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*                          F.M.U.G.                                  *
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Dear Mindset User,

      Welcome to the first issue of the F.M.U.G. newsletter. This
is your newsletter. We heartily welcome contributions of arti-
cles about both applications and programming, programs, reviews,
commentary, etc. from any and all who are interested in the
Mindset computer. The newsletter will be issued bi-monthly to
begin with, but will move to monthly publication as soon as it's
feasible. To join the First Mindset Users Group and start
receiving a 12-issue subscription to the newsletter, send $15 to
the above address.

NEWS AND NOTES

Compatibility Update

-      Good news, Pascal hackers! Borland's Turbo Pascal, rated
top-notch by everyone from Jerry Pournelle to InfoWorld, works on
the Mindset. Retail price is a mere $50. Unfortunately,
Borland's Sidekick program is not compatible.

-      Lattice-C, an excellent implementation of a fast-rising
language, is compatible. Mail-order discount price (see ads in
Byte) is about $300.

-      Framework from Ashton-Tate is compatible, but doesn't leave
much available working space. It should work fine with the
forthcoming Mindset RAM extension module (see New Hardware).

Mindset In Print

      So far as we know, only two full-fledged reviews of the
Mindset have appeared in the major computer media. The first,
which introduced many of us to the machine, was published in the
April 1984 issue of Byte magazine. It's well written, and is so
informative that it can be considered auxiliary documentation.
InfoWorld magazine published a rather poorly-informed but
effectively positive review in its August 13, 1984 issue, and ran
three letters of response, including one from your editor, in the
issue of October 15.
(cont.)

The issue of Ziff-Davis' PC Magazine of October 16, 1984, printed a review of Lumena under the title "Mindset On Graphics." Unfortunately, the editors neglected to list the article in the table of contents for that issue. It starts on page 194. Written and expertly illustrated (with Lumena) by Tom Christopher, who's almost as good a writer as he is an artist, the article is mostly complimentary. However, like the InfoWorld review, it unfairly blames the Mindset for problems with Lumena.

Mindset Software Revisions

Speaking of which, an updated and debugged version of Lumena, revision 1.06, was released to Mindset dealers in July. Also, a new revision of GW BASIC is scheduled to be released in mid to late October. If you've purchased either of these products and are in doubt about whether you have the latest version, contact your dealer.

New Hardware

Mindset's digitizing tablet, which makes drawing with Lumena and other graphics programs much easier than with a mouse, is available now by special order through CompuShop. The $595 unit, which is manufactured by Kurta, connects to the Mindset through a special serial port, which is included. The serial port provides a connection for power, so an external power supply is unnecessary. However, this apparently makes the port unusable for connecting a modem.

Mindset has announced that there will be a 128K RAM expansion module for $349, which will enlarge total on-line storage to 384K bytes, not including the 32K frame buffer. This permits the Mindset to run large programs such as Lotus' Symphony. Also, Mindset will produce a hard disk for its computer. We'll print details of these as we receive them.

The Mindset Logo

If you haven't seen the animated Mindset logo yet, you're in for a treat. Just turn on your computer without any disks or cartridges (what cartridges?) inserted and wait a few moments. It's an impressive effect!

THOUGHTS ON LUMENA

If Lumena and a Mouse were bundled with the Mindset and the fact well publicized, the company would probably sell more computers. Lumena is by far the most sophisticated drawing program available for any factory-standard personal computer today. Despite numerous shortcomings, of which lack of real

animation capabilities is the most glaring, the package allows
you a full range of artistic expression, whether you can draw or
not.

First of all, Lumena is not MacPaint. It is, in many ways,
a professional drawing and design program, and is not designed to
be easily learned by computer novices. However, despite its
complexity, it's not difficult to use once you've learned the
commands and how they interrelate.

Lumena is menu-driven, with "pop-up" menus that are
activated by moving the cursor past the bottom edge of the
screen. A menus sometimes appears when you don't want it while
drawing low on the screen. Using the Mindset mouse to select
from the menus is fairly easy, but drawing anything other than
circles and spirals is not. Lumena is best used with a graphics
or digitizing tablet. You may view on-line documentation about
any specific function while accessing its menu. These
instructions are sketchy, and are best used for refreshing your
memory about details on how to use a command.

It'd be nice if Lumena featured a true Zoom mode -- MacPaint
calls it Fatbits. This lets you temporarily enlarge a portion of
your picture to four or more times the original dimensions so
that individual pixels appear to be large square blocks. It's
like working with a magnifying glass -- you have much more
control over fine details in your drawing. Ideally, such a mode
lets you 'slide' the 'magnifier' over the entire surface of the
drawing. You can return to normal-size drawing whenever you
want.

You can use Lumena's Zoom feature to enlarge an area of your
picture, but you can't work on it in pixel-aligned blocks.
However, Zoom does allow you to shrink the enlarged area back to
its original proportions. To approximate the true Zoom feature,
you could Put your picture to the alternate buffer, enlarge the
area you wish to work on, reduce it back to original size when
done, then use the Get pen to replace the altered area in the
original picture.

Having to type in all file names is annoying. It wouldn't
have been very difficult for the programmers to allow you to
select a file to load with the mouse from an onscreen menu. Of
course, you might still need to type in names for files to be
saved.

Despite Mindset's claim that Lumena 1.06 is bug-free, we've
noticed a few problems. We suggest that you avoid rapid cursor
movement, as this seems to be the cause of most of these.
Occasionally, the program acts as though a key has been
depressed, spontaneously rendering a file listing on the screen
and prompting you for a filename. Also, the Copy with Options
function from the Moves menu doesn't flip an image if that option
is selected.

If you're using an RGB monitor and have looked at the
picture "GLOBE" on the Lumena disk, you may have wondered why it
was included -- it doesn't look like much. However, if you
connect your Mindset to a TV or composite color monitor, set
Lumena for TV by pressing 'D', then load "GLOBE," you'll wonder
no longer. The image uses varying luminances of blue and green
for a impressive dimensional effect. It's interesting to note
the differences between Lumena's TV and DTV modes -- you can tell
which one you're in by pressing 'K' and looking at the line for
'D'. For instance, in DTV mode, thin diagonal lines 'artifact',
or produce bands of alternating inaccurate colors. In TV mode,
the same lines appear in their true color, but areas with
patterns or fine detail 'shimmer' in a disturbing way.
Unfortunately, the Lumena manual doesn't provide much information
about the differences between the two modes.

VYPER REVIEW

    Flight simulation programs are perennial favorites among
microcomputer owners. Microsoft's small plane simulator for the
IBM PC, considered by many to be the best example of the genre,
has remained near the top of software sales charts for years (an
unparallelled feat).

    Vyper, from Synapse Software, is about flying, but it's much
more than just a flight simulator. This tour-de-force of
personal computer graphics is the first action game program
designed for the new Mindset computer from the Sunnyvale,
California start-up firm of the same name.

    In the game you pilot a Vyper, a fast agile craft that flies
repeatedly over and through a city represented colorfully in
three dimensions. As you swoop over, around, and through the
various structures, you'll swear you're actually flying a futur-
istic ship through an alien city. Practically the entire screen
is devoted to the remarkably convincing (but not finely detailed)
point-of-view display. Both in terms of graphics power and
quality of game play, Vyper easily outpaces any number of commer-
cial coin-operated video games, including some that use laser
disks.

    The 'experience' of flying the Vyper, in itself almost worth
the package's price ($50), is nothing less than sumptuous. The
joystick controls your speed as well as vertical and horizontal
direction of the constantly forward-moving ship. Its response to
joystick movement is instantaneous.

    Included with this marvelous flight simulator at no extra
charge is a thrilling arcade game. The object is to rid all nine
dimensions (levels) of the ancient city Kallithor of the rule of

the invading Rhyllian fleets. Zipping over and through the city
again and again, you fire your lasers at the Rhyllian
Shivfighters as they pass. Each of the fifteen enemy ships is
supported by a Power Shroud building in the city. When you hit a
ship, its associated Shroud begins to blink, registering
temporary vulnerability. Before the blinking stops (about forty
seconds), you must switch your weapons system to the high-density
Byrellic Projectiles. Then, because these are always fired out
directly forward and parallel to the ground, you must swoop down
to a very low altitude to use them to destroy Power Shrouds. But
your approach is limited because there's a long high wall
immediately ahead of the Shrouds, so skillful flying and deadly
accurate firing are a must. If you don't hit a Shroud before it
stops blinking, it resurrects its Shivfighter to play with you
again.

        You must destroy Shrouds to maintain your energy supply, so
you can't just fly about avoiding the enemy indefinitely. But
it's usually better to delay your attack until the Shivfighters
assume their wedge- or cross-shaped attack formations and are
travelling in the same direction as you, when they're particu-
larly susceptible to mass destruction. Enemy tactics can switch
rapidly from second to second, making you wish you had an extra
hand or two to work the keyboard controls. These are used to
switch weapons, change your radar scanner from side to overhead,
and to pause the game. The Shivfighters fire two types of wea-
pons which are usually easy to avoid if you keep weaving, though
you'll probably forget to in the heat of battle. They fly very
low or close to buildings, often luring you into alarming invol-
untary head-bashing. Every such collision with a solid surface
causes a major energy drain, even more than an enemy hit, and
thus is to be avoided at all costs.

        In Vyper, strategy is almost as important as hand-eye coor-
dination. It's easy to pick off just one or two Shivfighters at
a time, then slow down, descend, switch weapons, and blast the
blinking Shrouds, then return to the aerial battle. But this is
slow, and you're likely to suffer much damage from enemy fire
while maneuvering on the ground. It's much more efficient, but
of course infinitely more difficult, to wipe out a half or a
third of the squad at once, then hit the associated Shrouds in
one or two swoops. Every extra second between successive hits in
the air can mean the loss of the vulnerability of a blinking
Shroud on the ground -- the choice between continuing a chase and
descending can often be a tough one.

        Once you've destroyed every Shivfighter and Power Shroud,
the entrance to a warp tunnel to the next dimension opens at the
base of a tower. The long, narrow tunnel twists like crazy, and
every time you scrape the side you lose energy, so your joystick
handling must be most dextrous to make it through. Shivfighters
attempting to escape to the next dimension often pass you, and
you must blast these before they can get through to assist your
next set of enemies. Major differences between levels include
the shape of the grouped Power Shrouds (the first is wedge-

shaped, the second is circular, etc.), which affects your ground flying strategy, and more advanced enemy tactics.

The Mindset has both both composite video and RGBI (Red-Blue-Green-Intensity) output, as does our Sears monitor, so we were able to make an interesting observation about Vyper's colors. In RGBI mode, the game has but four colors -- red, blue, purple, and black, and surfaces are varied by the use of textures. Switch the computer and monitor to video mode, and you've added the colors grey, pink, violet, white, brown, green, and indigo to the scenery. Images are sharper in RGBI mode than in composite video mode, but the game isn't as colorful.

We'd also like to comment on the Mindset joystick, which costs $40 and seems to be the only one that works with the computer. It looks somewhat small and fragile, but it has served quite well for extensive and frenetic playtesting of Vyper. It fits quite comfortably in the hand, and it's not difficult to get used to the alternate use of the two buttons on opposite sides (which, incidentally, makes it great for southpaws).

Synapse and the game's designers, Kelly Jones and Dan Browning, are to be heartily congratulated, not only for creating what is undoubtedly one of the finest action games for any home or personal computer, but also for calling forth some truly eye-popping graphics effects from this new machine. In Vyper, Mindset and Synapse have set new standards for computer game and graphics quality.

Hello again! We've made it to the second issue, but are still suffering with a plain face (see above). If you come up with a good logo for the First Mindset Users Group and its news- letter, send it in. If we use yours, you'll have the satisfac- tion of seeing your design at the top of the first page of your favorite newsletter every month (or two). Speaking of which, the more contributions we receive, the faster we can put out the newsletter. It's not that easy to fill a newsletter with just one person doing all the writing. Since this is a newsletter, not a commercial magazine, your writing need not be of profes- sional quality -- the primary requirement is that you have some- thing to say that's of interest to our readers.

First we'll correct a couple of mistakes in the first news- letter. If your copy said Symphony runs on the Mindset, it's wrong. Actually, Ashton-Tate's Framework program does run on the Mindset, but it's of no practical use unless you install the 128K RAM Expansion Module ($349).

Also, we incorrectly stated that the powered RS-232 module that accompanies the Mindset Graphics Tablet (powered so that you don't need a separate power cord for the tablet) couldn't be used with modems for telecommunications. There is a power switch on the module, and with the switch turned off, it acts just like a regular Mindset RS-232 interface.

Mindset has just announced the release of its Video Produc- tion package. For $4000, you get a fully-configured computer (two drives and 256K RAM), a 'genlock box' for combining video signals with computer graphics onto videotape, and the necessary software. The cost of the additional hardware and software to those who've already bought the computer is approximately $2000. We'll cover the system more fully in a future issue of the news- letter. At $4000 and approaching the performance of systems costing ten times as much, if this doesn't sell lots of Mindsets, nothing will. Incidentally, Mindset is developing a color digi- tizing system in-house, but it won't be ready for some time.

THE MAILBAG

Dear FMUG,

BOFFO! First a fabulous computer, and now a great newsletter for all the wise souls who know a superior product when they see it. 1984 has been one hell of a year! Macintosh, don't make me laugh. Mindset is the computer for the rest of us.

I work for a large DEC (Digital Equipment Corp.) distributor, and for some time I had considered buying either a DEC Rainbow or a Pro, both of which offer costly graphics options which barely compare with the inborn capabilities of the Mindset. I'm glad I waited. My tongue is nearly bitten clean through from restraining myself from making heretical recommendations to my company's clients when they come in to see the DEC machines. I'm always inclined to take them aside and say, "Now let's go to my house for a look at the machine you really want." The things we do to make a living.

Good Guy of the Month, maybe the Year, kudos to Skip Satterlee at Mindset. While I've been getting to know my machine he's been most helpful in providing a wealth of information, suggestions, hints, and corrections and clarifications to the sometimes fuzzy GW BASIC documentation.

My only complaints stem from the attitudes of dealers I've encountered, and the lackluster Mindset advertising campaign. Until I corrected him, my dealer acted like it was a color Mac -- mouse, pull-up Lumena menus, etc. He seems to be only marginally awsare of the things that make it a unique machine, like its animation and sound capabilities, 80186 technology, and numerous other features. The Mindset "Pop Demo" and the Lumena Demo are nice, but hardly tell the tale of the machine's amazing powers. If I were a dealer I would have the Mindset hooked up to an audio system playing music and a projection TV displaying animation effects. Next to this I would have a PC or Mac whose display shows the word "Sorry." As for the ads that say no printed pictures could do the machine justice, I say "Try." The tiger picture, a price performance chart -- anything would be better than that dumb ad. Sorry, Mr. B., but I think you could have kept your production people working all summer with a different ad.

One more thing. Two books I've found to be quite helpful when working with GW BASIC are Graphics Programming Made Easy for the IBM PC and XT and Fancy Programming in IBM PC BASIC. Both are written by Gabriel Cuellar and published by Reston Publishing. Of course there are no details about the Mindset-specific extensions to GW BASIC like OBJECT, but for most of the other features of the language they are appropriate, and they have numerous program examples that provide a valuable supplement to the GW manual. I strongly recommend them to anyone getting heavily into GW BASIC graphics programming.

Timothy P. Negris
Norcross, GA

MORE MINDSET IN PRINT

Mr. Negris also sent copies of two articles from Microsystems magazine. The first, from the July 1984 issue, compares "Graphics on the DEC PRO 350, NCR PC, and Mindset." A review of the Mindset entitled "Mindset: Fast High Resolution Graphics" appears in the August 1984 issue.

The first article about three very disparate systems provides some interesting notes, if not a very useful comparison. For instance the two more expensive systems (NCR,$7250;DEC PRO,$11,100) could show only eight colors at a time, while the $3440 Mindset (prices are for a graphics development system including hard disk (not Mindset) and development software) can show 16. In a speed comparison, the Mindset ran an interpreted BASIC Sieve of Eratosthenes (a classic benchmark involving finding prime numbers) program in 15.3 seconds, while the NCR and DEC took 27.1 and 24.4 seconds respectively. In a test requiring the drawing of 126 circles of decreasing radii, the Mindset took 9 seconds, while the other two took 124 and 27 seconds. In a quadrilateral test involving the drawing of 100 quadrilaterals, the Mindset took 5.8 seconds, and the other two 265 and 25. The Mindset came in second only in the filled quadrilaterals test, taking 102 seconds to draw 100 filled shapes, while the NCR took 4450 seconds and the DEC PRO took 62.

According to David Fournier, the author, the Mindset "represents one of the very few microcomputer products which meet the minimum color display requirements for the NAPLPS (North American Presentation Level Protocol Syntax) videotex and teletext standards This means that, with appropriate software, it could properly display the frames residing on most videotex systems. It is an excellent candidate for use as a videotex terminal."

He concludes "Overall, the prices seem greatly different, but on closer inspection, the differences seem to be based on the hardware features and software support provided. You get what you pay for." Also, "The speed in displaying its own set of primitives, and the price, color flexibility, and slightly lower resolution of the Mindset make it more suitable for animation, games, and videotex, where cost, drawing speed, and esthetics are of prime importance."

The writer of the August review had access only to a "buggy pre-release version of Lumena" and was using a TV set as a monitor, so wasn't able to provide any new information. He concludes, as have others, the the Mindset "needs only the right amount and the right kind of software support to be a great machine."

The November issue of Computer Graphics World magazine, dealing with PC graphics, has an article about the Mindset in conjunction with a program called ExecuVision, as pointed out by FMUG member Douglas Hoyt. We're trying to get hold of a copy,

and will write about it as soon as we do.

Also, we're pleased to report that PC World has accepted our review of the Mindset, written at the request of its editors. It will appear in the March 1985 issue in the Compatibles Update column. Watch for it.

CLEAN MACHINE

What? You mean to tell us you don't wash your hands every time before you sit down at your Mindset? With head downcast, we must also admit to such negligence. As owners of the only personal computer that resides in the collection of New York's Museum of Modern Art, we have an interest in keeping our machines looking pretty. If your Mindset is starting to lose its pristine appearance, wipe it with a rag moistened with rubbing alcohol. Use a very soft brush to clean between the keys. And always keep those disks covered when not in use!

DISK LIBRARY

Speaking of disks, we've started to accumulate a library of disks containing various sorts of programs which are available to members. For each disk you want, send $4 or a blank, formatted disk and postpaid return mailer to the above address. Here are some brief descriptions:

1. C Disk -- Member Warren Leong of Sunnyvale, home of Mindset, has provided a disk full of programs he wrote in Lattice C, most of which require the ANSI.SYS handler and a mouse. The disk includes source code and and a compiled executable versions, and there are two source library INCLUDE files for use by various programs. TERMU is a terminal emulator. ARTILLERY is a two-player cannon game. LIFE1 is Warren's customized version of the classic computer simulation/game, with user-selectable or default colors and patterns. Other programs include a color demo and a hex/ASCII file dump. There's also a sample CONFIG.SYS that shows you how to load ANSI.SYS.

Three disks of public domain PC programs were provided by member Dave Mentley:

2. BATCH TUTOR is an extensive, excellent tutorial on the use of batch files. Everything you ever wanted to know about the little buggers is on this disk, presented in friendly, understandable language with numerous examples.

3. UTIL1 includes many utilities, including a program to convert files between WordStar and DOS format. Another lets you print graphics (from PC-standard screens) to a Graftrax printer with the PRT SCN key. BASIC programs include GRAPH, PLOT3D, ADD-LF (add linefeeds to downloaded files), INVNTORY, and AMORT. There's also a machine-language program that cross-references BASIC programs, and much more.

4. GAMES includes such titles as MORSECOD, KSCOPE, SERPENT, KINGDOM, CRAZY8, BLACKBOX, HANGMAN, WUMPUS, CHASE, BLAKJAK, OTHELLO, and VAMPIRE. Some programs may require fiddling to work on the Mindset.

We're currently compiling a disk of user-submitted Mindset programs, in GW BASIC or any other language. If you submit a program that's used, we'll copy the entire finished disk onto your submission disk and return it to you.

MEETING

The second monthly meeting of the First Mindset Users Group was held from 7 to 10 P.M. at Mission High School in San Francisco. With 18 in attendance, the group almost filled the small classroom we were assigned. As one of the first orders of business, Jeff Patterson of Graphic Reproduction, 981 Mission Street in San Francisco, kindly offered to allow us to hold future meetings at his place of business. Jeff's company has recently become the first San Francisco retailer of Mindset computers. Even more notably, Graphic Reproduction, a large multi-faceted graphics arts company, has never sold microcomputers before. The fact that this retailing agreement between Graphic Reproduction and Mindset has occurred is strong evidence of the turn away from the standard microcomputer audience by Mindset's marketing department. It also shows the need the graphics and design industry has of such a machine. Graphic Reproduction will support its customers in many ways that no traditional computer retailer can. For instance, a designer can take lots of time to work out all the major points of a new project on his or her Mindset, then come in to Graphic Reproduction and use very similar software to create a professional finished product on a machine with much higher resolution. Other services include provision of slides, color print-outs, rentals, and more. If you're interested, contact Jeff at (415) 777-9346.

Most of the meeting was taken up by software demonstrations. First, Gary Furr, who designed Designer for Datasoft, demonstrated the Video Production software. Next month he will bring the video hardware and demo the entire system. He also gave a brief demo of his Designer program, which is marketed under the Mindset label. His partner, Kevin Furry, demoed two very impressive programs in progress; an animation editor and a sound editor. The sound editor uses the mouse to quickly change various parameters of Mindset's most flexible mode -- three voices with special effects. David Joly, who uses CADDRAFT to design electric circuitry in his business, game a demonstration of that program. Chris Hall showed some BASIC graphics programs and a couple of nifty Designer animations.

MINDSET MONITORS

Choosing a monitor for the Mindset computer is a much more impor-
tant decision than choosing one for an ordinary computer. Sharp-
ness and correct color rendition are particularly crucial in
professional graphics work. What follows is a biased first- and
second-person report on monitors, and should not be construed as
anything else.

Our monitor is a Sears Total Video System TV/Monitor that we
bought for several reasons, by no means the least of which was
its $340 retail price. The name Total Video System is no misno-
mer -- the only feature the Sears unit lacks is stereo sound
capability. With a 13-inch screen, it's essentially an RGBI
(Red-Blue-Green-Intensity) monitor, a composite video (analog)
color monitor, and a color TV in one. Convenient buttons on the
front let you change modes, effect a 'green-screen' mode, and
compress the RGBI display vertically to eliminate scan lines in
text displays. The RGBI image is extremely sharp, allowing us to
perform word processing easily from four feet away. One minor
problem is that color number six (RGBI color, by nature, is
capable of only 16 true colors), instead of appearing brown as
it's supposed to, is a sickly olive color. Also, with this
monitor as well as other 'multi-mode' types (e.g. Sony Profeel),
when you change the border color, all screen colors are affected,
usually in an undesirable way. Many Mindset demos and programs
do change this border color, and if the user can't reset it, his
only alternative is to use the program in TV mode. This doesn't
happen with RGB-only monitors like the Taxan 420 and the Prince-
ton HX-12. The Sears' video mode is good if you don't mind a bit
of color fringing, which results in false colors in fine detail
work. The TV works fine but tends to distract one from more
important work, a purely subjective consideration. You always
bypass the TV mode on the way from RGB to Video, so best to leave
the tuner set to an unused channel.

Most Mindset retailers display and package the machine with
a standard RGBI monitor like the aforementioned Taxan and Prince-
ton units. If you haven't decided on a monitor yet, or wish to
upgrade, we highly recommend Taxan's new 420L monitor, which
seems ideally suited to the Mindset, instead. It has an analog
video circuit, which means that you can use all of Mindset's 512
colors on an RGB-quality display. What's more, the 420L's inter-
laced mode can handle Mindset's 640-by-400 ultra-high-resolution
mode without flicker. Contact Taxan at 18005 Courtney Ct., City
of Industry, CA 91748, (818) 810-1291.

SOFTWARE REVIEW

4 Point Graphics was described at a FMUG meeting recently as "the
WordStar of graphics programs." Actually, this is inaccurate, as
most current versions of WordStar can be customized to be command
or menu-driven, whereas 4-Point is command-driven only. And
there are quite a few commands!

All commands, including cursor movement, are entered via the

keyboard. There are sixteen basic commands, and many variations
and combinations of these are available. In most cases, commands
are single-key mnemonics; for example, press C to begin drawing a
circle. Many commands, however, are non-mnemonic (e.g. Shift-F9
to clear the screen), and aren't easy to remember. A well organ-
ized Quick Reference Guide accompanying the manual provides quick
access to these, once you've become familiar with the program.

        The program is named after its cursor, which can vary in
form from one to four points. The one-point cursor is used for
freehand drawing, and the two-point cursor draws lines and line
segments. The three-point cursor creates ellipses, arcs, and
triangles, while four points are used for rectangles and for
framing areas. Once an area is framed, you can manipulate it in
various ways, including erasing all outside or in the frame. You
can reduce or enlarge the framed image in different directions,
rotate it 90 degrees, move the image, or texture the screen with
the framed image. You can also save the framed image on disk.

