BETTER THINKING THROUGH GRAPHICS

The Thesis

Long ago, a business plan was an oral agreement: "I'll let you graze your buffalo on my land, and we'll share the meat." Eventually, people got around to writing out such agreements; but without calculators, the numbers tended to be inexact. Next, they typed them, then word-processed them — all of which led (ideally) to clearer thinking, better use of the language. In the early Eighties, spreadsheets came into vogue. With the advent of VisiCalc and its ilk, people began making precise predictions — perhaps too precise: "If we lower the price 10 percent, sales should increase 5.8 percent," or, "We expect Computer Confusion Stores to earn 48 cents per share in fiscal 1985." People who don't think in tenths of a percent now risk being considered fuzzy thinkers. Today, the au courant business plan has numbers galore, but still few charts.

Or to put it graphically:

Yet graphical thought is still rudimentary. Most people can manage a curve or two if pressed, but few use such images regularly — just as they didn't plan in spreadsheet terms until the tools became available. Unlike spreadsheets, graphics reveal more than just numbers: Relationships can be expressed clearly, channel conflict can be visualized, market positioning can be clarified, once people learn to express themselves graphically. It's more than a matter of trend curves and icons; it's a better way of expressing oneself. (We offer a selection of graphics jokes on page 3 to make the point.) Suddenly a business plan or division marketing

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strategy paper can -- must -- explain clearly distribution channels, organizational hierarchy, market positioning, time sequences.

It's not that people don't innately think graphically; that's why we talk with our hands. But because we lack the tools to communicate with graphics tidily, most of us have given up trying to do so. People don't want to draw amateur-looking charts in a business plan; give them a Mac or a Lisa or a good graphics package cum printer on the PC, and they'll find they can save a lot of words (for the reader who will skip the text, if not for themselves). In our own newsletter, we have found the use of graphics invaluable in making points about market positioning and relationships between different kinds of software, and expressing other sorts of unquantifiable connections. (It also helps, as any make-up man knows, to break up the text.)

For graphics to become the huge market pundits are predicting, it must change from being a market into being a feature, just as luggability/portability is becoming a desirable feature for any computer that doesn't have a good reason for existing in several large, heavy pieces. Like most market shifts, this will occur in interdependent steps: Good graphics displays will encourage better software, better systems (software, hardware and displays) will encourage more users, and so forth. The following vignettes provide some hope that that's beginning to happen. So do products sold only partly for their graphics capabilities (remember, integration into the mainstream is key) such as the Macintosh, Microsoft Windows and Digital Research's operating systems with graphics extensions included, 1-2-3/Symphony, Metaphor's not-yet-announced product, and a whole new crop of laser printers (Adobe, Apple/Canon, Imagen, Xerox) which will make typefaces look good and graphics look great.

Implementation

There are several issues in graphics: How good is the display? How fast can it paint a screen? How fast is the software that controls the display, i.e. how fast can it tell the screen what to do? And how good is it at manipulating shapes, moving images from one part of the screen to another, and so forth? A crt as humble as a television set is capable of creating fast-moving pictures -- as demonstrated in millions of households every night. But where is the software that can use such capabilities effectively?

A third issue is the translation of data into graphics. Most micro graphics packages can plot points from a spreadsheet onto a graph. But few (besides TK!Solver) can plot curves such as $x = y^2$ or, better yet, translate a hand-drawn curve back into data or equations.

Of the following companies (beginning on page 4), Mindset provides a graphics hardware system with "hardened" software accelerators, PlasmaGraphics provides a superb display for one segment of the market, and Brag Systems provides data-to-graphics software for tailoring to a variety of machines. (Another important component, neglected in this issue, is other input/output devices such as digitizers, plotters and printers.)


**Graphics Jokes**

A Salesman’s Mindspace

- Lunch
  - WordStar
  - 1-2-3

- Sugar
  - Pepsi
  - Pepsi Light
  - Pepsi Diet
  - PepsiFree

- No Sugar
  - No caffeine (Pepsi-Cola)
  - Caffeine (Pepsi-Light, Pepsi-Diet, Pepsi-Free)

*For further information, call JS at (408) 996-1010.

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**Suppliers-Demand Curve**

- Demand
- Supply
- Units

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The World Is Round

Sure Things

- Death
- Taxes
- You are here

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Chairman of the Board?

