

THE GURU

TRUMCUG

Trumbull Computer User's Group

Since 1984

Supporting All Personal Computers

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Send mail to:

P.O. Box 8632
Warren, Ohio 44484



Meeting Notice: Third Wednesday of each month (except July and August) at 7:00 PM. Our next meeting will be held on Wednesday April 17, 1996 at the Warren branch of the Cortland Bank, on Elm road, North of McDonald's and across from Sims Buick.

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Future Meetings

Future meetings are scheduled for Wednesdays
May 15, and June 19.

Note: Meetings now are back at 7:00 PM. February Meeting

Our March meeting was a tour of GSI test center given by Jay Shonk. We met at the Cortland Bank branch and then carpooled over to Howland GSI test center. Delphi (Packard Electric) is their biggest customer. We saw pieces of wire from an automobile harness being SLOWLY stretched until they reached the breaking point. We saw enclosed controlled atmosphere chambers where harnesses, etc. Were slowly cooled down to below freezing point and then heated up to the mid 100's degrees F. To simulate potential atmosphere conditions that an automobile might encounter over several years. We saw controlled vibration test chambers, and test products being subjected to salt water such as one might encounter near an ocean. Good job, and thanks for the tour & coffee, Jay!!

In April we're going back to the GSI test center where Chris Shonk will show us how to do research on the internet and on-line services. She's also going to show us a research type CD-ROM disc about art history that she's using for a class that she's taking. We will meet at the Cortland bank branch at our regularly scheduled 7:00 PM meeting time and then car pool over to the GSI test center again so Chris can use the computers there.

ALERT! Don't forget that May is election month!

If you are interested in running for or holding an executive position, please notify an executive officer and come to the meeting.

VisionTech Electronics has a new address and new phone numbers:
3995 Greenmont SE
Warren OH 44484
Voice: 856-6732
Fax: 856-5735
Readers should consider letting VisionTech quote on their PC computer needs.

I went, I Be'ed, I was conquered!

By Ed Musgrove (emusgrove@linknet.kitsap.lib.wa.us)

Yesterday I attended the Be users' group meeting in Bellingham, Washington. Two members of the Be corporate staff were on hand to give a 6 hour seminar! After the usual hassles of getting everything running and displaying on the auditorium's projector we were given a very informative set of talks about various subjects of interest to compu-holics hearts.

Mark Gonzales (Marketing dude at Be) and Peter Potrebic (Software support) were both ready with a slide show (overhead projections) and demos running on the BeBox itself. First, a note about non-disclosure; I asked about this in regard to the info we get from the web sight and from the employees who attended the users' group. I was told we were expected to disclose all and everything--in fact, the more folks who want in on the ground floor the better, "so spread the word, nothing is secret!" is the current watchword.

Julie Petersen is an Amigan of great renown. It was she

who brought all the pieces together to solve the "A3000 screen sparkle" problem. She has become a very major enthusiast in the Be world. It was she who formed this users' group and was instrumental in launching this meeting with Be professionals. She gave the welcoming speech and entertained us with a few choice tidbits from here past and from her recent Be experiences.

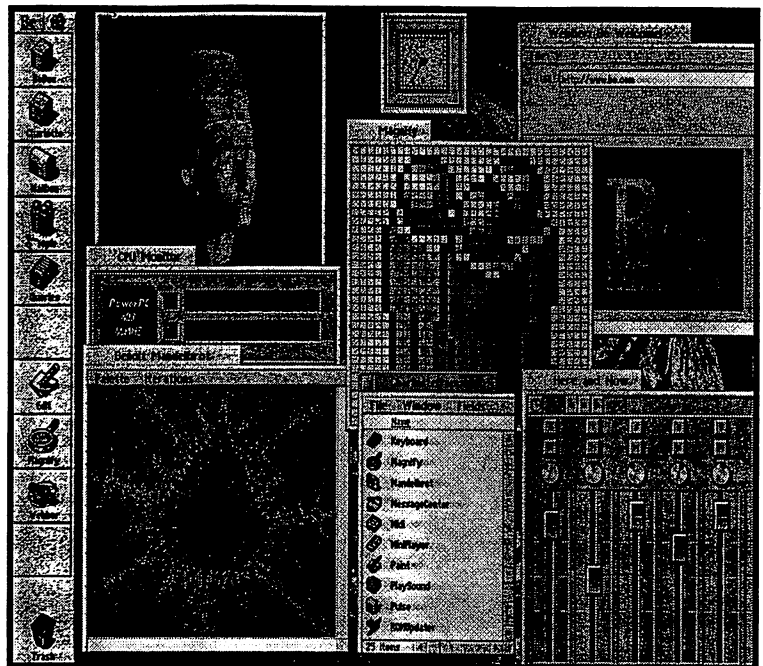
Mark gave us some interesting statistics about the computer industry in general, then tied them together to explain Be's marketing and design philosophy. One interesting factoid was that there is an installed base of 250+ million personal computers worldwide, an additional 68 million will be sold this year alone! He showed some of the "new rules" which Be is trying to operate under, the first and foremost is to break the old rule which said "CPUs are expensive, no one needs more than one", Be's rule is "one is not enough!" Another (which might not seem too clear from this) is "learn from the past--the mistakes and the successes", but don't necessarily (willy-nilly) just go with the past successful solutions.