        The use of the cursor is perhaps this program's most elabo-
rate aspect. With single-key commands, you can move the cursor
in any of the eight compass directions in increments that you
set. You can mark a cursor location and return to it instantly
from anywhere on the screen. You can set cursor wrap on or off.
If attached, a mouse can be used for quick cursor movement. The
cursor can be set to operate on 'automatic pilot', which means
that you tell it which direction to move in and how fast to move,
and it goes by itself, drawing circles or whatever all the while.
Many interesting effects can be created with this mode.

        Because 4-Point is meant to be used with RGBI monitors,
there is no provision for setting your own palette. The standard
sixteen colors are represented twice each in twin parallel color
bars under the screen, each with an independent cursor indicating
the currently selected color. The top cursor shows the color
used for drawing lines, etc. while the bottom color combines with
the top for dithered fills. You can set border and background
colors to any you desire. Instant on-screen color conversions
can be effected by setting a color in the top row to any in the
bottom.

        Other functions include: Any size image can be captured in a
memory buffer, then replaced onto the screen, or drawn with. The
Zoom feature offers three levels of magnification for fine detail
work. Another feature lets you flip the entire screen vertical-
ly. You can texture a selected area or the entire screen with up
to four repeating vertical color bars, a feature most likely of
interest to those who need to spiff up Lotus 1-2-3 graphs.

Also, you can add text to your images simply by typing on the keyboard (after invoking the proper command). Adjustments may be made to character and line spacing. Another feature of interest to business users lets you create presentation segments and chain them together. A segment is essentially a recording of all commands you give the program and their effects, and may be saved as disk files and linked together for an automated, animated presentation. You can enter predefined images into segments by loading them from disk.

One of 4-Point's most interesting features is actually an auxiliary utility program called Mindset Graphics Interface, or MGI for short. Briefly, MGI gives 4-Point graphic compatibility with almost any other program you can run on the Mindset. You can save drawings and graphs from programs such as Lotus 1-2-3, load them into 4-Point, manipulate them, and print them in any size from one inch to over 24 inches square on a host of printers. Unfortunately, our Gemini 10X isn't one of them. However, if you have an Epson, an IDS, a NEC or C. Itoh, an Okidata, a Radio Shack CGP-220, a Quadjet, a Transtar color printer, a PrintaColor TC1040, a HP7475A Plotter, a Diablo C150, or a Tektronix 4695 Ink Jet, you're set. If you're printing in black-and-white, you can map MGI's textures to your colors as you wish, or use a default map. You can also map colors for a color printer. Once MGI is loaded, you can load and run almost any other graphics program and use MGI to load, save, and print pictures and selected portions thereof from within the graphics program. Unfortunately, MGI is incompatible with Lumena, because that program was designed when the projected memory ceiling for the Mindset was 256K. A revision is being considered.

The 4-Point manual is brief but thorough, beginning with an introduction and instructions for getting started. Following this is an eight-lesson tutorial in the basics of drawing with 4-Point. Points covered include the use of the different cursors, the screen layout, different geometric shapes, using disk files, zooming for precision, and creating presentation. The next section, 4-Point In Depth, contains reference material, and given the complexity of the program, is bound to be revisited often by the user. Finally, an extensive section on the use of MGI tells you all you ever need to know about this eminently useful program. If you own one of the indicated printers and have need for its services, MGI alone may be worth the price for 4-Point to you. If you use business graphics, 4-Point gives you an easy way to make full use of Mindset's palette for presentations.
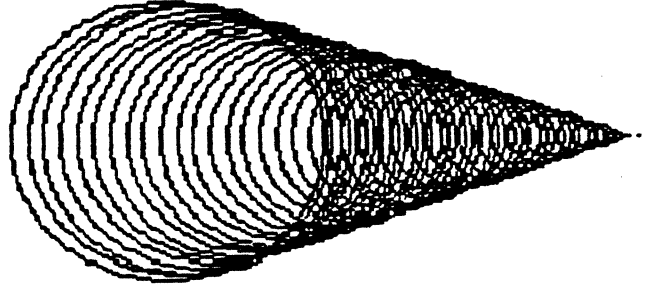
-- David Duberman
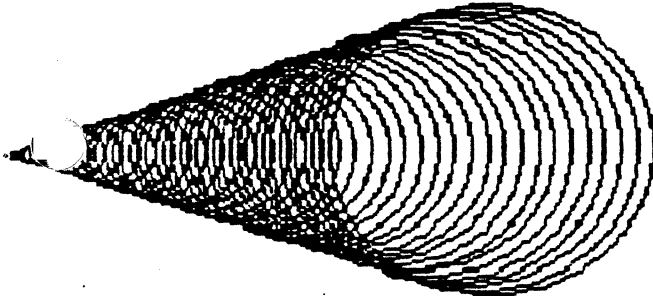
First Mindset Users Group Newsletter #3

January 1985

F.M.U.G.
First Mindset Users Group
355 15th Ave. #5
San Francisco, CA 94118
(415) 668-8352

FMUG NEWS

Welcome to our new logo! The above artwork was created by your
editor with a two-line BASIC program using the 640 by 400 pixel
resolution Screen 7, plus a little typing, and was printed on a
Gemini 10X printer using the wonderful MGI (Mindset Graphics
Interface) program that comes with 4-Point Graphics Plus. This
is by no means the final version, and will change as soon as we
or you come up with a better one. See "Printing Graphics" in
this newsletter for technical details on the printing process.

     The fourth meeting of the First Mindset Users Group will
occur at 7:00 P.M. on Monday, January 21 at Graphic Reproduction,
981 Mission St. in San Francisco. Jeff Patterson hopes to have a
Video Production System to demonstrate at that time, and we'll
have a discussion of peripherals.

     Interest in the Mindset computer continues to run constant
but at a low level. We get, on an average, about three to five
inquiries a week about the computer and/or the Users Group,
usually referred by Mindset Corporation. There should be a
notice about the group in the February issue of Byte magazine.

NEWS

Mindset Corporation suffered another series of layoffs January 4,
and the entire staff currently numbers about 30. We had been
planning to hold the January FMUG meeting at Mindset headquarters
in Sunnyvale, so when we heard about the layoffs, we immediately
called down to see if this was still feasible, and to find out
what this new development means for Mindset users. Jim Crowther
of Mindset, who has taken over the departed Skip Satterlee's
position of Customer Support, was helpful and informative, though
he didn't have much good news to report. At any rate, we'll
probably take Jim up on his tentative offer to hold the meeting

at Mindset in February rather than January. The date of that
meeting will most likely be February 18 (Washington's Birthday).

     Did you know that most existing Mindset systems are
incapable of accomodating the new Video Production System? To
use the VPS, you must have bought a special genlock-capable
system unit which costs about $500 extra, or else the entire VPS
system for $4000. Anyway, Mindset had originally planned to
offer upgrades to owners of existing units for a fee. Due to the
new layoffs, however, this plan has been placed on hold. Also on
hold is the long-awaited upgrade to GW BASIC, which is buggy and
doesn't perform animation very well. Oh well, we've been meaning
to learn C anyway. Another eagerly anticipated item whose
development has been placed on hold is the Mindset hard disk
drive, which would have been a 10-megabyte drive costing $1200-
$1500. Apparently Mindset has pretty much given up on the micro-
computer market, and is focusing a last-ditch marketing effort on
the commercial video industry. We understand the system is being
used by a number of video outfits, and we'll try to get more
details about this soon. We'd appreciate a report from any
readers having information on this.

WHERE DO WE GO FROM HERE?

Of course, FMUG will continue to support the Mindset computer and
its users, even if the unmentionable worst should happen. We're
currently discussing plans to offer new commercial Mindset
programs to members for reasonable prices, and we're constantly
collecting information on compatibility, graphics, special uses
and so on. Jeff Patterson of Graphic Reproduction (415-777-9346)
has stated his commitment to continue to support Mindset owners
no matter what.

     However, due to certain other recent developments, we feel a
certain broadening of our scope is in order -- specifically, we
feel it's appropriate cover computer graphics in general, and not
just specifically for the Mindset. For example, many in the
microcomputer world are eagerly awaiting an advanced color
graphics machine developed by Amiga and being produced by
Commodore, called the Lorraine. We fully intend to cover this
machine and others when they're available. Here's a report on
one such development:

THE NEW ATARI COMPUTERS

The Winter Consumer Electronics Show (CES) in Las Vegas has just
closed, and by all accounts one of the most interesting exhibits
was Atari Corporation's. Atari was bought from Warner Brothers
in July 1984 by Jack Tramiel, founder of Commodore, Atari's chief
rival in the home computer field. According to Michael Tomczyk,
author of The Home Computer Wars (Compute! Books), Tramiel
revolutionized the home computer industry by introducing the
first home computer with color graphics in the USA for under $300

-- the VIC-20. Tomczyk's book, by the way, is a fascinating
insider's account, and is must reading for anyone interested in
Commodore's past or Atari's future, or both. Jack Tramiel was
reportedly ousted (or resigned) from Commodore early in 1984
because he wanted to bring his three sons into high-level
executive positions within the company, and Irving Gould, the
chief stockholder, objected.

    .   Tramiel's Atari Corp.'s announcement of six new computers at
CES has the computer world abuzz. There are two series. The XE
line is a continuation of the classic 400/800/1200XL/600XL/800XL
series and is fully software-compatible with the existing Atari
machines. There will be four XE comuters. The basic model, the
65XE, is functionally identical to the 800XL. The 65XEM features
an "incredible sound synthesis system." The 65XEP (P for Porta-
ble) has a built-in monochrome monitor and disk drive for busi-
ness use on-the-go. The 130XE doubles available memory to allow
use of large business applications.

    But the real attention grabbers are the two ST computers.
ST stands for Sixteen/Thirty-two, because the CPU (Central
Processing Unit -- the central microprocessor) is a Motorola
68000 (same as Macintosh), which has 32-bit internal registers
and a 16-bit data bus. The ST's have a 32K bit-mapped screen and
three graphics modes -- low resolution is 320 by 200 pixels with
16 colors (from a palette of 512), medium resolution is 640 by
200 in four colors, and high resolution is 640 by 400 monochrome.
Sound familiar? These are identical to three of Mindset's
graphics modes. Also notable is the fact that these computers
are equipped with Digital Research's GEM operating system, which
works very much like Apple Macintosh's icon-oriented approach.
In fact, a typical GEM applications screen resembles a Macintosh
screen closely. Some of GEM's features are a two-button mouse
controller, icons, drop-down menus, windows, bit block transfer
(BLT), vector drawing, and a real-time clock.

    Other features of the ST computers include a sophisticated
sound generation system including MIDI interface for controlling
external synthesizers, a keyboard with one-touch cursor control
keys (laid out identically to Mindset's, but near the top of the
keyboard), an 18-key numeric keypad, and built-in serial (RS232C)
and parallel (Centronics) ports. The two single-unit computers
are the 130ST with 128K, and the 520ST with 512K. Associated
peripherals Atari will market include three printers: a color
non-impact dot matrix, a daisy-wheel letter quality, and an
impact dot matrix printer. There will also be single and double-
sided 3-1/2-inch floppy drives (250K and 500K respectively), a 3-
1/2-inch 10 megabyte hard disk, and two 12-inch monitors: high
resolution monochrome, and RGB color.

    We don't have prices yet for any of these, but we know that
prices will be low. The ST machines have been dubbed
"Jackintosh" by those who believe that Tramiel would love to take
a big bite out of Apple's market by offering technology similar
(or superior) to its Macintosh at approximately a third to a

fourth of the cost. The big question is: Will there be any
application software available for the machine in time to promote
the ST's success? Tramiel is reportedly actively encouraging
software development by third-party houses. Also, since Digital
Research has made GEM available to IBM PC software developers, it
would probably be easy to port applications developed for the
system between computers. That is, any programs written for GEM
on the PC will run with little or no alteration on the Atari
ST's. And it's a sure bet that there will be significant program
development on GEM for the PC, because MS-DOS's (and PC-DOS's)
lack of user-friendliness is the chief current stumbling block in
sales of PC hardware and software.

PRINTING GRAPHICS

        In the last issue of this newsletter, we reviewed IMSI's 4-
Point Graphics Plus including the Mindset Graphic Interface
(MGI), and mentioned that MGI doesn't work with our Gemini 10X
printer. If you set MGI for Epson MX, RX with SETPRINT, MGI
prints out recognizable graphics on the Gemini, but separates
each line of graphics with a line of blank space for an
unpleasant striped effect. This is due to the fact that Epson's
smallest increment of paper advance is 1/172 of an inch, while
Gemini's is larger -- 1/144 of an inch. Thus, when the paper is
advanced the proper number of increments to print the next line
of graphics on an Epson, advancing the same number of (larger)
increments on the Gemini moves the paper too far forward.

        The solution is to decrease the number of increments
advanced for each line. If you have a disk editor such as Peter
Norton's Sector Modify Utility, this is simple to effect. NOTE:
DO NOT TRY THIS ON THE ORIGINAL MGI.EXE FILE -- USE A BACKUP.
First use SETPRINT to set MGI for Epson MX, RX. Next, go to the
14th sector of file MGI.EXE. You need to change two bytes in
this sector. The sector offset of the first byte, which is 17h
(hexadecimal), is 437d (decimal) or 1B5h. Change this byte to
0Fh. The sector offset of the other byte, which is 24h, is 455d
or 1C7h. Change the 24h to 18h. In doing this, you're reducing
the number of increments advanced for each line of graphics by a
third. If, for some reason, you don't find the bytes 17h and 24h
at the described locations, look for the text "FRIEZEPRT Epson
RX,MX". The first byte comes shortly after this, immediately
preceded by the two bytes 1B 33, which mean "ESC 3" to the
printer. The second byte should be about 18 (decimal) bytes
after the first, and is also preceded by the two bytes 1B 33.

        Unfortunately, as we learned from experience, SETCOLOR (for
rearranging the correspondence of colors on the screen to
patterns on the printer) doesn't work with the modified MGI.EXE
file -- you get a mysterious "Template CRC Error" message. This is
the reason for retaining the original file. We should note here
that, the MGI documentation notwithstanding, black on the screen
maps to black on the printer and similarly white maps to white.
If you want to avoid using up your ribbon on a few pictures,

reverse these by using SETCOLOR menu Option B to map color 0 to 0
and 15 to 15, and use SETCOLOR menu Option D to save the new
default map to the MGI.EXE file, then copy the file and modify
it.   If you want to use reassign the colors later, use SETCOLOR
on another copy of the original MGI.EXE file, then change the two
bytes again. By the way, SETCOLOR.EXE and MGI.EXE must be
on the same disk.

        If you don't have a disk editor or are nervous
about trying this, we'll be happy to send you a copy of the
modified MGI.EXE file if you send a blank disk and postpaid
return mailer to the address at the beginning of the newsletter.

MINDSET TELECOMMUNICATIONS

        The following was written by Jeff Gortatowsky, a Mindset
enthusiast from Rochester, New York, and was downloaded from
CompuServe by your editor. Jeff has been alerted about the group
and hopefully will contribute further to the newsletter.

        The purpose of Mindset Notes is to chronicle on a semi-
regular basis my adventures and discoveries with the recently
released Mindset PC. First a little background.

        The Mindset PC is a sixteen bit computer based on the
Intel 80186 CPU. In addition to the main CPU the Mindset design
incorporates 2 additional 'co-processors' that control the
video output. When bought with the disk expansion unit the
Mindset operates under MS-DOS. It therefore has a limited
ability to run applications for the IBM PC. When fully configured
the Mindset has 2 disk drives (360k each),   256k of main
memory, 32k of graphics memory, and a detached keyboard. At
this time this configuration costs (approx.) $2500 retail. In
addition some hidden costs are almost essential. MS-DOS, BASIC,
a printer port, and a serial port are all extra. Total cost
after adding these items will run about $3000. A more in-depth
description of the Mindset may be found in the April 84 issue
of BYTE magazine.

        The computer runs fairly hot, especially after several
hours of use. This seems to bother me more than it does the
computer. I've used it for hours on end, without the slightest
hint of trouble,   in 90 degree weather.   The unit does have
a fan installed. While on the subject of the fan, I should tell
you that mine has gotten somewhat louder since I bought the
computer. Still it seems quieter than the fan in my
Columbia MPC.

        Physically the computer is quite small compared to the
IBM PC. It's about the width and depth of an ATARI 800 and about
1 1/2 times as high.   The only problem its size will pose is if
like me, you have a fairly large monitor and wanted to place it
on top of the unit.   Also Mindset warns against putting more
than 25 pounds on top of the unit, so I took my 25 inch color TV

off it and bought a Proformance monitor from SEARS Business
Center.

Moving along to MS-DOS I've found that the MODE command
doesn't always allow you to set the screen mode you ask
for. The manual explains that the MODE command can be used to
place· the machine in either the Mindset Native mode or the
emulation mode and leaves it at that. What the difference is
between the two is not explained. In addition the Native
Mode only seems to work if you define the screen as GRAPHICS not
CHARACTERS. Doing so causes the cursor to disappear until you
change back to the EMulation mode. The manual is useless on
the subject. However it seems that BASIC ignores the DOS
screen mode anyway and goes ahead and sets the mode you choose.

In the compatibility department I discovered why most
of my excellent IBM terminal programs don't work. All of
them seem to manipulate the RS232 control and data ports
directly. In the IBM the first port installed maps to I/O
address 3f8h. Looking at the DOS data area in the Mindset
I've found the port mapped at 8080h. that isn't the only problem
however. It appears (though I haven't completely confirmed
this) that the data and control registers are not in
successive I/O locations like the IBM. Instead they seem to be
spaced 2 locations apart from each other. That limits the
type of program patching I can do. If a program uses the INC DX
instruction, which only takes one byte, then its impossible to
put a ADD DX,2 instructions in its place for the Mindset.
The ADD instruction takes two bytes. The increment instruction
works on the IBM because of the control ports for the RS232 being
in sequential order. For those I've lost I apologize.
However for those familiar with the IAPX CPU's, I'm open to
suggestions. I've got an idea of replacing the RS232 code
completely with a setup then call to the DOS interupt for RS232
I/O. But it would take alot of work. Then again I could just
keep on using PCTALK III in BASIC (uhg) or write my own
(when???).

While I was working in the RS232 problem I also
found the printer port mapped at 80C0H. So far however I've
found none of my programs except VisiCalc to have a problem
with this. Perhaps the printer port is mapped twice. I
doubt this but it might be possible. A more likly explanation is
that a program not finding the· printer where it should be
decides to use MS-DOS's printer vector instead. Again as with
the RS232 port the printers I/O addresses are spaced 2 apart.
I could find nothing in the INTEL 186 programmers reference ng
mandatory so I don't think it's needed because of the 80186.

Another point I've discovered. The Mindset has a very
powerful sound capability. This includes 6 voices, variable
attack and decay, and interrupt driven (background) sound. How
ever the Mindset does not send sound information over the
video signal. Not even the RF modulated TV output. You
must have a separate AUDIO IN jack on whatever type of video

display you're using. Alternatively you can connect the
sound output to a stereo AUX input. Of course if your like me
and like to listen while typing that won't do. So beware
when buying monitors for the Mindset. Try and get one with
separate audio inputs.

Mindset Notes ---- June 20, 1984

        Rumor here in Rochester has it that Computerland
will be carrying the Mindset in the future. This could
help it get the recognition it deserves. The last issue of PC
magazine has a full 2 page ad from Mindset, so it looks
as if their ready to push the machine. Also in the magazine
department, the July issue of Microsystems has a
comparison of the DEC PRO 350, NCR PC, and the Mindset.
Although they were only able to test the Mindset briefly I
feel for the money it came out very well indeed. There are
a few errors in the article. One being the Mindset supports 4
colors in 640x200 and 2 in 640x400 interlaced.

        Using Trace 86 and DEBUG I've confirmed the serial
port is located at 8080 hex. After typing in and trying a
short serial driver for the IBM I found the port also seems to
answer when addressed as 3f8 (IBM's port address). It must be
designed to answer to both (?). However I could not read
from it at 3f8. I found the RS232 service routine (INT 14H) at
F800:11A0 hex in the ROM BIOS. Looking through it I found that
Mindset's baud rate divisors are slightly different to the IBM's.
Keep this in mind when doing any writing or patching for the
Mindset. The table starts at F800:128A and ends at offset
1299H. It seems to cover baud rates from 134.5 to 9600. As I
suspected each register of the Mindset's serial port is
separated from the next by 2 I/O addresses. The entry parameters
to the BIOS seem to be totally IBM compatiable. That dosn't help
most terminal programs as they don't use it. I'm working on
patches for a couple.

        Remember that when disassembling the BIOS, the 80186 has
8 new instructions that most IBM debuggers won't disassemble.
Debug found one of these in the RS232 BIOS routine. It appears
as a 'DB C1' to DEBUG. However when executed performs a
rotate of the DI register left by an immediate value of 4.
The 8086/88 don't have that addressing mode. The worst part of
course is it makes a mess of the disassembly listing as the
following instructions aren't in the correct addresses. A word to
the wise. Don't assume you're looking at data. Make sure it's not
a 80186 specific instruction. I keep the INTEL manual nearby
at all times. The best way to get the disassembly straight
is to step through the unknown instruction, see what happens,
then pick up the disassembly after that point. Of course this
could cause a lock up if it's not a instruction so look up the
hex op-code if at all possible.

More assembly ramblings...the End of Interrupt sequence
in the Mindset seems to be different. In the BIOS it doesn't
look like it's IBM compatiable. But so much software runs ok
that I wonder if Mindset didn't somehow emulate this also.

Here's a quick map of the serial port as I've found it. I
hope this helps some Mindset owners.

COM1: ONLY!

8080H -- TX/RX data register when bit 7 (DLAB) of the Line
Control
        Register (LCR) is false (0)

8080H -- LSB

8082H -- MSB of baud rate divisor when LCR's DLAB bit is true

8086H -- Line Control Register

808AH -- Line Status Register

808CH -- Modem Status Register

        Except for the 2 address spacing, they all seem to
operate as described in the IBM Technical Reference Manual
(TRM). Also the ROM BIOS entry parameters are IBM compatible.
These can also be found in the TRM. The major difference is
the I/O locations and the baud rate divisor's. I guess you're
wondering why I'm going through such great pains to discover the
RS232 secrets, you probably never had to work with a BASIC
terminal program. Also I believe you should know your machine's
basics before moving on to the more complex features.

        That's all for now. If you've found my ramblings
interesting or of value let me know. If there's enough
interest I'll continue. I'm having a ball exploring! Let's
hear from you!

                        From the Bit Bucket,
                        Jeff Gortatowsky
                        CompuServe ID 70516,751

8
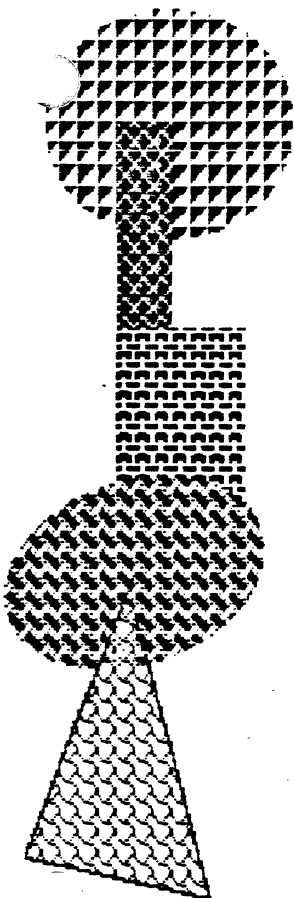
First Mindset Users Group

Newsletter #4
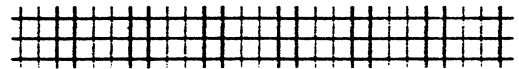
Welcome to the first issue of the FMUG Newsletter to be typeset by computer -- Mindset computer. PC Paintbrush from International Microcomputer Software, Inc. of San Rafael, California, who developed 4-Point Graphics Plus for Mindset, is a MacPaint Clone *par excellence*. This text is being typed in directly from the Mindset keyboard with PC Paintbrush's 5-by-8 bit font in the 640-by-400 pixel graphics mode. It's not very well suited to word processing, and is not intended to be, but is fine for creating spiffy openings for user group news- letters. For instance, there's no insert, or search and replace, but backspace is destructive and works fine as long as you don't perform some other function while typing. When you hit return, the text cursor returns to where you first positioned it and skips a line. To print this as single-space, I move the cursor up a line every time I hit return. Sometimes while I'm typing the mouse rolls a bit, the cursor moves off the drawing area, and I lose my text cursor. Also, since my Sears monitor flashes in this high-res mode, this sort of writing is not very good for my eyes.

Of course, it would be impractical to set the entire newsletter this way, but I thought it would be fun for readers to see some of the things this marvelously versatile graphics program can do. The fonts used in this box, in or- der, are Old English, Sanserif, script, light, computer, Euro, and Roman.