- Mother
- Chairman
- President
- CFO

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(Graphics by Lisa; next time: Macintosh.)

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Release 1.0, March 8, 1984
The Machine: Mindset

We've heard it several times: "If only Apple were selling the Mindset!" The premise is that with a strong product like the Mindset -- compatibility plus insanely great graphics -- an established company like Apple could best fulfill its destiny. We disagree. We think it's the destiny of an established company like Apple to take high-potential-payoff risks like the Macintosh, and to leave the low-risk stuff to start-ups like Mindset.

For Sunnyvale-based Mindset, funded to the tune of $20 million, the high-risk part is already over. That was the design and construction of two enormous VLSI chips that give the machine its extraordinary graphics capabilities. Working in conjunction with VLSI Technology of San Jose, CA, the company squeezed 45,000 transistors onto a graphics chip and 25,000 transistors onto a video interface chip. These, plus the system's 80186, give it its edge over the IBM PC. With this achieved, the company can almost relax as it settles down to the hard work of marketing to independent software vendors, dealers and other resellers, and ultimately to consumers. (We also expect that at some point the company will license those chips to other users, with engineering workstation makers in the forefront.)

The Mindset machine, now that the concept has been implemented, is indeed low-risk. Given proper execution and a few other necessary-but-not-sufficient conditions, the product should sell.

For the customer the Mindset, like the Compaq, is truly "as good as" a PC (read functionally equivalent), and also better. In Compaq's case "better" meant portability, dual-mode screen, etc.; in Mindset's case, "better" is extraordinary graphics. The strategy in both cases is low-risk because it requires the customer to give up nothing more than the IBM logo; in return, he gets the IBM machine sans logo and (in Mindset's case) the graphics. The customer is not taking the risk that if Mindset "fails" he has a worthless machine: If Mindset fails, he has a serviceable PC-clone. (If Mac "fails," the customer has a cheap, small-memory 68000 machine with a strange operating system.)

From the software vendor Mindset requires much less commitment than, say, the Macintosh, and promulgates no rules of interface: The software developer is free to do what he will with the fundamental graphics capabilities Mindset provides, and can elect simply to run his existing MS-DOS programs faster, or to write programs designed to use the Mindset graphics hooks. But actual graphics applications and components -- drawing packages, font libraries and the like -- are supplied as options. Mac, by contrast, provides a far more structured, strictured environment that imposes a common "look" on the software that will be written for the system. Mindset sets the imagination free; Macintosh, while limiting flexibility of the designer, provides the user more security. (Mindset's promotion materials include one sly reference to the Macintosh, an array of variably-colored tennis shoes (running shoes) that echoes the solitary, monochrome running shoe appearing throughout the Mac materials.)

While Mindset must expend resources on getting third-party graphics packages to exploit the capabilities of its system, it can already offer virtually the entire base of IBM PC software at no cost, risk, or effort by itself. It doesn't need to sell millions of machines to attract software developers; it needs to sell just enough to attract certain graphics-oriented software developers such as Time Arts (creator of Lumena), whose alternative is machines costing ten times as much as
Mindset. Other suppliers include Datasoft with Designer, Microsoft with GW BASIC, and IMSI with Four Point Graphics, all selling through Mindset, and BPI with its Accounting Series, Odesta with Chess, Hayden with The Writer, HES with Deep Sea Danger, and Synapse with Vyper. (The games developers who are flocking to the machine are flattering, but Mindset is not courting them avidly since they don't add to the image the company wishes to convey.)

For the reseller the Mindset has the same virtues as for the customer: It forces him perhaps to learn a few new graphics packages and a new demo, but it does not require him to learn or stock in duplicate standard spreadsheets and other productivity packages; for those he can rely on the IBM versions. The Mindset will slip easily into the line of a store already carrying the PC without needless duplication: The store's existing stock of PC packages, and the time he's spent learning them, will be made more valuable, rather than redundant, by the presence of the Mindset.

Setting in the market

Clearly, given the product's versatility and dual nature, Mindset's toughest problem is going to be how to position the machine. Founder Roger Badertscher, who once ran Atari's home computer operations, originally conceived of the product as a super home computer positioned something like the old Apple II -- for home and business -- before the PC pushed it downwards. But events dictated otherwise. The market has segmented itself more sharply in the meantime, and Mindset's product cost increased in the face of plummeting prices and general disarray in the home computer market. Moreover, the achievement of full compatibility meant that the system could be marketed as a full-fledged, more expensive business machine.

