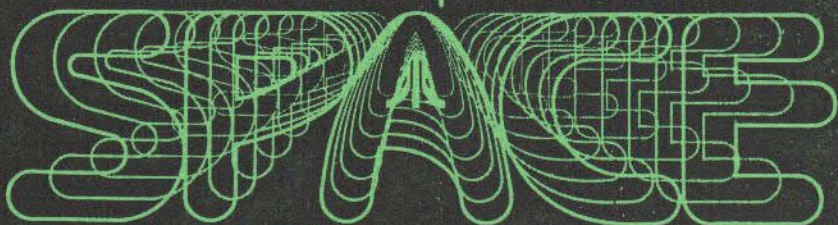# Saint Paul ATARI Computer Enthusiasts

## SPACE

### An Independent computer user group

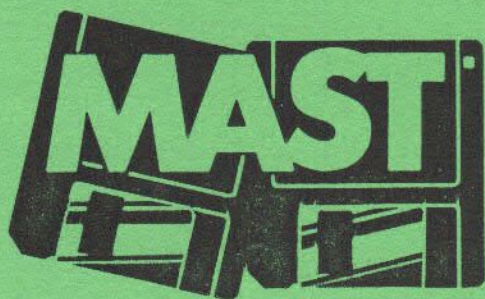# DECEMBER 1986

SPACE                FRIDAY, DECEMBER 12, 1986
MAST                 FRIDAY, DECEMBER 19, 1986
At the Falcon Heights Community Center
2077 Larpenteur Ave. West

## SPACE and MAST Executive Officers

| | | |
|---|---|---|
| Bruce Haug | President | 774-6226 |
| Jim Schulz | Vice President | 537-5442 |
| | MAST Co-Chairman | |
| | MAST Disk Librarian | |
| Bob Floyd | MAST Co-Chairman | 484-7576 |
| Joe Danko | Secretary | 777-9500 |
| Bob Siede | Treasurer | 489-3982 |
| Bob Rhode | Newsletter Editor | 222-3593 |
| Frank Haug | Disk Librarian | 774-6226 |
| Jim Siede | Paper Librarian | 489-3982 |

SPACE/TAIG Bulletin Board                522-2687

# MAST Minnesota Atari ST SIG

IN This Issue:

### Bytes from the Pres

December is here.  I know you always ask SANTA for something, but what do you want from YOUR computer USER GROUP, SPACE - MAST ? Let us KNOW !!

In Dec. at the SPACE meeting we will cover Data Bases, complete with Demo's. In January the theme will be Spread Sheets.  The MAST meeting will have a few new things, too.  Keep in touch by reading Jim's column.

For both the SPACE and MAST groups, we plan to start a group discussion after the main business meeting for members to pick up a few TIPS and TRICKS on operating their computers.  Q&A on the easy way to format disks, transfer programs from one disk to another...  If you are having a problem with one of your programs, bring it in.  Let us know before the meeting starts.  This way we should be able to answer your question and aid you in getting your program to run when we get to TIPS and TRICKS. See you at the meeting.

                The Pres

P.S. Christmas Music on Extra DOM !!!

### D.O.M. stuff
### Frank Haug

With the approaching sounds of jingle bells and visions of sugar plumbs it would have been nice to have a Christmas DOM.  Nobody thought of that, I guess.  Oh well, the DOM is still very good this time even if it isn't season oriented.

And yes, Virginia, there is a Christmas music disk. It is the same one that we have sold in the past.  We will have the music player there as well.  For those of you who don't know about the music disk, it is double-sided and stuffed full of 46 Christmas classics.  Come to the meeting we'll play through it 'til demos.  And because it's Christmas, it's only $4.00 for the 2-sided music and $4.00 for the player.

On with the programs on the December 1986 disk of the month
1. PSHOPEPS - (basic) epson version of #4.
2. PSHOPEPS.COM - compiled epson ver.
3. PSHOPGEM - (basic) gemini 10x ver.
4. PSHOPGEM.COM - prints out printshop graphics on a sheet of paper. Basic version is here if you want to convert to your printer. Compiled version is much faster.
5. CHILL.BAS - Prints wind chill chart (brrr.)
6. SWARM - An interesting shoot'em up, nicely done.
7. PERCENT - GUESS the percent; challenging little puzzle
8. ANGLE - richochet laser to hit target
9. KIDNAPED - escape 9 story building (text adventure)
10. MATHWAR - 'shoot' problems before they hit you.

Merry Christmas!  See you at the meeting

V.P. Notes
By Jim Schulz

December has come and Christmas is not far away. This month I have quite a bit to talk about in the 8 bit/XE/XL arena. COMDEX, the annual fall software show, has come and gone. Very little 8 bit software was shown, but news was still released. More on that later.

Now for this month's headlines... COMDEX, what's new for your computer?... Is the new Atari 1200 baud modem still for the 8 bit machines?... How did Star Raiders II get it's name? Sam tells all... Batteries Included removes copy protection - or do they?... Atari ads in Commodore magazines... News from ICD... GEM for the 8bit... Do we want Newsroom for the 8bit Ataris?... What's new for the 8 bit in this month's newsletter? Quite a bit.

COMDEX..... COMDEX was held the second week in November this year. As I told you at the meeting, news for us 8 bit owners was hard to find. Here is some of the stuff that I have found. Atari announced more information about their new 1200 baud modem. More on that soon. Atari also announced and showed their XEP 80-column board for the Atari XL/XE computers. The cost will be $79.95 (as Atari says it, a dollar a column) the XEP80 plugs into the joystick port and requires a monochrome or black and white TV. Currently, two programs are being adapted to support the 80 column card, PaperClip and AtariWriter Plus. OSS is also thinking about supporting the card if there is enough sold to warrant the release of new software. In addition to Atari, only ICD and St. Paul-based Keypunch Software were showing 8 bit software. More on ICD later.

Now what about this 1200 baud modem???? Atari announced at COMDEX that their new 1200 baud modem would be available in the first quarter of 1986. It was announced as the first fully Hayes-compatible modem for under $100. But it is now only being advertised as having a RS232 interface, no serial I/O port for the 8 bit machines. I have not seen any mention of 8 bit compatibility in any of the COMDEX reports released. Has Atari changed their mind???? I will do some more research on this and give you an update at the next SPACE meeting. For now, check out Atari's press release elsewhere in this month's newsletter.

In last month's review of Star Raider II, I mentioned that Star Raiders II was very similar if not identical to the old, never released; The Last Starfighter game. Well, in fact it is the same game. Why the name change? According to Sam Tramiel, it's economics. Atari owned the rights to the name Star Raiders and the Last Starfighter was a movie, so royalties would have to be paid. Atari makes money off a game that was never released and it, at the same time releases new software. The beauty of economics.

Batteries Included, makers of HomePak, PaperClip, and Degas, have announced that they are abandoning copy protection of all kinds. Currently, PaperClip is protected by a key in the joystick port. This protection will be removed in the next release. But, here is the kicker. They say that if pirating of their Atari software gets out of hand they will drop Atari from their product line. Another good 8 bit product could

HAPPY HOLIDAYS! Page 2

die a sad death to pirates. Let's hope not.

