

AMIGA news

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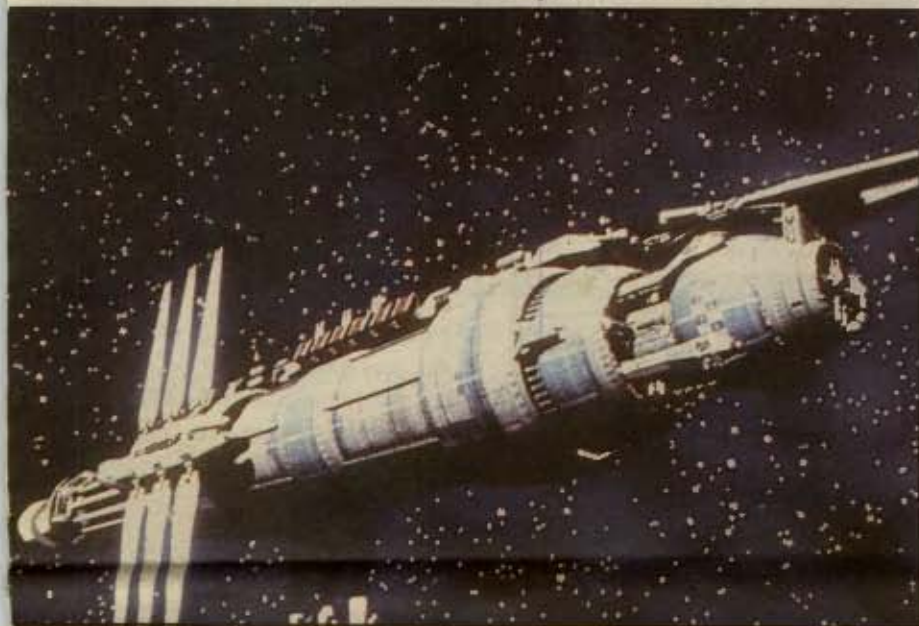
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See inside for more details.

Vol. 2, No. 2

MARCH 1993



Created entirely inside the memory of Commodore Amiga, the Babylon 5 space station includes in credible detail and realism.

Photo Courtesy Warner Brothers

Babylon 5 Achieves Goals!

by Terry Kepner

With the assistance of Commodore Amigas, Video Toasters, and lots of hard work, Babylon 5 beamed into television sets across the country the last week of February. An accurate understanding of science, drama, and computers enabled Joe Straczynski, the creator and producer of the science-fiction series, to make a two-hour premier episode on time and under budget. And that budget was one-quarter the amount spent by their competition over at Paramount.

"The use of Amigas was instrumental in keeping costs down, and will continue to do so in the future," said Jim Straczynski. "We'll be able to use a lot of new special effects footage in every episode of the series, unlike Star Trek, The Next Generation, for instance, which generally uses the same shots with different planetary backgrounds, and the same fly-by shot. On average, we'll be able to do 3-4 new minutes of footage for every show, and can build up from there. Combined with the stock that we will have and which will grow as we go, that'll give us a heck of a look."

Straczynski attributed the realistic look of the special effects to the methods used in creating the computer models. "The way standard space special effects are done is that they create a plate of a starfield; over this, they put a plate of a planet, then finally overlay a plate of, say, a ship going by," explained Straczynski. "Nothing is really to size or in perspective. Ron Thornton, our FX Supervisor, has created in the computer a sector of space about as big as a solar system. He's put the star in one place, Babylon 5 in another, the planet and moon in still another, and anything that enters that system—ships or anything else—are sized to scale. It's all created to the actual scale involved. So, when an object moves through that sector of space, it's moving through 'real space,' with everything in its proper perspective. Consequently, the eye accepts it as more real, more three-dimensional. Things moving away recede into the proper size and distance, and approach growing in correct size and perspective. It's really a stunning effect."

Not everything the computers gener-

Continued on page 2.

Phasar 4.08

Getting Your Life in Order

by Michael Tobin, M.D., Ph.D.

Two months ago, I made the startling discovery that although employed full-time as a radiologist, I was saving practically no money. I don't live extravagantly, owning neither a home nor an automobile. I pay bills as they come in and save the receipts I think I'll need in a shoebox. When I give to charity or buy medical textbooks, I write it in a notebook, because I know that I'll need the information later for income tax purposes. I haven't found the time to balance my checkbook in three years. Is it any wonder that I don't have a clue about what's going on?

WHERE'S IT ALL GOING?

After thinking about the problem for a while, I realized that the reason that my Quantum hard drive is better organized than I am, is that I have computer programs that set it up and keep it that way. Maybe what I needed was some software to bring organization to my financial chaos. Literally under a pile of cobwebs, I found Phasar 4.06, Professional Home Accounting System and Register.

The first thing I did was to obtain the latest version of the program, which is now being supported by Terrific Corporation. (1-617-731-3553). The cost of upgrading to the current 4.08 version from my 4.06 was only \$24.95, a price that included the manual.

BUT, IS IT EASY TO USE?

Using the program is simplicity itself and makes record keeping almost fun. I'm going to tell you how to use the basic elements of the program without getting into too much detail. One reason I prefer doing it this way is that you really have to be looking at the program to make sense out of specific instructions. A second reason is that everyone's finances are different and once you begin using the program you'll see how to make it fit your own situation.

The menu bar at the top has all your

options. The first thing that you will want to do is go to the Setup option on the menu and list your expense items, accounts, and sources of income. Your Expense categories are what you spend your money on—such as food, rent, clothes, car payments, etc. Your Accounts are your savings accounts, checking accounts, charge cards, savings bonds, etc. Your Income is your salary, etc. Don't worry about being complete. You can add new categories while you're entering transactions.

Before you go off and running, I do suggest that you look at the Change Limits options under the Setup menu. This lets you define the total number of entries you have for monthly transactions, expense categories, etc. For example, I found that I needed 40 categories for the expense items. You will also need to go to User Setup and tell the program about your printer.

TELL IT TO PHASAR

Phasar makes it easy to enter your finances. I did an entire year in one day.

The menu area you'll be visiting most frequently, especially early on, will be Transactions. When you select Enter New Transactions from the sub-menu list, you are presented with a split screen, the bottom half of which is the area you will use to enter your transactions. Let's do an example.

Suppose you are renewing your subscription to Amiga News (a shameless plug). You sent them a check for \$15.00, but it hasn't cleared the bank yet. For Accounts, you will use your mouse to select your checking account from the upper screen. Enter the date you sent the check. Phasar will remember this date for your next transaction. You will then tell Phasar if the transaction was "confirmed," i.e., if the cancelled check has come back from the bank (which in our example, it hasn't). You will next type in Amiga News as the Payee. If you ever have any more financial

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Continued from page 1.

ated was perfect, however. The garden scene in the premier, for example, left Straczynski unsatisfied. "The long shot of the B5 Garden was computer-generated," he said. "We'd built a full-size model — about 10 feet long, in fact — but it just didn't give us the look we needed. In retrospect, we're not completely satisfied either with the look of what we got, so we're going to take some different approaches to it in the series."

On the subject of special effects and the rest of the series, Straczynski said "I can't elaborate, but the first script that I've turned in for an hour-episode has an extremely elaborate special effects sequence — several of them, actually, which are linked — which goes considerably beyond anything we demonstrated in the pilot. Ron went over the sequence, and apparently it poses no problem. Beyond that, we have general plans to push this new technology to the absolute edge of its capabilities. The pilot was a test . . . the GOOD STUFF is yet to come!"

TIMING

Foundation Imaging started the special effects work in June and delivered the last shot the first week of November. There are around fifty shots, all of which were completed with about a dozen Toasters. "If it weren't for those little boxes," said Mojo, one of the series animators, "Babylon 5 would look a heck of a lot less spectacular."

"Originally they were going to go with

traditional models and motion control," he added, "but when Ron showed Joe and the rest of the producers what could be done with the same money on the Toaster, Babylon 5 suddenly had more FX shots than I think an entire season of Star Trek!"

To produce the many exterior space sequences, a basic Toaster configuration of an Amiga 2000 with 32 megs of RAM on an RCS 25Mhz '040 was used. Eight of these were constantly rendering to a 4 gigabyte network, each one working on one frame at a time.

Even with this arrangement, some sequences took a great deal of time to create. The title sequence, and the ending shot that pulls back ten kilometers from Babylon 5's observation dome window in one take required three hours or so per frame for the computers to render. With eight computers running, this represented three hours of real-time to make a film sequence a third of a second in length. Fortunately, computers don't require breaks, sleep, or weekends off.

They were going to use the Toaster on-set to create some live effects, but the producers decided to shoot the show at twenty-four frames per second (FPS) instead of the thirty. The Toaster is a 30FPS device and a lot of expensive hardware would have been required to film its output at 24 FPS.

"There were no Macintoshes used at any stage in the Babylon 5 FX work," said Mojo. "Some of their 3D software was considered for the show but, in the end,

Lightwave and the Toaster won out. Most of the texture maps were created in Deluxe Paint IV and modified in ToasterPaint, usually to dirty them down."

"I suppose it is inevitable that some people will think these shots look computer generated and some will think they look real," he continued. "Some of the work leans one way or the other, but after discussing this ourselves, we decided that what's important is that the stuff looks COOL. Anyone care to argue with that?"

When asked about The Last Starfighter, another movie that made extensive use of computer generated special effects for their space graphics, Mojo said, "The Last Starfighter was wonderful, but it was done on Cray computers seven or eight years ago. Technology has obviously progressed, and now people can achieve superior results on a desktop level. This is the sort of revolution that Newtek is pushing and Foundation Imaging has been the first out of the gate to fully utilize this new technology."

Continued from page 1.

dealings with *Amiga News*, you will find them by selecting the button marked **Frequent** the next time you come to **Payee**. You then select your expense category (I chose **Comp Mags** — short for computer magazines). If you forgot to set up an appropriate category, *Phasar* allows you to do it now. You type in the check number, the amount you paid, and a comment (perhaps indicating it was a one-year subscription). Now you are ready for your next entry.

NOW THE FUN BEGINS

Once you've entered all your transactions, you can select **View/Edit Transactions** from the Transactions menu. You can now see on your computer screen or printer every date you had this year, who you went with, and how much you spent. You also have a record of every computer hardware and software purchase, including when and where it was made.

You can go to the Reports menu and select **View Cash-Flow Summary** to see the total amount you spent in each category and the percent of your expenditures it represents. If you find that your computer purchases are 75% of the total and that your food bill is 5%, you may wish to re-examine your lifestyle. This sub-menu also allows you to see your cash-flow summary, that is, your total income vs. your total expenses. This is a rather important number, I think you'll agree.

Continued on page 8.

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Amiga — The Chameleon Machine

A Question of Emulation

by Bill Panagouleas

As you may already know, the Amiga is the great chameleon of the microcomputers. It has the ability to mimic the operations of Big Blue (clones), fruit (Apple Macintosh), and many other less popular machines like the Commodore 64, Atari ST, Apple II, and CP/M (which was the standard before PC clones; does anybody still use it?). Is all of this emulation necessary? Should we be an island on our Amigas or should we delve into the world of other computers?

I feel I can discuss this topic because I was a part-time computer salesman and have helped many users buy and set up A-Max/A-Max II (the Amiga Macintosh emulator), and I also own a hardware IBM emulator (it was a gift...). I use a Unisys 386 IBM-clone at work for the Air Force (not that I enjoy it; the clone, that is), so I know if the grass is greener on the other side. Having said this, I feel I have enough knowledge about the IBM to judge it objectively.

Unlike other computer users, Amiga owners have the freedom to modify their systems to use applications from other computers. This is called versatility.

Let's admit it—the Amiga is one of the most diverse and versatile modern com-

puters available today. It is not unique in the ability of emulation, other computers do a little emulation as well (except for PC clones).

The Atari ST has software emulators to run clones, and a hardware emulator for the Mac. Macs can emulate the IBM with software and hardware—quite pricey and SLOW! But no computer emulates as elegantly or as much as the Amiga. No computer can emulate an Amiga because of its custom hardware. Just for fun I would like to see an Amiga emulating a Mac emulating a IBM, or an Amiga emulating an Atari ST emulating a Mac emulating a IBM.

Emulation is bottlenecked on other platforms because of the fact that all tasks are forced through the CPU tunnel, making the process as slow as molasses! This is the same limitation that hinders all tasks performed on other-platform systems.

The Amiga is successful in emulations because of its use of custom processors. These allow various graphic, sound, and I/O functions to be channeled to custom chips. This is also what makes the Amiga such a functional system when compared to its PC counterparts.

IBAMIGA

The Amiga was the pioneer of emula-

tion. She did it first, showed that it was possible, and she still does it the best. In a confused world where everybody is on a dead-end quest for "IBM compatibility", where does the Amiga stand?

There are 12 IBM emulators for the Amiga: Transformer, Turbo Transformer, ATonce, ATonce Plus, PC Power Board, PC-Task, Cross PC (formerly IBEM), XT Bridgeboard, AT Bridgeboard, Commodore's 386SX Bridgeboard, Vortex Golden Gate 386/486, and PC 286 (from GVP).

A fellow worker (PC owner) is fond of saying that emulation is the sincerest form of flattery. He feels that the Amiga is trying to look up to the PC and be more like it though emulation—as if the IBM is its role model. I disagree! The Amiga was designed with the idea of mimicking other computers. This is why the 2000/3000/4000 has IBM slots. It's called versatility. If the Amiga is flattering IBMs and clones, why would not the emulation end at PC's? Many other platforms are emulated on the Amiga. Are we flattering the Apple II? Or CP/M? I do not think so.

There is nothing wrong with being able to use the software from other machines, if needed. The IBM/clone market has a large selection of business programs available

due to its high presence in that market. I feel however, that it is a quantity vs quality issue. PC owners are quick to point the finger at software that is not available on the Amiga, yet is available for their system. Yet, they do not want to hear about unique software that is exclusive to the Amiga that will never be ported to their poor old PC.

