferating "Professional Computer," code-named Pegasus internally. The original Pegasus, a flying horse, kicked the ground at Mount Helicon one day and started the fountain of Hippocrene, a magical output device held sacred by the Muses and said to inspire poets to bouts of creative frenzy. The new Pegasus is a little more utilitarian; its arrival has inspired great excitement among dealers and imitative frenzy among software vendors. Many software houses have already transported their IBM-PC software to the TI Professional, which runs Microsoft's MS-DOS operating system -- close to the PC's PC-DOS, but not quite close enough to obviate software conversion.

The TI Professional Computer comes with a full array of features and a price that should help it win in competition with the IBM PC. Most interesting is the Intel 8088 microprocessor that runs the thing, signifying TI's reluctant acknowledgement that standards, not engineering, determine marketplace value. The 8088 chip enables the system to run Microsoft's MS-DOS operating system. (TI also offers, for an extra charge, CP/M-86, Concurrent CP/M-86 and the UCSD p-System.) Beyond that, the machine sports 64K of internal memory, expandable to 256K; a 320K disk drive, with room for a second or for a 5- or 10-megabyte Winchester; a 12-inch monochrome 720 x 300 monitor; and a 5-slot expansion bus. The equivalent of TI's $2,595 starter set would cost about $3,000 from IBM.

Software

Software available includes an impressive array of more than 100 packages, virtually all of which run under MS-DOS, a third of which run under both MS-DOS and (Concurrent) CP/M-86, and a couple of versions of UCSD p-System. These four operating systems are available at extra charge, with both MS-DOS and CP/M-86 equally priced at $100. (The UCSD p-System is $350, and Concurrent CP/M-86 is not yet priced.) Also available is

Rosen Research Inc., 200 Park Avenue, New York, NY 10166 (212) 586-3530
Baby Tex from Xedex (the people who brought us Baby Blue for the IBM PC), a Z80 card which lets the machine run CP/M-80 software. Communications emulators for teletype and IBM 3780 are out now, with others coming later in the year. Other software on its way includes Lotus 1-2-3, the Oracle relational data base management system, and VisiCorp's Visi.

Yet to Come

This is fairly impressive, considering that many companies consider a product announcement an unveiling of work-in-progress. As of January 31, TI's machine, complete with software, was already in the hands of close to 200 dealers across the country and available for purchase in volume.

Nonetheless, TI did also have some work-in-progress to announce, add-ons that should make the system considerably more than just an imitation IBM PC. These two promises both have to do with this year's buzzword: the user interface.

Although TI had to use an Intel chip for this standard-adhering machine, the company could still put its technical virtuosity to good use by offering speech recognition. (Competitors such as Peachtree and Centigram offer only speech output.) The system's voice management system, scheduled for delivery in the third quarter, includes automatic dialing, telephone message store-and-forward, telephone answering, and word recognition. The electronics include a TI TMS320, a 32-bit, 5-MIPS, VLSI signal-processing microprocessor, another TI microprocessor (the TMS7000) to manage the system, 32K of ROM, 1K of ROM and some telephone interface circuitry. This all fits onto two boards that take up only a single expansion slot. The system can recognize up to 32 words, as spoken by a single operator, once it is "trained" by that operator. (This information is stored on a disk, so a second person could use another disk, or the operator could use several disks with different 32-word vocabularies.) These words can be integrated with any application so that you could, for example, command your Multiplan to "recalculate!" or -- in Texas -- your PFS:File to "sort, y'all!"

Then there's the natural language interface, also available in the third quarter. This consists of a menu of sentence fragments designed to make the user think he's constructing a sentence that the computer can understand. (The fragments are displayed at the bottom of the screen to form a sentence.) In fact, the user is selecting a series of commands and options and filling in an occasional blank with a value. The system works on the same principle as a foreigner walking into a French restaurant and pointing to the appropriate phrases in his guidebook. He can ask any question he wants -- as long as it's one preconceived by the system.

Yes, it's natural language, but it's not very flexible. However, the fact that the technology isn't too exciting is nothing to sneer at. TI has used low technology to develop a system that's unthreatening to the most bashful user. Currently it uses cursors and keys (move to the fragment you select with the cursor or by typing its number) but the system is clearly well-designed to work with a mouse.

So, Will It Sell?

Yes, indeed. The TI Professional Computer should be one of the year's bigger successes. Well-conceived (although we'd rather it had been completely compatible with the PC) and well-executed, this product has the muscle to give the IBM-PC a run for its money. Mind you, we know of one case (and there will be many) where...
people who really preferred the TI machine went with the PC because they liked the name, the trustworthiness and most important of all the identity of IBM. But if that weren't the case, the PC wouldn't be the standard by which all others are measured in the first place.

***

One by one, all the companies who prided themselves on their exclusive, unique, superior proprietary operating systems and technology are falling under IBM's sway. TI, Wang, Victor, Zenith, and most of the Japanese are all offering some degree of compatibility with IBM -- or with the MS-DOS software base, as they more delicately put it. DEC, which can't quite bring itself to alliance with IBM, has at least adopted CP/M, an industry standard, for its Rainbow, and Tandy/Radio Shack has adopted UNIX for its Model 16. Once the adherence to proprietary architectures has been breached, can MS-DOS be far behind?

DBMS AND THE WORKSTATION: ORACLE GETS CLOSE

Are full-scale data base management systems (dbms) appropriate for a workstation? When we raised the subject, one of our favorite sources had to rush off to a sudden meeting. Another gave us a lecture long on generalities and short on specifics. A third, a friend of a friend, regretted we'd ever heard his name. And the fourth, Oracle Corp., gave us a demonstration. We'll describe it later.

There's a raging controversy over the necessity of having a dbms as the foundation of "integrated software." The leading proponent of "integration" at the mainframe end, Cullinane, has built its system around a data base management system. On personal computers, most of the "integrated software" offerings include a "dbms," but it tends to be just another application, like this:

```
<table>
<thead>
<tr>
<th>mail</th>
<th>dbms</th>
<th>gr</th>
</tr>
</thead>
<tbody>
<tr>
<td>wp</td>
<td>calc</td>
<td></td>
</tr>
<tr>
<td></td>
<td>comm</td>
<td>?</td>
</tr>
</tbody>
</table>
```

In the first, the dbms trades data with (some of) the other applications and can manipulate them -- produce reports, possibly answer queries, sort lists, and so forth. But the only time you use the dbms is for such a specific function. In the second, the dbms is a permanent fixture. Without it, you couldn't have the other applications, which all depend on it for their data. The data are stored there; in the non-dbms topology, they're probably kept on floppy disks in application-specific files.

Now everyone knows that dbms is a good thing; relational dbms is even better. The obvious approach would seem to be a relational data base management system to
underlie all of the applications, keeping track of all the data and providing a permanent repository for them. That's all very well, especially to the extent that the system mimics a mainframe, managing a company-wide data base, handling a congregation of terminals.

But there are two countervailing factors. Both concern the distinction between a business computer and a single-user executive workstation. First, much of the executive's information is not the kind you'd want to keep in a table; it's documents, schedules, even pictures or voice annotation (soon); or it belongs to someone else -- a corporate date base, perhaps, or a commercial information service. Second, most dbmses lack the friendliness and accessibility that are now standard among typical workstation applications, to say nothing of application "environments" such as Lisa and VisiON.

Oracle, Among Others

There are many dbmses out there, many of them fairly impressive. To be effective, however, a program must be not only "good," but well-marketed with a substantial installed base. It must be something of a standard. That's not only in order to have a lot of customers who will indirectly fund further product development, but in order to attract the efforts of third-party software developers who will write applications software for the product.

Notable among others are the dbms capabilities of Phase One's Oasis 16 and the Pick operating systems, and MicroPro's InfoStar, a business-oriented dbms/report generator. But the most comprehensive offering we've seen along these lines is Oracle Corp.'s Oracle system. (The company used to be known as Relational Software Inc., but it took VisiCorp's and others' lead and recently renamed itself after its own more-famous product.) Oracle was founded six years ago by three founders including the current president, Larry Ellison. Its mainstay customer is the Federal intelligence community (they keep track of a lot of data), but altogether the company has installed 300 copies of its Oracle data base management system on a variety of mainframes, mostly IBM and DEC. Revenues should hit about $8 million in the year ending this May 31, and double in fiscal 1984.

The company has just announced Oracle on several micros, including Altos' ACS68000. We also expect to see it soon on the Tandy Model 16, the Fortune 32:16, and other 68000 systems. The current version runs under UNIX; the company is also working on an MS-DOS version for the TI Professional, which means we can probably expect an IBM PC version in short order, too.

Oracle makes good use of current standards in both its "faces" -- towards the user and towards the target computer system. The initial pc version is UNIX-based, targeted towards the de facto standard for multi-user micros, while the system's overall user interface is based on SQL, IBM's relational data base management system language. Queries written in SQL could be handled the same by Oracle or by IBM's SQL/DS (the commercial embodiment of its System R research project), although Oracle boasts many facilities lacking in System R, such as application generation facilities and a sophisticated report writer.