1
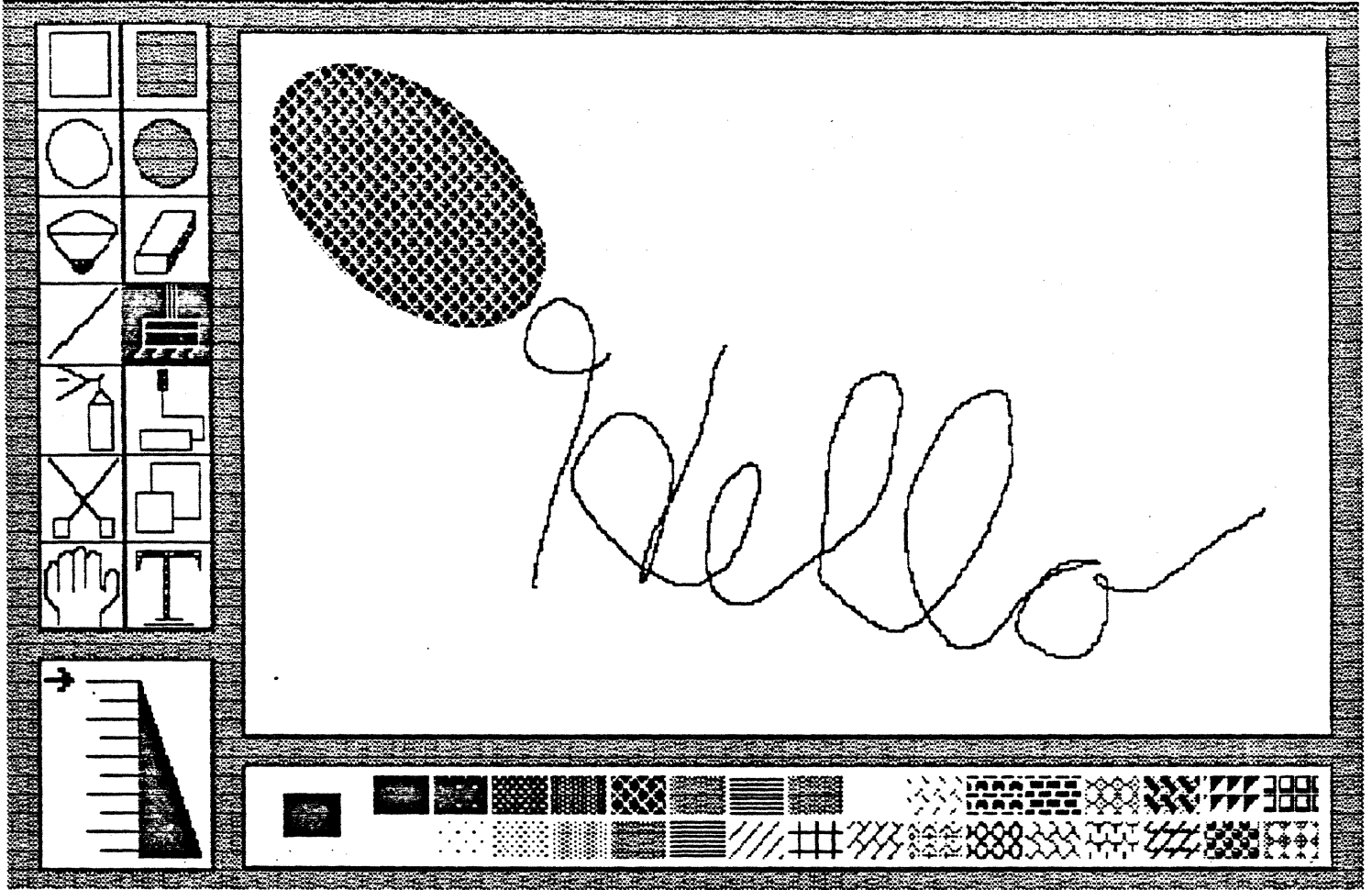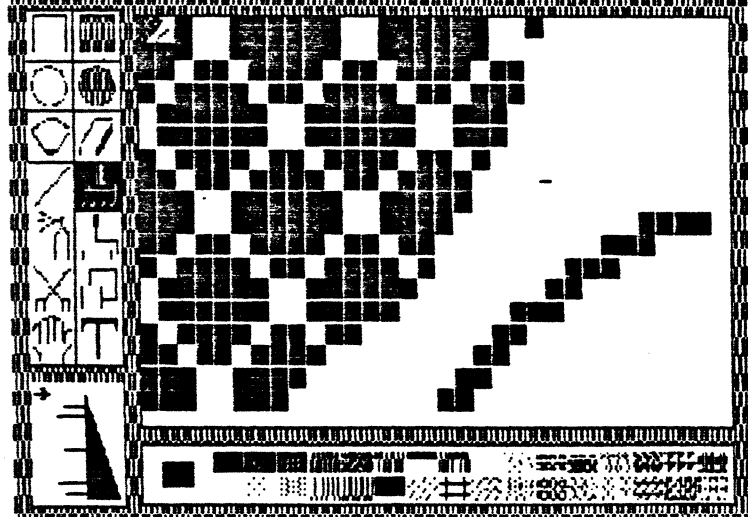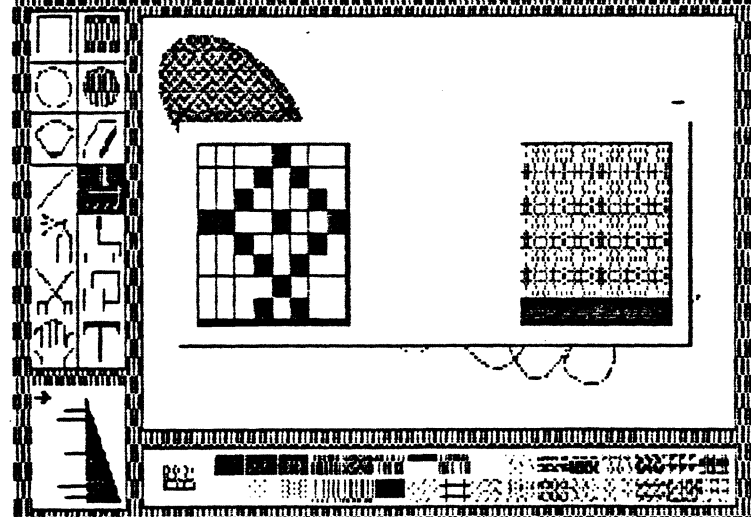
2

The preceding page contains several representative PC Paint-
brush screens. You can see all the tools in the icon menu on the
left, and the different pull-down menus named at the top of the
screen. Undo is very handy for trying a lot of different things
quickly, and there's also a local Undo for getting rid of part of
the last thing you drew without disturbing the rest of your
drawing. There are numerous print styles, most of which can be
printed in light, medium, or bold, with any or all of the follow-
ing options: italics, underline, outline, shadow, and kerning
(proportional), in any of eight sizes.

     The top four icons are used for drawing hollow and filled
circles, ellipses, and rectangles. The next two are erasers; the
left erases only the current color or pattern, and the right
erases everything. The line icon is used for rubber-band line
drawing, and the paintbrush is the normal brush, which can be set
to a number of different shapes and sizes. The spraycan, also
adjustable, is used for an airbrush effect, and the paint roller
to fill enclosed areas with a pattern or color. The scissors are
used for cut and paste operations with rectangular picture areas
-- "clips" are stored in disk files, and you can access any
number of clips with the mouse once you've typed the names in
with a clever rotating pull-down directory system. The "boxes"
next to the scissors are used with the "Pick" pull-down menu to
mirror, invert, enlarge and reduce, and skew any-sized picture
area. This function, a new feature, is implemented quite well --
for instance, the transformed area can be placed anywhere on
screen, leaving the original unaltered.

     Since the total drawing area is one full screen (unfortun-
ately not higher, as in MacPaint), you must use the hand icon to
move the "paper" around underneath the menus to get to the part
you want to draw on. Lastly, the "T" icon is used for typing in
text. The gauge in the lower left corner sets the size for
brush, line, and geometric figure drawing.

     PC Paintbrush's Fatbits display (no suit from Apple over the
name?) is depicted on the lower left of page two. There are two
levels of magnification for fine-detail work. A tiny box showing
the unmagnified area you're working on is in the upper left
corner of the drawing area.

     Also shown page two is the Edit Pattern display. As you
manipulate bits in an eight-by-eight matrix in the left box, the
right box shows the current repeated pattern in true size.

     Although PC Paintbrush is by no means perfect -- for one
thing, it would be nice to be able to edit fonts -- it's a great
program, and one every Mindset owner should have. It's the first
graphics program for the Mindset that supports all of the ma-
chine's graphics modes, and is very reasonably priced as well.
We'll be giving more coverage to this remarkable program in
future issues of the newsletter.

IMPORTANT NEWS--

The next meeting of the First Mindset Users Group will take place
at Mindset Corporation headquarters in Sunnyvale, on the evening
of Monday, February 11. We will rendezvous at the main office at
617 North Mary at 7:00 P.M., where company representative Jim
Hannon will meet us and give us a guided tour of the company
facilities.   There will be a demonstration of the Video Produc-
tion System using a video camera, other demos, and possibly some
surprises. Call David Duberman at (415) 668-9352 for further
information.

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OTHER NEWS

A couple of items in the February issue of Byte magazine are of
interest to Mindset owners. Micro Mart, a chain computer retail-
er in the Southeast, is getting out of the Mindset line, and is
advertising a two-drive 256K system including mouse for $1795.
Also, Advanced Micro Devices (AMD), a Silicon Valley pioneering
chip firm, has come out with a 10-megahertz version of the 80186,
Mindset's CPU. Although there was an 8-megahertz version of the
chip available at the time, Mindset chose to use the 6-megahertz
80186 because it was more readily available.

     We hear the CompuShop, the Texas-based chain of retailers,
originally the only retail outlet for Mindset in Northern Calif-
ornia, has also decided not to sell the computers any more.
Their salespeople are telling prospective customers for the Mind-
sets being remaindered at prices similar to Micro Marts that the
company has decided to market the machine vertically, that is
directly to business users. CompuShop stores currently have some
great deals on Mindset software and peripheral hardware.

****

WE GET LETTERS........

     Marinus Lutz of Japan has been in touch several times
requesting information for a 3D xray project he's working on.
He's not yet an owner, but is very much interested in possibly
using a Mindset to extrapolate with software a three-dimensional
represention of a body area from two sets of x-y-z coordinates,
in order to spare medical patients the ordeal and danger of many
sets of xrays. If you have knowledge of such software, contact
Mr. Lutz at 202 Watanabe Apts., Sakamachi, Shinjukuku, Tokyo
F160, Japan.
****

Following is a listing of the FMUG Public Domain Disk Library,
compiled by David Mentley. For any or all, send blank formatted
disks and a postpaid return mailer or $4 each to: FMUG, 355 15
Ave. #5, San Francisco, CA 94118. Membership in FMUG is $15 a
year.

FMUG 1 -UTILITIES   02-01-1985

ABSTRACT.DOC	DISRTN .EXE	FREE5 .COM	RAMDISK .DOC
ALTER .COM	DOSKEYS .BAS	FREE5 .DOC	RAMDISK .SYS
ALTER .DOC	DOSKEYS .DOC	HEX .BAS	SD20 .COM
AREACODE.EXE	DSKPGM2 .BAS	HIDEFILE.BAS	SD20 .DOC
ASTDOC .BAT	FASTDISK.COM	KEYREDEF.BAS	SHIFTBS .COM
BEEP .COM	FILEMOD .ASC	KEYS .BAS	SHIFTIBM.COM
CALC .EXE	FILTER .BAS	PARTCOPY.EXE	SUPERDRV.COM
CLIP .COM	FIXDEL .EXE	PATCH256.ASC	TUNE .COM
COMMAND .COM	FIXIT .BAS	POKEPEEK.DOC	UTSCAN .BAS
CONFIG .SYS	FREE4 .COM	PR256 .ASM	96256 Bytes
CRETURN .BAS	FREE4 .DOC		

FMUG 2 - C STUFF   02-01-1985

ANSI .SYS	COLORS .C	LIFE1 .EXE	SQUARE .C
ARTIL .C	COLORS .EXE	LIFECODE.C	SQUARE .EXE
ARTIL .EXE	COMMAND .COM	LIFEFORM.C	TERMEMU .C
BIOSCOD2.C	CONFIG .SYS	OTHELLO .C	TERMEMU .EXE
BIOSCODE.C	DUMP .ASM	OTHELLO .EXE	TERMEMU5.BAS
BOX .C	DUMP .EXE	README .DOC	37888 Bytes
BOX .EXE	LIFE1 .C	README2 .DOC	

FMUG 3 -BATCH TUTORIAL   02-01-1985

ALDIR .BAT	MORE .COM	SIDIR .DIR	FIND .BAT
ALDIR .DIR	PARSER .INC	SLASH .ASM	FIND .REM
AUTOEXEC.BAT	QDISPLAY.INC	SLASH .COM	FUNKY .BAT
CATALOG	QGETKEY .INC	TESTERR .BAT	FUNKY .REM
COMMAND .COM	QUERY .ASM	TESTF .BAT	PERFORM.REM
EXDIR .BAT	QUERY .COM	TESTFIND.BAT	QUERY .BAT
EXDIR .DIR	Q_CMDS .INC	TESTQ .BAT	QUERY .REM
EXTCODES.REM	README .031	TESTSET .BAT	RUNME2 .BAT
FILELIST	READTHIS.TO	TO_C .BAT	RUNME3 .BAT
FINDFILE.ASM	RUNME .BAT	WHAT .ASM	SLASH .REM
FINDFILE.COM	SETDISK .ASM	WHAT .COM	WHAT .BAT
FUNKY .ASM	SETDISK .COM	ELEM .REM	WHAT .REM
FUNKY .COM	SIDIR .BAT	EPILOG .REM	146432 Byte

FMUG 4 - BASIC GAMES   02-01-1985

AUTOEXEC.BAT	CHASE .DOC	KINGDOM .BAS	VAMPIRE .BAS
BLACKBOX.BAS	COMMAND .COM	KSCOPE .BAS	WMTELL .BAS
BLAKJAK .BAS	CRAZY8 .BAS	MORSECOD.BAS	WUMPUS .BAS
BMENUD .BAS	GWBASIC .EXE	OTHELLO .BAS	177152 Byte
CHASE .BAS	HANGMAN .BAS	SERPENT .BAS	

FMUG 5 - POPDEMO   02-01-1985

AUTOEXEC.BAT	IDA_FRUT	IDA_LND2	MINDSET
COMMAND .COM	IDA_ICON	IDA_LND3	POPDEMO .EXE
FONT1	IDA_LAND	IDA_LND4	PROSWARE
FONT2	IDA_LND1	IDA_PEPL	19456 Bytes
FONT3			

FMUG 6 - BIT BLIT DEMO   02-01-1985

BUSER .INC	DEMELL .ASM	DEMSIM .ASM	SATURN .ASM
COMMAND .COM	DEMELL .OBJ	DEMSIM .OBJ	SATURN .OBJ
COPYRT .ASM	DEMPAL .ASM	DEMSMD .ASM	SATURNX .BAS
DEMBLT .ASM	DEMPAL .OBJ	DEMSMD .OBJ	SATURNX1.BAS
DEMBLT .EXE	DEMPL .ASM	DEMST2 .ASM	SATURNX2.BAS
DEMBLT .OBJ	DEMPL .OBJ	DEMST2 .OBJ	SLANTPL .ASM
DEMC .ASM	DEMPOL .ASM	DEMXMD .ASM	UTILS .ASM
DEMC .OBJ	DEMPOL .OBJ	DEMXMD .OBJ	UTILS .INC
DEMCW .ASM	DEMSAT .ASM	LINKLIST	UTILS .OBJ
DEMCW .OBJ	DEMSAT .OBJ	POPALARM.EXE	115712 Byte

```
FMUG 7  -  UTILITIES              02-01-1985
ALPHAHEX.BAS    CRCK4    .COM    LPT12SET.BAS    STARTUP .BAS
BLUEBERY.BAS    D&CFORM  .BAS    MENUPRNT.BAS    STARTUP .CLR
BLUEBERY.DOC    EASYWORD.BAS    NECLABEL.BAS    TASKLIST.BAS
BLUEBRY2.DOC    EPSONSET.BAS    NICELIST.BAS    TEST2WRT.BAS
BLUEMENU.BAS    ESCKEY   .BAS    PC-COLOR.BAS    TESTWRIT.BAS
BOXINBOX.BAS    FILEDATE.BAS    PCADD    .GRA    TESTWRIT.DOC
BOXINPUT.BAS    GASFORM  .BAS    PEEKPRNT.BAS    TIMESHOW.BAS
BUSCHECK.BAS    HEADCLN  .BAS    PRNTCALL.BAS    WEIGHTFM.BAS
CALULATE.BAS    HEXPRINT.BAS    PROGHEAD.BAS    WORKFILE.BAS
CHEKFORM.BAS    HEXSAY   .BAS    QUICKBOX.CLR    WORKFILE.DAT
CHR$PRNT.BAS    IBMLABEL.BAS    RANDSEED.BAS    YESORNO .BAS
CIRCLE  .GRA    KEYSET   .BAS    SAMPLE   .TWD    YOURMENU.BAS
COLORSEE.CLR    LABELPRO.BAS    SAVINGS  .BAS    ZIPCLEAR.BAS
COMPOUND.BAS    LISTSKIP.10P    SHOWBOX  .BAS     14336 Bytes
CRC     .TXT    LISTSKIP.17P    SIXBOXES.BAS


FMUG 8  -  GENEALOGY             02-01-1985
ALPHAMAR.BAS    DIRECTOR.BAS    LISTMAR  .BAS    REFERENC.BAS
ALPHAPER.BAS    DISPLAY  .BAS    LISTPCI  .BAS    TABLEOFC.BAS
APPENDIX.BAS    FAMILY   .BAS    LISTPER  .BAS    UPDATMAR.BAS
CRC     .TXT    GENERAL  .BAS    MENU     .BAS    UPDATORD.BAS
CRCK4   .COM    INDEXMAR.BAS    PEDIGREE.BAS    UPDATPER.BAS
CREATMAR.BAS    INDEXPC .BAS    PRINTMAR.BAS    USINGTHE.BAS
CREATORD.BAS    INTRODUC.BAS    PRINTPER.BAS     13312 Bytes
CREATPER.BAS


FMUG 9  -  FREEWILL             02-01-1985
BANNER  .ASC    FREEWILL.ASC    PAGEIX   .ASC    PRINTING.DOC
C2      .BAT    FREEWILL.DOC    PAGEV    .ASC    TRUST
CRC     .TXT    PAGEII   .ASC    PAGEVI   .ASC    WILL
CRCK4   .COM    PAGEIII  .ASC    PAGEVII  .ASC    XXX
DISCLAIM        PAGEIV   .ASC    PAGEVIII.ASC     36864 Bytes
```

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THE MINDSET SOUND EDITOR

The ISV Toolkit, the software development package that provides function calls for "C" and Pascal programmers, also includes a graphics editor called Ida, and a sound editor called simply "Editor". The sound editor is an attempt to give the Mindset user easier access to the custom sound chips in the machine. GW Basic permits only limited manipulation of their possibilities. The editor, on the other hand, provides a dedicated "control panel" that permits the user to create virtually any sound or combination of sounds the Mindset is capable of. The control panel displays as a set of "gauges" on the screen that can be adjusted to control frequency, amplitude, attack/decay, AM modulation, FM modulation, and FM frequency ramping. In addition, a noise and sound mask are provided. If you know as little about sound and music as I do some of these terms may seem incomprehensible. That is not terribly important. The tool is designed for learning by doing. A given "gauge", say the frequency gauge, can be adjusted with either the left-right cursor control keys or by simply inputting a number corresponding to the frequency. The resultant note can be played by hitting function key 10. Consequently one does not have to be a musical expert to master the tools. One simply fiddles with the dials and knobs and listens to the results. Of course the musical expert will be able to exploit the system's possibilities more quickly and more intelligently.

Different parameters are selected by moving the up-down cursor keys. The selected parameter is highlighted (The panel is in color) in pink. In addition to the gauges, single letter commands can be issued at the keyboard to build sound lists (sequences of sounds which can be played back at a single key stroke), save the sound list to disk, or load a previously save soundlist back into memory. These commands consitute a crude editor, the limitations of which quickly become exasperating. Altogether, there are 19 single key commands including Append a sound to the soundlist (the sound generated by the current settings of the gauges), Get a previous sound from the soundlist (whereupon the editor prompts you for the numerical position of the sound in the list, and makes it the current sound, adjusting all the gauges to the correct parameters), and Display the soundlist (which displays all the parameter values associated with each sound). The duration of the sound may be specified and a pattern of sounds may be repeated up to 255 times by "looping." Looping involves placing a Begin-loop command in the sound list and an eNd loop command followed by the number of times the pattern is to be repeated. Loops, unfortunately, cannot be nested.

Almost immediately I began wanting commands not on the list. Music, after all, consists largely of repeated patterns, and repeating a pattern of sounds with the editor is a laborious processes, requiring that each sound in the pattern be gotten from the sound list and then append to the end. A tool similar to the "block move" in word processing would be helpful. In

fact, all the standard block options would be an improvement --- the ability to create, move, delete, and copy a block within a file or to another file, or the ability to read in a soundlist from disk and append it to the current one. Another nice feature would be the ability to play a block independent of the whole sound list. Listening repeatedly to the entire sound list in order to gauge the effect of the last two or three sounds is a time consuming process.

The problem with such complaints is that there is no alternative. If you are dissatisfied with your wordprocessor, there are 250 on the market. There is only one Mindset sound editor that I know of, so you are stuck. Developing a more complete one for a computer with such a small installed base seems like an exercise in financial gullability unless you do it purely for your own enjoyment.

The editor is not entirely bug free either. If you do not have the stereo module, never, and I repeat, NEVER change channels. It is a fatal error which requires more than a warm boot. You have to turn off the machine and start from scratch. Occasionally some incorrect input has caused the screen display to lose its bearings and creep upward with every carriage return, but this problem can be solved by hitting ESC, which rewrites the screen. I encountered a serious problem attempting to use the noise and sine masks. While the current sound could be altered using the noise mask and played back with F10, the modified sounds would not append to the soundlist, or rather, they could not be played back with F9 (which plays the entire soundlist) despite that fact that the editor clearly said the sounds were being appended. At one point, while using the sine mask, the whole screen became covered with a pattern of dashes and the machine froze. My recommendation for all users is save your files frequently. You never know what might happen next.

The documentation is skimpy, to say the least, about 9 pages. Considering the enormous potential of the hardware, and the complexity of the concepts involved, a few examples would have been helpful (Surely someone down at Mindset has come up with a way to make it sound like a fire engine or violin). I can only reiterate, however, there's not competition. You pays your money and you takes your chances. All in all, considering the ISV Toolkit comes with a graphics editor as well as the "C" and Pascal routines, and all this for a mere 100 American dollars, you can hardly complain to vociferously. I have spent many evenings creating tiny, if somewhat peculiar, musical inventions using the editor. I say, check it out music lovers. You too may be another Lawrence Welk.

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BY:

BRUCE SKOGEN

FMUG

FIRST MINDSET USERS GROUP
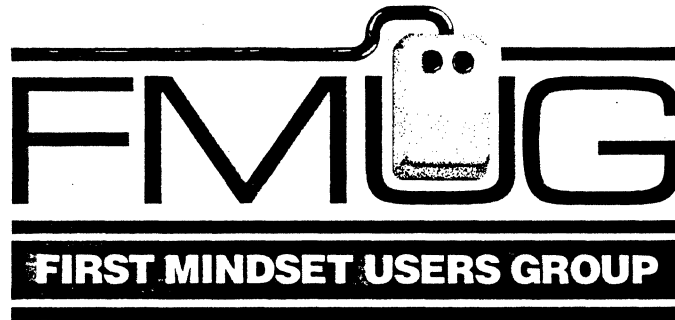
Newsletter #5, March 1985
First Mindset Users Group
355 15th Ave. #5
San Francisco, CA 94118
Newsletter subscription: $15 for 12 issues beginning with #1

News

The next meeting of F.M.U.G. will take place at Graphic
Reproduction, 981 Mission St. (near 6th), San Francisco, at 7:00
PM, Monday, March 18. Meetings are usually held the third Monday
of each month. Here is a list of the next three meetings:

        Monday, March 18   7:00 PM
        Monday, April 15   7:00 PM
        Monday, May   20   7:00 PM

We'd like to thank Jeff Patterson of Graphic Reproduction, who
provides his company's facility for our meetings and also prints
the newsletter every month, all at no charge. Not coincidental-
ly, Jeff sells Mindsets. In fact, his company placed a handsome
ad, which we'll reproduce in an upcoming issue, in a local Bay
Area biweekly, Computer Currents. Graphic Reproduction discounts
all Mindset hardware and software 20% and intends to continue to
sell Mindsets, which is more than can be said about certain
computer retailers that are currently closing out the line at
large discounts. Contact Jeff at (415) 777-9346.

Mindset Meeting

The February meeting of the First Mindset Users Group was hosted
by Mindset at their Sunnyvale offices. Mindset's Jim Hannon had
much of interest to show and say. We were treated to an impres-
sive demonstration of the Video Production System used with a
live video camera. The most interesting news concerned the
announcement of the Video Capture Module, described later in this
issue. In other news, we learned that instead of producing the
planned hard disk drive (10 megabytes for $1500), Mindset will
develop an interface in conjunction with the Xebec disk drive
company. Also, owners of standard Mindsets who wish to upgrade
to the Video Production System can simply buy a new genlocking
base unit and genlock box from Mindset for 30% off list ($1599 +
$799). Potential uses for your old base unit are left up to you.