The company's pitch is in essence "a tool for the mind"/"the first tool that works faster than the mind it serves;" precise ad copy for the million-dollar-plus launch scheduled for May has not yet been written. Mindset wants to position the product as a productivity/creativity tool, rather a hard message to convey forcefully: The productivity of a PC with graphics that will unSETtle your MIND?? But many of the product's early third-party sign-ups have been games manufacturers, people the company should mostly avoid until the product is firmly established as an aggressively priced productivity machine.

Does Mindset's low-risk marketing strategy imply a low payoff? Not if the company can reap the rewards for its high-risk silicon software design prowess, whether in system sales or license revenues. However, it will always have to follow the lead of IBM or whoever is out there setting the MS-DOS standard. While Mindset offers genuine, unique benefits, it doesn't stake a clear enough claim on new territory to (have to) carve out a whole new niche for itself. The good news is that it can probably be financially successful without doing so.

RELEASE 1.0, March 8, 1984
The Software: Brag Systems

If graphics is to be taken for granted as part of any well-appointed micro system, it should be available virtually off-the-shelf as a component to any manufacturer developing a new computer system. While a million-dollar development contract (as an advance against royalties) doesn't quite qualify as off-the-shelf, such is the aim of Brag Systems of San Mateo, CA.

During Softcon, we visited with founder Johan Brag, who started the 30-person company last April with the aim of creating the Convergent Technologies of the software business. (Pauline Lo Alker, vp of marketing at Convergent, is on the board.) Brag, 26, a Swede who grew up in Paris and attended MIT before working for a number of U.S. software companies, is out to make his company famous among a coterie of well-heeled, high-volume hardware manufacturers who are too busy selling to do their own graphics and other software, just as most of CT's customers are too busy (or too inefficient) to do their own hardware. Its OEM approach distinguishes it from (among others) ISSCO of Sorrento Valley, CA, which sells directly to corporate end-users, and focuses on minis and mainframes.

Starting out with graphics (it will wait to attack the more crowded dbms market later), Brag Systems has developed its own internal graphics application generator to tailor a set of business graphics applications to the specs of each OEM customer, who can then sell it as the MightyMicro (for example) Graphics Pack. The system generates and edits graphics driven by data from Brag's own dbms or by files imported from standard micro applications and other structured files. Brag's internal tools are device-independent and relatively portable, which makes it easy for the company to develop software for a variety of MS-DOS, UNIX and other micros and minis. Because graphic images are transferred from a metafile rather than a screen dump, the resolution of the hard copy output is as good as the hard output device (plotter, laser printer, whatever) will allow, regardless of the quality of the display. (This is an especially useful attribute for PC users.)

Brag Systems is working now on a big contract for Honeywell, and has three other big deals in prospect, for an estimated $2.5 million in revenues this year. (Convergent Technologies' OEMs would be a natural, as would Olivetti, which owns about 5 percent of Brag.) What the customers get for their money is negotiable, of course, but typically includes a set of business graphics applications that they could probably create themselves...if they went out and hired a team of graphics programmers, specced out a set of business graphics applications after checking out what the competition was up to, and went through several iterations until they were satisfied. Sometimes it's simpler to make than to buy.

RElease 1.0, March 8, 1984
The Display: PlasmaGraphics

Burroughs once owned 65 percent of the DC plasma display market, but that whole market was knocked out of contention by cheap crts and liquid crystal displays in the late Seventies. Late last year Burroughs closed down the bulk of its OEM display division, which had manufactured more than 5 million small display panels in the past 20 years. Only a 140-person group working on a combination of AC and DC plasma discharge technologies remained. (AC offers inherent memory; DC offers high-efficiency addressing.) That group is now in fighting trim, fired up with the impending shipment of its first product and its recent achievement of substantial independence from parent Burroughs. Detroit-based Burroughs recently sold 20 percent of the Warren, NJ-based operation to Telex Computer Products, while management employees have options that will pay off nicely when the company goes public, probably within a year or two.