What Oracle provides is a sophisticated data base management system plus an easy way to get in and out of it. Given the existence of mainframe versions of Oracle (to say nothing of IBM's System R), the problem of mainframe access is relatively soluble. Data can easily be transferred and manipulated among disparate machines as long as they all run Oracle. (That's about as good as anyone in the business.)
What really makes Oracle stand out is its user interface. It's not a question of mice and pictures (excuse me, icons), but rather the simplicity of setting up "programs" -- queries, data manipulation, updates -- without actually programming. Data and tables can be added with a minimum of fuss and no need for reconfiguration of existing files. Items in one table can refer to items in another without any work on the user's part. You tell the machine what you want, either with requests for information or by creating forms, and it supplies it. However, Oracle has only a rudimentary spreadsheet capability; i.e., it can be used to create a spreadsheet, but the company hasn't yet got around to making a standard one that can be called up on command.

Things to Come

Imagine not just a spreadsheet, but a spreadsheet with a cell referring to the current cost of Part #34JT19. When you send out a new purchase order for that part, reflecting a price increase, your spreadsheet will automatically be updated. No need to re-enter a number in the spreadsheet, or even to request it to be updated. Imagine a Visi - or Lisa-like system where you didn't need to plunk data from one application into another; it would happen automatically. Or imagine a genuine text-search filing system. You don't look for a document just by name, but by key words. (Each document is automatically indexed as it is archived, with the system adjusted to eliminate "the," "a," and other nondistinguishing words, like the name of your business, which occur too frequently to be useful as a key.) Or imagine a multi-machine system which distributes data so smoothly that queries to multiple locations require no special programming; neither do updates to any single location. (Simultaneous data updates to several locations are still in the more-distant, beyond-1983 future.)

Features like these are what make a dbms-based system interesting. They're not here yet, but Oracle and at least three other people are working on them.

Benjamin M. Rosen, publisher of the Rosen Electronics Letter, is a minority stockholder in Visicorp. Sevin Rosen Partners Limited and Sevin Rosen Investors Ltd., venture capital funds of which Benjamin M. Rosen is a general partner and chairman of the board, respectively, own equity positions in COMPAQ Computer Corp., Lotus Development Corp., and Osborne Computer Corp.

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The Rosen Electronics Letter, February 22, 1983
DISTRIBUTION I: SOFTWARE

What's growing faster than the personal computer software business? The personal computer software distribution business, of course. The chart opposite shows vital statistics for the leading software distributors and selected minor ones. They will soon be joined by many others. (Note the number of asterisks indicating 1982 start-ups.) Many of them distribute software as a sideline, while for others software is the only purpose in life. Even a pure-play software distributor, however, generally also sells modems, softcards, books, or other accessories.

We estimate that about $1 billion (rounded to the nearest billion) of personal computer software — games, operating systems, applications — was sold at retail in the U.S. last year. Of that, roughly one-fifth, or $100 million at wholesale, passed through distributors' hands. In 1983, total software volume should about double, while distributors' share will probably rise to 25%, or $250 million.

What has made the software distribution business so healthy? Basically, it's the proliferation of products, target machines, and vendors on the supply side, and the proliferation of dealers, mass-merchandisers new to the business, and other resellers (to say nothing of end-users) on the demand side. Software distributors play several roles in joining these two communities. Although the business is fluid and fast-changing and there are few generally accepted rules of conduct, the major roles of the software distributor are to:

- **stock goods.** This may be mundane, but distributors who think it beneath them don't last long. The primary function of the distributor is to take over such functions as inventory financing and inventory maintenance, so that the dealers can perform their function: selling the stuff. Service is great, dealers think, but you can buy the product only from the guy who has it — on the day you call. Softsel estimates that it can fill from stock 90% of the orders it receives; of the 10% it can't fill, most are withdrawn to be placed and filled elsewhere. Software Distribution Services has a conditional back-order service: When the 10-20% of orders it can't fill become available, it checks back with the customer and gets an additional 5-10% of business from customers who couldn't get their orders filled elsewhere. (Reps, by contrast, do almost everything distributors do but don't actually stock the goods — or handle the money. See below.)

- **make the product easily available through one-stop shopping.** Even when a dealer could get products from the vendor, he may prefer to use a distributor in order to buy just one or two units at a time, from a number of different vendors, with a single phone call (once he gets through frequently jammed-up phone systems). Turnaround times from distributors are now typically 48 hours, and most of the larger outfits operate several warehouses across the country. By contrast, it can take a good five days for even in-stock software from a vendor in, say, Fargo, North Dakota, to reach a dealer in Columbus, Ohio.

- **select the product.** There's more than enough product to choose from, and a lot more than any one dealer has time to evaluate. One of the problems with software is that it comes in such little pieces. Dealers are willing to take some time to evaluate a $3,000 piece of hardware that will be a foundation of their business, but they can't afford to look at every $50 package that waltzes through their stores, especially when such packages may
### THE MAJOR PLAYERS

<table>
<thead>
<tr>
<th>Company</th>
<th>1982 $m</th>
<th>1983 $m</th>
<th>Business/ Home (%)</th>
<th>Coverage</th>
<th>Outlets</th>
<th>Vendors</th>
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<tr>
<td>Softsel</td>
<td>35</td>
<td>80-100</td>
<td>90%</td>
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</tr>
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<td>800</td>
<td>85</td>
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<td>11</td>
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<tr>
<td>Sw. Distr. Svcs.</td>
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<td>15-20</td>
<td>80%</td>
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<td>2,000</td>
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<tr>
<td>Microamerica</td>
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<td>5</td>
<td>5-10%</td>
<td>nat'l</td>
<td>3,300</td>
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<tr>
<td>Sigma Distr.</td>
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<td>2</td>
<td>15%</td>
<td>Northwest</td>
<td>800</td>
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</tr>
<tr>
<td>MobileSoft</td>
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<td>5</td>
<td>85%</td>
<td>Northeast</td>
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<td>100</td>
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<tr>
<td>Hamilton/Loonam</td>
<td>NA*</td>
<td>NA</td>
<td>5%</td>
<td>nat'l</td>
<td>3,000</td>
<td>27</td>
</tr>
<tr>
<td>Micro Dist'ors</td>
<td>1*</td>
<td>8-10</td>
<td>5%</td>
<td>East</td>
<td>2,500</td>
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<tr>
<td>Vitek</td>
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<td>20%</td>
<td>Calif.</td>
<td>500</td>
<td>4</td>
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<tr>
<td>Comp. Potentials</td>
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<td>20</td>
<td>95%</td>
<td>0/100</td>
<td>300</td>
<td>25</td>
</tr>
</tbody>
</table>

* not a full year

Sw.: our abbreviation of Software; w-wide: worldwide

This table shows our best estimates of the statistics listed. Although we show 16 distributors, there are probably 50 or so altogether. Columns 2 and 3 show software sales, not total sales, of the distributors listed. As you might expect, these numbers are not "hard" -- especially those for 1983. (A derived figure, the percentage gain of 1983 revenues over 1982, might well be listed in a column headed "Bravado Factor.") Column 4 shows the percentage that software sales constitute of the total; this percentage refers to 1982 revenues and is generally increasing for those distributors where it is 50% or less. Column 5 shows the business to non-business software mix in dollars; in units, the ratio of business to non-business would be lower in each case given the higher unit prices of business software. (We unilaterally define home software as games, non-institutional education, and personal management -- low-end financial packages, file management, word-processing, and even the occasional VisiCalc or data base service such as the Source. The numbers are vague enough that the definitions can be vague too.) Column 7 shows the total number of outlets a distributor ships to; steady, regular customers probably number about half the figure shown in each case. Column 8 shows the number of vendors whose lines are carried by each distributor.

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The Rosen Electronics Letter, February 22, 1983
have only a six-month life cycle. Softsel's Headstart program, which gives a dealer an automatic selection of Softsel's most-likely-to-succeed picks, is a packaged example of this service. Softsel also established the now widespread practice (copying a good idea from the entertainment business) of publishing a best-seller list, providing useful feedback to both retailers and vendors.

- **handle returns.** In the trade, this is known as "stock-balancing," a much politer term. It isn't something distributors like to do, but most of them take some product risk, with restrictions as specified in a contract and accommodations as won by good customers. In rackjobbing, the distributor assumes the entire product risk. The dealer can't afford to swallow returned or slow-selling goods (although he pays in lost margins on the products he buys through distributors) and the vendor generally has the power to refuse to. It's the distributor-buyer who must beware.

- **train dealer staffs.** This is a big undertaking, especially since dealer staffs turn over so quickly. In this, distributors function as an arm of the vendors whose products they carry. Frequently, distributor personnel hold training classes in conjunction with vendor personnel or reps. These classes are important not just to pass on the salient points of various software packages, but to impart the fine art of getting software to work with specific pieces of hardware.