In plain truth, any task that is performed within a program for the IBM/clone market, an equal or superior product exists for the Amiga platform. Why? Simply because we are able to run their software on our Amigas via emulation, which makes us PC-compatible! Imagine going into a software store, and not having to go to a particular section, based on which machine you own... you own them all! This is a feat that no other computer, personal or otherwise, can claim. Talk about compatibility!

The best database for the IBM (running under Windows) is *SuperBase Professional 4*. Not surprisingly, it is ported from the Amiga! My father, Andy, runs his business using an Amiga 3000, so the Amiga can be very effective and productive in the workplace. Spreadsheets, word process-

Continued on page 18.

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Fish disks swim past number 800 . . . but will they flounder?

(Or: "How many bad 'fish' puns can Don come up with?")

By Don Lloyd

The Fred Fish library of freely redistributable software recently passed the 800 disk mark. In fact, as this is being written, disk 810 is now available.

Fred has put together a software collection that's unparalleled anywhere, on any platform—the Fish library is probably the single most important source of utilities, games, applications, languages, and just about anything else in the Amiga community. Congratulations on number 800, Fred, and thanks!

AND NOW THE BAD NEWS

But there's a bit of bad news, too. In mid-January Fred posted that he would soon have to decide whether or not to continue to expand and support the library. Putting Fish disks together is time-consuming work, and Fred has always charged a small fee for direct distribution of them in order to compensate for the effort on his part. Unfortunately the wide availability of the Fish library on public BBSes and networks has slowed down the number of library subscriptions. In fact, as of January 17th, only 41 people in the world are paying Fred for the twenty to thirty hours a month he puts into the collection (not to mention the several outside helpers he pays for things like disk duplication, labels, packaging, and shipping).

Fred's message to the network was this: "If you are in a position to influence a club, computer store, or other Amiga related organization to maintain a direct subscription for new disks, and thus help fund continued maintenance of the library, and are interested in seeing the library continue to grow, I'd urge you to consider doing what you can to help push the number of direct subscribers back up to more reasonable levels."

Disks can be ordered from:

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Current pricing is:

1-9 Disks	\$6 each
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Combat Classics Land, Sea and Air battles from Empire

If war simulations are your thing, check this out. Empire software had released a compilation titled *Combat Classics*, featuring three top charting titles that had outstanding sales and reviews when first released.

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688 ATTACK SUB

This Electronic Arts production places you in command of a top secret billion dollar attack sub. You can choose to captain either a US Los Angeles class sub, or a Soviet Alfa, while discovering the advantages of each. You will hunt and evade enemies, using the world's most advanced

sub technology, like 3D sonar contour imaging.

The software provides 10 different scenarios, with infinite play possibilities, and includes digitized sounds of a submarine at work. You can listen to your crew actually talk to you and hear sonar pings as you pick up your target.

TEAM YANKEE

Touted by Empire as "the definitive action simulation of modern tank warfare," *Team Yankee* tests your leadership and tactical skills. Your aim is to win promotion by your successful leadership of 4 platoons of tanks and 79 men against a Soviet tank force who occupy major strategic positions. *Team Yankee* features 8 different tanks, including the M1 Abrams, T72, M2 Bradley and T62; a mass of weaponry, including TOW missiles, high explosive artillery, laser range-finders, SABOT ammunition, smoke screens and 50mm machine guns. Your options include night-time fighting using thermal imaging, vision magnification and scrolling maps.

The *Combat Classics* package is available for the Commodore Amiga and IBM PC. Suggested retail price is \$59.95.

Contact: ReadySoft, Incorporated, 30 Wertheim Court, Suite 2, Richmond Hill, Ontario, CANADA L4B 1B9, (416)731-4175, fax (416)764-8867.

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The Stealth or the Slab?

by Don Lloyd

No, this isn't about some unbelievable new "Power Up" program; in fact, it's not really about new Amigas either. It's about how I made my Amiga look like a new machine by painting it! I know what you're thinking at this point: "This guy has gotten a little bit too attached to his computer." My girlfriend would probably agree.

I'd been tossing the idea around for some time. Every once in a while discussions pop up on the networks about how nice looking or ugly particular computers are, and how to make them more aesthetically pleasing. At some point in these discussions, some one generally comes along and mentions that they've painted their machine or had it painted (there are apparently several businesses in California who charge 50 to 100 dollars a shot to paint Macs). Gloss black seems to be the most popular color among computer-painters; it makes the machine look like a piece of stereo equipment. I wasn't really convinced that this would be an attractive color for an Amiga until I saw a picture of CDTV with black case, keyboard, floppy drive, and mouse—it looked impressive. I decided at that point that I was going to turn my old A3000 into a shiny "new" machine ... the Stealth Amiga.

Sometime in mid November I headed out to Rickel to pick up a can of gloss black spray paint. As I was walking down the paint aisle comparing the prices of various brands, something I hadn't run across before caught my eye. It was a kit called "Marble-izer"; it consisted of a base color spray and a smaller spray can that held a slightly thicker paint that shot out in confetti-like streams. The idea was to paint a whole object with the base color, then shoot the 'streamers' into the air above it. They'd fall on the surface of the object and create a veined look like marble.

Quickly casting aside thoughts of the Stealth Amiga, I chose a kit that would do white marble with black veins (I still wonder if I should have gone to black with white

veins, but the pink with black veins was definitely out of the question). It wasn't until two weeks later that I found the time for the painting, but I was able to get most of it done in one weekend.

Before I go into a description of the painting process, I'd better protect myself with a disclaimer: if you try this on your own, I'm not responsible for destroyed equipment (take the cases off the equipment when you paint; don't get paint inside the machines!), house fires (don't paint anything that tends to get dangerously hot), fumes (paint someplace where there's good ventilation), or any other mishaps.

I started out by pulling the covers off of both the Amiga and the mini tower case I use as a housing for a couple of external drives. I removed the face plate from my tape drive and popped out the "filler" pieces that covered the empty drive bays on both machines. All this was taken downstairs and put to the newspaper-lined back porch. After covering all the buttons and lights with masking tape, I put a first coat of the white base on all these parts and went to gather everything else. I unscrewed the keyboard cover and removed the top and bottom plates for painting (obviously painting the keys themselves was not an option). The mouse was left alone since it wasn't easy to disassemble (it's one of Commodore's humphack mice). The monitor presented a bit of a challenge. The first problem was in removing the back of the case; two screws that held it shut were recessed so deeply into the unit that I had to borrow or buy several new screwdrivers to try to reach them; eventually I came across an old triangle-handled screwdriver (the kind Epson ships with their printers to allow you to remove the packaging hardware) that opened the case. After I had detached the metal RF shielding from inside it, the panel that covered the top, back, and sides slid off and joined the rest of the equipment that I took down to paint. The

front and bottom of the monitor would have to wait; they weren't easily detachable.

Working gradually over the course of the day, I eventually sprayed on several coats of white, then the veins, then a coat of clear polyurethane as a final protective measure. The painted parts were all moved to the garage to dry overnight and for much of the next day.

At that point I needed to reassemble the machine to get some work done on it, so the monitor would have to wait until the following weekend. To finish the project, I covered over the already-painted portion of the monitor, as well as the display itself and the vents underneath, with protective newspaper and masking tape. Then it was a simple matter to marble-ize the rest of the monitor. The only difficulty I ran into was that after painting the swivel unit at

the base of the monitor, I realized that as soon as it tilted or turned, unpainted surface was exposed and I had to spray a little more down into that area.

I finally got the "renovation" finished and now have several large electronic marble sculptures (hmmm ... I wonder how much I could get for them if I sold them to a gallery as a modern art exhibit?) on my desk. I plan to paint a logo (maybe a Boing! ball or Amiga checkmark) on the areas where the old logos were located. I've even thought of a name for this new high-tech system:

The Slab 3000.

(For anyone interested, I've spotted Marble-izer at a number of places recently. The best price I've seen on it yet was at Hechinger for something like \$8.77).

AMIJAM '93

The Place to BE!

Calgary has long been known as the home of the Stampede and stomping grounds for the Calgary Flames, but it is also home to the largest Amiga show ever held in Western Canada — AMIJAM '93, lovingly sponsored by AMUC, the Amiga Users of Calgary.

On May 14 and 15, the Southern Alberta Institute of Technology will be "home" to AMIJAM. Over thirty booths will be dedicated to the Amiga computer and its related products. "Hand-on" workshops, lectures and seminars on popular topics such as video, animation, AREXX, two and three-dimensional art, desktop publishing, music and multimedia will be given for the

beginner, as well as the experienced user.

Invited guests at AMIJAM include Eric Schwartz, Jim Butterfield, Coniah Chuang, Jim Dionne, Tom Shepherd, Stephen Jeans and Dick Bourne.

Ticket prices are a modest \$3 for gate entry (includes eligibility for draws and door prizes) or \$10 for gate plus seminar admission (also includes eligibility for draws and door prizes).

For more information about AMIJAM '93, contact Linda Kitchin at (403) 270-0720, or write AMIJAM '93, 144 Strathbury Circle, SW, Calgary, Alberta, Canada T3H 1P9. Fax (403) 246-2861.

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Environmentally Sealed 10" Color Monitors

Modgraph, Inc. has introduced an environmentally sealed enclosure version to its line of 10" Super-VGA color monitors.

These monitors can now be equipped with a sealed metal enclosure that is virtually impervious to dust, dirt and moisture. Using newly developed heat-dissipation technology, these monitors actually run to 5° C cooler than comparable plastic, tilt/swivel models. These models are also available with RGB/BNC video connectors and 12 VDC power. All standard VGA and Super-VGA resolutions (up to 800 x 600 non-interlaced) are supported.

This unique combination of small size, Super-VGA resolution and environmentally sealed enclosures allow the monitors to be utilized in industrial, scientific and marine applications. Whether they are built into an instrument, rack-mounted, or used as a system display, the Modgraph moni-

tors fit size-sensitive applications that larger, bulkier monitors cannot handle.

The monitors are also available in a choice of full metal industrial enclosure, open frame chassis, or desktop tilt & swivel enclosure. Standard industrial 19" rack mounts are also available.

Modgraph offers a complete line of

specialized displays ranging in size from 8.5" to 29" +.

For more information, contact: Modgraph, Inc., 83 Second Avenue, Burlington, MA 01803, (800) 327-9962, (617) 229-4800 (inside MA), fax (617) 229-3062.



The environmentally sealed monitor from Modgraph.

HIGH SPEED at low cost

for the Amiga 500 - 1000 - 2000 line of computers.

Break the 25 MHz "barrier" without breaking your budget!

The Krueger Company is pleased to announce *Krueger's Instant Speed System (KISS)*, which includes a **Mega Midget Racer** accelerator board from Computer System Associates (CSA) with a full **33 MHz 68030** Microprocessor with MMU and a **33 MHz 68882** Floating Point Unit. Oscillators are socketed to facilitate 68030/68882 upgrades faster than 33 MHz.

Dr Chip suggests a **KISS** for those who like their older model Amiga and want it to:

- run **faster than an A3000!**
- run **faster than most accelerator boards!**
- continue to be **user friendly!**
- achieve **33 MHz** operation for **under \$300.**

FEATURES:

- User upgradable to **even faster** 68030/68882 combinations!
- **Software selectable 68000** processor on board for easy running of older software - No need to change jumpers or dipswitch settings. No need to hold down several keys - just point and click to deactivate the 68030 and activate the 68000!
- Optional 512K Bytes of SRAM on board for even faster operation.
- Accepts CSA's memory board for the Mega Midget Racer if 512K Bytes are not enough.
- Full CSA warranty on the board and Krueger warranty on the 68030 and 68882!
- Last - and best - **The price: \$295 for the KISS system** (\$339 with optional 512KB SRAM)

Call Myron Lieberman at the Krueger Company, 800-245-2235 or 602-820-5330 for more information.

Courtroom Legal Affairs Game



THE PLACE: FairView
THE TIME: October 16
THE CRIME: Narcotics

Police Blotter:

"At approximately 10 P.M., the evening of October 16, Officer Owen Tracker stopped a late model sedan because only one headlight on the vehicle was working. Officer Tracker, after a radio check, ascertained that the driver's registration and license were in order.

"However, he became suspicious when he observed that the rear license plates were fastened to the car by wire.

"Officer Tracker sought further identification of the vehicle and its occupants. He opened the front car door and looked for the Vehicle Identification Number (VIN) imprinted on the side of the door. As he opened the door, he noticed the odor of marijuana.

"Officer Tracker then ordered the occupants out of the vehicle, searched the vehicle, and found a large quantity of marijuana in the front trunk. Officer Tracker and Joe LeBaron subsequently searched the trunk and found \$4000 in cash and 24 one-pound bags of marijuana. They arrested the driver, one Juan Merry, for possession of narcotics.

"The defendant claims that the police had no 'probable cause' to search his vehicle, and that the evidence should be suppressed because it is the result of an illegal search.

Now you can choose to be the defense attorney or prosecutor in this criminal case...

- Sixteen Cases - Robbery, Fraud, etc.
- Choose Liberal/Conservative Judge.
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- Question Witnesses, Raise Objections.
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- Based on Federal Rules of Evidence.
- Entertaining and Educational.

Originally \$59.95, now on sale for \$39.95!

Audio Gallery Talking Picture Dictionaries



Each *Audio Gallery* is a 7 or 8 disk set with 600 - 800 digitized words to build vocabulary in a foreign language. Various topics such as weather, living room, kitchen, numbers, etc. are presented in a fun graphical context. Each set includes grammar manual, quizzes and dictionary. Korean includes Hangul characters, Chinese features Mandarin, over 500 characters and Pinyin translation. Japanese includes Hiragana, Katakana, and Kanji, with Hepburn translation. Russian fonts by Classic Concepts.