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As for the current state of Mindset, Mr. Hannon told us that they are doing quite well with the Video Production System, and are in fairly good shape financially since the recent layoffs. There probably won't be a whole lot of new Mindset software in the immediate future. However, FMUG is going to try to work with Mindset to make available whatever products may have been almost ready available to members. We won't mention any specific products to avoid accusations of 'vaporware', but watch this space. At the end of the meeting, we had a chance to meet and chat with with some of Mindset's resident geniuses, also known as engineers, who were very friendly and informative. We thank Mindset very much for the opportunity to meet there, and hope that Sunnyvale meetings will become a regular occurrence.

Video Capture Module

This is an edited version of Mindset's press release:
The Frame Capture Module allows you to capture full color video images from any NTSC standard souce: VCRs, laser disks, video cameras, and broadcast video. Images are captured in real-time at frame refresh rates. Once captured, images can be manipulated with Lumena and Designer. (We assume that if images can be used with Designer, than they can be saved using MGI - ed.).

The Mindset Video Capture Utility software package provides control over the Module through a menu-driven interface, used with keyboard or mouse. With a single keystroke the utility captures a frame, selects the best color representation from the 512 available colors and displays the image on the screen.

Here are the specs:
Video input (75-ohm):any standard signal from:
    - 1/2, 3/4, and 1-inch videotape (consumer or broadcast
grade)
        - laser disk
        - video camera (consumer or broadcast grade)
        - TV broadcast
Video output (75-ohm):video loop-thru to allow viewing of image
to be captured.
Capture Resolution: 320 x 200 x 12 (4096 colors/pixel)
Display Resolution: 320 x 200 x 4 (16 colors out of 512)
Capture time: 1/60 second
Color mapping time (Video Capture Utility): 3 seconds
Interfaces to Mindst computer via Video Capture Interface Module
Operates with standard Mindset Computer System or Mindset Video
Production System
Dimensions: 12" w x 10" d x 1.1" h
Powered by external AC adaptor

That's right folks -- you don't need a genlocking base unit to use this baby! The Video Capture Module should be available in April 1985, and will cost around $1500. We were shown a number of impressive-looking images captured with the Module, although we didn't get to see an actual capture. The price puts it out of range of the casual user, but those using the Mindset for profes-

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sional applications, particularly with video, should find it most
useful. Contact Mindset at (408) 737-8555 for further information.

New Logo

Notice the new logo? It was provided by member Gary Nickerson of
Metairie, who uses a Mindset in his advertising business. Nice
work, Gary! We have other logo submissions you'll be seeing in
months to come. Incidentally, we welcome submissions of artwork
for publication in the newsletter. As evidenced in newsletter
#4, we've been getting nice results using PC Paintbrush in the
640-by-400 mode and printing out on an inexpensive Gemini prin-
ter. We've received some beautiful color slides produced by Bill
Hood of San Luis Obispo, California, not to mention a dynamite
address label, which we unfortunately can't reproduce in this
medium. We're considering compiling a disk full of images
created by members with Lumena, Designer, etc. to make available
to members, if there's sufficient interest.

Wanna Buy a Vyper?

Synapse Software of Richmond, California has kindly agreed to
allow the First Mindset Users Group to make Vyper available to
its members for $25. If you've seen this arcade game in action,
you know that it's easily the most impressive demonstration
available of the Mindset's graphics and animation capabilities,
not to mention a hell of an exciting game. For further infor-
mation, see the review in issue #1 of this newsletter.

      A Mindset joystick ($40) is required to play Vyper. If
you're interested, send a check for $27 (including $2 shipping)
to the address above. By the way, FMUG makes nothing on this --
the whole $25 goes to Synapse, the one company that had faith
enough in the Mindset to invest their time and energy into de-
veloping this great game.

Thanks to member Mark Hapner for this long contribution. We
welcome articles, reviews, commentary, or anything else you'd
like to contribute to the newsletter.
                                                      - ed.

Modula 2 and the Mindset
by Mark Hapner

              The Modula 2 Language on the Mindset

The Modula 2 language is a relatively recent arrival on the scene
of computing. Recently there has been quite a lot of information
published about it. The reference list contains a few sources of
information.   This article contains some of the things I think

are significant about the language and some of my impressions of
its use on the Mindset with the Logitech compiler. I will
contrast Modula 2 with both C and Pascal since all are trying to
meet the same need.

In order for you to put my views in perspective I'm including the
following info on my background. I have been interested in
computer languages for a long time. I've used Fortran, Cobol,
PL/1, Pascal, and several assembly languages extensively. I also
attended several government sponsored meetings on Ada and have a
high degree of familiarity with it(although I have not actually
programmed using it). I have scanned the C manual and talked to
users, but have not used it myself.

Until recently, performance on micros required assembly language.
Good C compilers for the PC have recently become available and
applications using C are just beginning to enter the commercial
market. C is not an assembly language because it hides the
architecture of the machine from the programmer. It is not
considered a high level language because it lacks features like
data structuring. It makes up for this by providing more freedom
and higher efficiency. The freedom is provided whether you want
it or not(in much the same way that assembly provides freedom).
Since it has been accepted by developers, extensive libraries of
functions for windowing, B-tree files, etc. now exist.

C does not contain a single feature which is considered to
have advance the state of the art in programming. In fact it
ignores several features which are considered to be highly
important, like Pascal's strong typing. Its major contribution
to computing is that it has the requisite facilities for system
level development and is portable. Its simplicity allows it to
be rehosted without a significant loss of efficiency. Its
acceptance has spawned a beneficial spiral of interest and
availability.

The problem with C is that it contains little of the technology
which assists in the development of complex software(to be fair,
some of the tools within Unix do make up for this to a small
extent). The net result is that software written in C is
inherently less reliable and more complex than it need be.

The bench mark data in the PC Tech reference compares Microsoft
Pascal and C compilers. It shows that they are about the same in
execution efficiency. This illustrates that inclusion of
Pascal's data structuring and strong typing does not force a loss
of performance. It's the quality of the compiler that makes the
difference.

The reason that Pascal is not used more for commercial software
is that it contains restrictions that limit its application to
smaller non-system level problems. Some implementations have
tried to improve this situation by extending the language. These
extensions suffer from lack of portability and poor design.

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Modula 2 is not Pascal with some new features tacked on. It is a completely new language which is designed to handle problems of broader scope. It keeps some of the technology pioneered by Pascal and drops some of the features of Pascal which limited its application. Some have criticised Modula 2 for the lack of a pet feature. It is not perfect. Modula 2 is far more than the sum of its parts. The integration of its features into a minimal but highly functional whole is its best feature.

The basic hypothesis of Modula 2 is that software can be developed at a higher level with no significant loss of efficiency. Just as Unix was written in C, Wirth(the designer of Pascal and Modula 2) wrote an operating system for his Lilith computer in Modula 2.

Both Modula 2 and Ada attempt to take up where Pascal and C left off. They are designed to help the programmer to develop modules with well defined interfaces. The user of a separately compiled module gets the same level of type checking as procedures within his own unit. In addition, a method of naming is introduced so that two modules that contain an identifier of the same name can both be used without conflict. In addition both languages provide system level facilities to escape type checking and access hardware when needed.

Ada, with present implementations, cannot begin to challenge C in performance or cost. Modula 2 can and does. Until Ada can make this challenge(and compile on its target machine) it is not worthy of much discussion.

The Logitech Modula 2 compiler(Modula-2/86) release 1.10 is a high quality professional software development system for all MS-DOS based machines. It is a later version than is tested in the PC Tech reference. Its major enhancements are improved compilation speed(it was slow, now its well within reason), 8087 emulation(needed by us since Mindset designed out the 8087), and improved speed of pointer dereferencing(the only major inefficiency found in the bench mark). I ran the PC Tech benchmark on the Mindset and found that the times for Logitech Modula 2 met or bettered the times for Microsoft Pascal. This is to be expected since the Mindset is faster than the IBM PC used for the benchmark.

Logitech Modula 2 includes full access to DOS facilities and several other modules for IO and other useful things. Its cost is $495 and a runtime debugger costs an additional $250. Most of the complaints in the PC Tech review have been addressed in the 1.10 release.

As an example of the capability of Modula 2, I have included a Module I wrote to interface to the Mindset display processor operations. The complete interface produced 287 bytes of code and consists mainly of moving parameters from the Modula 2 parameter stack to registers and back. Its major benefit is that

it provides a highly symbolic and thoroughly type checked interface to the functions.

This example consists of two compiler listings. The first is the compilation of the definition of the display processor module(DSP). This must be produced and compiled before users of the module can compile and before the implementation of the module can be written. When it is compiled it produces a symbol dictionary for the module which is referenced when the definition is referenced. Other languages usually require copy files which must be parsed each time they are referenced. The second listing is a simple program that sets a few of the display parameters.

The implementation of the module is not shown since its a bit too long for this article. Typically each operation required three or four lines of code. Most statements were assembly code inserted using the Logitech facility for execution of data values. The implementation of the display processor module is not portable. Its definition is potentially portable.

When a module interface is compiled it is assigned a unique id. When it is recompiled this value is changed. If either an implementation or a user of the module has not compiled with the latest version of the interface the linker reports an error. This prevents the loss of interface validation caused by interface revision. The implementation of the module can be changed at any time without recompiling users as long as it uses the current version of the interface. This assumes that the implementation has remained faithful to the intent of the interface. Since the compiler cannot judge this, it does not attempt to do so. When a change in intent occurs, it is up to the developer to determine the code affected.

Rather than continue to discuss generalities, I have heavily annotated the example. Those familiar with Pascal should have no trouble picking up Modula 2. For those interested in experimenting with Modula 2, the $50 interpreter noted in the references is a cheap alternative. Performance is about 15 times slower than Logitech version but about the same as Pascal on the P system. The Volition Modula 2 is a definite loser in price/performance ratio. I have no knowledge of the other two compilers referenced.

Packages with the same facilities as those offered for C should appear soon for Modula 2. I do not know of any commercial products yet written with Modula 2; however, given the quality of the Logitech compiler I would expect some soon.

The runtime debugger provided by Logitech is an excellent example of a quality tool. It will debug up to a 90k program with overlays on a 256K system. No special compilation is needed, it uses reference files produced as a normal part of compilation to support breakpoints at the statement level and to query and set data values. This is done with the full text of the program visible on screen: no reference to listings is required.

If you are contemplating buying a C compiler for $350, spend an
extra $150 and get Logitech Modula 2.   Its a superior tool in
every respect.   Interface Technologies Modula 2 might also be
worth checking out.   They make some strong claims. Rumor has it
that Borland is about to announce a Modula 2 compiler.

References

Wirth, N.W., Programming in Modula 2, 2nd Edition, Springer-
Verlag, 1982, 173 pages.

Richard Gleaves, Modula 2 For Pascal Programmers, Springer-
Verlag, 1984, 145 pages.

PC Tech December 1984 reviews three Modula 2 implementations -
Logitech, Volition, and Modula Research Institute.

Byte August 1984 has several articles on Modula 2

Implementations on IBM PC and compatibles

Modula-2/86 release 1.10, Logitech, Inc., 805 Veterans Blvd,
Redwood City, Ca., 94063, ph. 415/365-9852, $495, runtime
debugger $250, extended utilities $50.

Modula-2(Interpreter) release 0.3p for UCSD P system, Volition
Systems, P.O. Box 1236, Del Mar, Ca., 92014, $395.

M2M-PC(Interpreter) release 1.34, Modula Research Institute, 1673
West 820 North, Provo, Utah, 84601, ph. 801/375-7402, $40.

Modula 2 integrated with syntax directed editor, compiler,
linker, and utilities, Interface Technologies, 3336 Richmond,
Houston, Texas, 77098, ph. 800/922-9049, $249.

Modula 2(Interpreter), Modula Corp., 950 N. University Ave,
Provo, Utah, 84604, ph 801/375-7400 or 800/LILITH2, $90.

(*
The following is an example of a Modula 2 program which uses the
Mindset display processor module to set the graphics mode and
initialize the palette. This is done only when the Mindset is in
Genlock status.   This is a main program module because it does
not state that it is either a DEFINITION or IMPLEMENTATION
module.
*)
MODULE EXAMPLE;

(*
The import line lists the modules referenced by this module.
This method of import gets all identifiers exported by the
module.   To reference them in this module requires that they be

proceeded by their module name. Another form of import allows a specific list of identifiers to be named. These are made local to the routine(as long as no conflicts exist) and can be referenced without the module name prefix. Every use of a DSP identifier is cross checked against the content of the definition module. This is accomplished efficiently because the complier produced a symbol table for the definition when it was compiled.
*)
IMPORT DSP;

```
(*
The variables needed for the program are declared
VAR
myPalette : ARRAY[0..3] OF DSP.ColorS;
oldMode : DSP.ScreenModeE;
oldStatus : DSP.StatusS;
oldBitsPerPixel : CARDINAL;

BEGIN

(*
The current screen mode is queried.
*)
DSP.GetScreenMode(oldMode,oldStatus,oldBitsPerPixel);

(*
The IN operator tests for the existence of Genlock in the
oldStatus set variable.
*)
IF Genlock IN oldStatus THEN
    DSP.SetScreenMode(M320x400x2);
    myPalette[0] := DSP.Red;
    myPalette[1] := DSP.Green;
    myPalette[2] := DSP.Blue;
    myPalette[3] := DSP.Black;

(*
The four entries in myPalette are placed in the first four
entries of the Mindset palette. Entry three(Black) is chosen as
the background color.
*)
    DSP.SetPalette(0,4,0,3,myPalette);
END;

END EXAMPLE.(*
```

This is the definition of the Mindset Display Processor module. It defines the interface to all available Mindset display processor primatives.
*)
DEFINITION MODULE DSP;

```
(*
The  export list of a definition module lists all the identifiers
that  can be referenced by a user of the  module.   This implies
that  some identifiers may be used in the definition but can only
be  referenced  by  the  implementation.   This  is  not  done  in
practice.   Wirth has recommended that the export list be dropped
from the language. I agree.

Note  - Case  is  significant in Modula 2,  also  the  underscore
cannot  be  used  in the language because it is not in the  ascii
character set.
*)
EXPORT QUALIFIED
    ScreenModeE, StatusE, StatusS,
    GetScreenMode, SetScreenMode,
    Monitor, ColorTV, BWTV, SetDspDevice,
    SyncFeatureE, SyncFeatureS, SetSyncFeatures,
    ScanLineC, ScanDiagnosticE, SetIntScanLine,
    ColorE, ColorS,
    SameBorder,
    Black, Grey, Scarlet, Ochre, Forest, Turquoise, Navy, Violet,
    Steel, White, Red, Yellow, Green, Cyan, Blue, Magenta,
    SetPalette, GetPalette,
    Done, WaitIntRtn, Wait, SetIntRtn, DisableInterrupt,
    SwitchActiveBuf,
    BorderIndexC, ColorIndexC, ColorTableLengthC, InterruptPR;



(*
The  types  used  in general are  listed  here.   The  types used
exclusively  with  a  particular function  are  listed  with  the
function.  The  only restriction is that they are declared before
they are used.
*)
TYPE

(*
These  cardinal  types are declared  with  restricted  subranges.
Checking  to  verify  that the subrange is not  violated  can  be
optionally included at compile time.
*)
BorderIndexC = [0..16];
ColorIndexC = [0..15];
ColorTableLengthC = [0..16];


(*
This  declares  a  procedure  type  with  no  parameters  as  an
interrupt  procedure.   Modula  2  allows  procedure
types(implemented  as addresses) to be be declared and passed  as
parameters, used as fields in a record, etc.
*)
InterruptPR = PROCEDURE;
```

```
(*
This  is  an  enumerated  type that contains  a  symbol  for  each
Mindset display mode.   The order is significant.   It determines
that  the  mapping  of  the  value  used  by  the  compiler  will
correspond to that required by Mindset.   In this case M320x200x1
will  be assigned a value of O because it is first in  the  list.
This is like Pascal.
*)
ScreenModeE = (M320x200x1, M320x200x2, M320x200x4, M640x200x1,
            M640x200x2, M320x400x2, M640x400x1);
(*
This  is an enumerated type that contains a list of status values
for  the Mindset.   Here order is important for  another  reason.
The  value  assigned by the compiler determines the bit  position
used for the enumerated value when a Set(bit vector) of the  type
is  defined.   In this case ApaMode is assigned the second  least
significant bit position.  The values DSPS1, DSPS2, etc. are used
as  place  holders  for bit positions unused by  Mindset  in  the
status word.   Once this is defined to correlate with Mindset the
user  of  the module does not need to worry about  position.   He
simply  tests  for the existence of the status values  using  set
constants similar to Pascal.
*)
StatusE = (DSPS1, ApaMode, CharMode, DoubleBuf, HZ50, DSPS2,
            Interlaced, DSPS3, ExternalSync, Genlock,
            Buf2Displayed, Col80, DSPS4, PAL, TV, BlackWhite);
StatusS = SET OF StatusE;


(*
These are procedures to set and get the screen mode.   The  types
and  mode of each parameter is defined.   VAR means the parameter
can  be  used for output and is passed by address.  Lack  of  VAR
means    that    the   parameter   value   serves   to  initialize    the
corresponding parameter in the called routine. Any changes to its
value are invisible to the calling routine.
*)
PROCEDURE SetScreenMode(Mode: ScreenModeE):
PROCEDURE GetScreenMode(VAR Mode: ScreenModeE;
                        VAR Status: StatusS;
                        VAR BitsPerPixel: CARDINAL);


TYPE
DeviceE = (MonitorDev, BlackWhiteDev);
DeviceS = SET OF DeviceE;


(*
The   constants   are  defined  below  so  that  the  appropriate
combinations  of  elements  in the device set are  used  for  the
desired purpose.   The user could provide the set literal himself,
but having the constants makes it a bit easier.
*)
CONST
Monitor = DeviceS{MonitorDev};
```

```
ColorTV = DeviceS{};
BWTV = DeviceS{BlackWhiteDev};

PROCEDURE SetDspDevice(Device: DeviceS);


TYPE
SyncFeatureE = (GenLock, SF1, InterlacedSync, FixedPhase);
SyncFeatureS = SET OF SyncFeatureE;

PROCEDURE SetSyncFeatures(SyncFeatures: SyncFeatureS);


TYPE
ScanLineC = [1..199];
ScanDiagnosticE = (On, Off);

PROCEDURE SetIntScanLine(ScanLine: ScanLineC;
                         Diagnostic: ScanDiagnosticE);


TYPE

(*
These are the bit definitions of the palette entry.
Since  the Monitor colors are defined as constants later on,  the  normal
user  would not refer to them when in Monitor  mode.  If  ColorTV
mode is used more constants could be added or direct manipulation
of the bits can be done.
*)
ColorE = (TR1,TR2,TR3,TG1,TG2,TG3,TB1,TB2,TB3,TK,UU1,UU2,
          MB,MG,MR,MI);
ColorS = SET OF ColorE;

CONST
SameBorder = 16;

(*
These  are  the  color constants.   Note that they  include  both
Monitor  and  ColorTV  bit values.   The  ellipsis(..)  means  an
inclusive range of values.
*)
Black = ColorS{};
Grey = ColorS{TR1,TR2,TG1,TG2,TB1,TB2,MR,MG,MB};
Red = ColorS{TR1,MR};
Ochre = ColorS{TR1,TG1,MR,MG};
Forest = ColorS{TG1,MG};
Turquoise = ColorS{TG1,TB1,MG,MB};
Navy = ColorS{TB1,MB};
Violet = ColorS{TB1,TR1,MB,MR};
DkGrey = ColorS{TR1,TG1,TB1,MI};
White = ColorS{TR1..TB3,MB..MI};
Red = ColorS{TR1..TR3,MR,MI};
Yellow = ColorS{TR1..TR3,TG1..TG3,MR,MG,MI};
Green = ColorS{TG1..TG3,MG,MI};
```

1

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```
Cyan = ColorS{TG1..TG3,TB1..TB3,MG,MB,MI};
Blue = ColorS{TB1..TB3,MB,MI};
Magenta = ColorS{TB1..TB3,TR1..TR3,MB,MR,MI};

(*
The user controls the palette by declaring an array of colors  of
any length desired,  setting a range of entries in the this array
to  the  colors desired and mapping this range into  the  Mindset
Palette.   As  an  example,  if I wanted the palette  to  contain
Scarlet,  Navy , Cyan starting at  entry 5, I  would  do  the
following:

VAR
MyPalette : ARRAY[0..2] OF ColorS;

MyPalette[0] := Scarlet;
MyPalette[1] := Navy;
MyPalette[2] := Cyan;
SetPalette(0,3,5,SameBorder,MyPalette);
*)
PROCEDURE SetPalette(SourceIndex: ColorIndexC;
                     SourceLength: ColorTableLengthC;
                     TargetIndex: ColorIndexC;
                     Border: BorderIndexC;
                     VAR Palette: ARRAY OF ColorS);
PROCEDURE GetPalette(SourceIndex: ColorIndexC;
                     SourceLength: ColorTableLengthC;
                     TargetIndex: ColorIndexC;
                     VAR Border: ColorIndexC;
                     VAR Palette: ARRAY OF ColorS);


VAR
Done: BOOLEAN;

PROCEDURE WaitIntRtn;
PROCEDURE Wait;
PROCEDURE SetIntRtn(IntRtn: InterruptPR);
PROCEDURE DisableInterrupt;

PROCEDURE SwitchActiveBuf;