There was one interesting rule, "assume the future, and build it in". Combined with "ride the industry cost curve", these might seem a bit at loggerheads, Mark was able to synthesize the two into a seemingly reasonable business and technical plan.

Peter gave us a guided tour of the more interesting apps and abilities of the machine. Remember, this is a machine in it's infancy, the software was startling, considering that real software development was only just begun last year. Peter was subjected to a wide range of technical questions (some of which ended up answered by Mark who is quite capable of explaining system level hardware and software issues in complex detail--not common in a Marketing person!)

Let me give you a quick overview of the hardware and software from a naive users' point of view (that's me--naive.) Some may have seen a posting which mentions that the developer's machine currently ships with no front panel (bezel), this appears to be accurate for the first few hundred machines shipped, as the case (a medium dark blue very close to the Zip drive color) seems to be an industry standard box, but the folks at Be have been working to design an attractive, functional front panel. This has resulted in the folks there trying their hand at modeling in various mediums. The result which they displayed yesterday was interesting, slightly different (though not obnoxious), and only a trial run, first attempt. The final unit will have twin LED arrays which will display each CPU's current load rate--kind of a Starwars wannabe.

The software (the OS, a complete CLI-driven development system and a few home grown apps) was impressive. The OS takes all the good stuff from AmigaDOS, Windows95, and MacOS; all the bad stuff from them seems to have disappeared. As this is not only a true multi-tasking machine (like the Amiga), it is also an n-expandable multi-processor system (hardware limits not inherent in the machine seem



to limit cost/price/return to about 8 PPC processors.) The current board supports only 2 603e's, but they seem to handle everything with ease. The CLI is a "bash" which I think stands for "Bourne Again SHell", but don't quote me! It looked exactly like an Amiga shell with the exception that it was a full blown app window (menus, scrollers, gadgets like iconify, help.)

Help--ah yes. They have a totally rad concept on context sensitive help, the exact details of which escape me, but basically you select a "help" icon then select something on the screen (an icon, a running app, a gadget, a blank area of a window--whatever tickles your fancy). The machine then checks if it is a system resource for which help is required and if so does it's really nice thing. If not it passes the help request on to the app which has a built-in OS standard way of responding which may be used, modified or ignored.

Back to the "workbench" (as we Amigans know it), I can only wax ecstatic over the desk top environment. It has only one drawback for Amiga-aware folks--it has no way of displaying multi-resolution screens simultaneously (like if you pull down the Amiga's Workbench screen to display something running behind it.) As I understand it, this is possible by using a graphics card which will do this--and at least one is available at a very high cost. So it is not so much a system problem but a cost thing--but don't quote me on this either!

When you drag a window somewhere the entire window display moves and uncovered screen area is redrawn (as opposed to the Amigas drag a simulated rectangle method.) The 2 processor system is so fast it is doing all this in *software* doing constant *total* screen redraws, not just clip region fix-ups. It is so fast that even with an insane work load the process was not in the least affected. Remember, this machine has no custom ASICs (custom graphics or sound chips like our blitter/Agnus/Paula stuff.)

The desk top supports the standard Amiga functions like drag and drop, clipboard, multi-select (uses the shift key or select draw boxes just like the Amiga.) The OS is completely "hot linked", any change of anything in the file structure immediately updates all references to that thing. For instance, you have your favorite paint program running and open the file requester displaying a list of file, one of which is the infamous "foo". Now, just for fun, you go to the desk top, find foo's icon, and change foo's name to the much more reasonable "bar". As this is a single screen design, the paint program's file requester was left visible off to one side, and you notice that as you change the files name it's entry in the file requester changes instantly and automatically from foo to bar. For the programmers this can even be set up so that code which opens a file will get the file even if the name has been changed!