English*, German, French:
Retail \$89.95, our price \$59.95

Russian, Korean, Japanese:
Retail \$129.95, our price \$89.95

Limited Time Stock Reduction Sale!

Spanish: \$49.95! Chinese: \$79.95!

* English Audio Gallery translates into German, French and Spanish. Ask for French or Spanish manual.

Digital Orchestra IFF Sound Sample Libraries



Compatible with MED, SoundTracker, sequencers.

Sampled at 17897 S/Sec.

- SA01 Bass Guitars - Slap Bass, Fretless, Picked, etc.
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- SA04 Strings - Violin, Viola, Cello, Orch Hrn, etc.
- SA05 Guitars - Acoustic, Electric, Lead, Jazz, etc.
- SA06 Pianos - Grand, Electric Piano, Honky-Tonk, etc.
- SA07 Latin Percussion - Timbale, Conga, Bongo, etc.
- SA08 Drums 1 - Bass Drum, Snare, Tom, Cowbell, etc.
- SA09 Drums 2 - Hi-hat, Gato, Agogo, Cymbal, etc.
- SA10 Percussion - Steel Drum, Tinkles, Bell, Woodblock, etc.
- SA11 Organs - Cathedral, Electric, Bandoneon, Reed, etc.
- SA12 Ethnic - Sitar, Koto, Baglama, Kokyu, Banjo, etc.
- SA13 Clavier - Marimba, Xylophone, Celesta, etc.
- SA14 Pipes - Flute, Piccolo, Recorder, Whistle, etc.
- SA15 Ensemble - Orch Hit, Strings, Voice, Solo Choir, etc.
- SA16 Chorus - Three or more harmonious singing voices.
- SA17 Piano Chords - Major, Minor, 6th, 7th, 9th, etc.
- SA18 Guitar Chords - Major, Minor, 6th, 7th, 9th, etc.
- SA19 Organ Chords - Church Organ and Electric Organ
- SA20 Synthesizer - Calliope, Square Wave, Saw Wave, etc.
- SA21 30 SFX - Animals, Human, Weather, Scary, etc.

Each disk is priced at \$4.95, 3 for \$13.95 each, ten for \$29.95. Complete collection for \$68.95. Also available PD Musical Editor programs and utilities. Send for free complete listing. Shipping \$3, ten or more disks, \$4.

The Sorcerer's Apprentice
5054 South 22nd Street
Arlington, VA 22206
(703) 820-1854, Fax (703) 820-4779

Demo Disk for Audio Gallery (specify language), Courtroom - \$5 (reduced on regular purchase). Free brochure available. Shipping \$3, additional units \$1 each. Add \$4 for COD, UPS 2nd Day Air, Canada, \$6 shipping, add 20% if paying in Canadian dollars. Overseas, add \$8 shipping. Checks, money orders only. Most Institutional PO's accepted.

Attention: Motionman and Cycleman Users

Users of *Motionman* and *Cycleman* should register their software immediately. Tim Wilson, the designer of those two kits, is planning to release a new set of human models for *Lightwave* and *Imagine* users called *Humanoid: Human Animation Designer* in March. This new set of models is much more detailed and realistic than *Cycleman* and *Motionman* and features males, female and child figures. It also features morphable facial expressions,

and hands, as well as hierarchical motion, and an extensive manual on these functions. MSRP for *Humanoid* will be around \$200. However, there will be special limited time discounts offered only to users of *Motionman* and *Cycleman*. You must have a bona-fide registration on file to receive the discount offers, so if you haven't done so, please send in your registration today!

Support and sales of both *Motionman* and *Cycleman* will continue after the re-

lease of *Humanoid*. However, the technical support number for *Cycleman* has been changed to 909-338-1786. Support for *Motionman* will continue to be handled through Anti Gravity Products at 310-393-6650.

With the impending release of 3.0 versions for both *Lightwave 3D* and *Imagine*, some users may be concerned whether or not the new *Humanoid* models will work with the new versions. The models should be upwardly compatible. However, if for

some reason they are not, users will receive upgrades to rectify that.

In addition to the *Lightwave* and *Imagine* versions, Tim hopes to eventually release *Humanoid* to work with other rendering packages, such as *Caligari*, *Real3D*, *Aladdin4D*, and *3DPro*.

All questions about *Humanoid* should be directed to Tim Wilson at Crestline Software Publishing, P.O. Box 4691, Crestline, CA 92325. (909)338-1786.

VR Slingshot VR Simulation for the Home

VR Slingshot is a new and exciting virtual reality simulation sport for the home market. *VR Slingshot* pits two players against each other as they pilot crafts in true flight simulation and struggle to deplete each other's energy reserves. Most events last an intense 15 minutes.

The action takes place within a confined playing space that contains a spherical gravity generator that players can "slingshot" around to pick up attack speed or escape their opponent. All maneuvers utilize physics-based algorithms, which adds to the reality of the event.

VR Slingshot features play in both 3-D and 2-D modes. The 3-D format requires 60 Hz 3-D glasses. Both modes require a pc analog joystick. Additional options include a single player mode that allows a player to compete against a computer-generated opponent.

REQUIREMENTS

Computer: Amiga 500, 600, 1000, 2000 with 1 MB of memory. An Amiga 2500, 3000, 3000T or 68020/30/40 accelerated machine is recommended.

Joystick: IBM analog joystick (Adapter is included in software package).

Dual-Computer Interfaces: Direct Link - Null modem cable between two Amiga (pins 2-3-7, with 2 to 3, 3 to 2, and 7 to 7). Modem - 1200 bps and up. 2400 bps required to run at 30 frames per second on A3000s.

Sound: Any stereo amplifier. Full ear stereo headphones through an amplifier of a full size stereo system with large speakers and excellent response is recommended.

The *VR Slingshot* package includes software, documentation, and a custom joystick adapter. List price is \$129.00

Contact: Ixion, Inc., 1335 N. Northlake Way, Seattle, WA 98103. (206) 282-6809, fax (206) 547-8802.



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DeskTop Library \$34

This CDROM contains more than 75,000 pages including: Aesop's Fables, The Odyssey by Homer, Shakespeare, Mark Twain, Jules Verne, The Holy Bible, The US Constitution, Declaration of Independence, 1991 CIA world fact book, several dictionaries, thesauruses, and Reference Works.



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The 68040 is now Available for your A500!
Now you can have the speed of the A4000!
We will install the board for \$50 + Shipping

Virtual Reality SIG

In March of 1992, a special interest group on Virtual Reality Technology was created for Southern Californians. Each month a Thursday evening program was offered to the public featuring live presentations and videophone connections to VR experts around the country. Speakers at their meetings have included:

Linda Jacobson, editor of the book *CyberArts* and author of numerous articles VR articles in such magazines as *Verbum* and *A.I. Expert*.

Mort Heiling, who pioneered VR in the 1950's and was responsible for the creation of the experiential theater, the cinematic precursor of computer-based VR.

Bob Gelman, previewing his most recent *CyberArts* show and conference (see *Phil Osborn's* article in this issue, for more details on the show. Ed.)

Dave Warner, who showed a video featuring applications of VR technology to medicine and neurology at Loma Linda University Medical Center.

For more information about this Virtual Reality SIG, call or write:
Virtual Reality Special Interest Group
1300 The Strand, Suite "A"
Manhattan Beach, CA 90266.
(310)545-0369.

Continued from page 2.

THAT'S NOT ALL!

Phasar actually has many more options. It can balance your checking account, print checks, help you set budgets, display graphs, analyze loans, figure out your net worth, and even do your taxes. It will help prevent you from double paying bills that continue to come months after they've been paid. It also keeps track of names, addresses, and special occasions.

CONCLUSION

I'm not the kind of person who thinks that keeping track of finances is a fun thing to do. Every year when I have to file taxes, I realize that another year has gone by without my knowing what happened to the money I earned and I have come to realize that a certain amount of personal record keeping is necessary.

Phasar makes the process painless. It does this by remembering just about everything you type in your transaction entries so that when you want to enter a new transaction it is ready with the date, the next check number, a list of your expense categories, your payees, and so forth. So instead of doing a lot of typing, you wind up needing only a few mouse clicks and a couple of carriage returns. There is even a way to automatically enter fixed monthly

expenses like rent or car payments. You can go into as much or as little detail as you wish.

Phasar isn't a financial planning program as such. It's not really set up to follow stocks, bonds and that sort of thing. Although you'll probably need other programs for that, *Phasar* will provide you with the information that you will need as input.

You may be interested to know that a PC version of *Phasar* is available through is Terrific Corporation. They also have software that can convert your Amiga files into PC files. Unfortunately, according to Terrific Corporation, the PC files are not capable of being imported directly into programs like *Managing Your Money* or *Home Wealth Builder*.

FINAL THOUGHTS

Finding out about my finances was a sobering experience. Years of neglect had taken their toll. *Phasar* helped me get organized. I am glad that there are excellent financial packages like *Phasar* and wish that more business applications of its caliber were available for the Amiga.

Product Specification and Supplier
Phasar, version 4.09 — \$89.99.

Includes one 3-1/2" diskette and manual.

Requires 1MB of RAM and Kickstart 1.2 or higher.

A hard drive is recommended.

Works with any Amiga meeting these requirements.

Upgrades Available

from *Phasar* 3.0 or higher, \$34.95.

Price includes diskette and manual.

from *Phasar* 4.0 or higher, \$24.95.

Price includes new disk and a list of changes.

To obtain upgrade, please include some proof-of-purchase, preferably one that includes your current version number.

Terrific Corporation
29 Saint Mary's Court
Brookline, MA 02146
(617) 731-3553, fax (617) 731-8379.

Data Bus Protection

Electronic Specialists' expanding product line now includes Industrial Grade RS-232, RS-422 and RS-485 computer bus protection. Kleen-Line Security models are available with any combination of connectors/pins to accommodate diverse requirements.

Intended for suppression of electrical or lightning-induced spikes often found on longer bus lines, these data protection systems employ the latest high-speed, high-current suppression techniques. Isolated ground suppression is employed to shield equipment from damage caused by massive lightning discharge currents flowing between local and remote grounds. RF Interference (RFI) filtering is also available.

Units can be configured to accommodate unusual system requirements. Single unit prices start at \$53.00 and are available from stock.

Contact: Electronic Specialists, Inc. 171 South Main Street, Natick, MA 01760.
(800)225-4876, fax (508)653-0268.

ImageFX and CineMorph Upgrades Available from GVP

Early in January, GVP announced the release of upgrades for the popular software packages, *ImageFX* and *CineMorph*.

Released in September, *CineMorph* was instantly acclaimed for its powerful features, which give the user the ability to warp simple images, sequences of multiple images and even full motion video. New features of the upgrade include infinite zoom, regional dissolve, point naming and point locking. New gadgets have been added to the curve editor window which allow for greater flexibility. In addition, AGA support has been added to the Render menu.

ImageFX was released in November, and is held in such esteem by GVP staffers that they boast that it "promises to obsolete all other visual effects software packages for the Amiga." *ImageFX* contains all of the features of *CineMorph*, plus a host of other image processing features. The new version of *ImageFX* also adds AGA preview and render modes, more keyboard shortcuts, an OpalVision render module and an improved file requester to its impressive list of features.

Registered owners of *ImageFX* and *CineMorph* are entitled to receive these upgrades at no charge.

Contact: GVP, 600 Clark Avenue, King of Prussia, PA 19406. (215) 337-8770, (215) 337-9922.

 <p>Pyramid Hand Scanner 400 D.P.I. 16/32 Level Grey-scale Scanner. Text/Half-tone & Grey-Scale Modes. Great For DTP And Drawing/Paint Programs. Saves 16/32 Level Grey IFF.</p>	<p>BIGFOOT Power Supply 300 Watt Fan Cooled A-500/600/700 Power Supply. Will Handle Virtually Any Add-on Device. Imaginable! Power Accessories Externally And Save Wear And Tear On The Motherboard.</p>	<p>Attention! We Have 200/250/300 Watt 2000/3000/4000 Power Supply Solutions Great For Toasters!</p>
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Data Bus Protection from Electronic Specialists.

Amiga Goes to Work!

by Andy King

In August of 1987, I decided that I needed some electronic help to keep up with my Real Estate business. After some "poking around," I found a computer dealer who was able to address my concerns and my need for an expandable computer that I could grow with, that was user-friendly (since I had never touched a keyboard) and was priced within my budget. I took home an Amiga 2000 with 512K chip RAM and 512K fast RAM (Wow, what a powerhouse!), a communications program, a data base program, a dot matrix printer, a modem and a sketching tablet. That night I missed dinner and spent until about 3:00 a.m. finding my way around the Amiga, much to my wife's dismay. After a couple of days, I found out how to make it print and only realized a couple of months later that I could save my data to floppy instead of producing reams of hard copy.

During the following three years, the Amiga and I became very close. Rarely did I pass an Amiga store without stopping to buy software or hardware. The computer looked after my data storage and kept all my spare time occupied. Early in 1990, the company I worked for wanted to put together some 35mm slides and I volunteered. I printed the information with my dot matrix printer and photographed the hard copies. By August of 1990 I was getting regular request from associates to create original page layouts, and LaserCraft Unlimited was born. I purchased an 800 dpi PostScript printer and continued to upgrade the Amiga — with 6, then 8 megs of fast RAM, 1 meg Agnus, a US motherboard (since this was Amiga # 694, it was built with a German motherboard), harddisks, controllers, DCTV, and finally, a Fusion Forty with 16 megs and a Deskjet 500C.

In 1991 I was searching for an easy way to create 3D text effects and drawings to use in my publishing. After some time, I read a review in a magazine about *Draw4D* from Adspec Programming. The review was long on criticism and short (as I found out) on fact. I contacted Greg Gorbey (affectionately referred to as "Wizard of the Keyboard and Master of the Mouse" by one of my associates) who gave me the answers I was looking for — *Draw4D* can easily create 3D text, objects, animations and output structured clips as well.