END DSP.
```

Low-Cost Modems

Byntel, 530 Flyon Dr., Raleigh, NC 27606 (919) 828-4626, offers a
1200-baud refurbished modem for $130. Contact them for further
details. Also, Business Computer Network, 2533 S. Hwy. 101, Ste.
210, Cardiff-by-the-Sea, CA 92007, offers a 1200-baud modem plus
software and literature for $200. Phone 1-800-446-6255 or 1-800-
442-0982. **Caveat emptor** on both of these, of course.
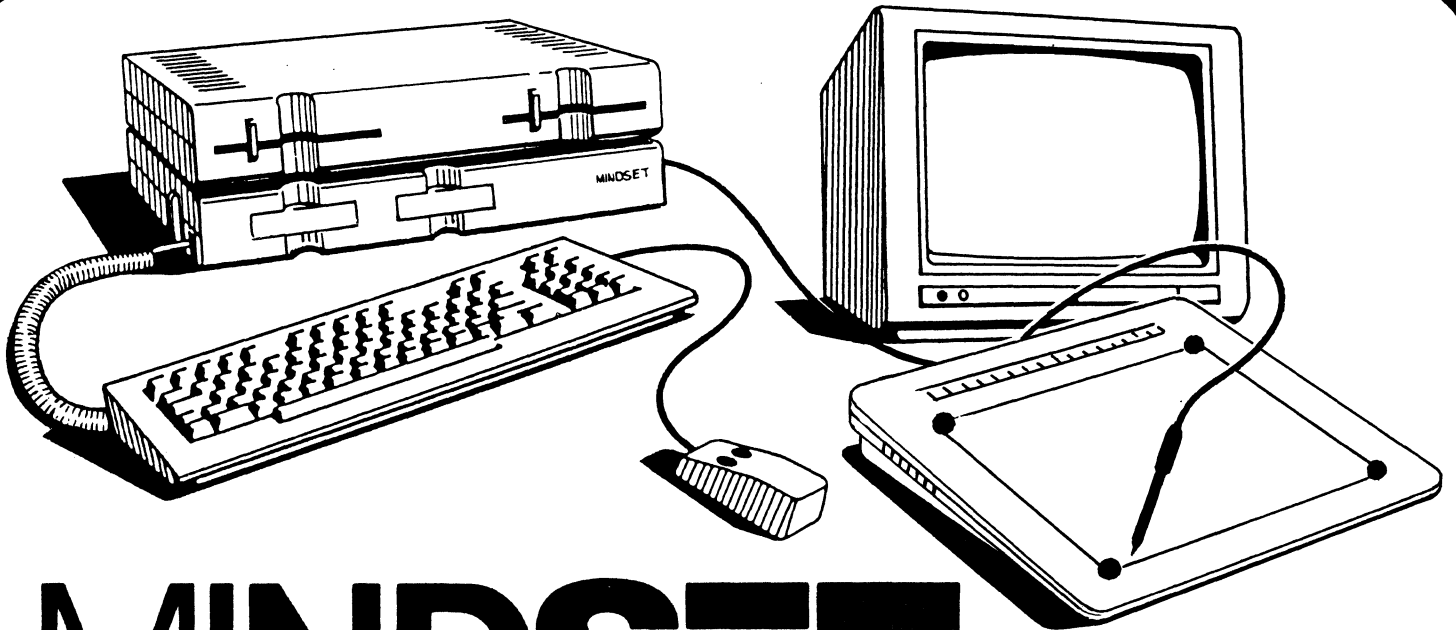
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First Mindset Users Group
Newsletter #6 April, 1985
333 Escuela Ave. #109
Mountain View, CA 94040
(415) 961-0367

USER GROUP NEWS

Due to a recent change of employment and address by your editor (please
note new address and phone above), this newsletter will be brief -- our
apologies. By the way, we're currently working for Atari Corp., so if
you have any questions about Jackintosh, get in touch.

The next meeting of F.M.U.G. will take place at the home of member
Virginia Dean, 1830 Woolsey St. in Berkeley near the Ashby BART station.
From Route 80 take the Ashby exit east, then take a right turn on Martin
Luther King Jr. Drive (formerly Grove), then take a right turn two
blocks down onto Woolsey and park. There is no set topic for the
meeting, so please bring anything you'd like to talk about. Meeting
time is 7:30 P.M. Many thanks to Virginia for providing her home for
this meeting.

For various reasons, including conflict of interests, F.M.U.G. meetings
will no longer be held at Graphic Reproduction. We welcome suggestions
for nonpartisan alternatives.

COMPATIBILITY UPDATE

A great new strategy game for IBM PC that doesn't lock up too often on
Mindset is The Ancient Art of War from Broderbund Software, San Rafael
CA. We're not particularly fond of war games, but this one is special.
We'll print a review soon.

Also, Mindwheel, a great new text adventure from Synapse, is available
now. If you like Infocom games, you should find Synapse's 'Electronic
Novels' intriguing.

TECH TALK
by Jeff Gortatowsky

       I have a couple of corrections to make regarding the published
notes I uploaded to CIS. The information on RS232 port locations was
only valid if you had your RS232 module installed in the system unit's
left slot (looking from the back). In my own defense that artical was
written long before I ever received my ISV or PDL. I gleaned the info by
tracing the RS232 interrupts and DOS location 0040:0000 hex. By the way,
that DOS location is as good as any for determining if a RS232 port is
available. Or you can use the GET_MODULE_ID function of the extended
BIOS. My guess that certain IBM RS232 ports were shadowed in the Mindset
was confirmed in the ISV tool kit documentation. I'm continuing work on
Mindcom. Mindcom is my own idea of how a terminal program should work.
I've scrapped most of my initial assembler code for C . So it looks like
it will still be sometime before Mindcom comes to the public domain.

Now that I've finished the corrections, time for some reflections. I received my ISV toolkit with no licensing agreement so until someone sends me one or tells me I don't need one I'll have to write my own routines. Looking at some of code that comes with the ISV I believe I can do better anyway (don't all programmers!). Some day I hope to use the PASCAL code with TURBO, but I haven't investigated how much modification is needed. Any takers on that one? Another disappointment with the tool kit is the triviality of the example code. No animation, no VBLANK examples, and no source for the editors. More disappointments, no GCP instruction set or MASM macros for it, no 186 macros, no internal port locations, and no ROM source. Come on Mindset! If IBM can release this information, you can too. All that public domain stuff out there just waiting to be enhanced on the Mindset, and we can't get the information needed to really make the machine shine. I think the success of the APPLE IIe and IBM-PC prove that an open system is the way to go. Are Mindset sales that good? Is Mindset so rolling in dough that releasing this information is not necessary? I think not. Drop the price and open the machine up! Do away with the Macintosh attitude. The machine is just too damn good to die a slow death because of 'closed system' thinking at Mindset.

Any Hardware people out there?

I got ahold of a 80186-3 (8mhz) and a 16 meg crystal. The problem is I don't have the nerve to try it! Aside from the obvious baud rate divisor problems, etc., would the machine run? Could the GCP handle the heat? Would the DCP timing be off? Is the DCP clocked off the CPU? Anyone who has the answers to these pressing questions, I'd like to hear from you.

What does everyone think about most expensive 128k expansion board ever devised? 400 dollars! Current 4164 RAM prices are $2.50. Lets see.... we'll need 16 of 'em. At $2.50 apiece thats....wait....umm ....well I come up with $40. Thats single quanity price by the way. $360 bucks for a new backplane and a pc board, labor, etc.? Oh well, when it's the only game in town...... . Bring on the AMIGA. (and Jackintosh - ed.)

Don't get me wrong. I love the computer! It's the company that irks me. All the programmers and users I've shown the machine to love it. But I feel obligated to tell them that it's a closed system. The smiles leave their faces, especially the programmers, and they all head back to their IBM's. SIGH... I don't want to make the newsletter my personal gripe forum. But being in New York it's the only way to communicate with other Mindset owners.

Next time I hope to have some code for you.

Jeff Gortatowsky
CIS [70516,751]

PS. If I can write so can you! Let's help Dave out.

(to which we add Amen! Please send in graphics, articles, reviews, or anything else to help fill this newsletter.) Thank you, Jeff.

FIRST MINDSET USER GROUP
c/o David Duberman
333 Escuela Ave. #305
Mountain View, CA 94040
(415) 961-7051
Newsletter #7 -- May 1985

MAY MEETING & NEWS

The next meeting of the First Mindset User Group will take place
Monday, May 20 at 7:30 P.M. at the home of Josepha Haveman. The
address is 47 Del Mar in Berkeley. From University Ave. heading
east, go north about four blocks, then right on Cedar. Take
Cedar to the end, or top, then left on La Loma. Take La Loma to
the end, then right on Glendale. At the end of Glendale, turn
right on Del Mar. Josepha's is the second driveway on the right
side.

Please note the change of address and new phone number above.
The apartment number differs from that printed in the previous
newsletter, as does the telephone number -- last month's number
was incorrect. We understand some mail has been returned
"Addressee unknown" -- the problem with the post office should
be straightened out by the time you read this, so please try
again. If you are owed any back issues, please let us know --
two moves in one month tends to scatter records. Please keep in
mind that back issues are in short supply. If you're receiving
this newsletter but haven't paid your dues ($15), this may be
your last issue. Please send a check to the address above.

        MY LIFE WITH THE MINDSET AND OTHER REVIEWS
        by Greg Wood

        I think I bought the Mindset over other computers because I'm
really more of a visual person rather than verbal. However, Jeff
Gortatowsky's call for the rest of us FMUGgers to write woke me
up. So I would like to express my views on some of the software
I'm using and also leave some questions for someone to answer
since I'm stuck down here in L.A. (Santa Monica to be exact 213-
453-2936) By the way, couldn't FMUG list members with area of
interest and phone numbers? (It's in this newsletter - ed.)

        First off I want to recommend a word processor to anyone who
has not bought one yet since this one is only $25 and seems to do
what you want although I'm no expert.   Its called My Word! and
it's available by mail from TNT software,34069 Hainesvelle Road,
Round Lake, IL 60073. The author, Bruce W. Tonkin, claims it's
better than wordstar and it may be. Phone is 312-223-8595.

        Next software I can totally recommend is Odesta chess for the
Mindset. It seems a bit expensive: around $75 but if you like
chess at all or want to learn about chess this program is fantas-

tic. The pieces actually leap around the board in 3D with a
shadow moving along under the piece. There is a menu with all
kinds of features like taking back moves or playing back the
whole game. There is also a library of about 30 famous or inter-
esting games that you can play back and study. And you can store
your own games on a separate disk if you want. So far I have
done as well as level 3 and I'm somewhere between a novice and an
unrated player. I'm sure it will challange most, except the
super high rated master types. Besides all the great features I
have not even mentioned yet there is one thing that I consider a
drawback. There is no way to get a screen dump of the chess
board because the program is copy protected. If someone has an
answer I wish they would let me know. I think it would be the
ultimate way to play chess by mail (or over the phone?). By the
way, My Word! mentioned above is not copy protected. Odesta's
address is 3186 Doolittle Drive, Northbrook, Il 60062. Phone is
312-328-7101. To order : 800-323-5423. One other thing: instead
of a mouse it uses the arrow keys and return which works just
fine.

     I'm not sure whether to recommend this next item or not but I
feel it's at least worth knowing about. The HP Thinkjet is a
pretty neat printer. However if you want to hook it up to a
Mindset it doesn't work correctly unless you put a buffer in
between. I was getting transposed letters like w instead of s
until I put a Quadram parallel in/parallel out buffer in between
the computer and the printer. However, I managed to write a
nifty screen dump program in GW basic which takes a high resolu-
tion image (640x400), peeks the screen buffer, and sends those
little byte critters out to the printer which has a resolution of
640 dots (or double if you want) by whatever you want. I disco-
vered that the printer works better in the HP mode settings than
the IBM settings. So all in all for $500 (or less if you search)
(then $120 for the buffer) it's working out okay. The thing I
really like is that it is quiet--much more quiet than an epson.
And it's very compact. However, not without its problems in fact
if you really send out a complicated picture some of the dots get
shifted so it's okay but I shouldn't recommend it. Of course
it's not color either. Hey--I'm cheap!

     Lets face it--you get more color in Vyper on your TV, and I'm
writing this on an Amdek video-300 green screen.

     Moving right along. I've been working on a perspective
program for the Mindset that would be similar in concept to a
program called Mega Cadd for the IBM. I figured a great graphics
engine like the Mindset would have some cool perspective soft-
ware, but noooooooo. (I know Lumena has a perspective tool but I
need more than that) Mega Cadd thinks it's not worth the time and
this brings me to another question for someone out there: Why is
it so hard to adapt an IBM program to Mindset? Anyway I gave up
waiting and started writing my own perspective program in GW
BASIC and being a novice makes it pretty difficult but so far I
can use my mouse to draw a simple floor plan and then pick a
point to view it from with the mouse and come up with a perspec-

tive shot of the plan. Then I print it out on my Thinkjet. If I
could just make it a bit more sophisticated I might be able to
actually use the program in my work which is, you guessed it,
architectural illustration--mostly technical stuff for other
illustrators. I would welcome any input from
other members on this subject.

     Along the way to understanding programing, I've picked up a
few books which have answered many questions. Here is a bibliog-
raphy with comments:
     THE MBASIC HANDBOOK by Walter A. Ettlin and Gregory Solberg,
Osborne/McGraw-Hill. 1983. This book answers many of the ques-
tions unanswered by the GW BASIC documentation for the Mindset.
I guess MBASIC is a subset of GW BASIC.
     IBM GRAPHICS FROM THE GROUND UP by David E Simon, Hayden Book
Company. 1984. Has the best explanations of how to make music
and how to write a screen dump program in BASIC plus lots of
graphics info. Seems to all work in GW BASIC. Except for the
BSAVE/BLOAD bug. Does anyone know a simple way to write a spe-
cial BSAVE/BLOAD DEF FN? Will it ever be fixed?
     MICROCOMPUTER GRAPHICS FOR THE IBM PC by Roy E. Myers,
Addison-Wesley Publishing Company, 1984. Best explanation of the
geometry of computer graphics with a good section on perspective.
     GRAPHICS MADE EASY FOR THE IBM PC AND XT by Gabriel Cuellar,
Reston Publishing Company, 1984. Lots of examples of graphics.
     ASSEMBLY LANGUAGE PRIMER FOR THE IBM PC AND XT by Robert
Lafore, (the Waite Group), New American Library, 1984. I only
wish I had more time to discover all the great stuff in this
book. I'm sure it would open the key to understanding the Pro-
grammer's Development Library by Mindset. Lafore really wants
you to understand whats going on. In contrast, I find THE 8086-
8088 PRIMER by Stephen P. Morse to be totally confusing. Its for
people who already know what's going on and why would they need
it?

     I don't know if you will be reading this in time but the
COMPUTER GRAPHICS '85 will be at the Los Angeles Convention
Center June 25-27,1985. Last year I got my first peek at Mind-
set. If Mindset shows up again it will be another opportunity to
figure out what they're up to.   The show last year was computer
graphics heaven. Sponsored by the National Computer Graphics
Association (703) 698-9600. The cheapest way to go is to send in
an application and $10 fee for non-member exhibits only.

     So that's the end of this article. One other question:
What's the highest level anyone has made it to on Vyper? (I've
gotten to the 3rd).

(Ed. note -- Thanks to Greg for the above interesting article.
Incidentally, Greg, not a hardware hacker by any means, recently
replaced one of his disk drives that had gone bad with a $100
mail-order Shugart DSDD drive at a substantial savings over
repair cost. We expect to print Greg's article describing the
experience soon.)

COMPATIBILITY UPDATE

Vic Wong has volunteered to help coordinate the task of
maintaining the list of commercial MS DOS programs that work with
the Mindset computer. If you come up with an interesting
discovery please drop a line to: Victor L. Wong, 2 Panoramic Way,
Apt. 206, Berkeley, CA 94704, or call (415) 841-7106. Vic wants
to know about all software tested, even programs that don't work,
with comments on small incompatibities and necessary patches.
Here is a list provided by Vic of software we've discussed at
recent meetings:

1. Sidekick (Borland) -- Compatible
   Non-copy-protected version only. Leaves blinking residue on
   screen occasionally upon exit.
2. MaxThink (MaxThink) -- Compatible
   Non-copy-protected version only. Available only from
   MaxThink, Oakland, CA.
3. Pop-Up Desk Set (Bellsoft) -- Compatible
   No obvious problems.
4. Smartkey (Software Research Tech.) -- Compatible
   No obvious problems.
5. Norton Utilities (Norton) -- Compatible
   Version 2.0 works. Version 3.0 should.
6. AutoCad (Autodesk) -- Compatible
   Locks up after save (save is successful) and on call to help.
7. Electric Dragon (Baen) -- Compatible
   Computer version of I Ching. Menu selection depends on high-
   lighting unsupported by Mindset.
8. Copy II PC (Central Point) -- Incompatible
   Used on an IBM PC can make backup copies usable on the Mind-
   set, but locks up when used on Mindset. (Also CopyWrite -
   ed.)
9. dBase III (Ashton-Tate) -- Incompatible
   Locks up on full-screen commands.
10.Word Challenge (Proximity) -- Incompatible.

We can make a couple of additions to the list. Last year Atari
began a division called AtariSoft that makes (mostly game) soft-
ware for computers other than its own. Most of the PC versions
of AtariSoft games don't run on the Mindset, but Pac Man does.
Also, a new program called Mindreader, from Businessoft, Inc.,
703 Giddings Ave., M-4, Annapolis, MD 21401 seems to run on the
Mindset. The program is described on the box as a complete
writing system for business people who write but don't like to
type. You can type the first few letters of a word, then press a
function key and let the program pretty much take over and finish
typing the word from its built-in dictionary. Mindreader has an
"Artifical Intelligence" mode that keeps track of how often you
use certain words, deletes unused words, and makes it easier to
use the commonly used words. Frankly, we find it easier just to
keep typing, but this may be useful for someone that really hates
using a keyboard. Mindreader is copyprotected, but allows you to
make a copy for data backup purposes.

WEEKEND GRAPHICS INTENSIVES

Josepha Haveman, instructor at the College of Arts and Crafts in Oakland, is resuming classes and workshops in computer art to be offered at her studio in Berkeley. Currently planned are weekend workshops in May and June, with possible repetition in July. These are open to anyone interested in computer art. There will be demonstrations and hands-on practice with Mindset computers with a wide collection of graphics software.

Workshops are held on Saturday and Sunday from 10 A.M. to 5:30 P.M. Dates are May 25-26, June 8-9, and June 22-23. Contact Josepha Haveman, 47 Del Mar, Berkeley, CA 94708. Telephone (415) 848-3776. The cost is $50 per person per weekend.

FIRST MINDSET USER GROUP MEMBER LISTING

Please send a one-or-two-word description of your interests and any corrections for the next listing.

NAME		ADDRESS			PHONE #
Balick	David	6627 Lebanon Ave.	Philadelphia	PA 19151	
Banks	Dennis	8 Mohican Pl.	Huntington Station	NY 11746	(516) 549-1746
Barlow	Townsend (T.)	33488 N. Greentree Road	Wildwood	IL 60030	(312) 223-8023
Becker	Len	2017 Marin Ave.	Berkeley	CA 94707	(415) 524-4133
Betteridge	Craig	3708 Hackberry Rd.	Bedford	TX 76021	(817) 283-5877
Bordeaux	Marc A.	Flocon Inc., 848-4 E. Gish Rd.	San Jose	CA 95112	(408) 995-6306
Brice III	John J.	1600 Stokes St. #25	San Jose	CA 95126	(408) 298-6353
Brown	Harry	2961 Industrial Rd. #276	Las Vegas	NV 89109	
Chambers	H. Alan	PO Box 420 Speed Code S-6	Indianapolis	IN 46206	(317) 242-7010
Cummins	Hayes	1208 W. 27	Bryant	TX 77802	
Dean	Virgina	1830 Woolsey	Berkeley	CA 94703	644-3925
Duberman	David	333 Escuela Ave. #305	Mountain View	CA 94040	(415) 961-7051
Fischer	Jeanne	9451 Ranch Park Way	Elk Grove	CA 95624	(916) 685-5044
Friedman	Jack	21 N. Ridgewood Rd.	Kentfield	CA 94904	(415) 461-0211
Furr	Gary	P. O. Box 1330	Mountain View	CA 94042	
Furry	Kevin	8 Rosewood Court	San Rafael	CA 94901	
Gortatowsky	Jeff	139 Holyoke St. B-8	Rochester	NY 14615	(716) 663-8462
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Hoyt	Douglas	3345 Chisholm Terrace #104	Boulder	CO 80301	
Inscore	Jim	1750 20th Ave.	San Francisco	CA 94122	
Janzen	Ronald C.	12355 SW Bowmont	Portland	OR 97225	644-0065
Jaso	John	512 East Alder	Walla Walla	WA 99362	
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Lunden	Wayne	CA Aca. Sci., Inst. Shop, 66 Park	San Francisco	CA 94118	621-5390
Lutz	Marinus	202 Watanabe Apts.	Sakamachi, Shinjukuku	Tokyo 160, Japan	
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Moes	William	10760 Market St.	Defiance	OH 43512	
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Schlosser	James E.	1450 W. Warner Ave.	Chicago	IL 60613	
Schwager	Jason	Box 851	Ross	CA 94957	(415) 499-8881
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Simonton	Ken	PO Box 212	Pine Lake	GA 30072	
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Wood	Greg	1151-23 St.	Santa Monica	CA 90403	(???) 453-2936
Zietz	Dr. Stan	Drexel Univ. 32nd and Chestnut Sts.	Philadelphia	PA 19104	

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FIRST MINDSET USER GROUP
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(415) 961-7051
Newsletter #8 -- June 1985

Rita
737-8555

MEGAMEETING PLANNED FOR JUNE!!!
by Tim Negris

The next FMUG monthly meeting will take place at the new Mindset
corporate offices in Sunnyvale on June 24th at 7:00 pm.

The new office is located at 965 Maude Ave., near the junction of
Hwy. 101 and Rte. 237. Take either of these routes to Mathilda.
Take Mathilda towards Sunnyvale about a mile to Maude. Turn
right on Maude. The office is on the right, just past Mary Ave.

This meeting promises to be one of the best yet, with something
for everyone. The agenda includes new product demonstrations, a
presentation on animation techniques, and some important
announcements by Mindset. So, as the late, great showman Sam
Goldwyn used to say... "DON'T MISS IT IF YOU CAN!"

Here is some of what you will see and hear:

*	Demonstration of the new Mindset Frame Grabber. This is a
real time color video image digitizer which allows you to use a
standard video camera and a standard Mindset to capture images on
disk for use with Lumena and other programs.

*	Demonstration of the new Mindset 10 megabyte hard disk unit.
It's not just much bigger, but also much faster than floppies.
It makes short work of loading and saving picture files.

*	A presentation on Mindset grahics and animation. Dusty Park
and Ed Critchlow of Inter/Action Inc. will preview a new training
course their company is offering which teaches advanced animation
techniques using C on the Mindset. They will also discuss the
interactive videotex system they have developed and built which
combines the Mindset with a videodisc player and touchscreen for
use in public access information applications.

*	An announcement of the end of the "closed system" policy.
Mindset officials will reveal their plan to make detailed
technical information concerning the internal design and
specifications of the Mindset system available to end users.

The meeting will begin promptly at 7:00 and a large group is
expected, so please be on time.

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For FMUG'ers outside the bay area and those local folk who can't make it, a videocassette of the meeting will be available for a nominal charge. Watch for an announcement in the July issue.

Tim Negris responds to Greg Woods

To get a screen dump of your Odesta chess games, you may be able to use the Frieze printer driver, which is included with the PC Paintbrush drawing package. It can be uses in a stand-alone mode to capture, store, and print graphic images from a variety of sources. I have used it with GW Basic on the Mindset and with Lotus and Framework on a PC.

It is a "background" program and only seems to have a problem coexisting with other background programs, like Prokey and Sidekick. It seems to work fine otherwise.

Frieze also lets you change the size of the image when you print it, print sideways, and map screen colors to texture patterns on a dot matrix printer. It allows for Replace, Or, And, and Xor, logical image combination modes on screen.

If all that isn't enough, it uses a very clever run length encoding scheme for image storage which crunches a full 32K screen down to well under 10K on disk. It sure beats BSAVE and Lumena PSAVE.

Alas, it won't work in cooperation with Lumena. So, I am in the process of writing a file conversion program in C which will let me convert Lumena format files to PC Paintbrush/Frieze format and vice versa. In spite of Lumena's ponderous abilities, I find Paintbrush to be much more elegant for certain types of operations and it includes a decent set of basic fonts. By converting files back and forth I can use both programs to work on the same image. I will be writing an article on this subject, and on how to call Frieze and use run length encoding in higher level language programs, in an upcoming issue.

Concerning your inquiry about the BLOAD/BSAVE bug, Mindset circulated a memo many months ago which provided a get-around that will probably work, although I never actually tried it.

It is not complicated, but the explanation and examples are lengthy, precluding exposition here. If you, or anyone else with this problem, will send me a S.A.S.E. I will happily pass it along.

ADVENTURES IN HARDWARELAND
by Greg Wood

     This article chronicles my experiences with replacing a bro-
ken disk drive on the Mindset. Drive A was fine until one day I

wrote a program that told the drive to whir forever. The key-
board would not respond so my only hope was to turn the machine
off. Unfortunately, this rendered the drive and computer use-
less. All I could get was four grunts from the drive and the
Mindset logo on my screen. I've never really wanted to take
something like this apart but what the hell it was out of warran-
ty and I knew Computerland would charge a mint. They had dropped
Mindset anyway and never had been very helpful as soon as they
got my money. Enough griping. I got my Phillips screwdriver and
went to work.

     Basically, you've got to pretend that you're a secret agent
or a thief and take things apart as if a bomb would go off with
any sudden moves. No forcing. Just prowling like a cat. I
would love to just talk and talk about how I took everything
apart but it would take a long time to explain. Just remember
these tips: Unplug the machine first. Remove cartridges and back
modules. Write down each step and include diagrams if necessary
to remember the order and position of each part or connection.
Keep the screws and disassembled components organized.   The
screws for getting the cover off of the expansion unit are deeply
recessed except for two long screws near the front corners.
Leave in the eight screws that look like they might be holding
the drives and leave in the three screws that are in a line
between the two long ones. If anything is not coming apart find
out why before continuing. I found that it was basically like a
Chinese wooden puzzle where one could not remove a piece until
another had been removed.

     It's really pretty easy and it didn't take too long to
expose the drives. My first experiment was to switch the drives.
I did this by putting the whole unit a bit out over the edge of
the table and just holding it with one hand while I unsrewed the
four screws per each drive. Before you do this carefully take
the handles of the drives off. Then you have to switch the metal
casings on each drive. And then put the whole unit back together
again.   This first experiment was fairly successful. Now the
machine would grunt from the B drive four times and then read the
A drive. So now I was at least partially functional.

     I decided to go for it and try to find a new drive somewhere
and put it in. Out of three ads in May Byte magazine that
carried the Shugart SA455 drive one was here in Los Angeles.
Computer Components Unlimited (p.461,Byte) has a retail store in
Inglewood and a salesman there named Danny was extremely helpful.
It turned out the new drive was almost identical except for some
minor things: The cover and handle had to be removed. The
Mindset extension shaft piece had to be removed from the bad
drive and added to the new one. I used some little screwdrivers
to wedge that little metal piece off from the shaft itself. Then
it fit snugly on the new drive shaft. The only other difference
was a jumper on the new drive that wasn't on the old one. Jump-
ers are these tiny little boxes that connect two little prongs
together. There were about ten on both drives in identical
positions and identically set. But the new one was near the

center of the board and away from the others. I discovered later
that this jumper was a switch for making the drive read only.
There are three little prongs in a row and the two closest to the
back of the drive should be connected with the jumper if you want
reading and writing. One other difference were three little
squares of metal nearby that were connected differently on the
new and old drives. The new jumper is probably related to this.
I had gleaned from a Computerland serviceman that the resistor
pack should be the same and it was. Its located at the back and
looks a bit like a inch long cocckroach See diagram accompaning
this article. I couldn't believe it when I finally reassembled
everything (remember--like a thief) and turned it on and it
worked. What a good feeling. Computerland would have charged at
least $200 and kept my old drive. My new drive was only $95 and
I have the old one which someday I may learn how to repair. I
should note that I put the B drive back in the B location and the
new drive in the A location. Please don't hold me responsible
if the above information screws up your computer. To be safe you
should go to your Mindset dealer for repairs. The only one in
Southern California is Computer Solutions. Phone is (818) 996
9666.

        Switching from hardware to software: I bought Typing Tutor
for my girlfriend so she could learn to type and relate to "Min-
dy" better. Unfortunately the letter invaders game doesn't work.
However the rest of the program is a good teacher. My girlfriend
is not quite as jealous of "Mindy" now.

        SOME MS/PC DOS SOFTWARE and The Mindset
        by Josepha Haveman

        At a recent meeting we were discussing SIDEKICK. Does it
        work, or doesn't it ? Some said no, and some said yes.
        Actually, it is probably fair to warn you that it does not
        work very well, though it can be used, with caution.
        SK is supposed to be loaded into memory just prior to
        whatever program you are about to run. Then by pressing
        CTRL-ALT, a Sidekick menu appears which lets you choose your
        option: a calendar, a notepad, a telephone dialer, an ASCII
        translation table, or...a calculator.
        Well, we can forget the calculator right off, since we don't
        have the IBM numeric keypad. Too bad too.
        I use the calendar just about daily, though it pulls some
        funny tricks. With some programs it appears just from the
        slightest pressure on the CTRL key, and then it may, or may
        not leave when you press ESC. It does other odd things and
        it seems to affect some other programs which may finally
        lock up.
        But even when I use it straight, just from the DOS disk, it
        may act weird. The last stunt was locking the keyboard in an
        upper case mode so that no . (period) was accessible, and
        the arrow keys (needed to move around the calendar) yielded
        NUMBERS, like on a numeric keypad!

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The program is fun to use, especialy if you like
surprises, but do so with caution! UCP avail.

While on the subject of software experience, I'll share some
observations about other programs:

VOLKSWRITER de LUXE

I have used this for more than 6 months and found it to be
glitchy. It worked, and it is a very nice wp, but I kept
having certain formatting problems, among others, so I did
not recommend it for use with the MS.
Now it turns out that I had a manual for a different version
than the one I was using! Having a better match, I am happy
to report that the program works fine on the Mindset, and
that I think it is also very good as well as reasonably
simple. On this version some screen response seems slightly
slow, but that isn't much of a problem for me.
VW de Luxe is probably a best buy at discount prices.

WORD PERFECT
This wp is command driven (VW has some menus to guide the
user along), and the commands are printed on a keyboard
overlay that comes with the package, a la Framework and
Lotus 1-2-3, except that it us all the function keys and
also the whole top row, ESC through +/=. If you have access
to an IBM it isn't too much of a problem to translate the
IBM template into one for the Mindset.

I could xerox the template I made to use as both a cutting
and label guide for those who don't think they can make
their own. WP is a very nice wordprocessor and seems to run
well on the MS, although I have used it only experimentally,
while thinking that VW de Luxe wasn't performing properly.

CHECKBASE
This is an excellent simple bookkkeeping program for
non-accountants. It keeps track of all kinds of accounts as
if each one were a checkbook. It invites you to mark every
entry with a "tax code" (such as 'c' for every computer
expenditure, 'o' for office supplies etc.), and it has a
superfast sort of the list of entries by these, or many
other categories, such as date, check number etc.
Works like a charm on the Mindset.

THINKTANK
The unprotected demo works, the actual program which is
protected, does not run on the MS.
The joke is, of course, that the protection schemes do not
stop us from making back-up copies, but they do limit the
number of MS DOS computers the programs run on!
The same was true of:

MAXThink
A similar, but more elaborate ouitlining program that now
sells for under $ 60.00. The free demo (call 415 428-0104)
runs, though a little fast because of our hot chip, but the
protected version of the program does not.
THEY WILL SELL AN UNPROTECTED VERSION TO MS USERS (check on
the price of this version, it may be higher,) which runs ok.
One warning: I believe that MaxThink is basically a good
program, but unfortunately it seems to have been designed by
someone who had a desperate need for it! This means that the
program seems to outline and sort fine, once you have
figured out HOW. The manual very badly needs exactly the
kind of outlining and logical organization that the program
professes to promote.
The whole user interface is badly designed, though the
screen, (as is often true, unfortunately) looks better on
the IBM--in color.

Sidekick, Copywrite and MaxThink are examples of programs
with nice color screen lay-outs (or options) that do not
show on the MS.
Here we own the "ultimate" graphics computer, 16 color
capability, but these programs are reduced to b/w because of
the different graphics access involved. Who goofed ?

IBM LOGO
This is probably the best LOGO around sofar, and it runs
well on the MS, IF you avoid the graphics mode, which cannot
run on the MS system. Even without the turtle, this Logo is
a very nice programming language.

DR. LOGO
DRI's version, uses Gary Kildall's (in)famous CP/M-86. The
disk must therefore be booted, and there is no conventional
DOS access at all. setd "B: will get you the B drive, and
getfs shows the directory. Dr. Logo uses lower case
throughout. The turtle runs, it works, it is ok, though
sensitive to errors, and it locks up easily.

Some other programs that work well, as many people already
know are:

WORDSTAR 3.3
dBASE II
LOTUS 1-2-3

Does anyone know how well the later versions function on the
Mindset?

I'd like to hear about Wordstar 2000, dBase III, and I am
afraid I know the bad news about SYMPHONY and FRAMEWORK.
I have used Framework on the IBM and I think it is a really
versatile program. The original version is the only one I
have had access to, and it will boot up on the Mindset, but

then it locks up. The story about the built in worm eating
programs on a disk in either drive seems to be true. In
trying to use Framework on the MS, it actually wiped out my
DOS disk!
Scuttlebut has it that a later version works on more
compatables. Who knows the answer ?

Some other disappointments and warnings:

INTUIT, from Noumenon in Alameda. An affordable ($ 89.98)
integrated program that looks like it would do big jobs.
Won't run on the MS.

QBASE (Versaform), from Applied Software Technology, Los
Gatos, has everything I want for doing a versatile
once-and-for-all mailing list.
Wouldn't boot. Written in UCSD p-System, with, wouldn't you
know...excellent documentation, very well designed!

Who has tried Adam Osborne's Paperback software ?

Next month let's hear from someone else.

TURBO PASCAL AND THE GRAPHIX TOOLBOX
by Victor L. Wong

        A previous newsletter has already noted the compatibility
of Borland Industries' Turbo Pascal Version 2.0 on the Mindset,
but some updating is now warranted: that earlier mention may
have been based on Borland's contention that its generic MS Dos
version (and not the IBM-PC version) would be the only one usable
on the Mindset. I know that I and at least one other user had
been using the generic version with success, after a somewhat
non-intuitive installation procedure involving the ANSI.SYS
driver and the T.I. Pro emulation.

        I've recently discovered, however, that the IBM-PC
version of Turbo Pascal version 3.0 does work on our computer
without modification, contrary to what Borland's technical staff
believes. This is somewhat momentous news for the non-system
programmers among us since this version has some powerful
graphics capabilities built in, and not available in the generic
version, such as windowing and turtle graphics.

        More importantly, the Turbo Graphix Toolbox also works on
the Mindset, and this makes available a whole host of graphics
tools to the Pascal programmer. The 250 page manual details over
120 procedures for creating and manipulating windows, setting the
graphics screen, plotting and fitting curves, creating pie charts
and histograms, drawing shapes and even animating pictures
(through the ability to draw to a ram screen and to flip

screens). The Toolbox manual is well organized with sufficient
examples (and source codes for all of these on the disk).

If you're still using the generic Turbo, you'll have to upgrade to the IBM-PC version; programs written with the Toolbox can only be compiled to disk with this version (although they can be compiled to memory with the generic model). Borland's trade up policy while fair may not be the best way to go; Conroy-LaPoint, for one, is selling Turbo Pascal 3.0 for $39 without a trade-in (the Graphix toolbox should be in the $35 to $45 range). In any case, the combination of utility and price makes both these packages well worthwhile (it shouldn't be necessary for me to beat the drum on the attractiveness of the Borland programs, but let me add for the non-programmers that this language with this implementation is a great introduction into programming).

EDITOR'S NOTES

Many thanks to Tim Negris, Greg Wood, Josepha Haveman, and Vic Wong, whose efforts comprise the bulk of this issue. Congratulations on a great newsletter, folks.

Among recent comments received by mail:

Lawrence Newberg of Beaverton, Oregon recommends Comtek International as a Mindset dealer in the Portland area. "They have bent over backwards in their efforts to serve me and get my system the way I want it." Mr. Newberg reports that Comtek recommends the Panasonic DT-M140 monitor, but that it doesn't support the high-res 640x400 graphics mode.

Richard Malzahn of Long Beach, California writes:
To comment on Mr. Gortatowsky's column in the April newsletter, obviously Mindset's marketing strategy fell a bit short of its intended target. But the company is indeed on its own feet and ha good reason for the closed architecture policy. Machine-dependant software makes future upgrades incompatible with available software for future improved machines, the software must be written to certain specs. Don't be so hard on them. They try hard and have produced a remarkable product. To ensure their security and thus our own, users' support and backing is critical at this point. When they are rolling in the dough is the time to impale them with your scorching pen (or printer).

Mr. Malzahn also reports that he uses Microsoft Word for a word processing program, which he prefers to WordStar. His high score on Vyper is 130,000+ at Level Seven and "boy, those little Shrouds get hard to hit." Also, "UniForth from Unified Software seems to run fine though Forth-32 balks in the screen editor. Neither File Express (a user-supported file program) nor CopyWrite 1.1 seem to run, but Borland Turbo Pascal 3.0 runs great."

See you next issue!

TINY
SCREWDRIVER

SHAFT

EXTENSION
PIECE

RESISTOR
PACK

BACK

JUMPERS
SET CORRECTLY

PROPER
SETTINGS
FOR
JUMPERS

NEW JUMPER
SET FOR READING
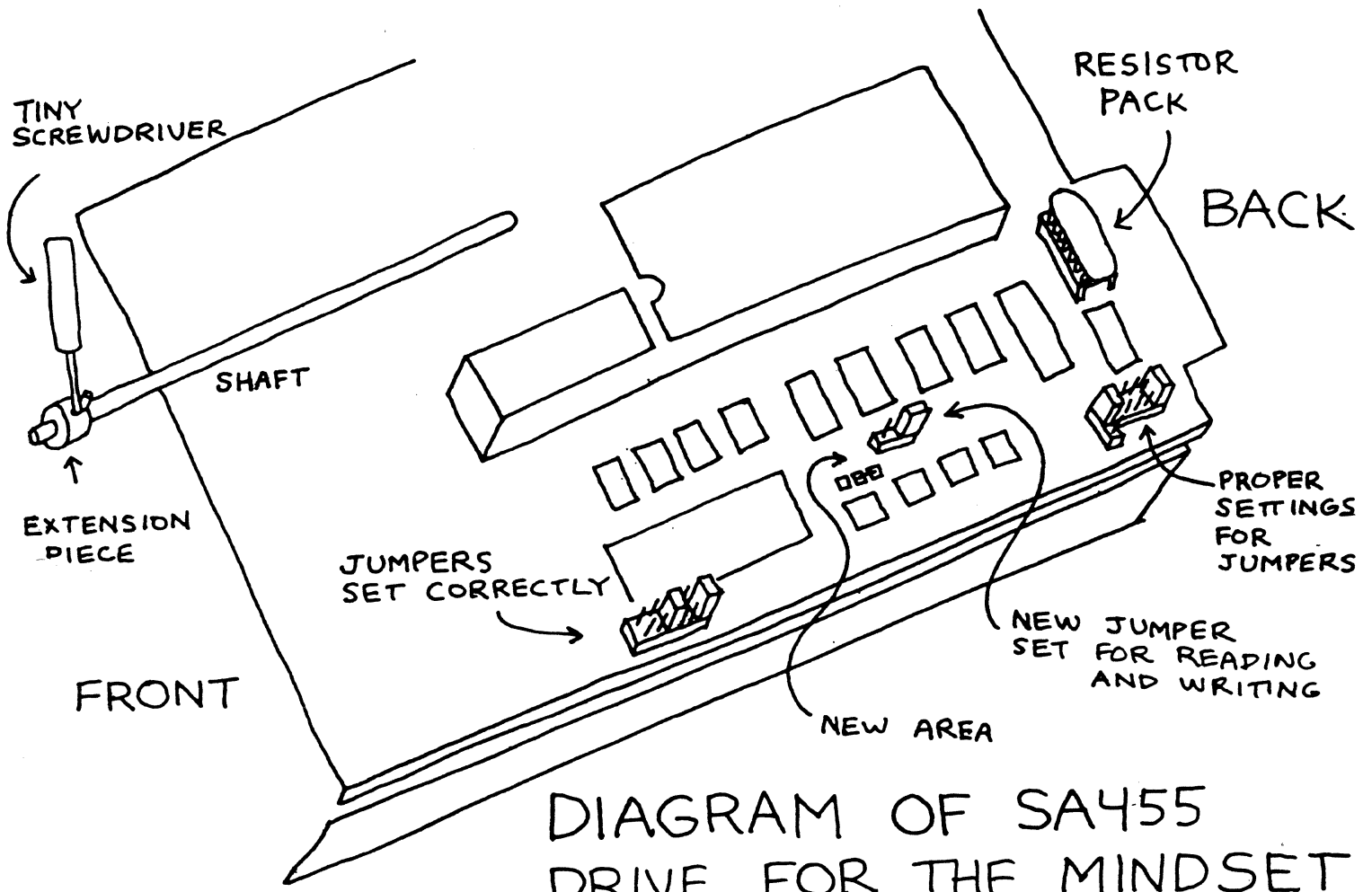AND WRITING

FRONT

NEW AREA

DIAGRAM OF SA455
DRIVE FOR THE MINDSET

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Newsletter #9 - July 1985

Following is the full text of an interview with Roger Badertscher,
Mindset president, from the June 1985 issue of Computer Graphics
Today, the official publication of the National Computer Graphics
Association. Thanks to member Gil Robles for sending this in.
Computer Graphics Today is published by Media Horizons, 50 W. 23
St., New York, NY 10010, (212) 645-1000.

**Most everyone agrees that the Mindset PC is an excellent product.
Why didn't it sell well on the retail market?**

When we rolled the product out in May 1984, graphics was our key
area for product differentation among PCs. Unfortunately our
concept of quality grphics on a microcomputer really didn't take
hold, nor could we cause it to happen.
People who used PCs for general office operation did not place a
premium on graphics performance. It wasn't an important consi-
deration in their purchasing decision.
Also, windowing software didn't develop last year like we, and a
number of people, thought it would.
We found, too, that special purpose graphics applications such as
presentation graphics, CAD and graphics design aren't appropriate
for distribution through retail outlets.
The computer retail business has become very brand-name driven.
It is best at selling commodity items as opposed to specialty
application products.
Mindset really didn't have a good fit. We're good at the special
graphic applications and computer retail is good at selling brand-
name products at aggressive prices.

**Do you think it's possible to sell a PC in the retail market by
primarily emphasizing a feature such as graphics or do you
absolutely have to have a name from the beginning?**

I feel the main driving force in the retail market is brand name.
I think without brand recognition, a better mouse trap may not
sell. We've seen a few large companies come out with products
that emphasize some product differentiation. However, these com-
panies haven't done very well at retail. I think Hewlett-Packard
and Texas Instruments are probably two examples of that. They
went out with something different and found they couldn't make it
in a big way in computer retail.

**Where do you see the PC market for graphics going in the next five
years or so?**

Let me speak from Mindset's perspective. We see a lot of vertical
market opportunities for graphics. Areas such as interior design,

education, video post-production, product design and graphic art.
These areas, not the retail business, are where we see big growth
for our company.
I do think graphics will get sold, certainly in the next five
years, in the retail environment. This will happen as some of the
application categories become more commodity-oriented and have
broad market appeal.
I think presentaion graphics is the logical candidate there. It
really fits into the office environment for people making slides,
foils, marketing communication pieces and other materials.

How are you now marketing the Mindset PC?

Primarily those people involved in video production, education and
graphic design.
We see small broadcasters using the system. For instance, a local
station in San Jose uses one of our systems on live TV show. In
industry, our products are used for traning tapes, sales communi-
cations, presentation materials and to do post-production work.
Resellers of our equipment are achieving some success in education
environments where it is being used for video production training.
It is also being used to teach computer-aided design at several
schools.
Graphics design is a big area for us. This includes preparing
marketing communication materials, presentation graphics, slides,
brochures, advertising, that type of thing. Interior designers,
landscape designers, those type of people, are using our product
as well.

Do you see more markets eventually developing for the machine?

Yes. For instance, we've had some people incorporate the machine
into inteeractive video products. I see that as being a potential
area for our product.
There are a lot of applications for computer graphics now and I
think we have a product and a price/performance range that can
get us into a lot of areas. I think as we learn how to market it
better and bring out more software tailored to specific applica-
tion areas, we'll be able to build a very significant business.
Right now we're just getting arms around the technology and begin-
ning to apply it to other applications.

**Is your marketing movement generally toward increasing cpapabili-
ties in chosen application areas or producing a lower-cost
product?**

I would say as we understand the applicaion areas better, we will
provide capabilities more tailored to the end-user's needs.
Of course I think we'll continue to try to offer systems and
system solutions that are very aggressive from a price/performnce
standpoint. We have to market a product that does the job at a
price that causes the customer to buy it and not find an
alternative solution.

Do you think graphics will ever become a major selling feature in the retail market?

It could. You see, graphics is important in a number of different areas.
It can increase office productivity by improving the user inter-face. I think that as graphics becomes important to users and the way they use their computers, graphics quality will become a factor in the buying process. In the future, some graphics applica-tions such as presentation graphics could gain broad market appeal and become commodity products sold at retail.

ASSEMBLY LANGUAGE TUTORIAL
by David Duberman

Why learn to program in assembly language? For one, it's the only way to really learn how the computer works. Even a relatively low-level compiled language like C hides much of the machine's internal workings from the programmer. Also, if you're interested in real-time 3D animation, as many Mindset owners are, it's the only way to go. Vyper could not have been written in anything but assembly language.

That said, the question remains -- where do you start? Why, at the bottom, of course. Read and commit to memory, if possible, the Programmer's Development Library (PDL), and a good book on assembly language programming, such as Assembly Language Primer for the IBM PC & XT from the Waite Group. Type in the sample programs, assemble and link them, and see what they do. Then, using that knowledge, read and try to follow the following simple graphics program. Its structure was derived directly from sample programs contained in that book.

Here's what the program does: First it calls the routine INIT, which first sets up the double buffered four-color Mindset grap-hics mode. INIT then gets the addresses of the two buffers, necessary for the SWAP routine that switches the display between the two. The first buffer is shown while a triangle is drawn in the second buffer, then the display is switched to the triangle while a circle is drawn in the first, then the display switches back to the circle. From then on, you can flip back and forth between the two by pressing any key -- press letter keys and they will appear on the screen in blue.