The file system is just one part of the built-in database tool. You can search the entire database of all volumes (or just one or more volume(s) or directory(s)) using very sophisticated search criteria on one or multiple fields. Any user may extend the definition of what a file is on their system. If they want file comments, they simply add a new field to the database's file record. If they want user protection they can add a field like rating, and rate the files (x rated files would not be available without a password or something.)

Menus are handled about like on the Amiga--pull or drop down (did not see which) uses Amiga-key keyboard shortcuts. I did not know clone keyboards had Amiga keys, but the keyboard shortcuts were all shown as a stylized "A" + <key> and menu entries looked just like on the Amiga. Menus stay attached to the active window, as opposed to the Amiga's way of always sticking them at the top of the screen. There was a user preference to configure everything it seemed, but they did not go into details (we only had 6 hours and could have used twice that!)

Mice, gadgets, windows, icons, directories and files all will be totally comfortable to the Amiga user. The user interface is very similar to that of the Amiga (and Mac and Windows95 as well.) Currently scroll bars are not proportional, but the release being shipped with new machines has proportional scroll bars, just like we do. What they have done with system standard gadgets makes GadTools and even MUI look pale by comparison.

If you don't develop software you can stop reading here and skip to the conclusion at the end.

Be claims to have about 1000 registered developers in North America and about another 300 in Europe. From the traffic on comp.sys.be I would guess this to be true. They offer an astonishing deal to developers. If you have any track record at all in the electronics industry (even a tiny PD utility on an obscure platform) you may become a registered developer with all rights and privileges pertaining. The price is right--nothing! Developer support is in place and functioning well. Support is INet based by preference, though they might answer a letter.

The system is almost completely POSIX compliant (some

multi-processor issues need to be worked out, but they claim 99% compatibility.) They will be CHRP (or whatever it is called today) compliant when the standard is "set"--they maintain very close compatibility now, but the standard is still being changed so they will not buy in until it has a firm base.

The developer's text-based material is all available for free on their web sight (www.be.com) in multiple formats (HTML, Postscript, Acrobat) and includes the "Be Book" which is like the RKMs with the exception of the Style Guide (for which they are seeking a tech writer to design and write a "style" by which we may be guided.)

The functions all have very similar names to the functions in AmigaDOS which do similar things. Porting most Amiga programs will be a simple matter of running it through a spell checker with a "dictionary" composed of the function call names. (Well, it might be a tiny bit more complicated!)

Executable files on the BeBox are very small. An app which opens a screen and window then prints "Hello, World!" in a program specified font compiled to 7k. On the Amiga it takes 3k.

At the present, the only real support for software development is via MetroWerks CodeWarrior running on a Mac. The GUI is being ported to run natively on the BeBox, or so we were lead to believe, though some question remains about MetroWerks devotion to the cause in the eyes of a few users posting regularly.

The box ships with an interesting suite of apps (but absolutely NO printer or formatted parallel output) most of which come with source. They are considering the question of library source code for developers, but currently do not supply this. All the most critical apps are in place in at least rough form (web browser, terminal, paint, programmer's text editor, etc.). Apps may be coder defined as "take over the machine, single task, no OS desk top", "multi-copy of the same code", or "fully re-entrant, and re-executable" just as with the Amiga.

In conclusion, I would like to describe what they did in order to demonstrate multitasking. All the following were going at the same time, all were running at full speed, no degradation of the screen update occurred (and they claimed that if we had had an INet connection they would have had 4 sessions going at once as well.) All windows could be moved, or sized at will, doing realtime screen refreshment.

Sound: Running a panel which looked like a 16 channel sound mixer, but was a midi controller, they played a long 16 instrument midi file (using a midi synthesizer, not software emulation for now.)

Using the built-in CD-ROM drive they played a stock (Blues Brothers was obtained from an audience member) title via a very familiar looking CD interface.

Using the built-in sound generator they played a long sound file directly off the hard drive.

Video: Running the included paint/animation program they opened two examples of the same anim file (King Tut is

out--Nephertiti is in) and had each rotate the image (one clockwise, one widershins.)

Using a demo program which takes a bit of text then displays it in a window in various sizes and styles, while cycling through the entire directory of fonts, one font at a time, they exhibited the font rendering engine. It does all sizing and style (bold, italics, rotate, shear) change in real time, using the CPU.

Two versions of a program which calculates and displays Mandlebrots were going, but they went so fast that even with major window sizes and tiny magnification areas to re-compute they had a hard time keeping them both working as opposed to waiting for input.

OS functions: Pulse (SnoopDos for the Be) was showing 300+ processes running concurrently.