The product itself, the PlasmaGraphics 120, is a 7-by-4-inch, 25-by-80 display with 120,000 pixels in 480 columns by 250 rows. It weighs about 3 pounds and costs in the neighborhood of $1000, although PG hopes to work that down with sufficient volume to about $300 within a couple of years. Clearly PG isn't about to regain Burroughs' lost ascendancy in the overall display market, but it could do very nicely with a large share of the high-end flat-panel display market, which also includes electro-luminescent displays. Its position is protected by 150 U.S. patents (1500 worldwide) that Burroughs has earned over the years for its work on the chemistry, electronics and other black arts of plasma displays.

Plasma's advantages over lcd are clarity and brightness, offset by high power requirements and cost; its advantages over cathode ray tubes are size and resolution, offset by crts' color capabilities, screen-painting speed, and lower cost. The contest is closer with electro-luminescent displays, which are similarly expensive and have a slightly longer life and faster speed than plasma displays. Plasma displays, however, are brighter and probably cheaper, although since both markets are just reaching volume production ultimate economies of manufacturing have yet to be determined. Right now, PG's biggest U.S. competitor is Planar Systems of Beaverton, OR, a Tektronix spin-off quoting the same sort of prices PG is offering for a similar-size display. There's also Sharp, supplier of the GRiD electro-luminescent display, and Lohja in Finland.

PG is run by president Gilbert Yanishevsky, a veteran engineer of 52 who has run the Burroughs display business since 1980, and by chairman and ceo Peter Gould, a 32-year-old former Burroughs strategist who we imagine was told, "You think there's a market there? Go prove it!" Indeed, there's probably enough of a market now for PG and Planar and several others, given the advent of more powerful portables with better software that deserve better screens than thelcds they've mostly settled for so far. PG is looking to sell about 13,000 units in the rest of 1984, and four times that in 1985 as design-ins blossom into production runs. Now it will make sense to have graphics on a portable.
SOFTCON PERSPECTIVE

Personally, we always have fun at trade shows, and Softcon was no exception. But the exhibitors found that they were showing their products to each other rather than to would-be resellers. We spent one delightful evening taking a company president -- cognito, of course -- around to see several of his competitors. Although this situation is great for the advancement of industry understanding, it's likely to put us out of business if carried to excess. So, overall, we'd have preferred a show with a few more dealers, much as we were delighted with the uncluttered aisles and the easy access to vendor personnel for têtes-à-tête.

Mac Makes Out

Just two years ago most of the hot new software at Comdex was on the Apple II, and one year ago everything was on the IBM PC. This year much of the interesting software at Softcon was on the Mac -- mostly as demos, not finished products, to be sure. We counted about ten companies demonstrating Mac software. The two most interesting, in the compare-and-contrast sense, were Software Publishing of Mountain View, CA, and Odesta of Northbrook, IL. While Software Publishing perhaps underuses the Mac capabilities in the Mac versions of PFS:file and report, Odesta, in its $395 Helix dbms, perhaps overuses them. Odesta's programmers, who have given the world some extremely elegant, well-documented chess and other intellectual games, seem almost to have overdosed on Mac. Helix is busting out with icons all over, although words or menu selections are at least offered as options. Also, Helix, a fairly rich dbms that lets users join files and design a wide variety of data-entry and report formats, may require more imagination than most users wish to devote to setting up their own files -- which is why the company's plan to sell templates (as Software Publishing does) makes a lot of sense. We're looking forward to getting an early version to play around with; shipping starts in May.

The most commercially exciting Mac exhibit, of course, was 1-2-3-on-a-Mac, which seems to have just the right balance of MacEssence and of its own character, although the product is well away from shipment and will probably require the half-megabyte Mac (or a Lisa 2) to be usable. The most endearing was ThinkTank on the Mac, an idea processor from Living Videotext (Palo Alto, CA) that we liked on the Apple and the IBM PC (RELease 1.0, Sept. 12, 1983); we still like it on the Mac, where the use of pop-up menus, mouse selection and other MacItems makes it just that much friendlier to the thinker/writer. Then there were Microsoft's Chart and Graph, announced without any fanfare in a Wall Street Journal ad (but they'll sell anyway because they're all that's available). Finally, there was the Magic Telephone from Artsci (North Hollywood, CA) -- which turns your Mac (or Apple //, with different software) into an automatic dialing and message system. However, it doesn't handle file transfer. For that, you can use PFS:access, which presumably will follow PFS:file and report onto the Mac in due course.