In August of 1991 Adspec released *Draw4D-Pro*, which contained all the features of *Draw4D* plus advanced effects, such as texture mapping, fog and deform which could be saved as 24-bit, DCTV, and Amiga IFF animations and screens. I arranged to have Greg show off *Draw4D-Pro* at the World of Commodore show in Toronto in December 1991, where our corner was packed with excited spectators

for all three days.

By the time of the 1992 World of Commodore show, I was also distributing *MathVision* from Seven Seas Software, Inc. and *SignEngine* from Parallel Motion Graphics. Otto Smith from Seven Seas exhibited *MathVision*, Jeff Ginn and John Wilson displayed *SignEngine* and I showed off the latest release from Adspec — *Aladdin4D* — in a large booth provided by Comspec Communications from Toronto.

Otto Smith had a steady stream of Amiga users captivated with his exhibition of the image creation and processing features of *MathVision*, including visualization of mathematical functions, animation, and the interface which has many Amiga artists using the software for pure enjoyment.

Jeff and John showed some of the capabilities of *SignEngine* to professional and "would be" professional sign makers who want a low-cost professional solution to entering the lucrative sign making market. *SignEngine* drives most popular cutter/plotters and engravers and fully supports the Amiga multitasking environment, allowing the user greater flexibility and productivity.

I was running a scripted presentation with examples of screens and animations created with *Aladdin4D* and *Draw4D-Pro* that prompted great numbers of prospective users to ask me to show them how the interface looked and worked, how to create the animations, use the built-in font editor, create gases and camera views and other special effects that were being displayed. All were impressed by *Aladdin's* ease of use, even when it was called upon to create their special requests, such as chiseling and warping text, hierarchical animations, and realistic simulations of ray-tracing and bit-map morphing. *Aladdin4D* directly supports the popular DCTV, Firecracker, Resolver and Opalvision display devices, as well as native Amiga IFF formats.

When I am not preparing for or exhibiting at a show or supplying dealers with software, my desktop Amiga business includes preparing resumes, creating camera-ready layouts,

colour prototyping of board games, and providing an output services for computer users when they send me their documents on disk or by modem. Future system expansion will be focused on meeting the requirements of my customers through hardware and software additions.

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St. Clair Designs New Kiosks

Amiga Computers components of system

St. Clair Interactive Communications has been developing custom multimedia information systems, commonly known as kiosks, for the last ten years. They recently announced that they have selected Commodore's Amiga as the computer component for their three new, innovative turn-key system. With the inclusion of the Amiga system, each one of these kiosk models has multimedia capabilities that can exceed other industry standards.

Included in each system is the kiosk equipment, software and the interactive multimedia program. The Basic unit includes a simple enclosure, digitized and painted graphics with 50 custom graphics screens, animation and audio, plus authoring and run time software. This basic unit is best suited for tourist and visitor centers, store information, corporate and employee directories. In quantities of 100, this system is available for an MSRP of \$2,850.

The Deluxe system is based on a high speed multimedia computer which includes a 32-bit processor, 100 MB hard drive, a touch screen, digitized and painted animation using 256,000 color pictorial graphics, stereo digital audio, text, an upgraded enclosure, modem and communications software capabilities. This model is targeted for point-of-purchase couponing, vendor merchandising, customer service, real estate, ticketing and reservations applications. In quantities of 100, this model is available at an MSRP of \$5,500.

The Premier system includes all the features of the Deluxe system plus a faster

processor, 10 MB RAM, 100 MB Hard Drive and full motion video from the hard drive. In addition, there is a printer, graphics processors, a central control panel for remote updating for graphics, audio, video and text. Applications for this system include fashion merchandising, travel, product catalogs and corporate communications. In quantities of 100, this system is available at an MSRP of \$9,600.

"The interactive information market is exploding. With the number of retail kiosk applications expanding rapidly, we anticipate sizable growth. We especially feel confident that our custom developed, professional system with full service networks far exceed the present industry standards in content, operational and multimedia capabilities," comments H. Douglas Peter, president of St. Clair Interactive Communications.

"We are pleased to announce that we have chosen the Commodore Amiga as the exceptional multimedia computer component. The Amiga's quality digital audio, digital video and multitasking capabilities tremendously enhance each system's delivery performance. We know this from experience since St. Clair has already developed and installed successfully running multimedia kiosks that incorporate the Amiga. Some of these locations include: Logan Airport, Boston, Massachusetts; K-Mart Coupon Centers; and the National Auto League in Ontario, Canada," added Peter.

TURBO FIREPOWER! New Accelerator from GVP Available for A1200

Owners of Commodore's new Amiga A1200 will now be able to add an accelerator to their computer, thanks to the folks at GVP.

Called the A1230Turbo, this 40MHz accelerator can be easily installed inside the expansion bay on the bottom of the A1200 computer. Two SIMM sockets allow for the expansion of up to 32MB of 32-bit wide 60ns DRAM. The A1230Turbo also includes a socket for an optional FPU, which dramatically increases the performance of floating-point intensive applications.

This system uses the same technology as that found in GVP's Turbo and Combo

family accelerators, and comes with 1MB of 32-bit RAM in a modular RAM design that allows users many options for adding memory. When 4MB SIMMS are used, the A1230 can be configured with either 4MB or 8MB of RAM. The accelerator will also accept 16MB SIMMS which allows for RAM expansion up to 32MB. Other options allow the user to install various combinations of 1MB, 4MB and 16MB SIMMS.

Suggested list price for the A1230Turbo is \$499.00

Contact: GVP, 600 Clark Ave., King Of Prussia, PA 19406. (215) 337-8770, fax (215) 337-9922.

Notes from the Nets

Rumor has it . . .

by Times Roman

As usual, this column consists mainly of a compilation of rumors, speculation, gossip, and the occasional piece of real news as gathered from various computer networks. Don't use *NFTN* as the basis for any major life decisions, and *don't take the information here as fact without verifying it yourself*. I strive for accuracy, but the rumormongering business that's not always possible to achieve.

COMMODORE

A few months ago, the announcement that Commodore had laid off Gail Wellington startled quite a few Amigans. Gail had been with Commodore for years and was one of the driving forces behind CDTV, and her dismissal came as a surprise to many. Gail has resurfaced recently as a major supporter of CDTV's direct competition: OptImage, a prime supplier of CD-I authoring tools. Even though she's signed on with the competition, let's wish her the best of luck and thank her for her efforts in the Amiga community.

The December World of Commodore in Toronto saw even more new product introductions and even more hints of what's to come from Commodore. Just as he did at WOCA Pasadena, Lou Eggebrecht went into surprising detail on CBM's short and long term plans (yes, Commodore really is making long-term plans these days!).

A few items of interest from Lou's presentation:

By mid-February, three new 4000-class machines will probably be available. There will be two machines in 4000-style cases; one with a 68EC030 (lower cost, MMU-

less '030) and one with the full '030 chip. A 4000 Tower is in the very near future as well. Unconfirmed rumor has it that at least one of these new machines will ship with CD-ROM to compete against systems such as the Mac Performas.

He confirmed the rumor that CBM (with the assistance of a third party) will be releasing a 386SX card that pops into the PCMCIA slot on the 1200 and uses the AGA chipset to emulate a VGA display. A similar product is in the works for higher end machines, but according to reports from the show, Commodore is out of the full-fledged-bridgeboard business.

According to Lou, January should see the release of Commodore's Zorro III SCSI-2 card, which will plug into 3000 and 4000 machines to provide transfer speeds in the 10 megabyte per second range.

In late spring or early summer, OS 3.1 will become available. In addition to integrated networking, 3.1 will provide support for the A4000 DSP module. Coincidentally enough, this module will be released at about the same time...

The DSP module will use an AT&T 3200 series 32-bit Digital Signal Processor. This chip is a much more powerful one than the Motorola 56001 used in many PC sound boards (as well as the NeXT and the mythical Atari Falcon). One comparison I seem to remember hearing was "56001 vs. 3200 is like 68000 Vs 68030". In any case, as mentioned here often, the DSP will bring things like inexpensive high-speed communications, 16-bit sound at CD quality, realtime compression and de-

compression of video and sound, and many more powerful applications that would previously have required specialized additions. Third-party "personality modules" will plug into the DSP board to allow even further functionality.

He went over the next-generation "low end" and "high end" chip sets that were mentioned at WOCA Pasadena. There have been a few changes to the specifications (like true 24-bit color in even the "low end" chips, up from 16-bit), but they're largely the same as previously announced.

In any case, I'll go back over them for those who missed it before (as well as for the sheer drool factor of reading through the spec list again!)

The "low end" chipset will compete well against some of the higher end graphics available on other machines. It will be a two-chip set running at 57 MHz, compatible with 68020 and higher processors. It will use high-speed VRAM for chip RAM (up to 8 megs of it), and will have about 8 times the memory bandwidth and twice the blitter speed of AGA. This means that not only will the blitter itself be faster, but it will have more memory 'slots' in which to perform operations without causing contention with the processor. There will be a 24-bit color mode as mentioned above as well as non-interlaced 800x600x8 (256 color) modes. This chipset will support 4 megabyte floppy drives (2.88 megs formatted under MS-DOS, 3.52 megs under AmigaDOS), and will have a much more efficient serial port interface.

Mouth watering yet? Well, take a look at the upcoming high end chipset! This four-chip set will be less reliant on the surrounding Amiga system, meaning that it could be used in theoretical future RISC-based Amigas. They will be clocked separately from the processor and will use 32- or 64-bit wide dual-ported VRAM (again, very fast memory) as chip RAM (no mention of the amount available, but I'd guess lots!). In addition to the bitplane graphics system the Amiga currently employs, there will be a 'chunky' pixel mode (more along the lines of a bitmap). The blitter will be able to access both. Maximum resolution will be non-interlaced 24-bit 1280x1024. A 12 to 20 times increase in memory bandwidth will be accompanied by a blitter speedup of 800% (the blitter will finally become 32-bit). If you need more graphics horsepower, you'll be able to simply plug in more blitters to complement the existing one; it will be possible to have a separate blitter dedicated to each plane of a 24-bitplane display! Hardware graphics decompression and a built in frame grabber will add to the new chips' power. Sound will be 16-bit, 8-channel, 100 KHz playback (more than twice CD sampling rates!). A new "on demand DMA archi-

ture" and high-speed serial port for CD-ROM usage will further enhance overall system functionality.

Both of these chip sets have already passed through the first design cycle (i.e. they're in semi-working Silicon) and are ahead of schedule, with the high-end being closest to completion. My prediction: around this time next year, there will be new Amigas introduced which use these powerful new chips.

Some other Lou E. tidbits include: quad-sync monitors from Commodore (able to handle all the various output frequencies of AGA), work on "multimedia extensions" (Hey! Quit using MicroSoft buzzwords!) such as full-motion video ala Quicktime and support for Kodak Photo CD (Photo CD licensing negotiations are apparently underway, but Phillips is likely trying its absolute best to keep PhotoCD off of CDTV). He reaffirmed that CBM is dedicated to bringing CD-ROM to the entire Amiga product line, from the 1200 up. There was even mention that there could be upcoming software updates which will allow some AGA interlaced resolutions to display at higher refresh rates (i.e. less flicker). A new, faster Ethernet card is in the works (the existing one is already a rather good performer), and its release will probably coincide with that of 3.1.

Lou admitted that the 2000 will be history in the near future. The *Toaster* is the only reason it's survived this long.

AGA will be brought to CDTV, says Mr. Eggebrecht, and it seems to me that the perfect time to unleash such a beast (a modified A1200 in a black box, most likely) would be the Consumer Electronics Show in January. Interestingly enough, Commodore is one of the companies signed up to attend.

Disappointed that the Amiga 1200 only comes with an 880K floppy rather than the high density model? Speculation as to the reasons for this have ranged from "Commodore is run by idiots" to "it's what the European developers asked for". As it turns out, though, the real reason is... special dual-speed high density disks CBM uses are too thick to fit in case. Commodore has said they are working on getting a slimmer high density drive, so it's likely we'll see one in before too long.

Wondering where the speech 3.0? Apparently the narrator-related software were licensed from a third party, and Commodore not to renew the license because something better is coming soon. In the time, the 2.0 and 2.1 speech software fine under 3.0.

Rumors have sporadically popped over the years of plans at CBM to an Amiga-based console-style game

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tem to compete with the likes of Nintendo and Sega. According to a few recent murmurings, this may finally happen this year (Consumer Electronics Show?). My guess would be a \$150 box with a meg or so of RAM, the old chip set, a joystick or two, and a PCMCIA slot; no keyboard, floppy, or other types of ports. I would, however, expect there to be a CD-ROM adapter of some type so that this gaming machine could be suddenly turned into a CDTV for a couple of hundred more. Software would be available quickly by simply sticking existing Ami games onto PCMCIA, and this would also have the advantage of adding more utility to the PCMCIA slots in existing Amigas; software from the other consoles wouldn't be overly difficult to port, since much of it is already programmed on Amigas anyway.

According to at least one UK magazine, a console-style CDTV machine is almost ready to go at a list price of under 200 pounds.

By the time this edition of *NFTN* reaches its readers, Commodore's new *Power Up* program should be in effect (or maybe even over!). Watch for an A1200 with *DPaint IV* AGA and *Final Copy* for \$599 and a 4000 with *DPaint AGA* and *ADPro* for about \$2700.

Commodore has said that they are actively evaluating RISC processors for future Amigas; according to Lou Eggebrecht, such machines would probably run *Windows NT*. Unlike previous MicroSoft offerings, *NT* looks to be a Real Operating System, capable of running other OSes as "virtual machines" on top of *NT*. Having *NT* on an Amiga would not only mean an instant software base, but would also bring Ami a sudden boost in its image. (Any computer running an OS that almost requires 16 megs of RAM to run is not a game machine...) If this prediction comes true, owners of future high-end Amigas will probably find themselves running *AmigaDOS* applications simultaneously with *DOS*, *OS/2*, and *Windows* software in a multitasking environment, taking advantage of the Amiga's superior hardware architecture to make the machine stand out among *NT* platforms.