A CPU monitor program was running.

Windows were dragged, iconified, and sized as quickly as they could go from one app to another.

The file system was queried using very extensive search criteria with multiple queries going at once (again it was hard to keep this going to load the system, as these calls get a high priority, adjustable just like on the Amiga.)

Even more was going on, but I could not get it all down to give any more details. No real OS intensive things like formatting or disk copying were going on, but at least one app was streaming data from HD to the sound sub-system.

All this took place with only a barely perceptible slow down.

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3DO AND CIRRUS LOGIC TEAM TO DELIVER ADVANCED 3-D TECHNOLOGY AND ENTERTAINMENT TO PCs

FREMONT and REDWOOD CITY, Calif. -- March 26, 1996 -- Cirrus Logic Inc. and The 3DO Company today announced an agreement to develop 3-D graphics and video technology that will enable the PC to deliver arcade-class performance, raising the bar for entertainment on the PC. The technology accord will combine 3DO's cutting-edge M2 3-D technology and software expertise with Cirrus Logic's world leadership in video graphics controllers to give millions of PC users the ability to experience the most advanced 3-D realism on their desktops.

Under the agreement, Cirrus Logic will license the 3-D portion of 3DO's M2 technology, which has already been validated in silicon. The companies will collaborate to integrate the M2 3-D engine with Cirrus Logic's video graphics controller technology and other PC technologies to develop next-generation 3-D accelerators. These high-performance graphics chips will be optimized for accelerating 3-D games written for Microsoft's recently announced Direct3D standard, the new Windows 95 API for 3-D applications. Cirrus Logic will manufacture, market and sell the accelerators, and will work with software providers to create content for this new level of 3-D performance.

"Cirrus Logic's partnership with 3DO adds an important technology and a new level of performance to our aggressive 3-D product roadmap," said Douglas J. Bartek, president of Cirrus Logic's Visual and Systems Interface Company. "The combination of our technologies provides a unique synergy that will enable us to deliver unsurpassed 3-D reality to the power gamer."

"Today's announcement marks our first major move into the PC marketplace and underscores our commitment to diversify the business into areas including consumer, software publishing, Internet and DVD," said Hugh Martin, president of The 3DO Company. "Cirrus Logic provides us with a large distribution base, leading-edge manufacturing and strong OEM partners to drive our technology and software into the PC arena."

3DO's 64-bit 3-D set-up engine is capable of processing more than one half million polygons per second peak, supporting complex photo realistic 3-D worlds. In addition, the rendering engine generates more than 100 million pixels per second, giving users more than 640 x 480 resolution and greater graphics detail, bringing the arcade experience to the PC. According to Dr. John Latta, president, 4th Wave, Inc., "This architecture will let software developers create titles that provide a whole new level of realism for the PC platform."

The 3-D graphics market is expected to be one of the fastest growing segments in the computer industry, with entertainment fueling most of the growth.

Printing of The Guru is courtesy of VisionTech Electronics, Inc Voice (216) 856-5732 FAX (216) 856-6735.

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Bill Gates of Borg!

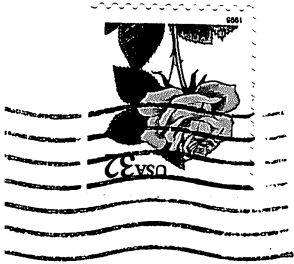


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You will be assimilated.

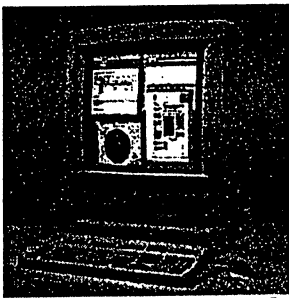
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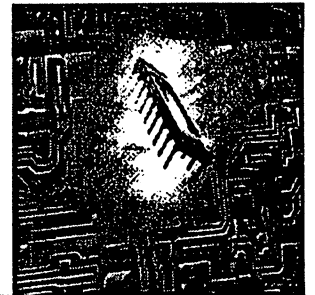


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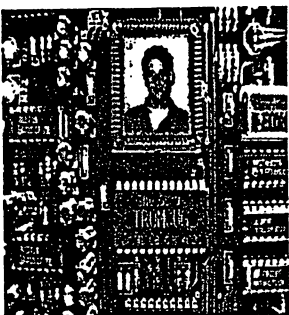
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Computer meeting on the
3rd Wednesday of each month at 7:00PM
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Warren branch
Cortland Bank
Elm Road-Warren, Ohio



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