```
;GR2.ASM

;       EQU STATEMENTS

GRAF    EQU     OEFH
BDOS    EQU     21H

;*************************************************************
```

```
st_seg    segment stack      ;set up stack segent
          db      20 dup ('stack')
st_seg    ends

;**********************************************************************

data segment

FRAME     DB      1       ;initial value -- used to determine which
                          ;buffer is being displayed
SCR1      DW      ?       ;used to hold address of buffer 1 - to be
                          ;set later
SCR2      DW      ?       ;ditto for buffer 2
SIZ       DW      ?


TRIDAT1   DW      160,10,80,180,240,180,160,10   ;x & y coordinates
CIRCDAT   DW      160,100,50,50,0,50,1,50

PALET     DW      0,11C8H,2020H,4004H ;see GW BASIC manual p. 6-169

data ends
;**********************************************************************

prognam segment

;---------------------------------------------------------------------
main      proc    far
          assume  cs:prognam, ds:data,es:data

start:

;set up stack for return
          push    ds
          sub     ax,ax
          push    ax        ;set up stack for FAR RET

;set DS reg to current data seg
          mov     ax,data
          mov     ds,ax
          mov     es,ax
;MAIN PART OF PROG

;set screen to mode 1 (BASIC SCREEN 1 -- 320 X 200 X 4  Colors)
          CALL    INIT

;BLT POLYGON   -- INT EFH (AH) = 19H  (ref. 4-59)

          mov     al,1      ;BLT ID #
          mov     cx,4      ;# OF PARAMETER GROUPS (PAIRS OF POINTS IN DATA)
;                                    four points for a triangle
          mov     dh,1      ;even color index
          mov     dl,2      ;odd color index
          mov     si,0      ;x origin
```

4

```
          mov       di,0        ;y origin
          mov       bx, offset TRIDAT1   ;relative address of
;                                    coordinate data
          mov       ah,19h      ;blt polygon
          int       graf        ;do it

          CALL      SWAP        ;Show triangle (switch active buffer),
;                                    swap GCP dest.
;BLT FILLED ELLIPSE -- INT EFH (AH) = 1AH (ref 4-61)

          mov       al,2        ;BLT ID #
          mov       cx,1        ;# of parameter groups
          mov       dh,3        ;even color index
          mov       dl,2        ;odd color index
          mov       si,0
          mov       di,0
          PUSH      DS
          POP       ES
          mov       bx,offset circdat
          mov       ah,1ah
          int       graf

          call      swap        ;display circle
;wait for keypress, PRINT IT, then display triangle again, etc.
;READ KEYBOARD AND ECHO -- BDOS FUNCTION 1H

AGAIN:
          mov       ah,08h      ;read keyboard, return char in AL
          int       21h
;WRITE TELETYPE -- INT 10H, (AH) =OEH (ref. 3-21  manual 2)
          mov       bh,frame    ;current GCP target
          mov       bl,1        ;blue text
          mov       ah,0eh      ;function
          int       10h
          CALL      SWAP
          JMP       AGAIN       ;endless loop -- ^C to end
          ret

main      endp                  ;end of main program segment
;-
INIT      proc      near
          MOV       AH,0        ;SET SCREEN MODE
          MOV       AL,1        ;TO 320 X 200 X 4 COLORS (2BITS/PIXEL)
          INT       GRAF        ;DO IT
          MOV       AH,0EH      ;GET BUFFER ADD AND SIZE (ref 4-19 man. 2)
          INT       GRAF        ;DO IT
          MOV       SCR1,BX     ;ADDRESS OF FIRST BUFFER
          MOV       SCR2,DX     ;ADDRESS OF SECOND BUFFER
          MOV       SIZ,CX
;set palette
          MOV       AL,0        ;BORDER COLOR INDEX
          MOV       CX,4        ;# OF WORDS IN PALETTE
          MOV       DX,0        ;OFFSET IN PALETTE AT WHICH TO WRITE
          MOV       BX,OFFSET PALET ;ADDRESS OF PALETTE DATA
          mov       ah,0ah      ;SET PALETTE
```

```
                INT        GRAF        ;DO IT
;SET TRANSFER MODE
                MOV        BH,0        ;SET TRANSFER MODE -- OPAQUE
                MOV        BL,0        ;PSET TRANSFER
                MOV        AH,2        ;SET TRANSFER MODE FUNCTION
                INT        GRAF        ;DO IT
;DISPLAY SECOND BUFFER
                MOV        AH,11H      ;SWITCH ACTIVE BUFFER COMMAND
                INT        GRAF
                mov        frame,0     ;point GCP to buffer 1
                RET
init    endp
;-
SWAP    proc       near
                CMP        FRAME,0     ;WAS GCP DEST FIRST BUFFER?
                JNE        SW2         ;IF NOT, SET 1 AS DEST, ELSE
;SET 2 AS DEST
                MOV        CX,80D      ;BYTES PER SCAN LINE
                MOV        DX,200D     ;# SCAN LINES IN BUFFER
                MOV        ES,SCR2     ;ADDRESS OF SECOND BUFFER
                XOR        BX,BX
                MOV        AH,4
                INT        GRAF        ;DO IT
                INC        FRAME
                JMP        SW3

SW2:
;SET 1 AS DEST
                MOV        CX,80D      ;BYTES PER SCAN LINE
                MOV        DX,200D     ;# SCAN LINES IN BUFFER
                MOV        ES,SCR1     ;ADDRESS OF FIRST BUFFER
                XOR        BX,BX
                MOV        AH,4
                INT        GRAF        ;DO IT
                DEC        FRAME

SW3:       ; SWITCH BUFFERS
                MOV        AH,11H      ;SWITCH ACTIVE BUFFER COMMAND
                INT        GRAF
RET
swap    endp