Ads in Commodore magazines? Yes, Atari is now advertising its computers in Commodore magazines. And one company is not too happy about it. Commodore is "irked" at Atari for this advertising. This is nothing new, though, since Atari is also advertising in MAC magazines as well. It's too bad, though, that they couldn't use some of this money for television ads to pump more sales into the one of the best computers around. I did see an ad for Ataris at Children's Palace: $79.95 for 65XE and $119.99 for 130XE. The only software that they advertised was Keypunch software for $4.99. It's nice to see at least one national ad for the 8 bit machines.

ICD... ICD itself introduced an 80 column card at COMDEX. Their card sells for $99.95. The only drawback of their card is that you need their MIO box to use it. Their card operates in 16 selectable colors or monochrome and requires no RAM from the computer. ICD was also showing their R-Time 8 battery powered clock cartridge. This plugs in the cartridge port and works with or without the MIO box. This sells for $69.95. From all the rumors, ICD's booth was quite busy and seemed to get quite a few people excited about buying Atari 8 bit machines. ICD was also the only 8 bit only vendor at the show.

GEM for the 8 bits? Well, I probably shouldn't call it GEM. It's RAOS. Yes, that's right. In the January 1987 Antic, there is an ad from Zobian Controls for a GEM-like menu, icon, and mouse driven interface for the Atari 400, 800, XL and XEs. It is available separately for $49.95 or with their new SuperRAT 2 button mouse for $99.90. This sound interesting. Something like this is available now for the C128 in GEOS and Atari two years ago announced GEM for the 8 bit. 8 bit GEM never materialized. If anyone orders this, let me know. I would love to see this demoed at a future meeting.

Newsroom for the 8 bit? Springboard Software, which is locally based, has produced a very nice newsletter generation program called Newsroom for other systems but has never shown any interest in Atari. Well, another effort is being staged to get this program converted to the Atari. This time, nationally. About two years ago, Phil from Wizard's Work staged his own fight telling everyone to call Springboard locally and request this program. His efforts didn't bear much fruit. Well, now others are trying it starting with Compuserve. You will find an appeal somewhere else in the newsletter. Let's try one more time with our phone calls and letters. At least this time, we are not alone. In other news, I have it on good authority that Springboard has purchased an ST. No word yet on what they are doing with it.

So that's about it for this month. You will find no review from yours truly this month. Maybe next month. But I have culled together a number of good 8 bit articles for your reading. Elsewhere in this newsletter, you will find part 3 of the ICD conference, the Springboard software appeal, news about the new 1200 baud modem, and hardware information about never released 1090 expansion box.

Good stuff this month. That's all. I will see you at the meeting.

HAPPY HOLIDAYS! Page 3

Subject: Report on Northern California Atari Expo

The Northern California Atari Expo was held in San Jose during the weekend of September 20-21.  This is a short report on what all went on.

First, it is important to note that because Atari is going public in October there were no new product announcements.  People would only talk about items that had previously been announced.  However, you should look forward to the upcomming Comdex show.  By the number of times it was refered to it seems there will be more than enough new products to keep everyone happy.

I have tried to get all my facts straight and am not mentioning a few things I couldn't get enough information on.  If I do make any errors it's not for lack of trying.  Any mail concerning spelling mistakes will be returned to the sender 256 times.

## MISCELLANEOUS

The Atari Explorer magazine will be coming off the presses this week (Sept. 22) and should be available soon.  Hereafter it will be published every 2 months, as Atari now has the staff necessary to produce it.

There were over 40 booths and of course Atari itself was there.  In attendance were several notable speakers such as Leonard Tramiel, Shiraz Shivji, Neil Harris and others.  The hall was so packed on saturday that it was difficult to move around.  ANTIC and ANALOG magazines had their own booths, so a more complete write up in these magazines is likely.

## 8-BIT HARDWARE/SOFTWARE

At the 8-bit hardware and software conference Atari representatives John Scrutch and Lane Winner gave repeated assurances that Atari has no plans to dropping the 8-bit line.  In fact, they have several new products, with several more under consideration.

The XEP80 80 column board will begin production very soon.  This product plugs into a joystick port, has a built-in parallel printer interface, and will work on all 8-bit machines.  Although it will work on an NTSC color monitor, a monochrome monitor is recommended. It should sell for about $80.

The SX212 1200 Baud modem will be available in late fall.  It has an RS-232 port for 850 or ST applications and also has the 8-bit SIO interface.  XE-TERM is being upgraded to accomodate 1200 Baud operation and the entire package will sell for about $100.

Concerning memory upgrades for the 130XE, Atari may or may not sell something like a 340XE or a 520XE.  The technology is simple and is something that they are considering but not saying (remember, no new product announcements).  However, they are considering making their Freddy chip available to 3rd party manufacturers.  Freddy is the memory management chip that is used in the XE.  By making it available, others could make their own 100% 130XE compatible memory upgrades (some that are currently available are not).

Also something in the future would be a monitor like the Commodore 1702.

Atari did show such a monitor at a past CES but never persued it as there was no real need.

Finally, the 3.5 inch 8-bit disk drive!  The drive is still being developed and probally will not be seen until early '87.  It will be a single sided, double density with 320k of storage, formatted.  The DOS is being written by OSS (Optimised Systems Software, who wrote the original Atari DOS) and will be DOS 2.5 compatible.  In fact, it will allow the drive to act as an 810 or a 1050 in single or enhanced density as well as the full 320k.  It will be twice as fast as a 1050 and will have sub-directoriesas well as the capacity to address up to 16M bytes, and will be capable of random access.

A 640k double sided drive is a distinct possibility, as Atari is currently the largest buyer of 3.5 inch drives in the world.

## ST HARDWARE/SOFTWARE

The first thing you saw when walking into the hall was Xanth's "Shiny Bubbles" demonstration.  Xanth is the company that gave the 8-bit computer its bouncing ball and bouncing fuji demos and this was its new ST demo.

Imagine four silvered spheres suspended in midair while you're looking down and slightly to the left at them.  The floor has the word ATARI printed in four columns and the ceiling (which isn't directly visable) is a yellow and red checker-board pattern.  Imagine that the floor and ceiling are smoothly scrolling into the background.  Imagine that all this is accurately reflected in the spheres.  Now imagine that while all this is going on the spheres are revolving around one another in a level plane!  Phenomenal!  Comparing the Amiga bouncing ball to this is like comparing a Ford Model T to a Ferrari Testarosa!

Xanth was also showing their game "Kill A Happy Face" (they're looking for a new name).  You're a happy face floating through a maze searching for other happy faces to destroy, which are the other players.  Up to 15 people can play by connecting 15 STs together.

FTL had two STs hooked together playing Sundog and were showing an interesting game called Dungeon Master which is a Dungeon/Adventure game with excellent graphics.

Although there were a several companies showing various software packages, the main things you noticed were the synthesizers.  It seemed like every other booth had half a dozen synthesizers hooked up through the MIDI ports.  Activision was showing its new music program, and even Guitar Showcase (which sells musical instruments and NOT computers) had a booth with several synthesizers going.