1-2-3 on Tandy's Model 2000

Ovation's big coup -- its presence on Tandy's Model 2000 -- has lost some of its impact with Tandy's announcement at Softcon that the 2000 will also run a specially tailored version of 1-2-3. While we'd argue (February 22) that Ovation and 1-2-3/Symphony are after opposite ends of the market (naive user and power-user, respectively), there's a lot of middle ground for them to fight over.

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Aside from Symphony -- which is both interesting because it comes from Lotus and uninteresting because it's expected of Lotus -- most of the interesting PC software involved communications in one way or another. There were both Menlo Corp.'s In-Search and PFS:access for remote communications (both mentioned earlier (December 32 and January 23), and Cullinet and Artificial Intelligence for hierarchical communications showing their micro-mainframe links. Strictly speaking, these are links to mainframe software, not to the mainframes themselves. Cullinet's, 15 months in development and at 12 beta sites now for shipment this summer, includes its own PC productivity suite; AIC takes the more humble, lower-risk approach of downloading information in its own report formats or into a SuperCalc model or the GSX graphics editor (other brand names to follow). Both can front-end most well-known IBM mainframe dbmases, although Cullinet will of course be marketing most heavily to some 1500 users of its own IDMS.

While AIC's system is basically its mainframe natural-language system (of which more in a future issue) used with a terminal emulator and the capability to transfer files into micro applications, Cullinet's system provides a fundamental linkage between micro and mainframe. Cullinet's $1000 "PC Software" includes a "directory manager," a sort of micro data dictionary that manages the disposition of data for the user regardless of whether it's within the micro system or on the mainframe. It links up the micro with the mainframe data base in a much more intimate manner than any other system we've seen so far.

Designed for sale to dp managers, the system works off a mainframe subsidiary data base called the Information Data Base that feeds off a company's regular production data base or remote data bases. The dp manager or his delegate runs the IDB and thus controls what kind of mainframe data each user has access to and the frequency of updates. Given permission, the user can move around within the IDB with as much facility as he can on his own system; indeed, he doesn't even have to know what's on his local disk and what's in general storage.

While we'd still prefer to see Cullinet (and every other manufacturer) linking up with existing PC applications unless they can offer something clearly better, Cullinet's system will neatly import and export data into most PC applications. Cullinet president Bob Goldman also makes the legitimate point that by naming its 1-2-3 upgrade Symphony rather than 1-2-3-4-5, Lotus may encourage 1-2-3 users looking for upgrades to consider other packages as well.

Software Protection

There were two separate meetings on software protection -- one sponsored by ADAPSO and one by the Software Protection Fund, which consists of many of the same people/companies operating in a slightly less fettered capacity (read unhindered by operating within the strictures of, but also without the clout of, trade association sponsorship).

The ADAPSO group, composed mostly of members of the ADAPSO Microcomputer Software Association, is developing a data base of technical protection methods, on the one hand. On the other hand, the Washington-area-based group is launching a lobbying campaign and working on a pamphlet to be sent to corporate officials to "educate" them about corporate software piracy and to encourage them to develop and enforce rules forbidding illegal copying and other abuse. The Software Protection Fund is
working on an advertising campaign that would complement the MCSA's direct-mail effort and urge readers to send in for their own copy of the pamphlet.

Actually, probably the most valuable move towards software protection taken recently -- especially if it wins a little more publicity in the business press -- has been Lotus's suit against Schlumberger subsidiary Rixon, undertaken without benefit of committees, industry consensus or anything. "It's wrong," says Lotus, "and we're suing you." Although this case, on Lotus's allegations, seems one of the clearest around, it should serve to make others who are doing the same thing on a smaller scale think twice too. It's foolish to assume we've got to make everyone scared of being caught; all we need to do is make them scared of being thought tacky rather than smart. That alone would drop the incidence of copying by half, we'd guess.
RELease 0.5: Forethoughts

Intel and the famous chip shortage

At Robertson Colman's recent technology conference we had occasion to spend a few moments with some friends from Intel, who told us the firm's goal for 80186 shipments this year is 1.5 million, with most of it coming in the second half. Despite a recent price increase from about $50 to about $80 (100-unit prices), this is still only a fraction of demand. Currently announced 80186 products include Tandy's Model 2000, the Mindset (page 4), several systems from Convergent Technologies, various industrial systems with the 80186 embedded, and a host of PC extenders and would-be clones -- to say nothing of overseas customers. It all adds up. Yet, the company noted, 80186 production is doubling each quarter, in line with commitments. People who blame Intel for shipment delays may be using the shortages as an excuse for their own production problems.