;----------------------------------------
prognam ends
;*********************************************************

                end start
--------------------------------------------------------------
```

The FMUG Disk Library
by Dave Mentley, Disk Librarian

We now have a few more and a few less programs in our FMUG libra-
ry. After copying off hundreds of disks during the past six

months, I have decided that it is time for a change. First, we
will only have Mindset-specific programs in the library. These
will be programs which use some specific features of the machine.
There were nine disks in the library, of which six were public
domain disks which I bought at the PC User Group meeting in San
Francisco. I am not going to be copying those disks any more. Yo
can choose from over 300 disks for $6 each from:

PC-SIG (Software Interest Group)
1125 Stewart Court Suite G
Sunnyvale, CA 94086

Their catalog costs $4.95. I just don't have time to copy all of
these disks on a volunteer basis and they are available in many
other places. Since I have only received two program donations,
from Warren Leong and Kevin Furry, I assume there are not too many
other people interested in contributing.

I have reorganized the disks into four, labeled A to D. The
directories are printed below.

FMUG A - POPDEMO, the retail store point-of-purchase Mindset demo.
This disk shows off all of the tricks which the big blue machine
can't do.

FMUG B - BIT BLT DEMO, demonstrates the block transfer (animation)
functions, including assembly language source code.

FMUG C - C STUFF, source and compiled programs by Warren Leong.
There are some games and useful utilities. These programs are in
a constant state of flux and improve monthly.

FMUG D - UTILITIES. These programs come from the June FMUG meeting
at Mindset and from ace programmer Kevin Furry (Designer). The
Mindset Loader Interface (MLI) by Kevin will automatically decode
and load any graphic file from Designer, 4-Point, MGI, or Lumena
and return he SACREEN and PALETTE data to user-specified addres-
ses in memory. It uses an Epson JX80 or Tektronix color printer
for hard copy output. Documentation is on the disk.

That's it. Send your programs in!!! One more thing. If you want
to get the disks, please send a formatted disk with return pos-
tage. If you don't send a formatted disk it may be several months
before you hear from me. Send disk orders, submissions, etc. to:

Dave Mentley
P.O. Box 325
El Cerrito, Ca 94530

MINDSET BBS

New York member James Pallack writes that he is starting an electronic
Bulletin Board for Mindset users. Called the S.M.U.G. BBS, the
telephone number is 212-924-3522. The reason for the name is that

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James may start the "Second Mindset User Group." The BBS rules
are:

1. Only Mindset owners have access to the file section.
2. Only Mindset owners and those interested in the Mindset can
enter the message base.
3. All files to be uploaded should be squeezed before uploading.
4. This board is specifically intended for images created with
Lumena, Designer, 4-Point Graphics Plus, and PC Paintbrush. I
will not keep utilities or programs on line, except for those
specifically intended for Mindset.

My system is currently floppy-based, which is why I must set these
limits. I am working on obtaining a hard disk drive, although I
may not be able to interface it to my system.

I am looking for all types of images, from scenic to nudes. Please
begin the names of all images with nudes with X (e.g.
"X_LOVERS.PIC"). The system is set up so that only people
interested in these types of images will be able to download them.

Please pass along this information to other Mindset owners. Let
them know that they should have the serial number of their base
unit and the name of the store where purchased handy when logging
on, as I use this information to confirm Mindset ownership. If
only interested in the Mindset, they should let me know in a
comment and I'll give them the ability to leave messages, so they
can ask questions about the Mindset.

There will be a list of PC-compatible titles online. If you know
of other compatible (or semi-compatible) titles, leave a comment.
Tell what does or doesn't work, and how to make it work. I will
also leave the list on The Source. If you have a subscription,
retrieve a copy by entering the following:

TY SFILES>BCY475>COMPAT.MST

I can be contacted at any of the following:

The Source: BCT475
CompuServe: 72636,2123

S.M.U.G.
70 Greenwich Ave. Ste. 152
New York, NY 10011-8307

FIRST MINDSET USERS GROUP NEWSLETTER
OCTOBER 1985

WELCOME BACK!

The transition of leadership which has occupied the past two
months is now complete and this issue represents a return to a
regular publication and meeting schedule for the First Mindset
Users Group.

Owing to other pressing commitments, David Duberman has
stepped down as the group's president and has been replace by Tim
Negris. Please direct future correspondence and communication to
the following address:

FMUG C/O Tim Negris
138 Village Ct. #6
Walnut Creek, CA 94596
(415) 934-1448

In case you may have thought otherwise, the group is
healthier than ever, having now passed the 100 member mark, and
continues to grow at a steady pace. This issue includes a
current list of all the group members.

By now you may have heard about Mindset filing for Chapter
11 protection. Don't be concerned. This was a smart move by the
company, intended to enhance its ability to take advantage of
some exciting new business opportunities which are currently in
the works. In this issue you will find a reprint from Computer
System News which should set the record straight concerning this
development and provide some interesting historical information
about the company and shed some light on its future direction.

This issue also features a letter from Dennis Peabody which
contains some colorful reflections on computing and some useful
tips for Lumena users. Also, Josepha Haveman has contributed a
review of Paperback Software products and a proposal for some
ways we might broaden the scope of the group in the future. We
thank these members for their contributions and encourage others
to continue to participate with reviews, suggestions, and
insights concerning the group, the system, and any other topics
you may feel would be of interest to members.

We are considering a thematic approach for future
newsletters, e.g. Animation Primer, Unusual Languages,
Programming with MSDOS, Freeware and Shareware, etc. Ideas???

The November theme will be Graphics Peripherals, with specs
on some new , inexpensive hardware we saw at the SIGGRAPH show
held recently in S.F., and a report on a project we are working
on with Mindset to release the previously unavailable Technical
Specifications for the Mindset system to FMUG members. That's
right, the system is open at last and we will tell you more about
it next month. Hardware Hackers take note!

Mindset has expressed a willingness to work more closely with the Users Group in the future, listening to what we have to say, keeping us up to date on what's happening in Sunnyvale, contributing to the Users Group Program Library, and improving the level of support offered to Mindset owners. They are anxious for everyone in the group to know that it is limited resources, and not corporate indifference, which has contributed to past misunderstandings concerning their ability to support the system.

Mindset employs a small, brilliant, and dedicated staff for whom there are never enough hours in the day to do as much for us as they would like. This does not mean, however, that you must suffer as a result of these limitations. It simply means that the Users Group must take a more active role in the support process by fielding questions and problems from its members and presenting them to Mindset in a consolidated form and delivering responses through the newsletter. In this way we can eliminate the endless duplication of the same support scenarios over and over again.

If you have a question or a problem, instead of calling Mindset, please submit it IN WRITING to the Users Group and we will get the answer or solution for you and publish it in the newsletter. If you indicate that a more timely response is needed, we will try to call or write to you as quickly as we can with the answer. Please be fair and exercise this latter option with reasonable discretion.

The December newsletter will focus on Resources. It will include a form you should use in the future for submitting any questions or problems you may have. It will feature an update on the Users Group Program Library with a descriptive listing of the many useful and interesting programs now contained therein. It will also present a listing of useful books and publications which may help you get more from your machine. Please submit anything you would like to see mentioned in this issue no later than November 15th.

THE OCTOBER MEETING OF THE USERS GROUP WILL TAKE PLACE ON MONDAY, OCTOBER 28TH, AT THE HOME OF VIRGINIA DEAN IN BERKELEY, CA. VIRGINIA HOSTED A MEETING EARLIER THIS YEAR AND HAS GRACIOUSLY OFFERED TO DO IT AGAIN. THE ADDRESS IS 1830 WOOLSEY, NEAR THE BIG BERKELEY BART STATION.

In closing... In light of the looming Atari/Amiga media blitz we feel that a policy statement is in order concerning the future focus of the Users Group, so here it is:

FMUG is devoted to graphics and all other aspects of computing in the context of the Mindset System and all compatible peripherals. We have only begun to understand the capabilities of this system, and, until we have learned everything there is to know about it, we cannot broaden our focus to include other systems without also diminishing the depth of our understanding. Unless a majority member vote dictates otherwise, we will not abandon this charter.

FIRST MINDSET USERS GROUP MEMBER LIST - 9/20/85

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Wood	Greg	1151-23 St.	Santa Monica	CA 90403	(???) 453-2936
World of Computers	John Munro,	2747 Pacific Ave. Suite A2	Olympia	WA 98501	(206) 786-0076
Zietz	Dr. Stan	Drexel Univ. 32nd and Chestnut Sts.	Philadelphia	PA 19104	

Dennis Peabody   84 BARKER ST., HARTFORD, CT. 06114 (203)525-8811

Hi Dave;

   I'm starting this letter for the third time
since my keyboard has been freezing up when I
mis-strike the SHIFT key somehow. Haste makes
waste, right? Here's a long overdue note to say
that I really enjoy the newsletter although feel
it could be better with more contributions from
readers. Don't want to preach cuz even this is
tough to get out (and isn't out yet). One main
hesitation has been 'fear' that since I'm not
doing heavy programming for the Mindset my con-
tributions won't matter or will be scoffed at.
Paranoia runs in my family...
   So big booming Hartford, stuck (!) half-way
between NYC (2.5 hours) and Boston (2 hours) has
little to offer if you're not a pyramid builder.
Sadly lacking culturally as well. One recent art
gallery opening requested 'creative dress'. Let's
just say that the creative dressers wore stripes
on their ties...
   Here I was a recent Mindsetter working as a
Database Administrator feeling my eyes had just
been pried open with these incredible graphics.
Then creating video tapes and trying to convince
management that these machines would be an asset.
What do I run into? Politics... Computer Science
Division doesn't talk to Corporate Communication
and visa versa... to make a long story short I
left to pursue self-employment and recuperation.
Do appreciate the savings plan and training I re-
ceived but couldn't hack the structure. Five year
of stone blocks was a lot and many folks aren't
as free to leave as myself.
   Presently my time is divided between computer
work and artwork. I work with stained glass and
have gotten some large commission pieces lately.
Many small creative tangents as well from electronic
jewlery to batik and horticulture. A graphics
oriented PC is still relatively unknown in this
area since number crunching and work processing are
the bread and butter in the insurance industry.
I'll try to capitolize on that while providing
a worthwhile service. Difficult alone though.
   Find LUMENA a joy to work with although there
are bugs. More inconsistant in the FONTS menus
and ANIMATION than the main LUMENA menus. I do
not have a video ready unit. Do feel a digitizing
pad is crucial to any serious design efforts.
   Have used lumena for about 8 months. Infrequently
use EDGES,ROTAT,PERSPETIVE, OR THE LAYOUT menus
but am sure they will come in handy in some
future applications. Have you ever tried....

1. make background white
2. create filled black box
3. create custom brush containing black box
4. change option to nxor and draw
            or
1. create cell with perhaps a word
2. create a shadow(copy/shadow) in color 1
3. create another shadow in color 2
4. create the next shadow in color 3
5. etc, etc...
6. choose a map and cycle in animation menu
   This is especially effective after fading
   all but a few colors in the map to black.

     With some help from Inga at Mindset I
found that cycle events can be used in the
events list of an animated sequence. However
if the image is not in a lettered cell the
cycling does not stop. Once the image is
contained in a cell, the length of time the
image cycles is determined by the length of
time you let the event cycle after pressing
GO before stopping it and inserting in the
events list.
     However it seems that the cycling speed
of an event in a list is faster than cycling
in just the cycle menu. For instance, to see
something cycle really fast...
1. create a good image perhaps with cycle
brush
2. save entire screen in a cell (cstor)
3. get back into cycle...choose your map
4. move cycle speed indicator to 1 (fastest)
5. press go...cycle for a few seconds and stop
6. back out...enter EVENT and insert event
7. now play and you will see a much faster cycling
   The above will work without creating a cell
but as I have mentioned your event list will
not proceed since the cycling event does not
stop for some reason and must be stopped
with the Escape key.
     Another thing I always wondered about was
the algorithm for fills. It was funny the
way certain parts of an area would fill before
others. Decided to use this for special effects
and started making mazes for slowing down
and playing with the fillin option. Try it
and see. An especially beautiful effect (at
least I think it is) can be achieved by using
MIX...
1. start with a blank screen
2. select MIX (under FILLS) using the entire
screen and choose any two colors.
3. use 15% (or less) of the first color and

0% of the second. We are just trying to lay
down a fine spray of 'obstacle' points.
4. select FILLIN and any color but the color
of the 15% spray. Press anywhere on the screen
to observe an interesting use of the mindset
fill ability. Try starting your fill in dif-
ferent corners of the screen.

Just a passing thought. Why don't we start
a LUMENA cookbook for different techniques
using the newsletter as a forum? We probably
all deal with wanting to hoard our own discoveries
for understandable reasons but we would all
benefit from sharing ideas...comments?

I will continue to try and find freelance
work with some of the smaller video production
firms around here while continuing my artwork.
Start next week an informal class for a half
dozen computer illiterate persons/artists who
have expressed a desire to learn to at least
bring up the machine and use LUMENA. Eventually
on a rental basis which could help me recover
my outlay for this equiptment and possibly
justify purchasing more.

Until then will continue to work towards the
up coming (sept 6-8) Italian Festival here in
Hartford. (a big event) Plan to have computer
art, stained glass and batik. Presently creating
an entire line of MONA CLONES. Will be manning
the LEONARDO DA VINCI booth outside the ART
cinema if anyone happens to be in the neighborhood
(ha ha).

Just some final thoughts...did you ever put
a roll of rice paper into your printer and
print some of those great chinese characters?
Can anyone tell me the meanings of the individual
characters or a reference I could find out?

Did you ever put on your 3D glasses and try to
create some 3D images on your 2D screen?

Lots of programming ideas I'd like to share.
My strong point is imagining the end result and
like everyone (?) find it more difficult to do
the technical dirtywork. Has anyone ever accessed
the D/A converter directly? I've read everything
I could about it but still can't grasp it. Haven't
been too persistant. Anyways, if I don't stop soon
I'll prattle on forever...

Mindset Computer Files For Chapter 11 Relief

By Jenny McCune

SUNNYVALE, CALIF. — Mindset Computer Corp., saddled with an advanced graphics microcomputer that impressed hackers but didn't sell well in the retail channel, filed for Chapter 11 protection from its creditors last week.

The company owes $1.3 million in secured debt to approximately 12 primary investors and about $1.5 million in unsecured debt, which is divided between 80 to 100 unsecured creditors, said Thomas Given, Mindset's lawyer. The company has $800,000 in assets.

"There were three main reasons why we decided to go Chapter 11," said Christopher Berg, Mindset marketing manager. "We wanted to settle with our creditors; we wanted an infusion of additional equity investment, which meant we had to get our obligations under control; and we have some major contracts that we can't complete before settling these obligations."

The personal computer vendor, which initially attracted an impressive array of venture capitalists, has already submitted a reorganization proposal to its creditors. The plan was mailed out eight days before the company initiated bankruptcy proceedings.

Mindset has been negotiating with creditors and investors since the beginning of the year. Once the reorganization plan is approved by the U.S. Bankruptcy Court here, the company will be effectively out of Chapter 11, Given said. "We hope to have it approved by the end of September," he added.

Berg said the company does not plan any layoffs or other cost-cutting measures in the near future. The company staff will remain at 35 employees.

Mindset already has had two layoffs: In January, it dismissed half of its then 67-person work force, and last August it let go of 43 workers from a 128-member work force.

Mindset, like many of its competitors, suffered financial ills due to poor sales. Its main product, an 80186-based personal computer with two VLSI Technology Inc. graphics chips, was introduced with much fanfare in March 1984. It initally attacked the retail market, but met with little success.

The company, established by former Atari Inc. and Intel Corp. executives, sold its personal computer through CompuShop, a retail chain, which was the first company to market the system.

The Mindset personal computer failed to make a splash in the horizontal market because its graphics capabilities didn't spark general interest. Meanwhile, start-up and operational costs put the company into debt.

In an attempt to salvage sales, Mindset changed marketing directions. Last summer, the company shifted its focus more on vertical markets such as computer graphics design and video graphics design where the machine's color graphics capabilities would be better suited. It also began marketing graphics software and peripherals to make the system more attractive to these markets.

Mindset is not looking for a buyout or for additional investors, Berg said, although it will attempt to raise additional funds from its original investors once the reorganization is complete. All the company's major investors have agreed to put more money into the company, he added.

Mindset initially was capitalized at $18.5 million in two rounds of financing. The initial five investors responsible for $4 million worth of financing were: Asset Management, Palo Alto, Calif.; Oak Investment Partners, Westport, Conn.; and Technology Venture Investors, Institutional Venture Partners, and Bessemer Venture Partners L.P., all three of Menlo Park, Calif.

An additional $14.5 million was raised with approximately seven other investors in November 1984, Berg said.

According to Berg, the company's investors and most of its creditors are enthusiastic about the reorganization plan. "The creditors have been very cooperative. They are convinced the company has a business to build," he said.

Some investors agreed with Berg. "A lot of companies get into Chapter 11 to find a solution. We're going in with a solution," said Robert Field, a partner with Bessemer Venture Partners.

Field confirmed his company would reinvest in Mindset once it emerged from bankruptcy proceedings.

Berkeley Sept. 26 1985

Dear Tim,

I have been thinking of possible formats/formal structures for
the F-MUG group, and the following idea has come to mind. I am
sure that it is bigger than anything we meant to envision, but it
could come off and be really useful all across the board:

F-Mug could become the core of an active computer graphics
RESEARCH/CONSULTATION/EDUCATION center, if we have the right
talent and interest in the group.
We may do enough business to support a permanent space, equipped
with some Mindset computers, of course, and from here project all
our activities.
New Mindset users could be directed there for consultation and
assistance; we could run some classes in computer literacy,
graphics, and probably programming, and perhaps take in someone
who wants to act as a dealer.
The "center" could function as a non-profit organization as a
proper user's group should, but the space could support
"concessions" for the income bearing activities.
Actually, even a non-profit organization can be in these business
as long as the money then goes to salaries, rent, advertising,
and general perpetuation of the c u l t u r a l activities.

I have experience with this sort of set up in photography, (I was
the founder, president and exec. director of The IMAGE CIRCLE
Inc. for 10 years), and would do it again within certain limits.
I would rather not have to run anything like that again, but I
can help organise it, teach in it etc.

We could even change the name to MIND/SIG, or something less
weird.

Just an idea.........I have them all the time.

Enclosed also a proposal for the Video equipment, to print in the
newsletter so that our members can mull it over ahead of time.

and a bit of re-view
on Paper Back Software

MINI-REVIEW: PAPERBACK SOFTWARE   Josepha Haveman 9/85

The last time I reviewed software for F-Mug, I ended with a
question about the compatability of Adam Osborne's Paperback
Software with the Mindset.
Since no one seemed to know, I decided to find out.

My main observation is, that it is worth knowing about.

1. All three (protected) programs I tried ran fine on The
Mindset. The are: Executive Writer, Executive Filer, and
Draw-it.
2. The price is right: ranging from about $ 30.00 to near $
80.00, with a Lotus like spreadsheet now also announced for
$ 99.00!
Back-up disks are $ 5.00, unprotected copies are also
available.
3. The concept is right. Adam Osborne, being one of the
original micro computer innovators, himself the only readable
author on the subject in the old, old days (4 years ago ?),
and publisher (?) of the Osborne/McGraw-Hill series, now
publishes paperback books, off the shelf, that are in fact
computer software manuals with the program disk in the back.

One criticism:
The books are paperback bound and have a very stiff cardboard
holder in the back for the disk. This may work in the store,
but is lousy on your desk. A book that is soft in front,
rigid in the back is very unhandy to work with, and worse, it
won't stay open on a needed page.
This should be re-designed. Computer manuals should have
spiral backs or equivalent, so that they will lay flat. They
also should be of minimum size, to occupy little desk space.
The Mindset manuals are excellent that way.
I am tempted to tear off the cardboard back and have the
spine cut off right close to the text. Then punch the pages
for simple rings. Either that, or memorize the text and throw
away the manuals.

I'll describe the actual software some time later, just some
insights now:
DRAW-IT is an amazingly full functioned graphics package, but
the drawing is limited to the use of the cursor keys. Too
bad, if it would respond to a mouse and/or joystick, we would
have a super bargain.
EXEC WRITER/FILER can be merged to re-create what used to be
sold (for much more) as THE IDEA PROCESSOR, a combination
writer and file card system.
It works. You can write all you want, and file each text to a
card for very easy recall. Sorted by key words you indicate.
Just what I needed.
So why did I write this on Volkswriter de Luxe ?
Ask me next time!

PROPOSAL FOR CO-OPERATIVE OWNERSHIP OF MINDSET VIDEO-PRODUCTION
EQUIPMENT.

by Josepha Haveman, 9/85

At a meeting several months ago, I proposed that some of us,
members of the Mindset user's group who share an interest in
using the new video production equipment, get together and
acquire this equipment co-operatively.
At that time several people came forward who were interested in
pursuing this idea, and now that summer is over, we should
discuss the options at our next meeting.

The equipment we are talking about could include as much as a
VIDEO PRODUCTION SYSTEM (the modified lower system unit),
at list $ 1599.00 (or one with analog mon. capability at
list $ 1799.00, or go all out and get a whole separate computer,
adding another 1299.00 (3100.00 for the latest computer ?)

Then we need the VIDEO PRODUCTION MODULE, $ 799.00
and the IMAGE CAPTURE MODULE, $1499.00
LUMENA and maybe VIDEO PRODUCER software.

The complete package would also include a video camera $ 650.00,
and a VCR with 4 heads, and ideally video and audio dubbing etc.
another $ 650.00 at discount prices.
That would be the maximum acquisition.

I would rather suspect that anyone who wants to pursue this line
would get his own Mindset updated, and most people seem already
to have VCR's. That would indicate a minimum group purchase of
just the Mindset VIDEO PRODUCTION and IMAGE CAPTURE Modules,
with a good camera. Or a camera/vcr combination in a single unit.

If Mindset (or someone else) can get us the modules @ 25%
discount, we should be able to get the 2 modules and a good
camera for under $ 2500.00.
With five people sharing the equipment, we would each end up with
plenty of access @ $ 500.00 per person.
Access could be simply alternating months. Each person keeps the
equipment for one month...but if someone needs it for a day or
so, this could be negotiated with whoever has priority that
month. Or something like that.

The way this stuff is used, I anticipate needing most of it only
some hours at a time, until the imagery is firmly on disk. After
that, manipulation with Lumena, with a VCR etc. can be done
separately.
Even 10 people could come in, and we would still have plenty of
access, at a very minimal investment.
Think about it !

I also propose that this video production co-operative
form a formal "VID-PRO SIG"
and meet monthly to share experience, expertise and to
iron out the inevitable bugs.
As a photographer I can help with camera work; I hope to
see others involved who have video or animation
experience, and of course, we need some tekkies to plug
it all in correctly!
If we formalize the organization properly, we could aim
at a business structure, making the investment potential
for tax credits.
Anything is possible.