Data Pacific was there showing the Magic Sac cartridge (formally Mac Cartridge) which they were selling for $100 and sold out of the first day.  This is the cartridge which turns your ST into an Apple Macintosh.  The normal price for the cartridge is $129 for the kit and $149 for the fully assembled version.  They also offer a modification to the Atari ST drives which allow them to read a Macintosh disk directly.  The cartridge comes without the Apple ROMs, which you must supply.  The booth next door was selling them for $30.

Of course the Atari booth was at the center of the hall.  They were showing STs with the new Blitter chip.  The blit chip is now ready and will begin shipping soon.  Contrary to popular rumors it does not increase screen resolution or the number of colors available.  It is simply a memory

management device capable of moving large blocks of memory very quickly,
and not just screen memory.  There were some demos running both with and
without the blit chip, and the blitter equiped ST was considerably faster.
     Upgrade kits should be available by the end of the year and may be
installed in both 1040 and 520 STs, even in 520STs that have had their
memory expanded, as long as the memory expansion does not physically
interfere with the blit chip location (it goes on top of the CPU).
     The OS9 multi-tasking software will be shown at Comdex as well as an
IBM-style box for the ST.  The new 2080ST and 4160ST (2 and 4 megabytes)
were shown earlier in London.  They should be priced at $1500 and $2000,
respectively, with monochrome monitors.
     A laser printer is another posibility to be announced at Comdex as well
as a hard disc installed inside the IBM-style box.  The AMY sound chip is
still undergoing development.
 ·   The IBM emulator may be available by the end of the year.  This is the
hardware version, with its own 8088 and memory.  A software version is also
under developement.
     Atari is still looking at the CD ROM but prices are going to have to
come down for the hardware before they will sell such a product.


     Well, that's it.  I probally left out a quite a bit, but I have tried to
be as accurate as possible.  8-bit sales have been keeping pace with ST
sales, and the ST has been selling extremely well in Europe, so Atari seems
to be doing well.

Kevin Thompson


                Atari Corporation Shows SX212 Modem
     First fully Hayes compatible 1200-baud modem for under $100

(Las Vegas, November 10)  Atari Corporation has unveiled a major new entry
in the peripheral marketplace -- a fully Hayes compatible, 300/1200 baud
external modem, which will retail for below $100.  The Atari SX212 includes
an industry-standard RS232 interface port, making it plug-compatible with
virtually every computer available.

     According to Atari president Sam Tramiel, "Atari is now bringing our
philosophy of 'Power Without the Price' to the peripheral market.  We
expect to offer the SX212 modem to a wider range of computer users than has
ever before been associated with Atari products."

     The modem follows all the commands of the Hayes instruction set with
only one, not relevant, exception, relating to internal telephone number
memory.  This feature is not in the Atari modem, due to the prevalance of
computers which duplicate this function.

                         8 Bit Xtra Part II

     This is some hardware notes taken from the ill-fated 1090 expansion
box.  This explains more about the Atari parallel bus protocol.  Next
month, a look at the chroma monitor signals.  Enjoy.

Jim Schulz

                   XL-Series expansion system
                    Technical Specifications
                         Revision A

     The expansion box is an extension device providing support of
expansion cards for the Atari computer line.  This device provides Atari
systems with expansion and enhancement.  The bus enables the consumer to
connect a variety of differemt devices to the Expansion Box Interface
(E.B.I.).  Some different devices are listed below.

) RAM EXPANSION
) SERIAL/PARALLEL INTERFACE
) Z-80 PROCESSOR
) 80 COLUMN VIDEO MONITOR INTERFACE
) HOBBYIST PROTOTYPING CARD

Architectural Overview

The expansion box contains a triple output power supply providing regulated
12 volts and -12 volts and +10 volts unregulated.  Also provided is a half
wave rectified AC waveform (for power line frequency reference only) and +5
volts (for reference only)
     The address bus, data bus and control lines are buffered by the
expansion box and bussed to the five edge connectors provided.

                    Connector pin-out top view

| +10V | 2 | 1 | +10V | Reserved | 28 | 27 | A10 |
|------|---|---|------|----------|----|----|-----|
| AUDIO IN | 4 | 3 | EXTSEL | Reserved | 30 | 29 | A9 |
| GND | 6 | 5 | EXTENB | DBUFSEL' | 32 | 31 | A8 |
| MPD' | 8 | 7 | REF | D7 | 34 | 33 | A7 |
| IRQ' | 10 | 9 | RDY' | D6 | 36 | 35 | A6 |
| RESET' | 12 | 11 | AC | D5 | 38 | 37 | A5 |
| ABUFFSEL' | 14 | 13 | CARDSEL' | D4 | 40 | 39 | A4 |
| -12V | 16 | 15 | BR/W' | D3 | 42 | 41 | A3 |
| GND | 18 | 17 | A15 | D2 | 44 | 43 | A2 |
| BPHASE2 | 20 | 19 | A14 | D1 | 46 | 45 | A1 |
| GND | 22 | 21 | A13 | D0 | 48 | 47 | A0 |
| +5V REF | 24 | 23 | A12 | +12V | 50 | 49 | COMPGNDRET |
| Reserved | 26 | 25 | A11 | | | | |

                         PIN DESCRIPTIONS

          Pins 1,2 +10V+10 volts unregulated
          Pin 3   EXTSEL External Select (Input) ==>  This open collector line is

generated internally by the Expansion Box Device (E.B.D.).  This signal
should be active low whenever EXTENB is active and the E.B.D. is selected
and there is a valid E.B.D. address on the bus.  EXTSEL' causes a CAS'
inhibit on the main board allowing a remapping process.  Although E.B.D.
can be mapped in any valid ram location, these devices should follow the
ATARI guidelines for E.B.D. locations so that future ATARI devices can be
used.  The drive device should be capable of sinking 10 ma.
    Pin 4  Audio Audio In (Input) ==> This line is tied directly to the
audio summation network of the computer.  The audio signal input is 100mv
peak to peak with a 4.7K ohm load impedance.
    Pin 5  EXTENB External Decoder Enable (Output) ==> This output goes
high when there is a valid RAM access.  Any E.B.D. can map during a valid
EXTENB but the E.B.D. should only map in accordance to specified address
locations.
    Pin 6  GND Ground
    Pin 18  GND Ground
    Pin 22  GND Ground
    Pin 7  REF' Refresh (Output) ==>  This output can be used for refresh
timing on dynamic memories connected to the E.B.I.
    Pin 8  MPD' Math Pack Disable (Input) ==>  This open collector input
is sed to diable the math pack of the OS ROM ($D800-$DFFF).  This should be
done when the E.B.D. is deselected and has a handler resident.  The driving
device should be capable of sinking 10ma.
    Pin 9  RDY Ready (Input) ==>  This open collector input signal allows
the E.B.D. to halt the microprocessor ONLY during read cycles.  Driving
this input low will extend the read cycle for slow peripherials. The
sinking device should be capable of sinking 10ma.
    Pin 10  IRQ' Interrupt Request (Input) ==>  This open collector line
creates an interrupt on the microprocessor.  The interrupt can then invoke
the handler ROM or other service routines for the E.B.D.  The driving
device should be capable of sinking 10 ma.
    Pin 11 AC The half-wave rectified AC signal from the power supply
bridge (rectifier).  May be used as an unfiltered line frequency reference.
    Pin 12 RESET Reset (Output) ==>  Reset is an active low signal that
occurs either on power-up or by depressing the reset key on the computer.
    Pin 14 ABUFFSEL Buffer Select (Input) ==>  This signal, when driven
high disables (tri-states) the address lines from the computer.
    Pin 13 CARDSEL  (Output) ==> This signal enables the E.B.D. to respond
to the hardware protocol.  In the 1090 it will always be grounded.  In
future Atari products it will be an address space select line for
processors which have an address space in excess of 64K.
    Pin 15 BR/W Buffered Read/Write (Output) ==>  This output is active
high for a read cycle and active low for a write cycle.
    Pin 16 -12V-12 Volts, Regulated
    Pin 20 BPHASE2 Buffered Phase 2 Clock (Output) ==>  This clock output
line is a buffered phase 2 clock from the processor.
    Pin 24 +5VREF  This is a +5 volt regulated reference.  Expansion cards
should not draw more that 10ma maximum from this reference.
    Pins 26,28,20  Reserved for future use.
    Pin 32 DBUFSEL' Data Buffer Select (input) ==>  This signal, when
driven low enables the data bus transcievers for data to and from the
computer.
    Pin 49 COMPGNDRET Computer ground return is a ground connction only
through the flat cable connector and is otherwise isolated.