- **rackjob.** Not every distributor rackjobs, but it's the hottest new thing in a fashion-conscious business. The idea is not new; it's practiced regularly by hundreds of distributors of everything from H&B (health and beauty aids) and potato chips to paperbacks. Service Software, a start-up, pioneered the idea quietly late last summer. SKU, another start-up, rolled out its own offering with some fanfare late last year and set off the current surge in the practice, now the latest thing in a trendy industry. The many distributors who offer rackjobbing, however, mostly still talk of it as an experiment.

  In essence, the rackjobber does everything for the retailer: He sets up a rack, stocks it with goods, and refills it every day, week, or whatever period it takes. The rackjobber removes items that haven't sold, keeps the books, and files periodic reports with the retailer. For his pains he gets an extra five points or so of markup.

  Clearly, rackjobbing is ideal for retailers who want to be in the business without investing much time or money (although they make less as a percentage of sales). It appeals most to mass merchandisers; computer stores and even department store computer boutiques take more interest in the software they sell. By contrast, a mass-merchandiser buyer may handle refrigerators as well as software, and needs help with product selection, purchase, and delivery — precisely what the distributor offers. Most of these mass merchandisers are all getting into computers but probably making very little money at it; their only hope is to wring profits out of the aftermarket.

- **help their dealers with merchandising aids.** These range from point-of-sale pieces (many of which come from vendors too) to floor planning (credit), starter sets of software or accessories, and Softsel's CompuVision, a sales robot/demo machine (see the Letter of Nov. 29, 1982). Some vendors even
need — and some distributors even provide — help with documentation, product "finishing," and the like.

- **Handle co-op ad funds.** While virtually all distributors handle co-op ad claims and pass along the funds from vendors to dealers, Softsel and SKU also offer commingled co-op ad funds. This practice isn't likely to sweep the industry as quickly as some others because it requires deep pockets — with a willingness to dip into them — as well as substantial volume to work smoothly.

Typically, vendors partially or fully reimburse dealers for product-related advertising up to some limit, generally 3% of sales. But $30, say, doesn't buy much space these days. Moreover, vendors' policies differ, making record-keeping especially cumbersome. In new, separately conceived programs, SKU and Softsel pool the funds they receive from the vendors instead of passing them along directly, and offer the dealers consistent reimbursement policies, with 3% reimbursement from Softsel and 4% from SKU, which eats the difference. From the pooled funds, each dealer can receive reimbursement according to his total software purchases from the distributor rather than by each product, and spend it on a single qualified product. For example, three dealers, each with $50 worth of co-op funds for three different products (a total of $450), could now spend $150 each on a single qualified product. Softsel and SKU do the bookkeeping to make sure that in toto a vendor pays only for ads devoted to its own products. In some cases, in addition to SKU's one-point differential, the distributors may end up funding some advertising out of their own pockets when dealers choose to advertise certain products in greater proportion than they buy them. However, both firms are large enough that the statistical variations should match funds and products fairly evenly. This sounds generous, but if you assume that co-op advertising works in the first place, then the more, the better.

- **Convert products to a variety of formats.** This is a fairly big business in the CP/M world, and looks to be big in the emerging MS-DOS and UNIX worlds, in which many varieties of hardware using a "standard" operating system nonetheless need specially configured versions of "portable" software packages. (Portable means it's easy for the developer or software distributor to reconfigure the software; it doesn't mean that you can physically move a disk from one machine to another.) Only a few distributors such as Lifeboat, Hamilton/Loonam and Software Distributors do much software conversion.

Competition is coming from all sides. In addition to the distributors, both old (two years or more) and new, there are the manufacturers' reps. Although some reps help vendors sell to distributors and help the distributors with training, by and large they represent a competitive channel of distribution. Most reps started as hardware reps, and are just now starting to pay serious attention to software. Several of them are spinning off organizations specifically to handle software, among them two Apple reps, Rainbow (Bellevue, Washington) and PCMA (Long Beach, California). Reps perform many of the same functions as distributors, but they don't actually buy and resell the goods; they live off commissions instead of markups. Manufacturers' reps tend to be smaller organizations than distributors (mostly because the business requires less capital) and don't offer a full product selection. They function more as advocates of particular products and generally don't carry competing lines. Their chunk of the software market, probably $200–
300 million at retail, is mostly game software that they get from the hardware manufacturers they represent, typically Atari or TI. However, Apple's reps already handle business packages for Apple, and a number of other reps are also beginning to handle support-intensive business packages.

Mail-order sales fit into this jumbled pattern awkwardly, as much of the mail-order firms' product comes from distributors and occasionally even dealers getting rid of overstocks resulting in large part from volume-dependent discount schedules. Mail-order firms annoy dealers who claim that mail-order discount sales constitute unfair competition -- but many dealers discount just as deeply as do the mail-order houses. What hurts is trying to support personal service on the same slim margins that easily satisfy a no-frills mail-order house.

Also involved in software distribution are manufacturers such as IBM, Apple and Tandy, who distribute other vendors' software as well as their own. (Other hardware vendors such as Altos use distributors.) The hardware vendors probably account for another $300 million or so of software at wholesale. Mostly, the hardware vendors have distributed software as an ancillary product, although they are now beginning to realize that a $200 (retail) software package may produce not just a $70 gross profit on a $100 wholesale sale, but also be responsible for a 10-times-greater $700 return on a $2,000 piece of hardware.

Consider the practice of bundling, a powerful merchandising tool. The clever retailer can take a plain old computer, dress it up with some applications software, and sell the package in a promotion. The not-so-clever retailer looks to his distributor for advice on such packages, such as the work done by MobileSoft for Macy's. And the clever manufacturer is trying to take the whole business out of their hands by signing up applications software, as well as operating systems, at the source. Promotions such as Apple's Family System, which included PFS from Software Publishing, Olympic Decathlon and Typing Tutor from Microsoft and Apple's own Personal Finance Manager among others, are examples. More permanent arrangements, such as Osborne's bundling of MicroPro's WordStar, Kaypro's not-so-permanent bundling first of Select and then of Perfect Writer, are other examples. And of course there's Apple's Lisa, whose whole identity is determined by its bundled software. These arrangements are proliferating, demonstrating the commodity-ness of hardware -- and the incipient commodity-ness of the basic four of productivity software: word processing, spreadsheet, file system and graphics.

You could argue that there's not much money to be made in distributing commodities, that the heart of the business lies in service: selecting this month's hot game or supporting the ultimate growth-monitoring package for poultry farmers. Yes, there will always be temporarily high-margin hot sellers, specialized packages designed for smaller markets, and state-of-the-art software that needs support. But the margins and the volume in much of the standard stuff that rounds out this higher-margin business may be diminishing.

Go Home(-market), Young Man!

The typical dealer buys from a variety of distributors, as well as direct from vendors. (Although theoretically the dealer pays the distributor's markup, many national distributors discount to their better customers based on total sales to that customer; by contrast, a vendor's or limited-line distributor's discounts, based on total sales of only one or two products, are hard to earn. Thus a dealer may actually get a better price from the middleman than direct from the vendor.)
Accordingly the dealer probably buys more than 50% of distributed product from his favorite distributor, and the rest from a few others. These others may turn over as new entrants come in and make unrefusable offers and glowing promises, only to fall short. The new entrants keep the old players on their toes. As in the hardware business, price is a more important issue at the low end.

In units and more slowly in dollars the balance of the personal computer software business is rapidly tilting towards the home — and away from the computer store. A lot of new outlets are setting themselves up to sell to this new market of non-business people (or business people in their leisure hours). Accordingly much of the action in the software distribution business is in supplying these new entrants to the business, these lucrative "needy" newcomers — such as K mart, Best and the corner drugstore — with the full range of goods and services. All the retailers have to do is take the product and sell.

For example, Micro D has even started a new subsidiary, Service Software, specifically to distribute software to mass merchandisers. Many of the new players in the software distribution business — CBS, Ingram Book, Warner, et al. — concede that discretion is the better part of valor and aren't even looking at the business market (for now). They know consumers and they know distribution; the fact that the stuff is software should have as little relevance as possible.

Two's Company, Three....

The proliferation of software distributors is enough to give some old-timers such as Ron Schreiber (Software Distribution Services), who began his company a year ago, pause. Ingram Book, which takes only limited returns on books, sees no reason to change its policies for software. Is Ingram smart, with 15 years of experience in distribution? Or does it simply not understand the software business?

Consider all the stores now stocking up with software. Stocking a new store is a plum for a distributor. The store manager will put himself in your hands, letting you select perhaps $10,000, perhaps as much as $25,000 worth of software. And if you do a good job, of course, he'll be grateful and come back for reorders. But how much of that software will get out of the pipeline into customers' hands?