Current speculation is that Commodore will go with DEC's Alpha processor line. There are several reasons for this line of thought. First, since CBM has said *Windows NT* is in the Amiga's future, and we know that *NT* is currently planned only for the Alpha and MIPS RISC processors, the number of choices are narrowed down to these two architectures. It's also known that CBM has an already established relationship with DEC (Digital resells Toaster-equipped 2000s as "Multimedia Workstations"). The machines that DEC has been using to show off the Alpha can often be seen running Amiga animations (like Eric Schwartz anims) during demos. (Of course, there is now a *PD X-Windows* program that will show Amiga anims on most *UNIX* workstations, which is probably what DEC is using).

Some people claim to have been told directly by Commodore reps that there is

already an Alpha-based prototype Amiga running in the labs at West Chester. While the CBM engineers on Usenet haven't confirmed this rumor, they haven't flat-out denied it, either.

Commodore has added some new products to its no-longer-available-in-the-US PC product line. These include a color 486 notebook and a 486 tower.

Here's an interesting Commodore-related tidbit that hit BIX recently. It seems that a few years back, Lotus did a full port of 1-2-3 to the Amiga, and an early version of it was in use for a while at CBM. However, Lotus would not release the product without first receiving a large

(probably to the tune of several million dollars that CBM didn't have at the time) "investment" from Commodore. The deal fell through and 1-2-3 was never released.

HARDWARE HAPPENINGS

Progressive Peripherals seems to have survived its losses from a warehouse fire last year and returned with a product line as strong as ever. Two of the newest additions are 28 and 33 MHz 68040 accelerators for the Amiga 500. Each board holds 4 megs of 32-bit memory, and Progressive claim as much as a 45 times increase in speed over a stock machine.

In mid December someone posted a message on one network claiming that,

Getting a 486SLC BridgeBoard?

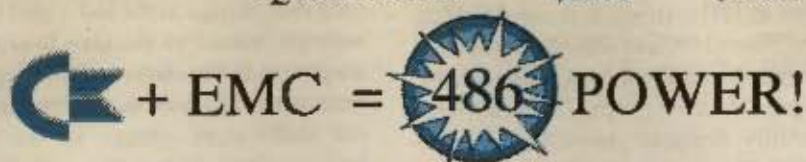
Well don't get *SUCKED IN* to buying a slower, less compatible board.

Introducing Elite MicroComputers 486SLC 33MHz Bridgeboard, based on Commodore's A2386SX. Just look below and see how we *BLOW* vortex away.



	EMC 486SLC	Vortex 486SLC
Speed	33 Mhz	25 Mhz
Landmark 2.0	103	71
Norton SI	66	45
Standard Ram	3 MB	2 MB
Price per MB	\$36	\$65 !!!
CPU cooling method	FAN!	Heat Sink
Janus 2.1 compatible	YES!	no
MS-DOS 5.0 included	YES!	+\$65
386sx to 486SLC upgrade	\$650	no
Floppy Controller	YES!	+\$89
Shipping	Next Day	+\$30

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The ORIGINAL....The FASTEST !!!! EMC's 486 SLC BridgeBoard.

EMC 486 SLC w/ 3mb	\$1200	Western Digital Caviar	
w/ 8mb	\$1405	80 mb IDE HD 12ms	\$200
A2386SX with 1 mb	\$550	120 mb IDE HD 12ms	\$275
386SX to 486SLC upgrade	\$650	210 mb IDE HD 12ms	\$345
Super Multi I/O	\$200	340 mb IDE HD 12ms	\$525
with purchase of 486SLC	\$150	3 B Serial Mouse	\$22

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A1200 Accelerator, Ram, and SCSI
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The Power Box

The PowerBox is an enclosure, specially designed for the A1200 power user. It has room for 2, 5.25", SCSI or IDE, half height devices, and includes a whopping 200 watt power supply. This power supply is usable by the A1200. So not only do you get all the power your drives need, but an extra 17 amps toward your A1200!

The Power Box \$175
w/ 2 to 3, IDE \$200



The Backpack

The Backpack

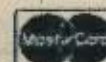
The Backpack is an enclosure, specially designed for the A1200, or BridgeBoard user who needs some more room for a drive. It holds 1 SCSI or IDE 3.5"x1" device, and has an internal 20 watt power supply.

The Backpack \$110
w/ 2 to 3, IDE \$135

2 to 3, IDE

2 to 3, IDE plugs into the mini IDE connector in your A1200. It then provides you with an external standard IDE connector, for easy expansion of 3.5" IDE harddrives. It does not interfere with your internal harddrive.

2 to 3, IDE \$50
w/ enclosure +\$25



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Continued from page 11.

The US MSRP is \$150.

In Germany, Advanced Systems and Software showed the Fastlane Z3 SCSI-II controller at the Frankfurt World of Commodore. The board has specs similar to Commodore's upcoming offering: it's a 32-bit DMA device which can provide transfers speeds approaching 10 megabytes per second. Unlike Commodore's board, though, FastLane also provides SIMM sockets for up to 64 megabytes of 32-bit RAM. Disk caching software to further improve the board's performance is also included.

Also shown and announced at WOC Frankfurt were a 24-bit ZorroIII graphics board called Rainbow III and a high-speed ISDN (digital phone line) card.

Just as speculation on putting AGA chips into pre-AGA machines has started to die down, this rumor pops up: supposedly DKB will be releasing an A2000/3000 AGA card early this year at a list price of about \$500. It's been pointed out repeatedly that this would be a very difficult, expensive task, but this information allegedly comes from a fax from DKB to a distributor, so it may be valid. Don't get your hopes up too high, though.

PCMCIA cards are on the way for the 600 and 1200. In addition to the 386SX emulator from Commodore, a company called New Media is working on a PCMCIA SCSI controller and a multi-serial card to add to its lineup of PCMCIA memory boards. Of course, PCMCIA devices are coming much more quickly now in the IBM world, and it's likely that drivers for these will begin showing up on the Amiga before too long.

EMPLANT EVOLUTION

Utilities Unlimited's EMPLANT board has taken a lot of abuse (much of it deserved) both in this column and from other members of the Amiga community. The product was late in shipping, full of bugs and limitations, and initially did not perform to anywhere near its advertised functionality.

That seems to have changed, though. Hard drive support is here now (including transparent support for existing AMax partitions and any AmigaDOS device), and with the latest version of the software (downloadable from many BBS and on-line services), the Mac II emulation now seems to work on most any 68020 or better Amiga setup. High density floppy support has been added, and by the time you read this a new display driver will be available

which will dramatically speed up screen updates on MMU-equipped machines. An upcoming software update will allow the use of Mac IIci, si, or lc ROMs.

For AMax owners who can't find Mac II ROMs but want to use the EMPLANT board for all its built-in ports and SCSI interface, UU is releasing a patch that will allow the AMax 2.53 software with 128K Mac ROMs to run on the EMPLANT hardware.

A PCMCIA version of EMPLANT is planned for the first quarter of '93. This version, owing mainly to the size limitations on a PCMCIA card, will lack the SCSI controller of the 'bigger' EMPLANT.

Also in the works are a PC emulation option. This will be primarily software based, but assisted by custom hardware on the EMPLANT board to add extra speed, and will include a board to allow owners to plug PC cards into the XT/AT slots to use them with the emulator. This option has been promised at an under-\$100 price.

Jim Drew of UU says that there is possibility that the EMPLANT hardware will be integrated with RCS' upcoming 68040 accelerator for the 1200.

GRAPHICS GOODIES

The crowded Amiga 3D market is being strengthened early this year by the release of major updates to several well-known products.

Caligari24 is the under-\$400 successor to *Caligari2*. Building on the strength of the *Caligari2* software and its elegant user interface, *C-24* adds features like hierarchical animations, organic deformations, import of IFF textures, and output in full 32-bit color (24 bits of color data plus an 8-bit "alpha channel" for transparencies, etc). *Caligari24* can input *VideoScape*, *Lightwave*, *Sculpt3D*, *AutoCAD DXF*, and *Imagine* files. An instructional videotape is included in the package.

An accelerated Amiga with 3 megs of RAM and a hard drive is the recommended configuration, but *C-24* will work on any 2 meg Amiga. Output is at resolutions up to 736x575, and direct support for the AGA chipset as well as numerous third party graphics devices is included.

Coming soon (1Q93) to the Amiga will be a new contender for the high end 3D modeling market: *Real3D version 2.0*. A multi-page preliminary list of this product's features (subject to change) was posted on several networks in late December.

Real3D 2.0 will have a customizable user interface. Users will be able to create multiple custom views, macros, function

keys, and menus. According to the network postings, ray tracing in this package is fast enough that it can be used in the design phase itself to see the effects of changes on objects, rather than relying on a wireframe preview.

Some of *R3D2*'s features (hmm... isn't *R3D2* a robot?) include: Ray tracing, solid modeling, hierarchical objects, multiple surface types, boolean operations, a wide range of object and surface attributes, mapping of textures, bumps, colors, and clips, multiple light sources, extensive animation support, multiple rendering modes, 9 levels of antialiasing, macros, mathematical textures, *R3PL* - a programming language that can be used to bypass, modify, or compliment the GUI, fractal generators, soft shadows, *AREXX*, multiple import/export formats, and more.

There's been no official word on pricing yet, but don't expect a program of this magnitude to be price competitive with Psygnosis games.

Tackling Amiga graphics from a slightly different angle is the *LightWorks Graphics Synthesizer*. This \$600 hardware/software product is geared specifically toward live performances. LGS provides real-time interactive control of graphics presentations; it provides fades, wipes, palette manipulation, triggering via MIDI or audio events, and a special script language designed to help easily automate effects.

NOW HEAR THIS!

There have been two important happenings recently in the Amiga audio world.

Blue Ribbon Soundworks has strengthened their Amiga MIDI and sound lineup with the release of the *One Stop Music Shop*, a \$649 list audio board which provides powerful sound capability for high-end audio users. Based on the E-Mu Proteus, a custom digital signal processor used in a number of professional keyboards, provides 32-voice, 16-bit audio output. *OSMS* is not a sound digitizer; instead, it relies on 4 megabytes of instrument and sound samples in ROM, all of which can be modified via software, to provide a flexible audio system. The board can be controlled directly via *Bars and*

Pipes Pro or through it's built-in MIDI interface from other sequencers. One review of *OSMS* mentions using it in conjunction with SunRize's 12 or 16-bit sound boards to provide SMPTE time code control and turn the Amiga into a truly powerful music workstation with digitizing capability, real-time effects, and a large variety of pre-rolled notes and sounds to draw from, all synchronized via SMPTE and controlled from Ami software.

The other big audio announcement is that The Dreamers' Guild, the company contracted by Electronic Arts to write *Deluxe Music Construction Set 2.0*, has openly talked about plans for the product and hopes to release it in March. (Actually, the product name will drop the "Construction Set" from the title, becoming simply "Deluxe Music"). *DMCS 2.0* is a complete rewrite with a large number of new and improved features. The interface will follow Commodore's UI Style Guide, including a full *ARexx* interface, public screens, and font-and-display-aware screens. Although it will run under 1.3, this new version will shine in a 2.0+ environment, and will support localization under 2.1 and 3.0.

The printed output has been greatly improved, but Postscript capability is still not there. Memory usage is now much more efficient. A freely-distributable player will be shipped with the product, and a new IFF CMUS format has been defined to cover *DMCS2* scores; CMUS is similar to SMUS but allows the instruments to be embedded in the file. The program will import SMUS, old *DMCS*, *MUSICX*, and *SMF* (Standard MIDI File) files and will save out in all but old *DMCS* format. The software will take advantage of the *camd.library* and *realtime.library*, giving it the ability to coexist and interact with other MIDI and sound programs and to synchronize with animations.

A number of high-quality instrument files will be included with the product, and a driver for the *One Stop Music Shop* is also planned.

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Monkey Island games, among others. The bad news is that for the time being LucasArts has stopped development of Amiga products; that means no X-Wing II light simulator for us Amigans. Hopefully the increased sales from the AGA machines (along with a flood of mail from Amiga owners) will convince LucasArts to reconsider.

The good news is that *Indiana Jones and the Fate of Atlantis* made it out the door before this announcement was made. This game pits you as Indiana Jones against the Third Reich in a race to find the magic of lost Atlantis. The game features over 200 locations in 32 colors, complete with animation (created using Disney-esque rotoscoping techniques) and a soundtrack driven by LucasArts' iMUSE interactive music system. The game is so extensive that it includes seven different user interfaces and three modes of play ("wits," "list," and "team" play). *Fate of Atlantis* lists for \$59.95. Unconfirmed rumor says that it crashes on AGA machines and that LucasArts does not plan on fixing the problem.

Wing Commander for the Amiga is here at last. Initial reports say that the gameplay is very good on accelerated ma-

chines, but on stock 7.14 MHz 68000 machines, it is almost unplayably slow. It lacks the 256-color graphics of the PC version, but an enhanced AGA *Wing Commander* is supposedly in the works, as is *Wing Commander II*.

It appears as though the announcement that Sierra is dropping Amiga development was inaccurate; it turns out to be likely that Sierra's European division will be taking over Amiga software development. InterPlay has also set up shop in the UK, and is at work on Ami versions of games like *Star Trek: 25th Anniversary* and *Castles II*. There are even rumors of LucasArts continuing development via a European subsidiary.

ReadySoft has announced *Dragon's Lair III: The Curse of Mordred*, the latest of that company's full-screen animation games based on the laserdisk arcade game from a few years back. This version pits Dirk the Daring against Mordred the Sorceress, whose brother you did in at the end of *DLII*. *DLIII* is available for most platforms, with a list price of \$59.99.