    Pin 50 +12V+12 volts regulated

### Interface Reqirements

    All E.B.I. outputs have the drive capability of 24ma at logic 0 and
-6ma at logic 1
    All E.B.I. open collector input lines must be able to sink 10ma
minimum at .4 volts (max).
    All E.B.I. non open collector input lines except AUDIO must have the
capability of driving 24 ma at logic 0 and -6 ma at login 1.
    All E.B.I. signals except audio will be standard TTL logic levels.
    The AUDIO input line must drive a 4.7 KOhm source impedence with 100mv
peak to peak signal.
    Each expansion box card should not load any E.B.I. output with more
that three standard TTL loads.

### Hardware Device Protocol

    The E.B.D.s have the following charcteristics:

    1)The interface between the E.B.D. and the CPU is defined through the
handler/OS resident is the OS ROM.  The OS can support 8 devices at one
time with only one enabled during any given interval.

    2)Every E.B.D. has a unique handler that resides in the CPU memory
from $D800-$DFFF.  The ROMs containing the code for these handlers are
physically resident on the respective E.B.D.s.  To access this handler, the
math pack must be disabled with MPD.  When the Math pack is disabled (this
should happen whenever the E.B.D. is selected and has an external handler)
the computer will generate EXTENB for the math pack area.  The E.B.D. must
then generate the correct EXTENB/EXTSEL protocol.  If the device does not
generate EXTSEL the CPU will access (in the 64K compuilters) an unused area
of RAM.  This area should not be used since all computers of this series do
not have that area of RAM.

    3) The location $D1FF in the CPU memory map is reserved for passing
control information between the CPU and the E.B.D.'s. The CPU selects one
of the devices by writing a "1" into the desired bit in location $D1FF.
The device can be deselected by writing a "0" into the desired bit.  The
CPU can access 8 devices,  but only one of the devices may be active at a
time.  If the IRQ line is pulled low the CPU can read status for location
$DIFF and locate the requesting E.B.D.  If the bit is a "0"  the device
has not caused the interrupt.  The E.B.D. must clear the interrupt flag
when the interrupt is being serviced.

    4)An E.B.D. should assert MPD only when it is selected.  An E.B.D.
should assert EXTSEL only when it is selected and if EXTENB is asserted.

    5)An E.B.D. may respond to any selects DO through D7.  It is
recommended that the E.B.D's have configuration switches to allow them to
respond to any one of the selects.  Some of the computer systems use the
E.B.I. to support internal devices; therefore the user should check each
manual for device locations.  If the system has devices in specific
locations, those are reserved in that computer.  (1450 modem and speech

synthesizer)

6)An E.B.D. handler may respond to addresses in the region $D800-$DFFF only when it is selected.

7)A peripheral may respond to addresses in the region $D100-$D1AF only when selected.

8) The E.B.D.'s will have priority over the SIO peripherials when they are addressed generically.

9)The CPU address space from $D600 TO $D7FF is reserved for E.B.I. devices as follows:

| Device Range | Size |
|---|---|
| D0 | $D600-$D61F 32 bytes |
| | $D620-$D63F Rerserved (modems) |
| D1 | $D640-$D67F 64 bytes |
| D2 | $D680-$D6BF 64 bytes |
| D3 | $D6C0-$D6FF 64 bytes |
| D4 | $D700-$D73F 64 bytes |
| D5 | $D740-$D77F 64 bytes |
| D6 | $D780-$D7BF 64 bytes |
| D7 | $D7C0-$D7FF 64 bytes |

The 800XL will not provide CPU RAM in this address space.  The 600XL has no internal RAM in this address space.  The 1450XL does allow access to internal RAM in this address space.  E.B.D.'s should provide this RAM on the E.B.D. or be restricted for use only on the 1450XL.

### RAM 64KMR

The RAM 64KMR module is designed to be used in the expansion box. However, it does not completly adhere to the E.B.I. protocol since it will allow RAM to be selected in liew of the OS (when used in the 1064 mode).

### RESERVED MEMORY LOCATIONS

The memory space from $D100 to $D1AF is available for use by most applications.  This space should be used by a device with the device select bit enabling it's use.  If the device select bit is not used, there is potential bus conflict between E.B.D.'s.  The remainder of the I/O space between $D1B0 and $D1FF is mapped as follows:

| | |
|---|---|
| $D1B0-$D1C7 | Speech/Modem/Disk Registers |
| $D1C8-$D1CE | Atari Reserved |
| $D1CF | Alternate Interrupt Register (1450 only) |
| $D1D0-$D1DF | Audio Registers |
| $D1E0-$D1E7 | Atari Reserved |
| $D1E8-$D1EF | Parrallel/Serial Registers |
| $D1F0-$D1F7 | Alternate CPU Registers |
| $D1F8-$D1FD | 80 Column Video Registers |
| $D1FE | RAM Bank select Registers |
| $D1FF | E.B.D. Select/Interrupt Register |

Help needed from 8-Bitters
    by Dave Pettit

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Ever since I heard about programs to create a mini-newspaper with an 8-bit computer I have been searching for one for my Atari 800.  So far I have only found one program for other computers and one from Xlent Software that is apparently hard to use.  The first program is 'The Newsroom' by Springboard Software, Inc.  Their program allows the user to enter their own text, choose from several fonts and several graphics, and merge it all together to form a fancy 8 1/2 by 11 newspaper.  This copy could be printed several times on your printer or used as a master at a professional printing shop.  Newspapers could be made for your social club, for your church, for school announcements, for classroom writing activities, your families annual newsletter, and more.