APPENDIX I: SOME STORIES BEHIND THE STATISTICS

The innovativeness of an industry's leaders tends to be inversely proportional to its maturity. Only in a mature industry does the status quo become too satisfying to the successful firms for them to risk a change. In a young, not-yet-coalesced industry such as software distribution, the large firms still have much to gain by taking risks and trying out new ideas. The descriptions that follow should prove this point. They are arranged alphabetically for convenience, but taken all together they provide a good mosaic of the business. The second section of this appendix looks at some representative software vendors and how they make use of the distribution community. (Icons borrowed, with permission, from Softsel's weekly Hot List.)

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Computer Potentials sells half hardware (modems and printers, mostly) and half software. It carries only eight software lines, including BPI Systems; Applied Technology's VersaForm, a "business forms processor" for the Apples II and /// and the IBM PC; Software Arts' TK!Solver; T-maker III, an unsung "integrated" software package; Aardvaark tax planning software; Microcom communications products. It is also, under a grandfather agreement, the only distributor besides Apple itself to handle BPI's accounting programs for the Apples II and ///. What do these packages have in common? They're all support-intensive, and tend to sell at close to list price, providing Computer Potentials with 12 to 15 points of gross margin. The support is provided by CP's two trainer/salesmen, soon to grow to three. Although CP generally doesn't have exclusive rights to its lines, it tends to be their main source to customers who rely on CP's monthly-or-more service.

Despite its pricing, Computer Potentials' main competitive problem is not keeping customers; it is getting the hot new products. Most vendors want the broader coverage of, say, a Softsel.

ComputerLand is not generally classified as a software distributor, but its $25-going-on-$60-million in software revenues ranks it as a significant factor in the marketplace. Competing distributors who want to sell to ComputerLand stores must contend with the fact that each store pays 8% of its revenues to ComputerLand corporate. ComputerLand compensates somewhat by selling to franchisees at cost those products it distributes, which overall account for 85-90% of what the franchisees sell. In software, given the multiplicity of units and the need for support and stock balancing, ComputerLand supplies somewhat less of its franchisees' needs. They go to Softsel and others for "timing," i.e. quick delivery, as well as product selection and service.

ComputerLand tends to keep limited stocks of software on hand, and has a limited stock-balancing policy. (However, franchisees are encouraged to trade or sell surplus product among themselves. "Anyone want four copies of BozoCalc Version 3 for one copy of Version 4?" might run the message on ComputerLand's Tymnet bulletin board.) The corporate organization has only four product evaluators, assisted by a product selection committee composed of franchisee/dealers, and generally buys only products requested by the dealers. ComputerLand sees its role as supplying marketing help, sales training and the like, not product support. (It could be potato chips as easily as software, one company person confides.) ComputerLand doesn't supply dealer training at all, figuring that task is up to the software vendor -- who will usually take it on, given the potential market represented by the chain's 400-plus stores.

However, the corporation is now beginning to pay more attention to the support-intensive software business. One factor heightening ComputerLand's interest in software is the opening of its Satellite stores, which now number five but should increase sharply this year. These satellites sell software and other aftermarket items, and each is located within a few miles of and owned by a standard ComputerLand franchise. Although senior vice president Mike Shabazian doesn't think the concept of stand-alone software-only stores makes much sense, he's excited about the prospects of the satellites, which offload their "mother" stores and also direct business to them.

Desert Micro, founded two years ago in Phoenix, is a rep, not a distributor. Like many reps it harbors a secret ambition to be a distributor, and with one product,
Software Arts' TKISolver, it is taking on that function, buying product and reselling it. The other software vendors that this service-oriented firm represents include State of the Art (accounting packages), and Business & Professional Software (graphics). Desert Micro's current owner, Wayne Mickelson, abandoned Michigan and his mining business last year to buy the $3-million (gross) business from its founder, who is now retiring. Besides Mickelson, the firm consists of a product specialist and a trainer (who is now teaching real-estate professionals to use VisiCalc) he hopes to bring on board this month.

Mickelson put the firm into the software business as a result of contacts he made at Comdex in November, so the software venture is still pretty much in start-up. He is still looking for more software products, with a special interest in those running on the IBM PC or compatibles. In fact, Desert Micro has also just picked up its first cpu, the Columbia Multi-Personal Computer, an IBM-compatible with bundled-in software (Perfect Writer, Perfect Calc, etc.). Aside from that, the firm sells a variety of peripherals and accessories. Its 40-odd customers, mostly Apple dealers of whom 12 also carry the IBM PC, are spread through the Southwest, and include several ComputerLands who like the extra service enough to forgo ComputerLand corporate's lower prices at least for some products.

Desert Micro gets commissions of 10-20% on software sales, less on hardware sales. Mickelson's goal is to raise software to 50% of revenues by year-end, raising the volume of software sharply and dropping the volume of hardware slightly. Although revenues may not quite double, commission dollars should do so.

Hamilton Microsystems and Loonam Computer Products are the two arms of Hamilton-Avent's Computer Marketing group. Hamilton Micro is Avnet Inc.'s home-grown venture into commercial (as opposed to industrial) distribution; Loonam is the 12-year-old firm brought in two years ago to amplify that effort. The two will be joined together in 1984, says Dick O'Melveny, vice president of Computer Marketing, "but if you're buying something to learn from it, you don't want immediately to merge it in and change it." Although the effort is focused around DEC's new personal computers (for which it is the sole distributor; the rest are sold direct by DEC to dealers or end-users), the group also sells Altos and North Star computers, as well as a variety of other terminals and peripherals. The firm's software effort likewise centers around these computers. HMS/LCP's dealers tend to be fairly sophisticated types; many of them qualify as full-fledged systems integrators and understand software well. The group believes strongly in dealer training, but it figures it's up to the vendors to develop training programs, so it hasn't done too much in the software area yet. However, it is actively working with DEC and assorted software vendors to get software moved onto the DEC computers, and it reformats existing CP/M programs for the Rainbow.

High Technology is the distributor that became famous when it resisted (unsuccessfully) Apple's move into direct sales to dealers. Started as the first Apple dealer in Oklahoma City in 1976, High Technology subsequently became an Apple distributor as well. The retail business and a small software firm have since split off, and High Technology the distribution organization operates out of its St. Louis, Missouri, headquarters and four regional warehouses. High Technology is now the exclusive distributor for High Technology Software Products, which produces a line of business packages for the Apple II -- or as the firm prefers to say, for the Franklin (which it carries).
High Technology stresses its service capabilities, with 18 salespeople who call on customers in addition to a five-person in-house software support team. The firm has just started its "Fully-Supported Software" program, which will give dealers exclusive rights to certain vertical-market packages in their areas. The first few packages are, not surprisingly, High Technology Software's -- such offerings as Doctor's Office Companion and PACE (for Prompt, Accurate Cost Estimator) for contractors. Dealers commit to buy a certain amount of product and come to St. Louis for two to three days' training.

Ingram Book, the country's largest distributor of books to bookstores (W.R. Grace's Baker & Taylor is larger in libraries), is currently rolling out a plan to get into software distribution. Last year, about 2% of its $135 million in revenues came from computer books; this year, with a late start in April or May, the Nashville-based company hopes to get about 5% of a bigger total from software and 8-10% from video games. Ingram, which has about 6-7% of the retail bookstore market (and 25% of the market served by wholesalers rather than direct) isn't content just to serve the bookstore software marketplace, and has hired a former Atari rep to address the computer specialty store market. Meanwhile, revenues from outfits like B. Dalton and Waldenbooks, Ingram's two largest customers, and the country's two largest booksellers, should make the whole venture profitable. Moreover, many of Ingram's "bookstore" customers are in fact departments in chains like Target, K mart and Rich's.

What are Ingram's chances? We'd rate them about as good as, say, DEC's in the PC market. Yes, Ingram doesn't really know this market. But ... it does understand distribution, and most orders it receives in the morning are shipped by the afternoon. The company has 300,000 square feet of warehouse space in Nashville, Washington, D.C., and Los Angeles, and handles roughly 1,000 orders a day. It also works hand-in-hand with customers like Waldenbooks at store openings and can ship a whole storeful of inventory tailored for a specific market. While Ingram may not fully understand the volatile games market and probably couldn't tell VisiCalc from TK!Solver without the documentation, it does have experience at tasks like supplying the country with just enough copies of "The Winds of War" in honor of a television special. Books can grow old pretty fast too. Yet of the books Ingram buys, it sends only 18% back to the publishers; of those it actually ships, only 8% come back to Ingram. That compares with a book industry average of about 40% returns. (That's why there's such a big business in remainders.)

Ingram's other strong point is Ingram Industries, a private, hundreds-of-millions-of-dollars industrial corporation that's searching for a lucrative, fast-growing business in which to invest its resources. "If there's any disappointment with us at Ingram corporate," avers Book president Dave Williams, "it's been that we haven't used enough capital." This new venture should change that. The company won't talk numbers, but it's expanding its marketing staff of 40 by 20 people, most of whom will work in the software area.