OTHER NEW SOFTWARE

SoftLogik has announced *TypeSmith*, a font manipulation package that is being billed as "the first professional Amiga

outline font editor". In addition to the ability to convert between Compugraphic, Postscript type 1, and SoftLogik DMF formats, *TypeSmith* provides drawing tools and import capabilities to allow for easy creation or manipulation of fonts. There's even a feature that allows users to load in Amiga bitmap fonts to be manually traced for conversion into scalable fonts. *TypeSmith* is expected to list for \$199.95 and ship in January '93.

SAS Institute has issued SAS/C version 6.1, a maintenance release that fixes some bugs and limitations in the 6.0 release. The 6.1 patch is available free from many bulletin boards and networks.

INOVAtronic is shipping *Directory Opus 4.0*. *Opus 4* adds further customizability to the program's user interface. It adds more ARexx support, hotkeys, and extended graphics and sound support (*DOpus* can now display AGA animas and pictures and play many MOD music formats). The biggest change in this software, though, is its price; it has risen to \$99.95 list! Upgrades for owners of current versions will cost \$45 or \$55, depending on the version you're upgrading from.

AMIGA IN THE MEDIA

The German multi-platform magazine *CHIP*, in conjunction with some other European magazines, has pronounced the Amiga 500 and 3000 "Computers of the Year" for 1992 in a number of different categories. Congrats, Commodore! If *CHIP* thought the 500 and 3000 were impressive, wait till next year when the AGA machines are up for awards!

Remember a while back when Apple was using Todd Rundgren's Amiga-and-Toaster-created "Change Myself" video to advertise Macs? Well, they're at it again. The new QuickTime developer's CD contains footage from Todd's more recent "Theology", which, of course, was put together on Todd's Amiga/Toaster systems. To be fair, Macs were used a bit in the video's creation... to generate still textures for import into *LightWave*.

Similarly, an Amiga sighting was reported at the Intel booth at Comdex. A Toaster system was being used to spice up a large-screen "Intel At Work" display. Of course, Intel won't be supporting the Amiga with any of its hardware or software projects, but at least Ami gives them something to shoot for in a few years' time.

The new Amigas have been reviewed recently in a number of magazines. *Personal Computer World's* January 1993 issue contains a four page review of the A1200, and both the 3000T/040 and the 4000 were reviewed in *BYTE*.

The *BYTE* articles were generally positive, but omitted a few details and made a few statements that some Amiga users are not happy with. The reviewer said that the higher resolution modes were too slow in 8-bit color mode; it turned out that he was using the 640x480 "productivity" mode, which is, in fact, significantly slower than the normal de-interlaced 640x400 display. He seemed to miss the point of ARexx entirely: he likened it to a slightly en-

hanced version of GW BASIC. On the whole, though, the review was favorable. The reviewer (who has since left *BYTE* to become a freelancer) says that the fact that he only had the 4000 for two days before submitting the review, combined with the 1500 word limit *BYTE* put on the article, forced him to cover the machines in much less detail than he would have liked.

THE OUTSIDE WORLD

The Amiga might see some new competition in late '93 from a new machine called the 3DO created by a new company under the guidance of Trip Hawkins. This machine will feature a 32-bit RISC CPU, CD-ROM, 3D animations, and full-motion video capabilities with an under \$700 price tag. Famed Amiga artist Jim Sachs is rumored to be working on some 3DO projects. It's unclear at this point what market the machine will be aimed at... will it be a computer or a console, or a CDTV-like "multimedia delivery" platform? What kind of software support will be available? I imagine we'll find out later this year.

IBM continues to flounder as mainframe sales give way to PC-based systems which perform the same tasks at a fraction of the cost. Big Blue is reducing its work force again, this time by 25,000 employees. The company's new PC lines will help in competing against the clones, but without its mainframe business, how long can IBM stay huge?

The Federal Trade Commission has begun taking steps against Microsoft by requesting a preliminary injunction against the company over MS-DOS licensing practices. Novell and several other companies that compete with MS have been "assisting" the FCC in the investigations. Although the first step has been taken, it's much too early to strike up a chorus of "Ding, dong, the witch is dead". The injunction will probably take months to approve, and would most likely just force Microsoft to change its DOS licensing practices... probably resulting in a higher price tag on DOS.

Watch for another group of new Macs from Apple in the first half of '93. With the exception of a color PowerBook or two, these will primarily be rebashes of existing machines with new names, cases, and price tags, but as usual Apple will sell them in vast quantities.

That's it for this month. As 1993 rolls in, there will be lots of news and activity in the Amiga community. This should be a very exciting year as software and hardware developers begin to take advantage of the AGA chips and Commodore continues to take a much more active role in the Amiga.

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Treasures of the Savage Frontier

Like all of SSI's Advanced Dungeons and Dragons games, *Treasures of the Savage Frontier* is set in the fantasy world of the popular role-playing game. The sequel to *Gateway to the Savage Frontier*, TSF pits a band of adventurers against evil forces who are trying to bring all-out war to the Frontier. Guided by the instructions of a friendly magician, the party must solve a number of quests in order to defeat their adversaries and avert the war. Each character has its own set of abilities, and characters can be of many different races and classes.

TSF shares a number of qualities with its predecessors. The interface is often cumbersome at best, especially during combat, and the graphics are not impressive. In spite of this, I found myself absorbed in the game for hours on end (complaining the whole time, but still playing). As the storyline unfolded my characters became stronger, but so did my opponents. I learned more powerful spells, found more powerful magical devices, and gradually fought my way through the various missions until the game was solved.

TSF comes on 3 disks and runs under OS 1.3 and up. Although the sticker on the box says it's not hard drive installable, I

had no problem copying the files to hard disk and running it. There's no on-disk copy protection, just a look-up-the-word-in-the-manual request when the game is first started. TSF even multitasks, though you'll have to use the keyboard to swap screens.

If you're into the fantasy genre and enjoy role-playing type games, TSF might be enjoyable in spite of some of its shortcomings. If not, it's probably a good idea to spend your money somewhere else.

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ADPro also placed third in a ranking of

all Amiga software products for 1992 sold by MicroPACE, Inc. Three other ASDG products also made MicroPACE's "Top 50 Selling Software of 1992". They were the *ADPro Epson Scanner Driver*, *MorphPlus*, and *TruePrint/24*, a 24-bit plane printer utility.

Contact: ASDG Incorporated, 925 Stewart Street, Madison, WI 53713. (608) 273-6585.

CyberArts International

by Phil Osborn

This was my third annual CyberArts conference out of three, so by now I suppose I qualify as much as anyone as a veteran. CyberArts is produced by *Keyboard Magazine*, in association with *Verbum* magazine. I covered the '90 and '91 conferences for the late lamented *INFO* magazine.

CyberArts '90, taking place in downtown L.A. in 1990 as part of the L.A. Festival, was huge. Corporate Apple had a whole hall full of Macs. IBM had a PC graphics area. Even Commodore showed up in the person of their newly-hired multimedia expert, Robert Edgar, who wowed his seminar audience with demonstrations of AmigaVision.

CYBERARTS, THE BEGINNING

CyberArts '90 tried to cover every base in digital arts and beyond. The movie industry special-effects people, such as Jay Riddle of Industrial Light and Magic, were showing us how they did it. Top techno-performance-artists, such as dancer Marci Javril, who controlled the music with her shadow, were strutting their stuff at the nightly performances and mingling with us mortals throughout the con. Ted Nelson was giving seminars on Xanadu (the twenty-year-plus project to build the ultimate hypermedia world database) and telling us what was wrong with all existing computer interfaces.

There were seminars on CD-ROM authoring, digital copyrights, and on game design. Video-interactive pioneers like Myron Krueger explained and illustrated

hard-won principles for making technology work with mere humans. While hardly CES or SIGGRAPH, CyberArts '90 brought together an amazing collection of attendees, exhibitors, artists and lecturers. Ten reporters working as a team could probably have covered it adequately.

CYBERARTS '91

CyberArts '91 took place up in the Pasadena mountains, famous for little old ladies and DooDah Parades (oh, yes, and Rose Parades). The Pasadena Center is a good venue for a small to middling conference. CyberArts '91 was much smaller, and the focus was beginning to change. It had a different mix of technology. The big guys were gone. In '90, the mix was about 85% Macintosh, with maybe eight or ten PCs and eight Amigas (I counted them - the other Amiga magazine reporters obviously didn't, and their inaccurate undercount doubtless had something to do with the lack of coverage in the Amiga press), plus a small assortment of workstations.

In '91, although the total number of computers was about the same, the PC's were hardly to be seen, but the Amigas were all over the place, with perhaps 30%, while the Mac still dominated. Given that this was probably the only significant non-Amiga-specific conference in the U.S. at which large numbers of Amigas and Amiga products appeared, the lack of coverage was particularly troubling.

The performances and seminars at CyberArts '91 were scaled down from '90, but there was still enough to have kept five or six journalists busy. Instead of small orchestras, we had Jaron Lanier himself (keyboardist for the Grateful Dead as well as top-flight virtual reality software/hardware developer), plus a host of other excellent entertainers, but no extravaganzas as in the '90 show.

The actual number of exhibitors seemed to remain about the same for '91, but there were a lot more Amiga-based products, such as NewTek's *Video Toaster*. A high point of '91 came at the very end with a "Town Hall Meeting" sponsored/hosted by Trip Hawkins of Electronic Arts. The result of this meeting was the formation of the Multimedia Association.

CYBERARTS '92

CyberArts '92, also held at the Pasadena center, was scaled down again, but not uniformly. There were still quite a few exhibitors. The number of nighttime performances had dropped to one - the Saturday night Halloween party at the local Hilton. The number of attendees appeared to have shrunk substantially, along with the number of simultaneous seminars, but



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this was no great loss. Trying to be in five places at once can get old fast — you know you're always missing more than you're getting.

So far, my report would point to a dying conference. There are, however, a number of positive indicators. The focus of CyberArts '90 was simply too broad. "Digital Arts" covers SIGGRAPH and a lot more. By the time you really did cover the bare surface of what that topic really encompasses, your information would be obsolete. CyberArts has since evolved a more precise focus — "Virtual Reality" or VR.

At CyberArts '90, the low-end VR system was *Sense8*. Originally developed on the Amiga and then ported to a workstation, *Sense8* provided a simple and rather sluggish, but fully interactive 3-D world for around \$50,000. For about \$250,000+, you could go with the much more detailed and interactive worlds available on Jaron Lanier's VPL system.

At CyberArts '91, *VREAM (Virtual Dream)* was exhibited on a fast PC, with performance similar to *Sense8* the year before, but at around \$5,000. At CyberArts '92, however, Virtual Reality Studio was running on a low-end Amiga (available on other platforms), with similar performance again, but at \$57 (mail-order list price). Of course, while the low-end prices have plummeted, the higher-end stuff has been getting a lot better.

Virtuality (see previous *Amiga News* coverage, May 1992), the first real commercial VR system now available in U.S. arcades, runs off a pair of Amiga 3000's and reportedly costs around \$30,000 per unit. It provides fairly sophisticated and detailed virtual worlds that respond close to real-time — very little lag. The illusion of being there is complete. You really do immediately forget that you are in a mall arcade as you stalk the other player around the *Dactyl Nightmare* space platform while trying to remember that the Pterodactyl is circling above you — and he's HUNGRY.

Then there's *Mandala*, an Amiga product from Vivid Effects in Toronto. *Mandala* allows real time control of an Amiga from the video input; that is, you see your image mapped onto the computer screen, which will typically be a computer graphic environment with objects that do things when you reach out and touch them with your image.

Mandala allows the user to quickly author environments that can combine the full range of multi-media options (laser or live video, sound, animation, special effects, data-processing, etc.) into a product that anyone can control simply by standing in front of the camera and reaching out with their image and grabbing or touching things.

Mandala (which also runs those arcade games on Nickleodeon in which the kids appear to be inside the game) stole the show both on the exhibit floor and at the nighttime performances at CyberArts '90 and '91. (In '91, I stepped into the *Mandala* Theatre area to discover an entire Brazilian TV news team filming one of their TV personalities having a ball with

the system.) It was also present in '92, but only as an application used by "Life on a Slice," an exhibitor. It still got lots of attention, but was upstaged by immersive VR in the form of Virtuality. (see above)

Backing up a moment, what is VR (Virtual Reality), and what good is it? One of the points made at this year's conference was that surveys show that almost no one outside the field knows what we're talking about.

VR could loosely be defined as a simulated environment or world that responds directly to the actions of real human beings as though they were physically present in that environment. The oldest real VRs are the flight trainers used since around WWII. The sophistication and realism of the current crop of trainers used by the military, however, is orders of magnitude beyond the original LINK systems.

VR CAN BE DANGEROUS

Why VR? One reason: because there are a lot of situations in which it is too dangerous and/or expensive for live training. Combat and flight training are good examples. One of this year's speakers showed footage from Desert Storm and commented that one reason the allies won so easily was that their troops had already done it and been there — many times. In fact, there was a potential down-side to the VR troop training that just by luck worked to their advantage.

Most of the troops had never been in real combat at all, and here they were fighting seasoned veterans. Only when they emerged from their tanks and saw the actual carnage did the fear set in among the tank crews. As long as they were inside, it was just like the VR war games they had played so many times. There was simply no fear — they had never been hurt. This reckless overconfidence worked because it was shared by everyone. No one

held back and so they overwhelmed Saddam's positions. In a slightly different situation, it could have been disastrous — which points toward what the real focus of this year's conference was.

From a broad overview of the range of cutting edge digital arts, to a narrower set of technologies — 3-D visuals, 3-D sound, interactive systems like the data-glove or *Mandala* — that make simulations of reality(s) ever better, the focus is now, in three short years, on the real live Virtual Reality industry: What is happening? What are the problems? What works? Where are we going with this? Is it a good place? How can we ensure that it is?