Another program by Springboard Software, Inc. is their "Certificate Maker".  This program is similar to Printshop but it makes an 8 1/2 by 11 award with border, graphic pictures, and text to the user's specifications. This program, too, could be used by a myriad of people -- probably you, too.

The problem is that Springboard Software, Inc. is "not currently planning on converting these programs to the Atari" according to a representative of the company.  But it came to me that if enough 8-bit Atari owners expressed a real interest in their software, they would be foolish not to make it for the Atari.  I believe this is what happened to Broderbund Software and their Printshop program.

Here is what you can do.  Write or call Springboard Software, Inc.  (7808 Creekridge Circle, Minneapolis, MN 55435, Ph.  (612)944-3912) and tell them in your own words that you would like to see both programs converted to the Atari 8-bit computers.  Tell them how you plan on using them, giving them the idea that there are more people in the country like you with an Atari.

Your efforts may convince Springboard that there truly is a market for their fine products.  If it does, it will provide us all with some terrific and useful software and keep me from buying an Apple clone which I will not use except for this software.  I thank you in advance for your help.

8 Bit Xtra

This is the third in a series of BBS articles which I have collected for our club newsletter.  This month is the second of two parts of a conference with two representatives from ICD on September 13, 1986. Elsewhere in this issue is 8 Bit Xtra Part II with some hardware notes on the never released Atari 1090 expansion box.  Read and enjoy.

Jim Schulz

(Robert Crosby) What's the current drain @ 9VAC for a 1 MEG MIO...I want to get started on a dedicated UPS early!

(ICD-Tom) About 1.5 amps

(Francis) 1.5 AMP! It like disk drive.

(Robert Crosby) OK thnks... 1 more... What's the nature of the interconnection between the XL/XE and MIO...(How long is the cable?)

(ICD-Mike) the MIO sits behind the computer on a 3-4 inch ribbon cable...this is due to noise level of lines from the computer. As to 1.5 amps...this is a maximum, realistically its less than 1 amp, but when the 80col becomes availible, it will take at least 1.5...also, a floppy takes 3 amps and gets much hotter.

(Robert Crosby) Thanks again.

(Francis) speak of 80Col, is come with MIO?

(ICD-Mike) no, about 2-3 mos from now... it plugs on top of the MIO.

(Francis) I see. Isn't you use 1Meg DRAM for 1Meg MIO?

(ICD-Mike) No, 256K x 1 DRAMS

(Francis) Ok, Just i think so. Thanks.

(Jerry) Will the Cart be chainable like the Rtime cart?

(ICD-Mike) Yes, the SDX cart will be able to control (turn on/off) the

(Francis) (hammer my head. I forgot!)

(ICD-Mike) cart plugged into it.

(Remus) I forsee a series of one-touch crashes with this stack of carts. Any thoughts about adding a cart expander out back of the XL bus?  I know they aren't there as they are on an XE.

(ICD-Mike) You must stack the cart on top of the SD X cart because it controls the one on top, i.e. running BASIC XE with SD X...

(Remus) And R-8

(ICD-Mike) This is true even on the 130XE adapter for the MIO the RT8 can be plugged into the second slot 3 carts it wont get bumped too much. The RT8 and SD X carts are fairly sturdy, but, you must take care.

(Remus) Yeah, the cart port on this XL is kinda wored out.  Thx!

(Robert Crosby) I know that the hope is that your 80col will be software compat. with Atari's; What do the chances for this look like?

(ICD-Mike) well, it will be about the same compatibility as the AFA 80 col was for the 800. There is NO way to get true compatibility since just the fact that we're using 80 cols implies this. You would have to pick up the data put in screen ram and convert to 80 col... this is virtually impossible, however, it is compatible on the E: level (that is through the CIO) just like the Atari XEP80 will be. We plan on giving more than Ataris version (like all our products).

(Chmn Keith) Tom and Mike...we have been running about 2 hours now.  How are you doing on time?  Want to carry on for a while?

(ICD-Mike) Just fine. Sure.

(Robert Crosby) How about DMA on for 40 cols when both monitors are connected?

(ICD-Mike) what do you mean?

(Francis) I think he means you could both video output of atari and 80col for one monitor.

(Chmn Keith) gonna follow up, Robert?

(Francis) (unless I am mistake)

(ICD-Mike) ==> Francis thats not what he meant. But in answer to your question, no, you can not get the 40 col to go through

(Robert Crosby) sorry...died momentarily at this end

(ICD-Mike) the MIO video... it is not availbible through the parallel port and is not worth connecting into the MIO case (would cost a lot)

(Robert Crosby) what I meant was whether BOTH a 40 col and 80 col (thru MIO 80 col) could be updated simultaneously?

(Francis) Oh. I see

(ICD-Mike) yes, 80 col and 40 col are seperate systems... the 40 col requires the DMA, and the 80 does not... however, the E: handler will not printer to both simutaneously.

(Robert Crosby) The reason for asking: Atari kills DMA when sending to the 80 col board.

(ICD-Mike) For the Atari, it is necessary for serial transmission (timing)... for our 80 col, it is not necessary... however, when the 80 col is enabled (through MIO config), the 40 display will be turned off... an XIO to it will bew able to re-enable the 40 col or you cxan reenable it yourself through programming... it does not matter to the proper functioning of the 80 col adapter.

(Jim Woods) my question has been answered but let me give ICD an "attaboy good job guys with all your products!"

(Chmn Keith) I agree with that!  now, I have a couple of quick questions...
first... with the X cart, will us US Doubler owners be able to boot normal
dos-2.0 type disks at high speed?  (ala SCOPY)?

(Chmn Keith) (sorry!)

(ICD-Mike) (get with the program Keith hehe)

(Chmn Keith) hahah...it was worth a try!!  Also, will the 80 col display be
able to be used with custom display lists?

(ICD-Mike) NO... display lists are things for ANTIC and 40 cols ONLY.  It
takes custom chips for stuff like that and is intended for game type stuff.
If you wanted, you can program the video controller for the 80 col and get
things like scrolling and setting display beginning pointer.

(Chmn Keith) (or term program status lines!!).

(Remus) You mentioned the AFA board.  It was RGB. Does this meanthe 80 col
enhancement will be RGB?  Or even color?

(ICD-Mike) It will be at least RGB (the design has not been finalized
yet... we are not sure exactly how far to go with it... we have thrown
around ideas of analog RGB (AFA is digital RGB called IRGB) and bit mapped
graphics, but we'll settle on this soon... alot depends on what people will
want and are willing to spend for...

(Remus) Have you decided on a controller?

(ICD-Mike) it... Once a design has been settled on, it should only be about
1 1/2 mos to get into the market. Its far easier than the MIO because it
needs no case or many connectors... BY THE WAY -- We will be selling AFA 80
col boards and IRGB adapters for these... we have hundreds for sale (this
is of course for the 800 computers... NOT the 800XL or 130XE).

(Chmn Keith) francis is next.  (Tom, let me know when you are ready to hang
it up here).

(Remus) What's pricing on AFAs

(ICD-Mike) AFA boards are $100 and IRGB are $30

(Francis) Have you planning to seell 4-Meg or 8Meg MIO? and Is that
SpartaDOS X automatic to load like you boot old SD?