Commodore and the clone?

Commodore has signed agreements with Bytec-Comterm of Montreal and with Intel that will enable it to market a PC-compatible made with its own chip if it so chooses. This, like the long-rumored advent of the Japanese into the compatible marketplace, is bad news for any PC clone vendor who hopes to compete on price — yet with a true compatible there's not much to compete on except price (and, until recently, portability). Exceptions are large computer vendors selling into their existing base; companies like Compaq (and Mindset, prospectively) who have successfully differentiated themselves through care and feeding of dealers (not Commodore's strong point) or certain innovative product features; and certain others like Tandy who've avoided the fray by using its own distribution channel. (If Tandy could find an alternate, cheaper source for its Model 2000, we're sure it would happily use it.)

Commodore has repeatedly alienated the U.S. dealer community by selling products through it and then broadening its distribution channels to include low-end retailers who destroyed the market for the original resellers. It will be interesting to see how many dealers will be willing to forgive Commodore for the chance to resell a really cheap PC clone. Probably quite a few.

Kaypro looks abroad and around

We've always thought of Kaypro, like Commodore, as a crack hardware maker, one of the last people likely to resell some other manufacturer's product. Yet just last week Kaypro announced -- somewhat prematurely -- that it will be selling a PC-compatible kneetop portable from Mitsui, in addition to its own PC-compatible luggable scheduled for formal announcement this month. (The kneetop, made by Sanyo for sale by Mitsui to Kaypro, is certainly only the first of many from a variety of Japanese companies.)

Kaypro, while it is indeed a good manufacturer, has also proved itself a good marketer -- and open-minded to boot. Evidently the company was willing to listen to a Japanese offer of a nifty new machine; Mitsui, for its part, was willing to offer a good price to get the sales/marketing acumen of Kaypro in a market likely to become quickly crowded.
Kaypro is indeed open-minded. Kaypro's David Kay notes that IBM itself seems to be abandoning the PC standard and wonders why the rest of the PC industry, Kaypro included, doesn't get together on a standard ROM. Kaypro would be happy to license its version, he offers.

Telenova: A PBX for the rest of us

Why would the president of TRW Vidar, a heavy-duty company that's built massive data-voice systems even for such technologically sophisticated clients as the Defense Department, chuck it all to start up a company that builds data-voice systems for 10-to-100-user sites? It's not because Ted Keane, age 57, thinks he's incapable of competing with Rolm in a business that has proved unexpectedly difficult for Datapoint, Mitel, and CXC, among others; it's because he sees a market vacuum that will provide him with a good foundation for his grander ambitions. His company, Telenova of Los Gatos, CA, has funding of a little less than $10 million from the likes of Rothschild Inc. (whose venture fund is headed by ex-AT&Ter Archie McGill) and gets advice from telecommunications analyst and former chairman of Continental Telephone Robert LaBlanc, but right now the company is demurely targeting the 10-to-100-line market, where the only real competition is voice-switch companies such as TIE/Communications, Contel, GTE, NEC, and AT&T itself. At the high end, of course, there's Rolm/IBM, Intecom, Northern Telecom, Mitel and even others (Sydis, Prolink) that replace your computer as well as your telephone, but none of them has a product for the market Telenova is after.

The Telenova 1 is a small local switch that handles up to 120 ports of data or voice at a cost ranging roughly between $800 and $2000 per station, about par for this business. The central unit has an 8086 and capacity for up to 16 megabytes of storage, leaving some room for growth beyond the upper end of Telenova's current market. Moreover, each central unit has a built-in Ethernet chip (from Intel), so that two or more units could easily work together when the time comes. Each user station (designed by Bill Moggridge, who also did the Convergent workstations and the GRiD Compass) has some local processing power, and the ability to handle simultaneously independent computer and voice connections. The station set has a small two-line display which gives the user feedback -- "Dialing 624-9191," for example, or "Modem connected" -- and which he can use to make selections with five soft keys located just below it. The system can dial automatically from its own phone directory (the user's files plus the system directory), and can send a limited set of messages (I'll call, Call later, Pls Wait) to users within the local system. In a later release the system will link the station set more closely with the user's attached pc, enabling him to send tailored messages and otherwise hook into the local system.