VR is here and it's working, whether for Desert Storm warriors or the U.S. Olympic Bobsled team or for molecular physicists, who can now reach into a 3D simulation on the molecular scale, and feel the resistance to trying to fit an artificial enzyme into a receptor site. This is a lot of maturation happening at breakneck pace and NOT slowing down.

If CyberArts '90 could be compared to the first personal computer conference of around 1976, with its kit-built, hand-wired Altairs and Kim 1's, it has already progressed to the early '80's.

A big reason for this is that the technology of VR is generally not something that has to be a special creation. The initial problems of VR are the problems of video, of human interface design, of show management, of dramatic presentation, of clever computational algorithms and faster hardware.

These are hardly unique to VR, and there is plenty of market impetus for development without VR. VR, however, is where all these technologies come together and it is also where the products employing these various technologies are progressively converging.

Take shows, for example. Disney has progressed from glorified roller coasters, mechanical puppets and surround theaters to Star Tours, Captain EO, and now Fantasmic, each one a more convincing alternate reality. The audience, however, is still a passive spectator, so that critical distinction between simulation and VR is still lacking — but not for long!

AUDIENCE PARTICIPATION IN VIRTUAL REALITY

This year's speakers reported on various experiments in audience participation. One musician had given an audience flashlights. Behind his band were colored areas of light-sensitive sensors. The sensors controlled aspects of the music. The conductor assigned different areas to segments of the audience and then conducted them using a "Darth Vader" sword as part of the performance.

D'Cuckoo, an all-woman digital rock band (they designed and built their own unique MIDI instruments and played at the first CyberArts) was reported using a five foot helium-inflated ball wired with touch sensors and RF. As the audience plays with the ball, the music and light show responds and the ball talks to them.

People LIKE interactive entertainment. Ask any Vegas comic, or attend a Grateful Dead concert. It's no accident that "the Dead" have retained and even increased their following of joyful fanatics twenty years past the demise of other 60's rock bands. Neither are the diverse connections between Deadheads and VR any coincidence. Jaron Lanier is but one link between the two worlds.

Saturday afternoon's main seminar at CyberArts '92 finished with a live performance on "Digital Media," the hardware/software driver for the psychedelic

Continued on page 16.

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Continued from page 15.

visuals used at Dead concerts, performed by former Pioneer Venus orbiter pilot and NASA super-computer programmer David Trisman, who personally runs the visuals at the Dead concerts. David deliberately chose a piece of music to which he had never performed, and then jammed with some of the wildest 3D abstract animations this reporter has yet seen. (You can bet where I will be when the Dead come round this way again.)

The interactivity factor may be responsible for the (reported) fact that more money is now being spent on home gaming than on theatrical releases.

Brett Leonard, who, together with Gimel Everett (his wife), produced *"The Lawnmower Man,"* discussed how the two of them are "parenting the next generation of theatrical fare." Films are produced modularly so that portions can be excerpted for "video games and other entertainment media."

This team is hot. Gimel discussed how they produced *"Lawnmower Man."* Rather than micro-directing the animations and effects, they chose the best artists they could find, gave them a direction and turned them loose to bring their full creative imagination to bear. If you've seen the film, you know the results. If not, rent the video.... Now. (We got to see some stuff that wasn't in the final cut because, like some of the scenes in *"Alien"* that were cut, it was too disturbing.)

SOCIAL AND ETHICAL IMPACTS?

Brett focussed on the social impact and ethical problems involved in portraying the new technologies. He told how Henry Ford saw the automobile as an "interactive medium" that would let the city man meet the country man - and now look at it! Their next movie will be based on Rudy Rucker's *"Software,"* and involves a look at "nanotechnology."

(It's so nice to be in a venue where I never have to explain anything - like CyberArts. "Nanotechnology" is defined as "total control over the structure of matter on the molecular scale." K. Eric Drexler, then of MIT, 1) coined the term, 2) wrote *"Engines of Creation,"* the book that has become an underground bible of cutting edge science and engineering, 3) founded the Foresight Institute to focus on solving the problems of 21st Century technologies before we have disasters (this time), 4) convinced MITI (Japan's top science/research agency) to put \$230 million into basic research on nanotechnology, and 5) sponsored a major conference on Nanotechnology two weeks following CyberArts '92, which meant that I had to choose between them.... The focus of Rucker's *Software* is more of a humorous assay into the nature and perils of Artificial Intelligence than nanotechnology, though.)

I asked Brett if he were aware of Drexler or Foresight. He was not. So I followed up and put Brett and Gimel together with Foresight after CyberArts ended. (INFO, by the way, actually reviewed *"Engines of*

Creation," although the connections with the Amiga are tenuous at best.)

THE GAMES

Humans are more interesting than computers! From the solipsistic arcade game of the '80's, we are moving to human to human competition in VR. Jordan Weisman, President of Virtual World Entertainment, discussed the evolution of their *BattleTech*, in which players are essentially enclosed in a control module of a virtual robot on a virtual battlefield, and experience what the robot experiences.

With over 300,000 (expensive!) games played at their Chicago site, they now have a real history of interaction. Players are briefed before the game and debriefed afterwards, with a fast forward review of their game and a printout. Spectators can watch the game from a flying virtual camera platform hovering over the battlefield.

BattleTech is strictly team against team, and the battlefields are always different, so how you interact with your teammates is as important as personal skill, and while the computer VR sets the stage, Weisman claimed that the *BattleTech* experience is 98% human/2% computer.

Over the past year, the teams have gotten quite professional, and strategy has rapidly evolved. Now they have tournaments. A top warrior of six months ago would be easy meat today, but now there are multiple levels of play, and teams are ranked. *BattleTech* is successful enough that 17 new facilities are going into Japan.

Weisman also focused on another of the nagging questions in the exploding VR industry. As Brett Leonard asked, why is it that the first real commercial VR, Virtuality's *Dactyl Nightmare*, is literally about stalking and murdering someone? Where will this end? (I recall a friend in the late '70's on his first encounter with *PacMan*, "I never would have conceived of a popular game based on the idea of EATING your opponent.")

Weisman is planning on doing something about it. Virtual World Entertainment's next generation of networked VR will be about exploring alien planets, among other non-conflict-based themes. He sees his company as being in the business of providing social experiences for adults. The kids have the reflexes, but that isn't what counts in *BattleTech* or the planned future VRs.

At the same session, Nicole Stenger carried this dialog into literally another realm. Her version of VR is based on the idea of a customized dream. "Agents" modify the VR environment independently of the human participant. Nicole described the interactions as poetic, non-realistic, sensual. The agents can manifest themselves in the virtual dream as "angels," abstract 3D figures resembling flowers with stylized hearts.

Most consumer VR to date has at least attempted to replicate a real physical world with laws similar to reality, most often related to the reality of violent competition. Most VR to date has also been done by men. Nicole's video of her work in

progress showed that we are certainly not restricted to representations of physical reality in VR. Literally anything can assume a VR presence — emotions, concepts, ideals, anything.

NEW TOYS

Let's look at some of the new toys that were demonstrated at CyberArts '92, just for a change of pace. The name "Kodak" is not usually connected with VR, but they were there in the person of Don Miskowitz, and during the seminar we got to see their new (and expensive) digital processing system. Film in — film out, a 35mm frame every three seconds at awesome resolutions, the intermediate digital imaging driven off over one hundred transputers, with upgrades from Silicon Graphics in the offing. Their claim is NO loss of picture information from input to output film. Unfortunately, what we weren't shown much of were the implied capabilities for mixings, morphings, transformings, mappings, tweenings, etc.

Brad Hunt of Angel Studios and Carl Rosendahl of Pacific Data Images rounded out that panel, and they did have plenty of real dynamite footage to show what's being done today in digital effects.

I suppose the problem here is that eventually you get jaded by all the morphs, fades, etc. I recently tried to look at some tapes of video effects and computer animation that were the hottest stuff around two years ago. Now you see it every time you turn on the tube. So what? Well, then it's time for content to have a turn. Fortunately, this is understood by the good digital artists, like good artists in any medium.

AutoDesk was showing off their new 3D animation/graphics package *3D Studio release 2*. This is what I call a comprehensive product — at this level of our development. Just about any image or animation that you can imagine can be done in this kind of package. If you plan to work on a PC (386/486 with math coprocessor required) then this is definitely worth looking into.

(Since the conference, I had a chance to speak with a professional 3D animator who has worked on just about every available platform at one time or another, including AutoDesk's. His evaluation of AutoDesk's 3D platform was that it is still far behind most of the high-end Amiga products that typically sell for one-tenth the price.

He did recommend, however, that PC owners compare AutoDesk's product to *PlayMation* from Anjon & Associates, which was originally developed on the Amiga and then recently ported to Mac and PC. He likes the current PC version of *PlayMation* better than the Amiga one, mainly because, on a 66 Mhz '486, it's much faster. He claimed that *PlayMation* at a few hundred dollars is better than the high-end products costing around one hundred thousand.)

"Anything you can imagine, we can produce," was actually one of the sub-themes of the conference. We are no longer trying to get there. WE ARE THERE. The

limitations of the current state-of-the-art digital modeling and visualization systems are generally already well beyond the capacities of human perception. Now we just want the cost to come down, the user friendliness and speed to go up, and some new ideas of what to do with these new toys.

On a down note, the word I got from one of the representatives at the AutoDesk exhibit is that AutoDesk, in the course of an internal shakeup, has divested itself of both *Xanadu* and *AMIX*. *Xanadu* (see above reference) is the scheme for a world data bank that has been promoted for over twenty years by the originator, Ted Nelson, and his crew of digital fanatics. Not just a passive repository of information, *Xanadu* combines facilities for authoring and marketing information packages with full hypermedia capabilities.

(Hypermedia refers to information systems that allow "transclusion." "Transclusion" means, roughly, "inclusion by reference." In a hypermedia system, the user can arbitrarily create machine-supported links between pieces of information.

This might be as simple as a footnote that, when clicked on with your mouse, took you to the material (text, picture, animation, video, simulation, VR world) referred to, whether in that document or any other. Or, it could be a link between your spreadsheet program and the price of hog bellies on the exchange. Or it might be a link to any number of digital "agents," ceaselessly roaming the information networks looking for information matching the patterns you had given them (36-24-35?).)

Xanadu and Ted Nelson were hot topics at CyberArts '90, and the news that AutoDesk had bought *Xanadu* from Ted was greeted with general jubilation. *Xanadu* is a kind of holy Grail for a lot of people in digital media, and AutoDesk's pull-out is not going to make those people happy. *AMIX* (The American Information Exchange) is essentially like a scaled-down version of *Xanadu*, with one very important difference....

AMIX went on line commercially on January 1, 1992. *AMIX* is focused on the information marketplace, although it does provide some hypermedia facilities. It offers very low access fees and makes its profits as a percentage of transactions. Any legal kind of information or informational service can be offered through *AMIX*, and *AMIX* takes care of details such as standardized contracts, marketing services, records, and even arbitration of disputes. *AMIX* is now on its own, however, so the question is "can a totally new kind of service make it in today's economy?" Chris Peterson, by the way, who is Eric Drexler's partner at Foresight, is a manager of *AMIX* and will be interfacing with Brett Leonard and Gimel Everett for "Software" the movie. So many connections....

MIND CONTROL

Silicon Graphics was at CyberArts '92 big time. It almost seemed that anyone who was doing serious, professional VR was using Silicon Graphics blindly fast

the motions of their eyes, hands and limbs encased in sensor gauntlets. At CyberArts '90, we watched how Muppets were animated directly via robot-like systems during working hours for most of us. *Cando* itself is an excellent product, but without support... O well.

but most of the people

who I observed there

were just getting into

multimedia and had a

million questions about

the Amiga and how it

could plug into their ap-

plications. They were

blown away by a \$299

Amiga 500 doing live

video still frame captures

at the same time that it

was calculating a Man-

delbert on another screen

and running the *Work-*

Bench on a third one. A

lady from Japan talked

to me about doing mail

touchscreen systems on

CDTV. A PC owner was

delighted to get a disk of

twenty digital snapshots

of his new baby. Only a

handful entered the con-

ference database, how-

ever.

I can understand that,

however, as there were

several other organiza-

tions offering conference

databases this time, and

I never even had time to

get on any of them. Even

as scaled down as this

CyberArts was, I still

missed probably half of

it.

Two booth away from

the LBAUG was a com-

pany selling "The Vir-

tual Reality Sourcebook"

on PC disk. I assumed

that the mannequin with

the robotic gear and the

other mechanical stuff

were just props for their

booth. I was wrong. So-

phistTech Research, pub-

lisher of the "VR Source-

book" was sharing their

booth with The Character

Shop, a company that manufactures

"Waldos".

What is a "Waldo"?

The name reportedly

comes from an old sci-

ence fiction story about

a crippled scientist by

the name of Waldo who

invented a way to move

around via remote con-

trolled robots. Well,

they're HERE, to coin a

phrase.

Many years ago, the

first sophisticated Wal-

dos™ allowed nuclear

researchers to reach into

highly radioactive areas

with robot arms which

responded precisely to

TECHNICALLY SPEAKING...

Few people know the technical back-

ground of the Amiga. Its OS (Operating

System) kernel, *TRIOS*, was developed

at Cambridge in the late '70s to provide a

system that absolutely pushed the limited

hardware available then, especially in time-

shared Britain, to its limit and give real-

time true multi-tasking with device inde-

pendence, so that it could run on virtually

any platform and interface with just about

anything.

TRIOS was quickly turned to the job

of real-time industrial control applications

in Europe, but only made it across the

Atlantic for the Amiga. Because of the

device independence inherent in *TRIOS*,

a 1985 vintage Amiga 1000 is upgradeable

to a 45 Mhz 68040. Try something like that

with any other personal computer.

The Amiga doesn't stop with a "fire-

cracker" OS, however. Other platforms

typically support video or audio input/

output (IO) either via custom plug-in cards

(e.g., the PCs) or load almost all the proc-

essing on the poor CPU (e.g., the Mac).