(ICD-Tom) No on the memory expansion it is not possible with the 6502 map
that is the Atari memory map. What do you mean? automatic to load Francis?

(Francis) I mean you plug SpartaDOS X, Will it loaded quickly when you boot
(or power up) Like you boot SpartaDOS 3.2c. (or Fixed DOS?)

(ICD-Tom) It will be instant high speed (unlike disk versions) and the DOS
is already loaded just a brief delay for system initialization.

(Francis) Good. THX.

(Chmn Keith) ok, we have time for Abdul and then Duane, then we will shut
down here.

(Abdul) What is special about the DRAMS in the MIO board?

(ICD-Mike) They are a different type of package (not DIP) for space
conservation... they'll much more than std DRAMS since they are not
discounted all over the place. Therefore, (that was cost much more) you
will be able to beat our prices even if you did try to expand (sorry again
-- that is will NOT be able to beat our prices for the upgrade)... having
typing probs anyway, we also do not want lots of MIOs coming back with bad
attempts at upgrading that will definately void all waranties.

(Abdul) I see... many thanx and keep up the good work! Abdul out.

(Chmn Keith) Sounds like Abdul has the soldering iron out (hehe).

(DUANE) WILL MIO BYPASS RAMBO XL ?

(ICD-Tom) Since the MIO is addressed differently both can be used at the
same time... Just use them as different drive numbers.

(Chmn Keith) well, in closing down, and since everyone seems real
interested in the MIO board, I can tell you that is really is an incredible
piece of hardware.  I received mine (1 MEG) last thursday, and have it
configured for (get ready to drool..hehe) a 128K print buffer and a 895K
RAM disk which I BOOT from.  it's great!  I think we should all applaud ICD
for both being here with as as well as all of the great Atari products they
continue to put out!!

(dick) <APPLAUSE -- CHEERS for MIO>

(Abdul) cheers!!!

(Robert Crosby) Absolutely!!

(Remus) Bravo!

(Chmn Keith) any closing comments, Tom and Mike?

(DUANE) HERE HERE

(Jerry) Good Work..Keep it up!

(Sarge) bravo

(ICD-Mike) Thanks for having us on... We appreciate all the support that
you guys are giving us... As long as products keep selling the way they are
we'll keep supporting you... again thanks

(ICD-Tom) And don't forget to send money with all those requests (hehe)

(ICD-Mike) And thanks for keeping things in order Keith. ga

(Robert Crosby) It's on its way!

(Chmn Keith) myself, I can't remember ANY atari product raising as much interest as this MIO board. I have a feeling that the transcript of this Co is going to be a HOT item!! Thanks again for coming to Tom and Mike!

(Dick) Excellent CO!

(ICD-Tom) Please use a spelling checker!

(Mike Schoenbach) Great CO guys!

(ICD-Mike) (With some editing... its hard to always get the flow)

(ICD-Tom) Thanks for having us!

(Chmn Keith) you guys make me wonder why I wasted money on an ST!! This CO is now officially over. I will stick around for a while if anyone wants to ask me anything about the MIO board.

(ICD-Mike) bye?

(Mike Schoenbach) Take care, Tom & Mike.


### MAST November Meeting Minutes
### by Dan Stubbs

The November meeting of MAST was held in the Falcon Heights Community Center on Friday, November 21, 1986. The meeting was called to order by SPACE president Bruce Haug, as co-chair Bob Floyd was unable to attend.

Jim Schulz mentioned that MAST information and other items of current interest such as information on COMDEX and on the MAC emulating cartridge was available on two local bulletin boards: L. R. Systems (777-6376) and Mindtools (542-8980). Jim asked how many people would be interested in a programmers' group that would meet soon after the MAST monthly meeting to discuss a variety of topics including: which C compiler is best, Pascal, Modula-2, and GEM related topics. Fifteen people expressed an interest in such a group. Bruce Haug said that he had found a meeting place for a programmers' group that would be free of charge. Jim would like the first meeting of this group to be held in January or February.

A MAST logo designed by Steve Pauly was shown at the meeting. It will be put on the newsletter along with the SPACE logo. Jim mentioned a software discount offer he received for club members from Power Systems.

Next Jim talked about DOM's #71 through #82 (don't panic -- there are only(!) twelve disks this month -- the high numbers represent a new numbering scheme that Jim is introducing.) See Jim's article for information on these disks. After this there was some discussion of problems people were having with their ST's. It was mentioned that Starglider crashes on some older versions of the ST. New chips are needed to get around this problem. Another member has had the ST keyboard begin

to emit escape codes. This situation can be remedied temporarily by hitting the space bar. It was stated that this problem was probably due the keyboard trying to read information from the Mouse.

The IBM PC emulator from Paradox is finished and one member has one on order. We will be anxious to hear about this when it gets a little use. Something was mentioned about GDOS and I heard several people ask "What is GDOS?". Maybe we could get a five minute tutorial next month... any volunteers? The next item of discussion was the COMDEX show. Some members were in attendance. Atari emphasis was more on software than hardware; no 2 or 4 Megabyte machines in the Atari booth.

Jim mentioned two new books out on the ST - Peeks and Pokes by ABACUS and a book by COMPUTE ST on Neochrome and DEGAS. Jim said that Supra 30 megabyte hard disk drives had a problem that Supra was offering to fix. Finally, the Blitter chip is supposed to be available after January 1, and will cost about $120.


### Disk of the Month - December
### By Jim Schulz

December is here; it's time for another disk of the month. Last month I had twelve new disks for the library. Here is the list of disks and corresponding numbers:

#71 - November DOM #1 (Utilities)
#72 - November DOM #2 (Applications)
#73 - November DOM #3 (Games and OSS Pascal files)
#74 - November DOM #4 (Demos, General ST Information, Monochrome Game)
#75 - November DOM #5 (Music and Sound)
#76 - Demo Disk #13 (CAD-3D Animation Demo of Pentagon)
#77 - Demo Disk #14 (CAD-3D Animation Demo of Hollow Object)
#78 - Uniterm 1.5C (VT100/VT102 Terminal Emulator)
#79 - Shiny Bubbles (Xanth Demo of three shiny bubbles - Excellent Demo)
#80 - CP/M Boot Disk (CP/M disk formatter and all CP/M documentation)
#81 - CP/M Utilities (CP/M utilities on a CP/M formatted disk)
#82 - FASTER #1 (Canadian Disk Magazine using the GEM interface)

That's last month. Also, my disk copying ran into some problems last month. If you got a bad disk, let me know and bring your disk to the meeting for replacement. Because of some the strange disk formats which I must now copy, I now use three different copy programs to copy the disks. After my first futile programming attempt with disk labels, I am working on two more programs to help me with the DOM. One of these will be a disk check program to validate the data on the disk. I don't like bad disk copies any more than you do.

A new version of Todd Burkey's DISKTOP program should be available at the meeting. Features of this update include monochrome monitor support. The new documentation disk this month will include this program. Remember, the documentation disk is only $2.00.