This is all wonderful, and we find the company's scheduled shipment date of mid-April, with 200 systems out by December, credible. However, Telenova's primary challenge is distribution and support -- those things for which it must rely on others. It's talking to several large computer companies who might resell the product as a component of the automated office, and to several large phone companies -- but it's hard to get excited about company support these days. In addition, Telenova is looking to contract with a national service firm simply to provide after-installation hardware support. The question is, Is a great product enough to succeed in what is essentially a service business?

RELease 1.0, March 8, 1984
RELease 1.5

Error detection and correction

We have detected two errors that we unfortunately failed to avoid in our recent comments on the IBM PC Cluster. First of all, it's carrier-sense, not collision-sense, multiple access. And secondly, while it's true (as we said) that the Cluster's access method is the same as Ethernet's, that both systems are baseband, and that applications and operating software are relatively transportable from one to another, we failed to point out that Ethernet uses collision detection while the PC Cluster uses collision avoidance. This means that the allocation of network transmission time is performed differently in the two systems, and the physical network control routines (whether soft or embedded in hardware) are fundamentally different.

VisiCalc by mail

Contrary to our assumption (RELease 1.0, February 22) that Software Arts would start marketing VisiCalc through dealers in competition with VisiCorp, the company plans initially simply to offer a $100 "upgrade" from VisiCalc to VisiCalc Advanced Version for the PC through the mails. Moreover, for reasons relating to the issues in the lawsuit, the IBM version of Advanced VisiCalc has never been sold by VisiCorp. Called an "upgrade," Software Arts' package is in fact a full-fledged disk of VisiCalc Advanced Version, but with documentation limited to outlining the enhancements over the original VisiCalc. Thus, it could be an initial purchase rather than an upgrade for a customer willing to forgo the documentation. This move, obviously, nullifies our comments that launching a full-scale marketing campaign would (initially at least) be beyond Software Arts' resources. (We were subpoenaed to testify in the suit and don't think we should comment further, but we wanted to clear up that one point.)

MSA Analyst's Day -- April 11

In our January 23 issue we listed MSA's Analyst's Day on April 12. That was only tentative as it turns out; the actual date is April 11. Call Betty Feezor at (404) 239-2000 for information.
PRESS RELEASE

You may have noticed the new footer on the front page; we've decided it's time to
give Ben Rosen back his name. We will be sending out the following press release
when we move on March 16. We thought you'd like to know first.

ROSEN RESEARCH RUNS OUT OF STATIONERY, CHANGES NAME;
RONA LEVINE ASSUMES POST OF PUBLISHER

Rosen Research Inc., publisher of the personal computer newsletter RELease
1.0, has changed its name to EDventure Holdings Inc. The new name follows
by about nine months the purchase of Rosen Research by Esther Dyson (ED)
from founder Ben Rosen.

Along with the change of name, EDventure has moved its offices in New York
City from 200 Park Avenue to 375 Park Avenue, New York, New York 10152.
The telephone number, (212) 586-3530, remains unchanged (thank goodness!).
EDventure also operates, on an occasional basis, out of Rickeys Hyatt
House, Palo Alto, CA.

EDventure also announces the appointment of Rona Levine, 21, chief
operating officer of Rosen Research and now EDventure, as publisher of
RELease 1.0. Levine joined Rosen Research in December 1981. Esther
Dyson, president of EDventure, remains editor-in-chief of the newsletter,
which she has written since August 1982.

RELease 1.0, EDventure's primary product, appears approximately 15 times a
year on an irregular schedule determined by industry events and editor
Dyson's travel schedule. The newsletter provides perspective on industry
events rather than summaries of facts and rumors, and is known for its
readability. It is called RELease 1.0 partly in honor of its former name,
The Rosen Electronics Letter, and partly because, like release 1.0 of a
software product, it is as up-to-date and complete as possible...but
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RELease 1.0, March 8, 1984
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