```
FMUG A - POPDEMO              07-02-1985
AUTOEXEC.BAT  IDA_FRUT    IDA_LND2    MINDSET
COMMAND .COM  IDA_ICON    IDA_LND3    POPDEMO .EXE
FONT1         IDA_LAND    IDA_LND4    PROSWARE
FONT2         IDA_LND1    IDA_PEPL      19456 Bytes
FONT3


FMUG B - BIT BLT DEMO         07-02-1985
BUSER   .INC  DEMELL  .ASM  DEMSIM  .ASM  SATURN  .ASM
COMMAND .COM  DEMELL  .OBJ  DEMSIM  .OBJ  SATURN  .OBJ
COPYRT  .ASM  DEMPAL  .ASM  DEMSMD  .ASM  SATURNX .BAS
DEMBLT  .ASM  DEMPAL  .OBJ  DEMSMD  .OBJ  SATURNX1.BAS
DEMBLT  .EXE  DEMPL   .ASM  DEMST2  .ASM  SATURNX2.BAS
DEMBLT  .OBJ  DEMPL   .OBJ  DEMST2  .OBJ  SLANTPL .ASM
DEMC    .ASM  DEMPOL  .ASM  DEMXMD  .ASM  UTILS   .ASM
DEMC    .OBJ  DEMPOL  .OBJ  DEMXMD  .OBJ  UTILS   .INC
DEMCW   .ASM  DEMSAT  .ASM  LINKLIST      UTILS   .OBJ


DEMCW   .OBJ  DEMSAT  .OBJ  POPALARM.EXE    115712 Byte


FMUG C - C STUFF              07-02-1985
ANSI    .SYS  COLORS  .C    LIFE1   .EXE  README3 .DOC
ARTIL   .C    COLORS  .EXE  LIFECODE.C    SQUARE  .C
ARTIL   .EXE  COLORSCC.BAT  LIFEFORM.C    SQUARE  .EXE
BIOS    .OBJ  CONFIG  .SYS  OTHELLO .C    TERMEMU .C
BIOSCOD2.C    DUMP    .ASM  OTHELLO .EXE  TERMEMU .EXE
BIOSCODE.C    DUMP    .EXE  README  .DOC  TERMEMU5.BAS
BOX     .C    LIFE1   .C    README2 .DOC    11264 Bytes
BOX     .EXE


FMUG D - UTILITIES            07-02-1985
DOC           MKTVMON .BAT  SETEQUIP.ASM  TEST    .ASM
DOC     .BAK  MLI     .EXE  SETEQUIP.COM  TEST    .BAK
EJX80   .EXE  MPI     .EXE  SETEQUIP.DOC  TEST    .EXE
IBM80   .ASM  PRINTER .EXE  SETEQUIP.OBJ  TEST    .OBJ
IBM80   .COM  RAMDISK .ASM  SETGEN  .ASM  TVMON   .ASM
IBM80   .DOC  RAMDISK .DOC  SETGEN  .DOC  TVMON   .COM
IBM80   .OBJ  RAMDISK .OBJ  SETGEN  .EXE  TVMON   .DOC
MAKEQUIP.BAT  RAMDISK .SYS  SETGEN  .OBJ  TVMON   .OBJ
MAKERAM .BAT  READ    .ME   TEK     .EXE    300032 Byte
MKIBM80 .BAT
```

```c
#include <stdio.h>
#define black           0x0000 + 0000      /* color map of 16 */
#define dkblue          0x1000 + 0500
#define dkgreen         0x2000 + 0050
#define dkcyan          0x3000 + 0550
#define dkred           0x4000 + 0005
#define dkmagent        0x5000 + 0505
#define dkyellow        0x6000 + 0055
#define dkwhite         0x7000 + 0555
#define dkgray          0x8000 + 0222
#define blue            0x9000 + 0700
#define green           0xa000 + 0070
#define cyan            0xb000 + 0770
#define red             0xc000 + 0007
#define magenta         0xd000 + 0707
#define yellow          0xe000 + 0077
#define white           0xf000 + 0777
#define ms_v_int                            0xef    /* mindset graphics */
#define i_io_int                            0x10    /* ibm compatible video io inter
rupt */
struct regs {
        int     ax;                         /* define registers to be transfered */
        int     bx;                              /* upon interupt */
        int     es;
        int     cx;
        int     dx;
        int     si;
        int     di;
        int     ds;
        int     flags; };
struct xypair {                                     /* x and y coordinate pair */
        int x;
        int y; };
int palette[16] = {
black, dkblue, dkgreen, dkcyan, dkred, dkmagent, dkyellow, dkwhite  ,
 dkgray,  blue,   green,   cyan,   red,  magenta,   yellow,   white
        };
static struct xypair square[] = {
                { 000, 000},    { 020, 000},    { 020, 007},    { 000, 007}
        };
main()
{
int ecolor,ocolor,x_org,y_org;
int hit;
    setmode(2);
        setpalette(0,16,0,&palette);
do {
  ecolor = 0;
  ocolor = 0;
  x_org = 0;
  y_org = 192;
  for(x_org = 0; x_org < 320; x_org += 20)
    {
  polygons(0,4,ecolor,ocolor,x_org,y_org,&square);
        ecolor += 1;
        ocolor += 1;
        }
hit = 0;
hit = kbhit();
}
```

```
while (hit == 0);
setibm(!);
}                    /* end of main */

setpalette(border, count, index, offset)
char border;                                    /* which table color is border c
olor */
int     count;                                  /* number of colors to s
et */
int     index;                                  /* first of colors to se
t */
int offset;                                     /* pointer to palette ta
ble */
{
        struct regs myregs;
        myregs.ax = 0xa00 + border;
        myregs.bx = offset;
        myregs.cx = count;
        myregs.dx = index;
        myregs.es = data_seg();
        callbios(ms_v_int, &myregs);
        return;
}
setmode(video_mode)          /* set IBM video display mode  */
int video_mode;                              /* argument for BIOS call       */
        {
        struct regs myregs;              /* structure from CUSER.INC    */
        myregs.ax = video_mode; /* set 80186 register AX = mode*/
        callbios(ms_v_int, &myregs);    /* actual call to BIOS */
        return;
        }
setibm(video_mode)          /* set IBM video display mode  */
int video_mode;                              /* argument for BIOS call       */
        {
        struct regs myregs;              /* structure from CUSER.INC    */
        myregs.ax = video_mode; /* set 80186 register AX = mode*/
        callbios(i_io_int, &myregs);    /* actual call to BIOS */
        return;
        }
polygons(id, count, evencolor, oddcolor, xorigin, yorigin, coords)
char id;                                         /* id number for blts */
int count;                                       /* number of points */
char evencolor, oddcolor;                /* color for even and odd pixels */
int xorigin, yorigin;                    /* x and y origin for destination */
int coords;                                      /* pointer to coordinate
s table */
{
        struct regs myregs;

        myregs.ax = 0x1900 + id;
        myregs.cx = count;
        myregs.dx = (evencolor << 8) + oddcolor;
        myregs.si = xorigin;
        myregs.di = yorigin;
        myregs.bx = coords;
        myregs.es = data_seg();
        callbios(ms_v_int, &myregs);
        return;
}
```

& passing address

OFFICIAL BUSINESS...

Happy Birthday to us. The Group is now one year old and still
going strong. Please be advised that your subscription ends with
this issue. Once again the annual subscription rate will be $15.
If you are new and you want the back issues from 1985, they are
$10 for the set. The Disk Library now contains 8 volumes and is
available for $2.50 per disk. (more about this later) Also, in
1986 the newsletter will be published every other month with an
according increase in the page count. This is so that those of
you who wish to contribute to an upcoming issue theme will have
enough time to get it together and enough space to treat your
subject in detail.

THE THEME IS RESOURCES...

This issue will focus on various tools and other resources which
will help you get more out of the Mindset computer, company, and
users group. Included in this issue you will find the following:

★   PC Software Compatibility Update by Vic Wong.

★   Mindset SIG on the Source by James Pallack.

★   Tips for the Advanced Lumena User by Inge Infante.

★   The New and Improved Mindset II by Mindset Corp.

★   New and Used Mindset Hardware Sources.

★   Disk Library Catalog.

★   Omnigraph file conversion program for the Mindset.

IN THE MAILBAG...

Stephen McCaughey, a Captain in the Air Force and a heavy duty
hardware hacker, writes that he is developing a reasonably priced
hard disk interface and wants to know who would be interested.
The question is "Who wouldn't?" Contact him at 1422 Territory
Tr., Colorado Springs, CO 80919, 303/598-7381 or Compuserve
75146,3657.

Reid Kearl would like to hear from other Pascal programmers,
especially those who have been successful with bit-blt
operations. He has modified PC-TALK to run on the system under
the GW-BASIC interpreter and would like to compile it. Does
anyone know about the compatibility of Quick BASIC or other
compilers with GW code? Contact him at Box 181 Rt 3, Deer Park
WA, 99006, 509/276-5659.

Bob Solem at the Milwaukee Institute of Art and Design informs us that his school is a hotbed of Mindset activity, with student work available on disk or video. He would like to swap work samples and shop talk with other artists. You can reach him at 342 N. Water, MIlwaukee, WI, 414/276-7889. He may now have a modem at 414/276-2949.

LUMENA TIPS...

Inge Infante is currently an artist-in-residence at Mindset. She recently contributed the following procedure as a convenient means of clearing the EFX, Path, and Chain Buffers in Lumena.

Do this once:

1.   Power up the system, boot DOS, and run Lumena.

2.   Go to ANIM menu, then to FILE sub-menu.

3.   Type a 1 and enter the file name EMPTY, followed by RETURN.

4.   Move cursor to SAVANM and press pen.

5.   Move cursor to EMPTY on file list and press pen.

The above steps create an blank file called EMPTY.ANM. Whenever you wish to begin a new animation sequence, save any work in progress and then do the following:

1.   Type a 1 and then the file name EMPTY followed by RETURN.

2.   Select ANIM menu, then FILE sub-menu.

3.   Select LOADANM.

4.   Select the file name EMPTY.

This procedure loads the empty .ANM file created above and, as a consequence, clears the Path and Chain memory as well as the EFX buffer. The contents of the Cell buffer is not affected. You may wish to place EMPTY.ANM on your Lumena program disk, rather than your work disk, so that it will always be handy for doing this procedure.

COMPATIBILITY WATCH...

Vic Wong is a founding member of the Users Group who has made something of a personal mission of keeping tabs on PC programs and their compatibility with the Mindset. The following list is his latest update. Please note that the selected programs are ones which do not appear on the list published by Mindset Corp. Contact Mindset for a copy of its list.

name	manuf.	type	compat.	notes
Ancient Art of War	Broderbund	game	yes	occasionally locks up
AutoCad	Autodesk	cad	yes	locks after a successful save and on help call
Checkbase	IMSI	accounting	yes	
Computerized Atlas	Software Conc.	atlas	yes	based on demo disk
Copy II PC	Central Point	copy	no	copies made on IBM PC will work on Mindset
CopyWrite		copy	no	copies made on IBM-PC will work on Mindset
DBase III	Ashton-Tate	database	no	locks on full screen commands
Electric Dragon	Baen	selfhelp	yes	menu selection depends on bolding (unavail. on Mindset)
Fancy Font	Softcraft	font edit	yes	based on their demo disk
FirsTime	Spruce	editor	yes	only the Turbo Pascal version tested
Framework	Ashton-Tate	integrated	no	
Gato v2.0	Spectrum Holo	game	no	
Gem Desk	DRI	window	yes	
Home Accountant	Continental	accounting	yes	
IBM Logo	IBM	interpreter	yes	graphics mode does not work
Intuit	Noumenon	integrated	no	
MaxThink	MaxThink	outliner	yes	non-copy-protected version only (avail. from MaxThink)
Mindreader	Businessoft	word proc	yes	
Mindwheel	Synapse	game	yes	
Modula-2	Logitech	compiler	yes	
Norton Utilities	Norton	file util	yes	Versions 2.0 & 3.0 work
PC Paintbrush	IMSI	paint	yes	
PC-Write		word proc	no	
PFS: Access	Soft. Publish.	telecom	yes	based on their demo disk
Pac Man	Atarisoft	game	yes	
Pop-Up Desk Set	Bellesoft	desk util	yes	
Qbase	Applied Soft.	database	no	
RBase 5000	Microrim	database	yes	requires 384k
Sidekick	Borland	desk util	yes	non-copy-protected version only; occasional garbage on exit
Sign Art	Techart Assoc.	signmaker	yes	Menu selection not visible, but works with trial and error
SmartKey	Software Res.	key macro	yes	
Superkey	Borland	key macro	no	Loads but locks up frequently
Symphony	Lotus	integrated	no	
Thinktank		outliner	no	
True Basic		compiler	yes	
Turbo Graphix Tool	Borland	library	yes	can only be compiled with the IBM-PC version of the compiler
Turbo Pascal 3.0	Borland	compiler	yes	the IBM-PC version works, as does the generic version
UniForth	Unified Soft.	compiler	yes	screen editor balky
Word Challenge	Proximity	game	no	screen is jumbled
XyWrite II	XyQuest	word proc	no	based on their demo disk

DISK LIBRARY...

The users group disk library now has 8 volumes which are as follows:

1.   POPDEMO

This is the original Mindset demo disk, featuring a broad assortment of interesting animation and transitional effects. It is good for showing off the machine, but, due to the fact that source code is not included, you can't learn anything from it.

2.   BIT-BLT DEMO

This disk is also mostly effects demos, but, unlike the first, contains all the assembler source as well as executable modules and a few BASIC programs. The program names are cryptic and I don't read assembler too well, but as near as I can tell it is an anthology of all the standard Mindset effects.

3.   MORE DEMOS

This disk contains yet more Mindset demonstration programs. They are in executable form only. These demos have a narrower focus, showing off the Vyper game, assorted animation effects, color dithering, and a videotext screen sequence.

4.   BASIC STUFF

This disk contains about 80 BASIC programs which run the gamut from graphics demos along the lines of those mentioned above, through things like mouse control routines, the telecom program PC-TALK, trig functions, and more.

5.   UTILITIES

This disk contains lots of useful programs, in both assembler source and executable form, plus documentation for their use. Included are programs for installing a RAM disk, changing video modes in a manner more convenient than with the DOS Mode command, manipulating the system color palette, and more. These programs were written by John Blair at Mindset. They are clean, easy to use and well documented.

6.   REAL TIME CUBES

This disk is a work of art by a programmer named Ralph Russell. The program is simple. After a stunning rotating title graphic comes up on the screen, you select a number from 1 to 9. The according number of 3D cubes proceed to bounce around inside a 3D cubical bounded space. The motion is so smooth its hypnotic. Also, the disk includes well documented assembler source.

7.   C STUFF - SOURCE

This disk contains an extensive collection of programs written in Lattice C by Warren Leong. It includes games (Othello, Life, and Artillery) as well as functions for controlling virtually all of the BIOS graphics interrupts, both IBM compatible and Mindset specific, and some highly original transitional effects and menu display techniques.

8.   C STUFF - EXECUTABLE

This disk contains the compiled version of programs on disk 7.

HARDWARE SOURCES...

Occaisonally we hear of people selling new and used systems and peripherals for sale, some at really great prices. Here are some of the sources we have recently learned of.

Used systems with assorted software:

Erik Eason, 9608 NE 40th Ave., Seattle, WA 98115 206/526-8195

Bob Cakebread, 509 Prospect Ave., Redondo Beach, CA 90277 213/376-1169

New 1st generation systems and assorted software and peripherals:

Rich Dixon, 3343 Cuesta Dr., San Jose, CA 95148 408/274-2625

Michael Moore, 6091 W 75th Dr., Arvada, CO, 80003 303/429-9423

Hardware dealers:

Art Johnson, California Video Sales, 330 Townsend, SF, CA 94107 415/896-0682

Glen Brock. 900 Ashford, #1206, Arlington, TX 76006 817/861-3577

FILLER...

Mindset has recently hired a fellow named Andy Soderberg as a Technical Marketing Specialist to act as a liason between the company and system users. Andy will be working with us in the months ahead to improve user support and documentation. Thanks, Mindset.

Several of you are already signed up for another year in the Users Group. Thanks for your early response to Reid Kearl, Malcolm Orr, Glenn Brock, Wilbert Beebe, and Greg Welz.

Everyone else, your dues are due.

OMNIGRAPH IS HERE...

Omnigraph is an important new graphics file conversion utility
program created exclusively for the Mindset. With Omnigraph you
can convert files between 4Point, Designer, Lumena, and all
versions of PC Paintbrush. With Omnigraph you can also convert
files created with other programs and saved to disk with MGI or
Frieze to any of the drawing program formats.

You can select source files to be converted using DOS pathnames
and wildcards. For example, if you specify "B:\MYPICS*.PI?" in
response to the source file prompt, the program will select
Designer (.PIC), and Lumena (.PIX) drawing files in the
subdirectory \MYPICS on drive B for conversion. The program will
disregard files which are not pictures. For example, it knows
that although Lumena Cel file names take the form filename.PIC
they are not pictures and will not try to convert them. The
program will disregard any files which are not valid drawing
files.

You can select to either view the files as they are coverted or
not. In fact, you can even use the program to view files without
converting them.

You can specify a common output file type, or a different output
type for each file being converted. If you specify an output
path which doesn't exist, the program will create the path
automatically and store the output files in the new subdirectory.

If the selected output type is one which stores palette data and
the source is one which does not, the default palette for the
output type is selected, otherwise source palette data is
transferred.

The program checks free disk space on the destination drive
before each conversion operation. If there is not enough space
there for the output file, you are given the chance to change
disks and continue. The program creates a subdirectory on the
new disk matching the one specified for the original output.

If you do not select to view files as they are converted, you may
use the program to convert Mindset files on an ordinary IBM PC.
This is because the program uses the Mindset-unique bit-blt
operation for display.

You may purchase Omnigraph for $25 per copy from Tim Negris at
138 Village Court #6, Walnut Creek, CA 94596.

CALLING ALL SOFTWARE DEVELOPERS...

Omnigraph represents the first in what will hopefully be a broad
selection of commercial-quality applications produced by Mindset
users for Mindset users. Other such submissions are welcome.

JAMES PALLACK
23 Hayward Street
Apartment 8
Burlington, VT 05401-4759
(802) 658-1255

January 3, 1986

First MINDSET Users Group
C/O Tim Negris
138 Village Ct - #6
Walnut Creek, CA 94596

RE:Computer Conference on The Source
    Borland Turbo Lightning
    December, 1985 Issue?

Dear Tim,

Around five(5) months ago I tried to start a BBS for the MINDSET
computer.   It did not go very far.   There was mainly three(3)
reasons the system failed.   First and mostly was the fact that I
could not get the software running.   Second not enough storage
space was available for running the BBS.   The third was the fact
that there seems not to be much of an interest in the BBS, but
this could be wrong due to the software problem.   To all the
people that tried, sorry.

Another idea came to mind.   There is a communication service
called ."THE SOURCE" which has available a program called
"PARTICIPATE".   I have started a conference called "MINDSET PC
EXCHANGE".   The IBMSIG on "THE SOURCE" was gracious enough to
allow us to use there SIG as a meeting place.   This is where our
conference is located.   We can use this area for software
trading, news, etc.. My conference is located via entering "4"
and RETURN at the IBMSIG command prompt.(or "PARTI" at THE SOURCE
command prompt) At that point type ' R "MINDSET PC EXCHANGE" '
(don't include the ' or ', but do include the ") to get you into
our conference.   At that point you can type "P C" to see a list
of CONFERENCES available.   You should type "J" to join the
conference.   This will send all NEW messages to your mail box
when you log on the PARTI.   You should also do this for all sub-
conferences you want messages from.   Also, please feel free to
leave any message you would like.   You can even create your own
conference if you wish.   I have created four(4) conferences so
far.   They are as follows:

```
At prompt
type      |  Title          |  Discription
-----------------------------------------------------------------
R 2       |  SHOULD WE      |  Discussing on starting our  own
          |                 |  SIG.
R 3       |  COMPATIBLE     |  Question    and   Answers    to
          |                 |  compatible    software     and
          |                 |  Hardware.   Also  a list out of
          |                 |  the    current   compatibility
          |                 |  list.
R 4       |  HACKERS CORNER |  You guessed it.
R 5       |  GRAPHICS       |  Discussing Lumena,   Designer,
          |                 |  and   all   the  rest  of  the
          |                 |  graphics software or idea's.
-----------------------------------------------------------------
```

I am starting this conference as a trial.   If I get enough users
we might be able to start our own SIG.

Sorry to say this service is not free.   If you have a modem all
you need to do is either purchase a starter kit at your Computer
Store, or give a call to THE SOURCE at 1-(800) 336-3366. [1-(703)
821-6666].   You can charge your membership fee and usage to a
major credit card or via CheckFree service.

Program: Turbo Lightning
         by Borland Int'l
Price: $99.95

This program which checks your spelling for you and/or looks up
Symonyms, is a really neat program. And it works on the MINDSET.

I have run only into 1 problem.   Once in a while after jumping
into Lightning, the cursor would not be visible.   To solve this
problem I created a small TurboPascal(Begin; NormVideo; end.)
program.   I use the "R" command to run the program.   Since the
"R" command returns to WS after running the external program.
You don't have all that much to do.   I'm sure someone could
create an small program(machine Language) that would run during
Vertical Interrupt, and reset the cursor.

Since I don't have an Hard Disk I had to create two(2) disks plus
one for Data. Here is an example of the listing of each Disk

Disk 1:   Drive A

```
COMMAND  COM   |   DOS
RAM1     DIC   |   1 of 3 Ram Resident Dictionaries available
AUXI     DIC   |   Your private created dictionary.  You can have
               |   more then one.  1 for TurboPascal, 1 for Word
               |   Processing, etc.
FLP-THES DIC   |   The Thesaurus (Floppy version)
LIGHT    HLP   |   Turbo Lightning Help File
LIGHT    TRN   |   Dictionary of Words w/Transposed letters
FLP-DISK DIC   |   The Dictionary (Floppy version)
RAMDISK  SYS   |   Ram Disk for WordStar overlay(OVR) files and
               |   the TurboPascal program to reset the cursor.
AUTOEXEC BAT   |   Contains the following:
               |
               |   echo off
               |   copy b:*.ovr c:
               |   copy b:cursor.com c:
               |   b:light
               |   b:wsi
               |
CONFIG.SYS     |   Contains the setting for the Ram Disk as Follows:
               |
               |   device=ramdisk.sys 85

Disk #2:Drive B:   |   Can be removed after Wordstar is running.

LIGHT    COM   |   The Turbo Lightning Program
WSI      COM   |   WordStar (Inverse Video)

CURSOR   COM   |   The TurboPascal Program(Resets Cursor)
WSOVLY1  OVR   |   WordStar Overlay file
WSMSGS   OVR   |   WordStar Overlay file
```
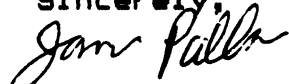
(The above three files are copied to the Ram Disk for faster access)

Disk   #3   only   contains   the   "WSI.COM"   file,   plus   your
data(programs, letters). After Wordstar is loaded, change disk
#2(drive B:) to your data Disk. The reason "WSI.COM" file has to
be available is that in order to use the "R" command.   There are
two reason not have that program on drive A: First is there is
not enough space on Disk #1, and the second is that I'm usually
logged("L" command) onto drive B:, and when you use the "R"
command you have to have "WSI.COM" available on the default
drive.

Hope all of you have a great 1986!!!

Thank you.

                                          Sincerely,

                                          James Pallack
                                          S.M.U.G.

December 19, 1985

Mindset Corporation
965 Maude Avenue
Sunnyvale, California
94086
Telephone
408 737 8555

Dear Mindset Dealer:

Mindset is pleased to announce a new system
product--the Mindset II Advanced Professional
Videographics System. The Mindset II offers three
major areas of enhancement: increased resolution,
smooth multiple-object real-time animation, and
larger system memory.

Increased Resolution

Mindset II offers a 640x400, 4-color
resolution mode which is interlaced.
Characters and graphics created in this
mode are extremely sharp and clear and
achieve a broadcast quality appearance.

Smooth Real-Time Animation

The video display buffer in Mindset II has
been increased to 128K. This permits double
buffering of the 640x400, 4-color mode and
quadruple buffering of the 320x200, 16-color
mode. The result is smooth, flicker-free,
real-time animation of multiple objects.

Larger System Memory

The Mindset II comes equipped with 512K bytes
of system memory, enough for any video or
non-video application.

Software

Along with Mindset II, Mindset is announcing three
new software products that take advantage of the
system's advanced capabilities.

Video Titler II

This is a high-resolution version of Video
Titler that uses the 640x400, 4-color mode.
It offers the same advanced features and easy-
to-use pop-up menu interface.

Video Animator

This powerful, easy-to-use program answers the
need for smooth, multiple-object, real-time
animation. Video Animator works in con-
junction with Lumena Animation and optimizes
the system's animation performance by
executing flicker-free animation as well as
executing multiple events simultaneously.
The program also sequences up to 1000 anima-
tion events and includes many helpful tools
such as a real-time clock and frame counter.

Chalkboard II

This is a high-resolution version of
Chalkboard that uses the 640x400, 4-color
mode. The high resolution makes the freehand
video annotation crisp and clear.

Of course, Mindset II is fully compatible with all
software running on existing Mindset systems.

Pricing and Availability

Mindset II sets another price/performance standard.
Priced at $3495 list, Mindset II comes complete
with two disk drives, 512K System RAM, 128K Video
Frame Buffer, and analog RGB cable.

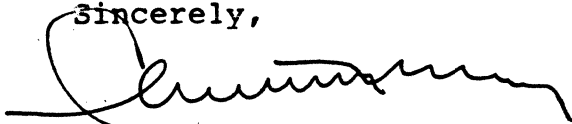Software products are priced as follows:

Video Titler II	$299
Video Animation	$299
Chalkboard II	$ 99

Mindset II and the new software products will be available for shipment in January and can be ordered immediately. Dealer discount levels for these products are the same as for existing products.

Mindset II represents an opportunity for you to expand your Mindset sales to customers for whom resolution has been an issue and for whom smooth, multi-object animation offers new advantages.
It is an ideal complement to the current Mindset system.

As 1985 draws to a close, we at Mindset want to thank you for your business and support during the past year. Looking ahead to 1986, we are convinced that the combination of a burgeoning non-broadcast video equipment market, and Mindset's increased product offerings, will result in an exciting and profitable year for Mindset and its dealers.

Sincerely,

Christopher B. Berg
Marketing Manager

CBB:rml

Mindset II Specification

Processors: 16-Bit 80186 (6MHz)
               Mindset Proprietary Graphics Processor
               Mindset Proprietary Display Controller

System Memory: 512K Bytes

Video Display Memory: 128K Bytes

Display Output: Analog RGB, Composite, RF-TV

Video Standard: NTSC

Expansion Slots for I/O Modules: 4

Dual 360K 5 1/4" Floppy Disk Drives

Color Palette: 512 Colors

Resolution Modes:

```
         320x200      16 colors
        *320x200      16 colors (quadruple buffered)
        *320x400      16 colors (double buffered;
                         interlaced)
         320x400      4 colors (interlaced)
         640x400      2 colors (double buffered)
         640x200      4 colors
         640x400      2 colors (interlaced)
        *640x400      4 colors (double buffered;
                         interlaced)
```

        *Modes unique to Mindset II

Compatibility: Mindset II is fully compatible with
                  all software running on other
                  Mindset systems.

April 4, 1986

Dear FMUG member:

We got together recently to discuss ways to reactivate the First Mindset Users Group which, as you have probably noticed, has not had a meeting since December.

We are inviting you to join us in reactivating FMUG by 1) creating a steering committee to plan and carry out FMUG activities; 2) continuing and improving the newsletter; 3) scheduling quarterly meetings with concrete topics and presentations announced in advance; and 4) taking advantage of the new Mindset users bulletin board to increase the exchange of ideas and information between members.

To that end, we hope you will come to the first FMUG meeting in 1986 which is scheduled for Monday, April 28. It will feature Andrew Soderberg from Mindset Corporation who will describe the bulletin board recently set up at Mindset which is available to FMUG members and accessible with a modem hook-up. Andy will also have the Mindset II and some new software to show us. Please join us to learn how we can best take advantage of this new opportunity to improve communications between members!

The meeting will be at PC Time, 1875 Mission St., San Francisco, starting at 7 p.m. The agenda is as follows:

7:00 p.m. meeting opens - come early to visit and
                          browse - FMUG member Josepha
                          Haveman has an exhibit
                          of computer art on display.

7:30 - 9:00 p.m.   - Presentation and questions
                            and answers by Andy.

9:00 - 9:30 p.m.   - coffee break.

9:30 - 10:00 p.m.   - steering committee meeting
                            (open to all
                            interested persons)

Hope to see you there!

                    Sincerely,

        Virginia Dean   Josepha Haveman

        Dave Joly   Vic Wong