Finally, I received little response to my Starter Kit disks mentioned last month. You use the programs. Which ones do you like? I want this to be a "Best-Of" collection, but if no one tells me what is best, we don't

need it.  If you think these would be useful, tell me the programs you use
via paper, BBS mail or US mail.  If no interest is shown, this idea will be
dropped.

Enough business.  Now for disks.  This month I am going to give you a
Christmas present of at least twenty disks if I can make it.  If I do, I
will break the one hundred disk mark in less than a year!  This month's
software seems to be directed toward special disks.  I have been quite
busy, and have not downloaded much yet.  Hardware problems.  If my hardware
all comes together, there is hope for a good crop of disks.  Here are some
of the highlights of this month's disks:

PrintMaster Icons Disk - This is a disk of converted 8 bit icon libraries.
I have found some icons already converted and I will also be converting the
three 8 bit public domain Print Shop disks.  I will also include the 8 bit
Print Shop to DOS program and two PrintMaster Basic programs on the disk.
If you own PrintMaster - an excellent program - this disk is for you.

FASTER #2 - If you bought last month's FASTER disk, you know about the
quality of this disk magazine.  This is a GEM-based disk magazine with
pictures, programs, and articles.  It supports both monochrome and color
monitors and it speaks both English and French.

LISP - LISP is a list-oriented programming language converted to the ST.
This is the latest update.  This disk includes the program and source.  A
second disk will also be available with example program and LISP tutorials.

Smalltalk - Smalltalk is another programming language for ST.  I have not
tried this one yet, but the disk or disks will include the programming
language and demos.  I have never used Smalltalk, but I have heard of it.
At this time I know very little about it.

MicroEmacs 3.7I - This is another version of MicroEmacs converted from one
of the standard Emacs available for a number of systems.  This version of
Emacs is updated across all systems about once every six months.  It
supports color, among other things.  It changes the screen color for
deletes, inserts and a number of other options.  I have read about this
program, but have not yet run it.  There is no source code with this
version of Emacs.  The 3.8 disk will include source code.  I will include
the 3.7 source code if I locate it.

Programmers' Editors - I have located two rather large editors which are
called programmers' editors, designed for program development.  I have not
run these yet, but by the docs both look good.  Both are shareware
programs.

Uniterm 1.6 - Last month's VT100/VT102 emulator has already been updated.
This version fixes bugs, supports GDOS and allows access to the desk
accessories.  The best public domain VT100 emulator supporting 132 columns
has gotten even better.

CP/M Utilities Disk #2 - This is the second disk of utilities for CP/M.
This disk will include utility programs, the MEX modem program and a space
invaders game.  Documentation will also be on this disk.  This will be a

CP/M formatted disk.

Demos - This month I have a number of demos of programs.  First, three
demos from Michtron: Space Station, Karate Kid and GFA Basic.  The demos of
GFA Basic are quite impressive.  Depending on size, these might be two
disks.  Second, three partialware demos from Stone Age Software.  These
include demos of UltraCalc (a 40-function calculator), Encrypt (a data
protection program) and Lewis123 (a Chemistry Spreadsheet).  These demos
let you use the program for a while, then stop.  I also have a demo of
Ez-Calc if I have room for it.

Picture Disk #3 - This is disk of pictures from the new Computereyes color
digitizer.  These pictures show all of the modes of the digitizer for both
color and monochrome.  Also on this disk will be Tom Hudson's Degas Elite
picture package showing of the features of Degas Elite.  All pictures will
be in Tiny format.

Christmas Disks - Remember, we already have one music disk full of
Christmas music from July using Neo pictures and Music Studio.  This music
was from last Christmas.  This Christmas, Michtron has come up with their
own Christmas music disk.  Both disks will be available at the meeting for
your Christmas viewing and listening pleasure.

STTerm - This is a running demo of the STTERM terminal program.  This VT100
emulator was on a DOM a few months ago.  I have just found a complete
distribution with documentation, the program and all auxiliary files.  This
one is totally complete and includes Kermit, Xmodem, Ymodem and ASCII
uploads and downloads.  It also includes a dial-up directory.  I don't know
what is missing from this program.  It looks too complete for a demo.

Less - Less is a lot like the UNIX More program.  Less allows you to view
files, search for strings, and even back up when viewing files.  This
should have been the view file program in GEM.

Flight Simulator Simulations - If you own Flight Simulator, this is for
you.  These are recorded simulations of flights that others have taken.  I
already have two sets of ARC files with simulations.  If you can't fly
well, let someone else do it for you.

Hacker Patch - This is a patch for Activision's Hacker for a 1 meg ST.
Without this patch none of the pictures show up.  Now you can run the
computer hacking game on your 1040.

MAK520 and MAK1040 - These two programs are essential if you own a 1 meg
machine.  These programs switch your 1 meg machine into 512K and back
again.  This is how I ran Hacker on my 1 meg machine.  If you know of other
programs that only work on a 520ST, you can now run these programs.

ST Writer 1.50 - This is the latest update of ST Writer.  It is also the
official release of 1.50 and includes some new files.  I will treat this as
the first update disk.  If you have ST Writer 1.5, bring in your disk and
$2.00 to get 1.50.

See, anything you like.  I have more, but I must sleep some time.  For more

information come to the December MAST meeting.  If all goes well, check out the MAST On-Line BBSs the week of the meeting for a complete update on the disk of the month.  Check out my quest for a 100 disk Christmas.  As of last month, we have 83 (count'em) disks after ten months.

For information on any of the past disks, see me at the meeting or purchase the MAST documentation disk for $2.00.  Send $2.50 if ordering by mail.  This documentation disk includes a description of each disk as well as a list of all files on all disks organized using the DISKTOP program. This disk will be updated this month.

For those who don't know, MAST has a disk of the month, for which we charge $6.00, which is packed full of public domain software for the ST.  I check all software programs and document them in a READ.ME file in each directory so you are sure you get something that works.
For those who cannot make the meeting and still would like the DOM, I will mail them to you within one week of the meeting for the standard $6.00 plus $0.50 for postage and handling for each disk.  My address is:

3264 Welcome Avenue North
Crystal, MN 55422

Also, if I blow it and don't have disk that you want at the meeting, I will mail it to you free within one week of the MAST meeting.
That is it for August.  See you at the MAST meeting with best selection of public domain software around.
That's it for December.  Merry Christmas and I will see you at the December MAST meeting with the best public domain software around with more coming in my quest for the century mark.

## Why BASIC Compilers?
### From DTACK Grounded

This article is by Hal Hardenbergh, author of a super BASIC ported to the ST called HBASIC.  The article was contributed by Brooks Butler. According to Brooks, this guy is an engineer whose business is or was to sell 68000 boards to soup up PCs and Apples.  Read his comments about BASIC compilers and his HBASIC.  In this article, he talks about a demo of HBASIC.  I would like to get a hold of this to put in the MAST library so all of can judge and possibly purchase this BASIC.  There has got to be something better for the ST, in terms of BASIC, than ST BASIC.  Hal's address is:
1415 E.McFadden Ste F
Santa Ana, CA 92705
If you would like to communicate with him about HBASIC.  Thanks again to Brooks for his donation.