Ingram probably won't do as well in the computer-specialty store market as it hopes, but a little chunk of that market and big chunks of the bookstore and mass-merchandising markets should go a long way.

Keystone Software has no revenues yet, and has no intentions of rackjobbing, creating point-of-sale displays, or opening up three warehouses -- at least for the next few years. Keystone is the creation of Judy Ross, formerly
marketing manager of the well-regarded software distribution operation at Intel. As usual in the computer industry, the UNIX machines -- Fortune Systems' 32:16, the Altos line, Tandy's Model 16, Apple's Lisa (soon), and others -- have preceded the applications software. However, the dearth of applications for UNIX is about to end, and Keystone aims to be the clearinghouse for the plethora of products coming to market. So far, it is signing up an illustrious group of clients, but it's not yet ready to make those names public. Ross plans to start shipping to a list of several hundred high-end dealers and systems houses late this summer.

**Lifeboat** is not exactly a distributor as generally defined, but it does get distributor prices from vendors and it serves as a distribution channel. Only 20% of Lifeboat's revenues come from dealers (who get a discount); the rest comes from full-price direct sales to end-users, from a mailing list of 160,000. Is it a store? No, Lifeboat is a full-service, list-price mail-order house. If those words don't seem to fit together, it's not surprising, because Lifeboat is the only outfit in that particular business. Delivery is by mail or UPS; service is almost exclusively by telephone, although the company has recently begun holding classes for end-users in New York City, where it is based.

The concept is an intriguing one, but hasn't been properly tested yet because Lifeboat's previous management, departed last summer, succeeded in alienating a substantial proportion of the firm's suppliers and customers with sloppy quality control and other failings. We expect the company to blossom under better management. Although Lifeboat sells mostly the 80% of software lines that accounts for only 20% of industry volume, this sector is far less competitive. (Indeed, 25% of Lifeboat's volume is from proprietary products.) No one else we know of sells consistently at list price.

The company began life as a CP/M software vendor and made its fortune off the proliferation of CP/M formats. It works closely with hardware vendors to convert and test software for their particular disk formats. For companies such as Hewlett-Packard, Sony, Xerox, and Sanyo (who pay for this service), Lifeboat also publishes software catalogs. The hardware vendor typically packs the catalog along with each computer shipped, pointing out to the buyer the wide variety of software available. Lifeboat gets the orders.

Currently Lifeboat offers roughly 300 different packages available in up to 200 different formats, for a potential 60,000 items. All the software is "serious" (only one, $150 backgammon game), but about 25% of the business is languages, tools, operating systems, targeted more at the programmer than at the businessman who just wants quick, no-frills applications that will work. Although most of Lifeboat's sales are still CP/M-80 packages, the company aims to establish itself as an equal force in the 16-bit software market, and now makes 10-15% of its sales in this area. By far the majority of the 16-bit packages, despite Lifeboat's CP/M-80 origins, are MS-DOS-based.

**Micro D**, a nationwide distributor of both hardware and software, is commonly considered the most aggressive major factor in the business. That means both in terms of pricing to dealers, and in cutting deals with manufacturers for their products. The firm handles a host of plug-ins, add-ons and other supplies for the Apple and IBM machines, as well as actual cpus from NEC, Xerox (the 820-II), Sanyo, Timex/Sinclair and TI (the 99/4A). Founded in 1979 as Micro Distributors and still headed by Lorraine Mecca, formerly in industrial

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distribution, Micro D promotes itself as the only truly national full-line, hardware/software distributor. It has three warehouses with a fourth opening this summer. The sales effort is equally massive, with 18 people manning telephones, and 11 salespeople and three trainers in the field.

The company's newest innovation is the "Hot Rack," a genteel form of self-service rackjobbing. Micro D gives a store a sales rack, designed to fit on a counter and hold 30 of each week's top sellers. With the help of a "dynamic 3-D matrix" on a computer, each store's selection is customized (by hardware line, local demographics, sales experience, etc.) and shipped to him before the weekend. The store provides a weekly sales report, and gets stock-balancing. Aside from the sales benefits, this venture will enable Micro D to offer a "Top 30" list based on actual sell-through. (Most of the "Top --" lists you see are based on what the distributor, rather than the retailer, sells.)

Another service was a recent four-day, expenses-paid trip to Hawaii for 30 top accounts. They had classes after breakfast on Monday and Tuesday, but the rest of the trip would not have been deductible. Participation was based on business with Micro D, with more points accrued for a given volume of software because it's more profitable dollar-for-dollar, says Mecca.

Micro D also owns Service Software, described below.

Micro Distributors, founded and headed by Dennis Moore, is a partially owned subsidiary of AGS Computers, a publicly owned software house. Dennis Moore is the brave man who admitted last month at the Personal Computer Forum that software distribution is a tougher business than he'd realized when his East Coast hardware distribution company entered it last year. The difficulty, he says, is to gain awareness in the customers' minds; getting suppliers -- Micro Distributors carries most of the top 100 -- is no problem.

So, down but not out, Micro Distributors is about to embark on an ambitious trade advertising campaign costing hundreds of thousands of dollars. The company will back that up by doubling the number of its support/evaluation people from four to eight, and possibly by using the services of an independent rackjobber.

MicroAge is the second-largest franchisor of computer stores, with 33 franchisees currently, and the third largest chain (after ComputerLand and Sears). The corporate parent was originally called the Phoenix Group after its home city, but as it happens, the company has also recently arisen from the ashes of a 10-month bankruptcy. A $5 million infusion of capital (half debt, half equity) from Docutel/Olivetti is helping the recovery.

In addition to the franchise business, MicroAge also owns PGI, a distributor that sells both to MicroAge stores and about 200 others. However, PGI is less captive than most distribution arms: Only about half its 1982 revenues of $5 million came from MicroAge stores, and its products accounted for less than a third of the MicroAge stores' sales. The focus is on sophisticated dealers selling multi-user systems to small businesses, and the choice of software reflects that. Big lines include Ashton-Tate's dBase II, the VisiSeries, Software Dimensions' Accounting Plus, Informix (a relational data base management system), Chang Labs' MicroPlan, and the MicroPro line of business and productivity packages. The big hardware line is Altos, although several MicroAge dealers have also qualified to sell the

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IBM PC, which they buy directly from IBM.

We recently attended a conference held by MicroAge for its franchisees; this was a cross between a social event and a three-day training class. The attendees probably learned even more from each other than from any of the planned events, although those were informative too. In addition, a score of vendor representatives were on hand, several of whom — such as Phase One (vendor of the OASIS operating system) — were not PGI vendors. Although this event was open only to franchisees (as opposed to PGI's other customers), it showed service at its best.

**Microamerica** is a typical hardware distributor that regards software as an adjunct to its hardware lines. About half its software revenue comes from systems software supplied by computer manufacturers, such as operating systems for the Altos and North Star computers it carries. In addition, the firm distributes a variety of business applications for these machines, including accounting software (the Open Systems line) directly from Altos and software-vendor-supplied packages such as WordStar, dBase II, and VisiCalc for these machines and others (Apple and IBM, mostly) that Microamerica doesn't carry. Software sells hardware at distribution as well as at retail, and so the firm provides a substantial amount of dealer training in software. Earlier this month, for example, six people from Microamerica, two from Altos and one from Open Systems spent two days training dealers in the fine points of Altos accounting software; this week Microamerica is hosting a course on Xenix, newly available on the Altos 16-bit machines. Most of these product courses are free to customers in good standing, except when the firm has to hire a trainer from outside; sales training which can't be directly related to a given product typically costs Microamerica's dealers $275 per course.

**MobileSoft** was founded a little more than a year ago by Joe Haydu, who formerly worked for Apple Computer in the New York area and became its New York area sales rep when that company changed from distribution to direct sales in 1980. One year later he started MobileSoft, a high-end distributor which carries such lines as Applied Software's Versaform, Ashton-Tate's dBase II and Alpha's Apple-IBM Connection, as well as Spinnaker, Broderbund and Datamost. The "mobile" in the name refers to two vans (originally the family car) in which Haydu and his three salespeople call on customers. (They also use UPS.) In addition to holding training classes for new products, MobileSoft works closely with customers. It helped Macy's and Bamberger's of New Jersey set up the software selections at their new computer stores, for example, and gets heavily involved in advertising campaigns using vendors' co-op dollars. Sometimes MobileSoft even gets the vendors to cough up a little extra for ads in so-called "key cities," where the additional exposure will pay off.

**Service Software**, a Dallas-based subsidiary of Micro D, is aiming squarely at the mass-market low end of the business. The unit was created and nurtured by Chip Lacy, who came from and has since returned to Best Products, a catalog showroom chain and parent of the Data Base computer store chain. It is now managed by president Bill Mitschrich, a former manager in Texas Instruments' Consumer Products group, and reflects the orientation of both these men. For the last quarter of 1982, the business's first full quarter, only 3% of the company's product was disk-based; the rest came on cartridges (80%) or cassettes (17%). Its specialty is rackjobbing, and its customers are the mass merchandisers who need that service: chain stores, catalog showrooms, and the

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like. Most of the software is supplied by hardware vendors such as Commodore, Atari, Timex/Sinclair, and TI, in contrast to the business market where third-party products predominate.