The Amiga has true, programmable "co-

processors" on board to do that kind of

work. (The custom cards also available —

e.g., the *Video Toaster* — also rely upon

the on-board coprocessors, which is why

you don't see the *Video Toaster* on any

other platform as yet.)

The results could be seen when celeb-

rity digital artist Jim Sachs showed off the

new *Brilliance* paint program at the Ver-

bum magazine booth. The Amiga was

running multiple screens simultaneously

in different resolutions, while the Mac

sitting next to it sedately displayed its one

resolution.

NON-COMMERCIAL

EXHIBITORS

In addition to the commercial exhib-

itors, there were numerous user groups and

artist groups with their own booths. The

Virtual Reality Special Interest Group, for

example, stayed very busy.

I had convinced Bob Gelman, show

manager, to give the Long Beach Amiga

Users Group (LBAUG) a twenty foot booth

for use as a conference message center.

Unfortunately, the man in charge of han-

dling the communications for LBAUG

didn't get the contract back to Bob. So

LBAUG ended up with a small booth in

the rear, and, due to that and other unre-

seen problems, the message center was not

running quite as well as I planned.

I wrote the database software in *Cando*

from INOVAtronics. It ran just fine on our

500's, but I didn't have the time to debug

the network system I wanted to have on

line. INOVAtronics' technical support for

Cando unfortunately turned out to be even

more marginal than their manual, which

was updated, but I have yet to receive the

update. Their last BBS update appeared to

be about a year old, and no one ever replied

on line to my repeated requests for help, in-

spite of numerous calls and promises.

Various individuals at INOVAtronics did

attempt to help, but technical support is

only available live for a few hours a day —

hardware. Their rep made the point sev-

eral times, however, that Silicon Graphics

itself is not involved in creating virtual

reality systems as such. They see their role

as providing the basic hardware and sys-

tem software for the VR developers.

While names like Silicon Graphics,

Autodesk and Kodak might give the im-

pression that VR has become a corporate

game, there were plenty of exceptions. At

the first CyberArts, I noticed a young

Japanese man, dressed entirely in black,

carrying a camcorder... everywhere, I

finally spoke with him briefly and gave

him my card. Some months later, a video

tape of the conference showed up in my

mailbox — from Tokyo.

At the second CyberArts, he was there

again, this time with a tiny palm-corder,

and at the very end of the conference he

approached me and asked if I would like to

see his company's new software. I almost

declined, as con-lag had long overtaken

me, but he said he could show it to me in

five minutes.

So we sit down on one of the balconies,

and he opens up this briefcase that turns

out to contain a MacII portable, and I put

on this light-weight headband with a tiny

little transmitter. The next thing I know,

I'm watching a real-time 3D plot of my

brainwaves scroll across the Mac screen.

He apologized for not having his MIDI rig

so that I could play music via mind con-

trol.

A few months ago, another video shows

up in my box — of the Interactive Brain-

wave Visual Analyzer System (IBVA),

showing various individuals running the

computer, playing music or controlling

visuals directly with their brain waves.

IBVA even has a portable recorder now, so

you can jog and record, or meditate and

record, and then play back at some future

date for your therapist.

Meanwhile, *MONDO 2000* (the maga-

zine where the digital artists let their hair

down), naturally discovered IBVA, and

this year, IBVA also had a booth at Cyber-

Arts, with a continuous line of people

cager to plug in. The line for strolling and

murdering — the *Virtually Dactyl Night-*

mare — was roughly forty times as long,

however.

Richfield Sound Design are the people

who did all the effects and lighting control

for Lilly Tomlin's "Is There Intelligent

Life in the Universe" — on a single Amiga

running their prototype MIDI show con-

trol system. At last year's CyberArts,

Richfield gave a seminar and ran a booth

presenting their finished product, an Amiga-

based, proprietary MIDI show control

system that allowed a single Amiga to

simultaneously and precisely control thou-

sands of MIDI devices.

This year they didn't have a booth, but

their system seems to have made it really

big time in the show control market. I

heard and watched video after video clip

showing such venues as the Disney fire-

works, the Astrodome, Disney's Fantasia-

mic, and on and on, all with spectacular

special effects controlled by the Richfield

system. There are good reasons for this.

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ing, databases, CAD, and many others, are as available and productive on the Amiga as they are in the world of the PC. But if you just cannot part with that latest revision of *Word Perfect*, or you can't get creative without a copy of *AutoCAD*, or you must be running *Lotus* for compatibility at work—don't turn away from the Amiga! Just load up your favorite emulator.

An even better idea is to load up an Amiga application that is file compatible with the other computer. For example, you could import a wireframe object of a spaceship that was originally created in *AutoCAD* into an Amiga 3D package such as *Lightwave 3D*. Then you could add surfaces, textures and render/animate it in full 24-bit color. Another example is *Microsoft Word*. Save the text on the IBM at work, then bring it home and load it into *WordsWorth 2* using *CrossDos* or *WorkBench 2.1*.

WordsWorth 2 loads *MS Word* files directly, as well as *Word Perfect 5.1* and many more. Don't use too many power features on the Amiga productivity package if you plan to take it back to the IBM/Mac, though, they can't handle many additional Amiga features.

Earlier I stated that I own a hardware PC emulator. I have now put it up for sale. After having it for a year, I've never had a need to buy any PC program. And I use them on the job every day! I am file-compatible already, as I explained. The only use I ever had for my hardware-based IBM emulator was to invite owners of PC clones to my home, install their original or PD software to show them that it really works, then delete it into oblivion. □

Continued from page 17.

controlled in real-time by human operators.

Now the focus is on character animation and VR. The traditional animator cannot work in anything close to real-time, especially in 3D animation. But at CyberArts '92, I saw footage of a *Waldo*™-based Nintendo "Mario" controlled directly in real-time 3D animation by a human performer. The facial expressions were completely natural, driven via a mask that sensed the operator's facial movements. This system is already in wide-spread use, and full body suits are available.

This is only the beginning. One of the Character Shop personnel stated at a seminar that their real business was building people. They are presently recording every available piece of information about famous people for the purpose of creating totally realistic interactive re-creations of them, not just physically, but also of their character, personality and knowledge. Ultimately, he implied, within a couple of decades they will be more than just simulations... shades of Fred Pohl.

PhotoShop appears to still command the top spot in Mac graphics. There were seminars on photoshop secrets. I dropped in on one and asked if *PhotoShop* could be externally controlled for algorithmic composition ("paint me a beach in the style of Matisse. More clouds. Bigger waves. Less bikini..."). I was told that it would be very difficult, but there were people looking at the problem — of algorithmic composition, that is, not less bikini.

The direct competitor with *PhotoShop* on the Amiga is the new *OpalVision* from Centaur Development, which was shown during the AmigaMania's Seminar. *OpalVision* does have at least some of the hooks for algorithmic composition in the form of AREXX support. Since algorithmic composition is one of the key elements in practical large scale VR, expect future

developments Real Soon Now.

Another booth ran a system called "Portrait Virus." A crew of artists, some of them physically present at the conference, another linked via modem across the continent, started with a frame-grabbed portrait of an attendee from a *Video Toaster*, and then passed it down the line, each adding his or her special effects on whatever system — Mac, Amiga, PC, ?? — he or she had, until it came back around full circle.

Exhibitors ranged all over the spectrum of applications, services, prototypes, demonstrations, magazines. There were semi-nude performance artistes dancing on pedestals to advertise fake digital jewelry. There was "Famous Melissa" with real digital jewelry. There were studio music systems. There was an interesting prototype video editing system — the *Stream Engine* — which was running quite impressively in software emulation and will soon be released as a PC board that could, in theory, at least, run in parallel with the *Toaster*.

There was the *Lightworks Graphics Synthesizer* from Euphonia. This Amiga product lets you compose and perform computer graphics like music, with full MIDI compatibility — very impressive, and drawing a continuous audience. While not quite up to the standards of the high-end system used with the Grateful Dead, Euphonia appears to have answered the needs of many a performance group for a very reasonable price.

Well, let's see... What haven't I covered so far? About 90% of the conference, unfortunately. Like the seminars on musical interface design by Bob Moog (the Moog synthesizer) and Don Buchla, or the seminar on lasers, or the talk on direct retinal displays, or the conference wrap-up round table. A couple of para-

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graphs does not substitute for a real review, which most of the above-mentioned products and talks and many others that I never had time to see certainly deserved. There are audio tapes available, and hopefully video as well.

The two prior CyberArts, together with some material that appeared at this year's conference, are well documented in "CYBERARTS — Exploring Art & Technology" from Miller Freeman, which includes a directory. *Verbum* magazine also has a Mac CDROM issue out that reportedly has a BIG directory of digital art sources, and then there is the *Virtual Reality Sourcebook*, which I never had time to investigate — but it looked good.

There are quite a number of journals and magazines now covering VR and related fields. An excellent and very reasonably priced interactive overview is also available in Nicholas Lavrot's *Virtual Reality Playhouse* from the Waite Group Press. This book includes a PC compatible disk full of programs that demonstrate various aspects of VR.

Who should go to CyberArts? Everybody really, because this is one place where the future is really being made. I don't have the time or the memory to try to cover the kind of detailed, intense discussions that went on at the seminars among the artists and industry leaders, but real decisions that will effect what we see and hear next year and ten years hence were on the table. If you care, be there.

If you are in the digital media, then this is the place to network, to find out what it really hot and what's coming, how to do it cheap and well, and who has the answers. The focus on VR means a focus on the cutting edge products in all the related support arts and technologies. This is not the Microsoft Windows seminar, with Mr. or Ms. Expert telling you how to work. Nor is it a mob of salesmen. Everyone, including the big guys like IBM or Kodak, is there to learn at least as much as to teach and market. (I spent twenty minutes explaining the Amiga's features to the official Apple representative — she had no idea that any Mac emulators even existed!) This is an art place and an idea place and it's hands-on. There are star

performers, but no elite — as yet.

At the Halloween Party on Saturday night, I finally succumbed to the urge to get out on the dance floor in spite of my bad knees, and found myself dancing like crazy with the star of the night, a lithe little figure in a striped cat costume with a long tail. Finally the cat girl said "Hello again," and so I asked "Who is it?" "You don't know?" "No." She raised her mask . . . Marci Javril.

One additional item which deserves additional mention and a follow-up report was the *Ghost in the Machine* interactive role playing adventure. I have included the text from Tod Foley's July announcement below. The *Ghost in the Machine* "fiction immersion" arose from a problem discussed at CyberArts '91. Game designers, programmers and hardware experts agreed that one area in which they were weak was the ability to design in the proper elements to involve the participants, to make them forget everything but the virtual reality and participate intellectually, physically and emotionally.

Tod is an expert in this area if anyone is. He writes the manuals for both role-playing games and game designers. Tod offered to provide an experimental environment that game and/or VR designers could enter and experience to give them a feel for what it took to make a virtual experience real. I was unfortunately never able to free myself from my other commitments long enough to participate in his conference environment for the requisite hour, but I had participated for about six hours in one of the trial runs some months prior to the '92 conference. I'm looking forward to the report on his results and plans, as well as the support effects provided on the Amiga.

NEWS RELEASE DATE: 17 July 1992

CONTACT: Tod Foley, As If Productions, 818/786-6318 (day/night)

AS IF PRODUCTIONS CREATING NEW FORM OF THEATER

As If Productions, a network of future-minded artists and technicians from the Los Angeles/Orange County area, is out to

expand the definition of entertainment media with the first of its experimental theater pieces, *Ghosts in the Machine*. The new approach is called "fiction immersion", and combines elements of role-playing games with media technology and traditional theater techniques to allow full involvement of audience members. "It's a sort of sociodrama," says AIP founder/director Tod Foley, a writer and game designer from the San Fernando Valley, author of Iron Crown Enterprises' "Cyberspace" role-playing game, "in the state of fiction immersion, the traditional lines between actor and audience, reality and illusion, are blurred beyond recognition."

Ghosts in the Machine premieres Halloween weekend at the third annual CyberArts International arts and technology conference, at the Pasadena Convention Center. The presentation uses live actors, sets, props, audio/video technology and computers to send participants fifty years into the future. Participants are given characters to play in the 'virtual world', complete with goals, clues, props and dark secrets, and are encouraged to interact with the principle characters, altering the storyline and perhaps becoming principle characters themselves.

The young organization is intent on expanding its operation to a full-fledged 'hypertheater', and is currently seeking independent art-technicians and tech-artists for forthcoming productions. "Our eyes are on the future of entertainment," says Foley, "This isn't virtual reality yet, but it's definitely the next step toward it."

Interested parties may contact Tod Foley at As If Productions, 8055 Wakefield Ave, Panorama City, CA, 91402. Phone: 818-786-6318.

Special thanks to Bob Gelman, CyberArts show manager, who came through at the last moment in spite of it all and gave the Long Beach Amiga Users Group a booth and free power. Larry Kroeger, Vice President of LBAUG, also deserves a mention, as he not only ran the booth and educated countless attendees on the Amiga, but also hauled equipment and prepared most of the demonstrations.

CNN Goes Online

Transcripts from 50 programs carried by the Cable News Network (CNN) are now available electronically through the *DataTimes* international network. The new service means that businesses, government officials, journalists and historians, among others, can now search through the transcripts of both recently broadcast and past CNN programs to retrieve news and analysis, including unedited coverage of important national and international events.

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The full-text transcripts of the CNN programs are added to the worldwide *DataTimes* network 24 hours after the first broadcast by CNN. Transcripts of programs back to January 1, 1991, are stored as well.

Included are transcripts from both regular CNN programs — such as *CNN Prime News*, *Inside Politics*, *Moneyline*, *Larry King Live* and *Evans and Novak* — and scores of special CNN program, such as the recent US political conventions and presidential debates.

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