Jim

Now, isn't that a stupid question?  Everybody knows that you use BASIC compilers to get programs to run fast - for BASIC, that is.  A quick review:  BASICs are either interactive or  compiled.  The interactive variety are either interpreted (the usual case) or incrementally compiled (rare but becoming  more  popular).  Incrementally compiled BASICs are rare because they are harder to write than interpreted BASICs.  But incrementally compiled BASICs have the virtue of being almost as fast as compiled BASICs while retaining the substatial virtue of being interactive.

I've told you this stuff before.  Once again, now: Incrementally compiled BASICs are almost as fast as compiled BASICs.  A compiled BASIC has to be faster because absolute variable addresses can be generated instead of offset addresses into a variable table and because some global optimization can be performed.

That means that HBASIC, being incrementally compiled, obviuoly has to be a tad slower than all those 68000 BASIC compilers which are appearing for the MAC+, Amiga and the ST.  Obviously!

So will sombody out there explain to me why HBASIC blows all those other  BASICs out of the water, performance-wise, on the BYTE Sieve benchmark?  The ones that are compiled, not interactive?  HBASIC is, for instance about three times as fast on the ST as TRUE BASIC, a compiler on the Amiga! (NOTE - He wrote it in assembler so there is no higher level language overhead).

### ANOTHER PRODUCT?

If HBASIC generated absolute variable addresses it really would be slightly  faster.  And it wouldn't be tough at all to modify the existing incremental compiler so that HBASIC would do that.  It could also generate slightly more optimum code, simply  because compilers don't have to list back out.  Gee, if I modified HBASIC to do just that, I'd have another

product to sell that would be ten million percent compatible with HBASIC!
Hmmm...

### ALOHA AGAIN:

About a year ago I decided to stop publishing a 28-page newsletter so
I could develope software for the ST.  Now I have decided to make another
change, but for the same reason.  We are very close to having HBASIC
release 0 up and running on the ST.  HALGOL v.04 already is less a DOS. And
HALGOL is just as snappy on the ST as on the DTACK/host combo - instant
response!  No mucking around with mice.  (NOTE: This guy hates mice, and is
developing software for the ST!)  A real keyboard!  A real 80x25 display!
And soon a real DOS!

This junk mailer will, beginning with the next issue, concentrate more
on programming in HBASIC and other topics related to the ST and less on
what AT&T is going to do with those 40,000 boat anchors that are gathering
dust on 17 miles of shelves.

A free demo of HBASIC release 0 will be provided to subscribers who
supply adds of ST retailers.

If you own an ST, fine.  If you don't, go  down to your local
retialer, boot the disk and get a feel of a really fast interactive BASIC.

For most of you, that will definitely be the last issue.  The exceptions -
about 50 out of the 850 of you who have been  sources of information as
well as sinks.  The other exceptions will be the ones who  expend the
munificent sum of $49.95 + $3.00 S$H on HBASIC after seeing the free demo.
For $53 you get a spiral-bound manual, a disk and micellaneous mailings
from time to time.  The people who buy early in the game will get a free
update in about six months.  Don't send money now.  We are about six to
eight weeks away from having the disks and manual ready to go.

The BYTE Sieve runs in 33.3 seconds now in ST-resident HALGOL v.04.  HBASIC
is now running the Sieve in 16.132 seconds on the DTACK board, which scales
to 25.2 seconds on the ST (slower clock).  So it looks like HBASIC will run
the Sieve on the ST in 25 to  33 seconds.  That's for size = 8191, ten
iterations.  BASICA runs that in about 2000 seconds on a PC, which means a
six times faster hopped-up AT will run in about 333 seconds, or ten times
slower than HBASIC on a $499 ST.  Remember, HBASIC is an interactive BASIC,
not compiled.  Makes a big difference to the great unwashed and also folks
like me who prefer their high level languages to be interactive.

Optimized Systems Software, Inc. is pleased to announce a new line of
software developed for Atari 8 and 16 bit computers.  This new line of
software, called BareWare, will be inexpensive ($25 and under), and many
programs will include source code.  Because of its price, BareWare will
only be supported by mail and all documentation will be included on the
disk.  In addition, BareWare will not be sold through our normal
distribution channels, but will instead be marketed directly to users
through OSS.  As always, BareWare products will not be copy-protected.

OSS's first two products will be QuikStart and ShortCut, both for the
Atari 520ST and 1040ST.

QuikStart is a batch processor and ram disk combination.  QuikStart's
repertoire includes the ability to display prompts, create folders, copy,
print and delete files, set time and date and run programs, to name just a
few.  When used with the accompanying ram disk OverDrive, QuikStart really
shines, allowing you to load the ram disk and its contents without ever
touching the keyboard or mouse.  All of this at a cost of only $20.00.

OSS's other entry on the BareWare label is ShortCut.  This desk
accessory will allow you to print, copy and delete files and more without
ever leaving your GEM application.  This program was actually developed
internally at OSS to help us in the development of Personal Pascal.  To top
it off, full source code (in Personal Pascal) for ShortCut is included on
each and every ShortCut disk allowing you to modify and enhance this
program at your convenience.  At a price of only $20.00, how could anyone
go wrong?

OSS will constantly be updating the BareWare product line, adding new
products that will solve a problem or make life easier.  A catalog of
BareWare products will be available shortly, both in print and on most
networks.

With the addition of the BareWare label, OSS will be opening the doors
to all software authors who have written programs that fit the BareWare
concept.  OSS is actively seeking software for the Atari 8 bit and 16 bit
computer line.  Interested authors should send a SASE for our submissions
kit.

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Notes from Chuck
by Chuck Purcell

It's time for another notes from Chuck.  This month, Chuck looks at
probably one of the most interesting program from our MAST library.
The program is STSPEECH.TOS.  This is a speech synthesizer program
which makes your ST talk, with no hardware modification.  This
program, sort of, appeared out of nowhere with no documentation.
Well, not for long.  Chuck has hacked this program and done some
experimenting and has come up with the following.  Now on to Chuck.

Jim


Instructions for use of STSPEECH.ARC  18 Nov'86   CJP

deARC STSPEECH.ARC package provided by MAST #75 in NOV'86 from
STSPEECH.TOS for text input only in mono or color; instructions for
use:

keyclick:STSPEECH.TOS:  text..........CR.      speaks the phrase

                        \CR.            repeats last phrase

!CR.    n-more ?        !#CR.           sets pitch (use 50-90?)

%CR>___N-more ?         %#CR.           sets rate (try 40-80?)

where CR. = ¦          .CR.            sets phoneme mode

carriage ret¦          <use only phonemes in phoneme mode notebook>

                 ¦ <each phoneme may be followed by a pitch code 1-9>

_____¦          ..CR.           restores English mode

Another good note from Chuck.  Expect some more goodies next month,
when Chuck looks at PCCommand shell, the PC-DOS command shell that
even includes commands to generate alert boxes.  Chuck liked this
program so much that he sent to the author for the complete
documentation.  Next month, Chuck tells what he found and
demonstrates the power of the command shell with a shell script.
That's not all.  Chuck's got more in the works.  But that will have
to wait for next month.  Thanks again Chuck.  Until next month, happy
computing.

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