The company has 20 people now and expects to hit 80 by mid-summer to cover a targeted 1000 outlets in the country's top 40 markets. The people doing the rackjobbing are typically college graduates, typically female (75%). "It surprises me how easy it is to hire top-quality young people with an affinity for computers," confides Mitschrich. Perhaps rackjobbing vans are the mailrooms of the ambitious young people of the future.

**Sigma Distributing** president Dick Lawrence is an anomaly in this business: someone who's not all excited about the possibilities of software distribution. In fact, in the face of onslaughts from the likes of Softsel and SKU, his response is to hand over the business. As a hardware distributor, his outfit is more comfortable handling operating and systems-oriented software, where it can offer value-added. Why cut prices just to lose money in applications when customers come to you for other reasons anyway? Accordingly, the firm expects to see its applications volume slip, while systems software rises just in line with hardware sales, for an overall flat year in 1983. Discretion is the better part of valor.

**SKU** (for Software Knowledge Unlimited) is another of the many startups. Set up as a separate software arm by Don Kingsborough, an Atari rep and owner of DK Marketing, SKU started out as a regional distributor 18 months ago. Eight months ago, Don Kingsborough decided to try for the bigtime, and the company has now entered the market as a national distributor with a splash, making an impact well out of proportion to its current size. We recently turned the page from a four-color Softsel ad in a dealer magazine, only to find an equally impressive one from SKU. It takes money to do this: The firm started off with $1 million from Don Kingsborough, and it's now on the point of picking up another $4 million from venture capitalists.

The firm's marketing efforts are carried out day-to-day by Bob Goldberg, former merchandising manager for CBS's recently divested Pacific Stereo unit, and Bob Brownell, former sales manager for Verbatim. Although it was not the first to use rackjobbing (Service Software was) SKU's publicity for its venture into the practice last fall kicked off the current fashion of rackjobbing. The company fields 10 Chevrolet vans (with six more on order), each carrying roughly $50,000 worth of software. This accounts for maybe 10-15% of the business, but the other customers get equivalent service through a combination of UPS and visits from the company's 17 rep organizations across the country.

In November, the company pioneered in offering commingled co-op ad funds, credit- ing 4% of a dealers' sales of qualified product, and making up the difference between that and the more typical 3% allowed by software vendors out of its own pocket. However, it hasn't publicized the program widely.

Kingsborough, as a longtime computer marketeer, is passionate about providing what he calls "tools for sell-through." Examples are the firm's "starter sets," collections of high-margin accessories designed to help the novice computer buyer (and to give the dealer a 40% margin despite a discount from list). The Atari/Commodore starter kit includes several blank cassettes, a head cleaner, a joystick, crt cleaner, a power-surge damper, nonstatic spray, and several software
discount coupons that should bring the customer back to the store, all for $44.95, or 10% off the sum-of-the parts price. The Apple/IBM starter kit includes a similar array, with diskettes and a diskette holder instead of cassettes, and a slightly more elaborate power strip instead of the surge damper, all for $64.95, a 20% savings. As a sort of software starter kit, the firm is planning to sell American Training International's teaching programs along with packages such as VisiCalc. ("They get the user up to the point where he can understand the manual," says marketing manager Goldberg.)

Like many of the start-ups, SKU is aiming for the new-entrants business -- video stores, mass-market chains and the like -- although 35% of its business comes from computer dealers. Personal service, as well as quick deliveries, is vital.

W H Smith & Son Ltd., the 400-plus-unit British newsagent and bookseller, is also intent on getting into the software distribution business. The company will build its effort around its division WHS Distributors, which does 80% of its business outside the Smith chain. WHS Distributors is the Ingram Book of the U.K.; luckily for it there is no U.K. equivalent to Softsel to compete with. (Softsel does have an office in the U.K., however, and there is one nationwide hardware/software distributor, Peter & Pam, to contend with.) Indeed, WHS Distributors' goal is to become the Softsel of the U.K. and more, distributing and perhaps even publishing both business and home software for that smaller but less crowded marketplace. At last report WHS management was in the U.S. looking to sign up some U.S. vendors; shipments should start sometime this summer.

Softsel is by far the leader in the pc software distribution business, but that's a much less secure position, than, say, IBM's in its business. Although many of the firms described here are older, Softsel, just about two years old, was the first significant distributor to concentrate only on software. Softsel got its lead in the business through a combination of good service, a liberal return policy, and being there first. Once a leader, one can benefit from economies of scale (in purchasing products, advertising) to stay a leader. But it ain't easy, and Softsel is well aware of the competitors crowding at its heels.

The company pioneered with its Hot List, now an industry standard, and its Headstart program (described earlier). It is now starting up a commingled co-op ad funds program, and promoting it much more effectively than SKU so far. Also following SKU's lead, but on a grander scale, Softsel recently started offering a rackjobbing service, paying Pickwick to do the job nationally. This may cost a little more than SKU's home-grown effort, but it lets the company roll the effort out all at once with a trained staff.

But Softsel also addresses the less helpless specialty computer store marketplace that can fend for itself, and stresses its one-day order turnaround (though it slipped a little around Christmastime) and its broad range of products. The company will open its third warehouse (in Chicago) this summer, and is beefing up its computer system.

Softsel's number-one position (plus the requisite performance) also recently won it two nice pieces of exclusive business: It is the only software distributor (plus ComputerLand) to handle Lotus' 1-2-3 package. It also was the exclusive initial-stocking distributor of software for the Texas Instruments Professional Computer (see page 1). That is, Softsel worked closely (and quietly) with TI to
find appropriate software packages for its new PC. These had to be produced in special TI format (for the TI PC is only semi-compatible with the IBM PC) and stocked ready for distribution at the time of announcement. Although other distributors may now carry these products, only Softsel had them on January 31. "We got 45 new customers through that deal," says Wagman happily.

Despite its leading position the company remains imaginative in addressing its marketplace. The two founders, Dave Wagman, 31, and Bob Leff, 36, came from a corporate dp background, and executive vice president David Blumstein, 38, from dp-oriented management consulting, but senior vice president Rich Lionetti, 42, put in 22 years in the record business at places like Warner and CBS. The company just raised its first outside capital last November, and it's already venturing into new areas with investments in companies such as CompuVision (an automatic software demonstration machine) and Tronix (game software).

Software Distributors is part of an even more diversified bunch of companies than Softsel is becoming. Operated with separate managements under the umbrella of Software Plus, they comprise Ashton-Tate, vendors of dBase II; Discount Software, a mail-order house; and Softwaire Centres International (18 stores open, with 13 more on the way). Overall, the firm reflects its origins in the computer-minded (as opposed to business-minded) CP/M world, and is a major source of CP/M products. It is a much more "serious"-minded company than, say, Softsel, with more than 90% of its revenues from business products, including about 20% computer languages and "literacy" products. Vice president of marketing Chris Daly (who ran a Radio Shack seven years ago at the age of 18) is trying to change that. The new approach builds on a series of efforts to gain marketplace attention which begins with a cocktail party you may have attended (3,999 other people did, too) at Comdex in Las Vegas. The party, which boasted a 12-person complement of game software artists, was filmed and has been syndicated for national television airing, with ample sponsorship beyond SDI's, in March. That will announce SDI's entry into the gaming marketplace. Then there will be a heavy ad schedule, another extravaganza (this time with end-users) to be filmed in June, and regional seminars for dealers.

In the meantime, the business side of the business is building apace. Like Lifeboat, Software Distributors works closely with certain hardware vendors, actually taking on the job of reformatting and documenting software for specific machines. Vendor-customers include Sirius/Victor, HP, Honeywell, TRW, Altos, Visual Technologies, Otrona, and Alpha Micro. The company has an especially close relationship with DEC as the only "endorsed" distributor of software for the Rainbow (except for Hamilton/Loonam, which is also handling the hardware).

To handle all the new business it anticipates -- from $2 million a month currently to $5 million by May -- the company is buying its own mainframe, a DEC VAX 780, which will eventually enable customers to enter orders electronically.

Buffalo-based Software Distribution Services started shipping product in July, and has already hit a $12-million run rate. President Ron Schreiber, who also owns a microfilm company, figures he's probably one of the last people to enter the business successfully; the window is closing. SDS took $2.25 million in start-up capital last spring.

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To make his mark Schreiber entered the business with a full-fledged product catalog, complete with product descriptions written by copywriters (Would that the documentation were too!), in contrast to the pricebooks typical of that period. Now aiming to earn customer loyalty, SDS is setting up a Professional Products Division, basically a service group to support business software such as accounting packages and various vertical market packages. Guiding these efforts will be dealers' responses to a questionnaire covering such issues as co-op ad plans, training and support, and all the other services a distributor could provide.

The fastest-growing part of the business is regional department stores in SDS's stronghold territory, the East Coast. These are the attractive "needy" customers, dependent on a catalog for even the vaguest idea of what a particular package is all about. SDS also offers them rackjobbing, for those who'd still rather leave it all to the distributor.

Vitek, based north of San Diego at the corner of Boardwalk and Park Place in San Marcos, was founded in 1979 by Tom Pine, who has been in the computer business since 1951 and in 1977 founded Vista Computer (sold to Randal two years later). Now 54, Pine has chosen the turtle as his company mascot and is building his business slowly and deliberately, eschewing outside funding. From peripherals, printers, supplies and the like Vitek is now expanding: It has just taken on its first cpus, Corona's IBM-compatible desktop and soon its portable, and it has started selling software. The effort is limited so far, but growing. The lines include MicroPro, VisiCorp, Software Arts, and Softsource, a Vitek subsidiary which publishes a proprietary line of disk-based software for the TI 99/4A. Vitek is one of those businesses beloved of its customers that would rather be loved than admired and thus won't ever grow beyond the scope of one gentle man.

APPENDIX II: DISTRIBUTION STRATEGIES OF SELECTED SOFTWARE VENDORS

Applied Software Technology: VersaForm -- VersaForm is a sophisticated business package, written for the UCSD p-System, that lets the user perform fairly serious data base management through the manipulation of business forms on the screen (it uses a forms metaphor, in modern parlance). To handle its product the firm uses Softsel for nationwide coverage plus a combination of regional distributors and reps. The distinction between reps and distributors is less important than the distinction between a good and a bad one of either kind, the firm feels, and so it uses both. VersaForm requires a fair amount of support that the product probably wouldn't get by itself, so the company has three support people of its own to train reps, distributors and dealers. All this attention, plus an 800 number for users, not just dealers, has won the product a rank holding between 15 and 25 on Softsel's Hot List despite the lack of much advertising.

AT&T: UNIX -- UNIX, as such, is not really a personal computer operating system; it's a multi-user system hostile to all but the best-trained programmers. AT&T generally sells the product directly to hardware and software OEMs, and has just announced a revolutionary new option with its latest release (System V): customer (not end-user) support. One of AT&T's software OEMs is Microsoft, which has configured the product into a somewhat more-friendly system, complete with tools and other aids, called Xenix. Generally, Microsoft licenses Xenix to hardware.
manufacturers, who offer it as a standard or an option on such systems as the Altos 586, the Tandy Model 16, and the Apple Lisa. Other UNIX resellers include Interactive Systems and Unisoft.

BPI Systems -- With one minor exception (Computer Potentials), Austin-based BPI Systems has always sold its products, accounting packages mostly, through hardware OEMs such as Apple, IBM, NEC, Sanyo. Now the company is bringing out some new products with perhaps more limited markets (such as information management, association management, and personal finance) and of less immediate interest to hardware vendors.

Accordingly, BPI has now signed up Softsel and Micro D, with others to come, to sell these new products. But the changeover is only partial. IBM will continue to sell BPI's accounting products itself. In the spring, BPI will offer a set of accounting packages for Lisa (but without the Lisa interface) through distributors; later in the year, after BPI has had a chance to use the Lisa development tool kit to integrate its packages into the Lisa environment, Apple will sell that line itself. In conjunction with this effort to gain more visibility apart from its hardware vehicles, BPI has started advertising in consumer computer magazines such as Byte, Personal Computing and Popular Computing. Later in the year, it will appear in Inc. and the Wall Street Journal.

Context Management: MBA -- Context MBA, an "integrated" software package for middle managers, runs on the IM PC and on the Hewlett-Packard 9816, a 68000-based machine. HP, under license, sells the HP version of the package to its own customers and dealers. (Other such deals are in the works.)

Context Management, the company, handles the IBM version, selling it directly to selected ComputerLands, but not to ComputerLand corporate. Aside from that, Context generally parallels IBM's distribution pattern, selling primarily direct to retail outlets (289 at last count) or to large end-user customers. In addition, about 15-25% of the volume ultimately should go through VARs (a term borrowed from IBM for "value-added remarketers") such as Wyly Corp.'s University Computing Co., which sells the product as part of its mainframe accounting package, and National Training Systems, which bundles it with three days of training.

Digital Research Library -- Digital Research, the folks who brought you CP/M-80 and are now trying to bring you CP/M-86, are embarking on a new sales program called the Digital Research Library. To get the Library on dealers' floors and walls, DRI is aggressively signing up distributors such as Softsel, Software Distributors Software Distribution Services and High Technology, as well as ComputerLand. In addition to the usual training and support, the company will put up documentation, product changes and other supplemental material on THE SOURCE's Private Sector, a by-subscription-only service. This is a big change for DRI, which traditionally has sold its product direct to dealers or through OEM agreements with hardware vendors.

In the parlance of rackjobbing, the Library is a rack, bookcase-like, designed to be filled with CP/M-86 products, utilities and, we'd guess, applications. (However, stocking the rack is done in the usual manner by the vendor himself unless he buys from a rackjobbing distributor.) In some cases, CP/M-80 software
may also be included, but most of that sells by itself quite nicely.

The problem Digital Research aims to overcome with the Library is IBM's neglect of this "supported" operating system, one of three on the IBM PC. For PC-DOS IBM charges $40 and for the UCSD p-System $50; for CP/M-86, it charges $240. Accordingly, DRI is fighting back with a $60 version of CP/M-86 (including a print spooler and graphics interface lacking in the IBM version). To amplify its allure there are the supporting utilities: languages, application development tools and graphics -- and DR ("doctor") Logo, chairman Gary Kildall's pet new product. All this will be rolling out in March. The obvious next step -- but one the company won't discuss -- would be to sign up a full complement of applications software vendors, for applications, after all, are what make the operating system useful.

Lotus 1-2-3 -- Lotus sells 1-2-3 direct to some dealers and large end-users, and otherwise exclusively through Softsel and ComputerLand. Although this policy has alienated most other distributors, the thinking here is that Softsel, as an exclusive distributor, will have a vested interest in making sure that the product sells. The company is assisting its resellers with a team of trainers and lots of distinctive sales aids. On rare occasions, Lotus even does end-user training, such as for groups of Macy*s customers.

MicroPro -- MicroPro made its name with WordStar, a sophisticated word-processing package that lists for $495 and is usually sold at a substantial discount. WordStar, always a popular program, also helped make a name for Osborne when it was bundled into that product, playing VisiCalc to Osborne's Apple. That deal alone, which let Osborne bundle WordStar and for which MicroPro received cash (based on volume) plus some Osborne shares, has generated a substantial portion of WordStar's base of some 400,000 installations.

Currently, products include CalcStar, MailMerge, SpellStar and the newly announced InfoStar as well as the ubiquitous WordStar. MicroPro sells more than half its units to (but gets less than half its revenues from) OEM customers such as Morrow Design, Osborne, Sanyo, Systel, 3R, TeleVideo (bundled) and Zenith, Xerox, North Star, DEC, HP and Cromemco (unbundled). However, MicroPro is now less eager than some competitors for sheer unit volume and is losing some deals to competitors with more aggressive pricing.

On the dealer side, MicroPro sells through distributors, which it supplements with support people in 20 cities. The company is currently phasing out of the last of its contracts with mail-order dealers, which once accounted for as much as 15% of unit shipments. Since September MicroPro has let such contracts expire as they come up for renewal, and the last of them will end late this summer. This move has significantly strengthened MicroPro's support among dealers, who bridled at the competition from big-discount, low-support mail-order services. (To be sure, mail-order houses will continue to sell MicroPro's products, and other vendors', as they can get them through more indirect channels.)

Perfect Software -- Perfect Software produces a line of "generic" productivity packages: Perfect Writer, Perfect Speller, Perfect Calc, Perfect File. Founded two years ago and shipping since last May, the company appears to be following MicroPro's path to stardom (but there's more competition this time around). Perfect gets about half its revenues from OEM agreements with hardware manufac-

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Manufacturers and half from sales to dealers which it reaches through a group of regional manufacturers' reps. In unit volumes, however, the OEM business (thousands per month, says management vaguely) far outdistances the dealer business.

What makes the bundled-OEM business so attractive, of course, is that it's a cheap, relatively painless way of building up a substantial user base for the company's line of packages, which comes in MS-DOS and CP/M formats. OEM bundling customers include Columbia Data Systems, Seequa/Chameleon, Quasar, Access Matrix, Basis, Seattle/Gazelle and General Electric/Intersil (yes, even engineers sometimes like to write letters, spell correctly, calculate and manage files).

**Software Arts: VisiCalc** -- Software Arts, which developed and owns the rights to VisiCalc, sells it exclusively through VisiCorp, under an agreement with no time limit but subject to modification by mutual consent. VisiCorp, as the publisher (as opposed to distributor), sells directly to dealers but also relies on distributors to reach smaller dealers or large dealers who like the inventory management and other caretaking provided by this channel. In addition, a fair amount of the product -- in Apple, IBM and Tandy versions -- goes through OEM channels. Although VisiCorp promotes VisiCalc directly to large end-users, it is careful to let the dealers do the actual selling.

**Software Arts: TK!Solver** -- This time around, Software Arts is handling the marketing itself (except for the DEC Professional and Rainbow versions of the product, which are being distributed by DEC through its own several channels). Aiming to get the same effect as Lotus with Softsel, Software Arts has chosen several regional distributors with strong training efforts to distribute its new product, TK!Solver. Although they do not have contractual exclusivity, de facto these distributors don't overlap. Later on, however, Software Arts may also select a national distributor. In addition, Boston-area-based SA fields its own sales rep in the Northeast, its backyard, in order to keep in touch with the market.

**VisiCorp VisiON** -- VisiCorp and its partners have announced the coming availability of VisiON on respectively, the IBM PC, the DEC Professional, and the TI PC, but no one has yet stated precisely how the product will be made available. Presumably it will be offered on a semi-OEM basis in an optional bundle as the moral equivalent of a Lisa to end-users and applications developers. The success of VisiON, an operating environment, depends largely on the strength of the applications programs that will be written for it by VisiCorp and others. (See Nov. 29 issue for details.) That, in turn, depends on the installed base of VisiON machines; a large base will attract a big following of third-party applications writers. Accordingly, VisiCorp is eager to sign up more hardware vehicles for the system, and will price it low enough to make sure it sells. The company will make money on (1) volume and (2) selling its own applications into that installed base. The hardware vendors who resell VisiON won't mind not having an exclusive, as long as they have a standard.

(For VisiCalc see above under Software Arts.)

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BETTER LIVING THROUGH SILICON

The Motorola 68000–Intel 8086 war is not going to be won by speed or power alone. If that were so, Motorola would have won long ago. But then Intel would have staged a comeback with its 80186 and 80286. ... And so on. In fact, there never is going to be a clear winner, but just a continual shifting of the balance.

Intel's latest sally, the 82730, is a neat little addition to the arsenal. The 82730 is a dedicated microprocessor, targeted towards makers of word processors and other text-oriented systems, which can offload any microprocessor from the entire line of Intel cpus. While the cpu does its traditional work of data processing, the 82730 will handle tasks such as text display and editing functions. For those who want to create Lisa-like systems, the 82730 makes it easy to offer split screens, virtual windows, dual cursors, dynamically variable type fonts and other paraphernalia of "friendliness." The 82730 can also be paired with the 82720, a graphics coprocessor, to mix text and high-resolution graphics on a screen.

The 82730 is just one in a line of Intel reinforcements to its main guns. This particular chip will be available for sampling in a few months, and will probably start showing up in products by year-end. Likely targets would be the existing range of 8086-family machines: IBM's PC, Displaywriter and DataMaster; Convergent Technologies' workstations; the Victor and some Altos machines.

SEEQ AND TI TEAM UP FOR E²CPUs

Word has it that the new Intel spin-off intends to call itself Seequel. The beneficiary of this flattery, Seeq Technology, spun out from Intel two years ago. It has since made progress worth emulating. Late last year it announced the industry's first Ethernet chips, and this month, in conjunction with TI, it is announcing a non-volatile memory version of TI's TMS700Q family microcomputer. In place of TI's traditional ROM, the chip uses a 2K x 8 E-ROM. This means essentially that you have a programmable microcomputer.

That's not very exciting. What is exciting is to have the whole thing on one chip. First of all, it's a lot smaller and more convenient than having a multi-unit system complete with disk or cassette or whatever nonvolatile medium you choose. Second, in the long run it will probably be a lot cheaper, although not until a few years' slide down the learning curve. Third, with the appropriate configuration, it provides automatic security, destroying the programming before anyone unauthorized can read it.

The applications are fun to think about: games that can remember who you are when you log on and adjust to your ability, robots that can learn their way around the house, pacemakers that know when you're exercising and need extra speed. More mundane applications include maintenance diagnostic monitors and cable television security boxes which could be altered remotely to foil laggard bill-payers. The essence of the system is that it can learn from its environment and react to it.

Like most semiconductor advances, the 72720 Adaptive Microcomputer isn't so much an accomplishment, but a challenge to all the ingenious tinkerers out there who've been longing for a machine with nonvolatile memory that can fit inside virtually any gadget you can name.

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ANALYSTS' & MANAGERS' CALENDAR

MARCH 1  Quotron Systems management presentation before the New York Society of Security Analysts.

MARCH 1-3  The Evolving Telecommunications Revolution - Kansas City.

MARCH 2  Tracor management presentation before the New York Society of Security Analysts.


MARCH 3  TIE Communications management presentation before the New York Society of Security Analysts.

MARCH 3-4  Multifunction Workstations - New York. Contact TechTran, a subsidiary of Gartner Group, Inc., (203) 348-4412.

MARCH 7-9  Convergent Systems for IBM Users - Boston. Contact TechTran (203) 348-4412.

MARCH 8-10  SEMICON/Europa - Zurich. Contact Bill Galarneau, SEMI (415) 964-5111.

MARCH 9-16  AEA Financial Conference for Emerging Growth Companies - Monterey. Contact David McKell or Lori Eschelman (415) 857-9300.


MARCH 18-20  West Coast Computer Faire - San Francisco. Contact Sarah Candelario (415) 851-7075.

MARCH 21-24  Interface '83 - Miami Beach. Contact The Interface Group (617) 879-4502.

MARCH 22-26  International Data Base Management Association - Lake Tahoe. Contact Bill Thurman (714) 855-4442.


MARCH 23  Lynch Communications management presentation before the New York Society of Security Analysts.

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MARCH 23-25  Minis/Micros with IBM Mainframes - New York. Contact TechTran (203) 348-4412.

MARCH 28  Wavetek management presentation before the New York Society of Security Analysts.

MARCH 28-30  Minis/Micros with IBM Mainframes - Boston. Contact TechTran (203) 348-4412.

APRIL 5-8  Texas Instruments/Minicomputer Information Exchange - New Orleans. Contact Dorene Cohen (512) 250-7151.

APRIL 7  Harris Corporation management presentation before the New York Society of Security Analysts.

APRIL 8  General Instrument management presentation before the New York Society of Security Analysts.

APRIL 10-13  AEA Monaco Conference - Monaco. Contact Florence Lewis (415) 857-9300.

APRIL 13-20  Hanover Fair, including Microtronic '83 - Hanover, West Germany. Contact Donna Hyland (800) 526-5978 or (201) 534-9044.


APRIL 26-29  COMDEX/Spring '83 - Atlanta. Contact Pete Young, The Interface Group (800) 225-4620 or (617) 879-4502.


MAY 18  Computer Consoles management presentation before the New York Society of Security Analysts.

MAY 24-26  SEMICON/West - San Mateo. Contact Bill Galaraneau, SEMI (415) 964-5111.

JUNE 5-8  Summer Consumer Electronics Show - Chicago. Contact William Glasgow (312) 861-1040.

June 6-8  National Educational Computing Conference - Baltimore. Contact Gerald Leach-Lewis (301) 589-3386.

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JUNE 8-10  The International Conference on Consumer Electronics - Illinois. Sponsored by The Consumer Electronics Society of the IEEE. Contact Marvin Gottlieb (312) 775-1151.

JUNE 13-16  Syntopican XL - San Francisco. Contact IWP Conference Planning Department (215) 657-6300.


JUNE 23  Sony Corporation management presentation before the New York Society of Security Analysts.

JUNE 29-JULY 1  DEXPO/Europe '83 - London. Contact Larry Hollander (609) 799-1661.


OCTOBER 19-21  ADAPSO Fall Management Conference Annual Meeting - Palm Springs. Contact Jerome Dreyer (703) 522-5055.

OCTOBER 18-21  Data Show '83 - Tokyo, Japan. Contact Japan Electronic Industry Development Association, Kikai Shinko Building, 3-5-8 Shibakoen, Minato-ku, Tokyo 105, Japan.


NOVEMBER 8-10  Wescon/83 and Mini/Micro-West - San Francisco. Contact Lisa Humbert, Electronic Conventions (800) 421-6816 or (213) 772-2965.

NOVEMBER 29-DECEMBER 2  Comdex/Fall '83 - Las Vegas. Contact Pete Young, The Interface Group (800) 225-4620 or (617) 879-4502.


Notes:

The Technology Conference sponsored by the Financial Analysts Federation and the Security Analysts of San Francisco is held biennially; the next conference is tentatively scheduled for mid-January 1984.

Wescon, traditionally scheduled for mid-September, moves to early November in 1983.

—Marie Valdes

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