

Notes From Meeting of 21/June/01ce

Open: 7:00pm

Newsletter: Approved

Chancellor: A reminder about elections next meeting, was met with groans from the officers. <BG> Nominations are still open. Currently the offices are

Chancellor: elected for life is poor Sensei.

Treasurer: Gary Dupuy, **Commodore**

Librarian: Imperial Warlord, **Amiga**

Librarian: Mark E. Reed, **Editor:** Lord Ronin from Q-Link.

The offices of *SysOp*, *Web Master*, *C= Inet Reporter*, *Amiga Inet Reporter*, *Amiga Emulator Representative*. Plus the *Deputy* offices are all appointed.

Sensei then went over the last issue of the Village Green. Covering points of interest and updates. E-Mail in the Wave is still being discussed, and a new beta version has been released. Lord Ronin has not DL-ed that one as of yet. The Jeri Board is now called the CommodoreOne. Lord Ronin is adding some information on this in his section *<ed note: that idea was cancelled at the last moment. Because I felt it more important to present the information from Maurice and his aquisition of CMD items. This therefore delayed the CommodoreOne information to a later issue.>* From the Fresno Users Group Newsletter. We saw more colours for the new Post Script System for the Geos/Wheels world. A print out of a file for users of post script, was put in the issue. More colours and the ability to print colour in GeoPublish. The display also showed sizing of entire pages that could then be printed in one page. *<ed note: I now have an Optra 40 post script printer. Many thanks to Dale Sidebottom. That in the future I hope to be using. I am signing up for Maurices list. Where the above file was located originally. Some of my work will be size reduced for the upcoming CML issue.>*

There is an early release for the JOS

files. Lord Ronin is planning on DL-ing this for our testing and a demo. He did DL the 4bit files. But they were not ready for viewing by meeting time. He is collecting the GoDot files and new E.P.S. files that are being put up at Arndt's site. As well as helping a little bit with Arndt's Newsroom and Print Master work.

Treasurer: \$6

C= Librarian: Work for the BBS in testing out a huge and unsorted collection of Geos files. At this time only GeoPaint files are being taken to the BBS. Part of the disk sorting. So far almost 200 GeoPaint files have been found. Data Store 3.01 and subs hold the files. They were tested, classified then with the use of GeoZip V6. Converted and Zipped into DL-able files. The June disk has a surprise upon it. Side one is all in UUENCODE. But the tools to open them up are included. As is the .D64 creator/reverter from Load Star. Side #2 is a game called B Burago. A race car game from 95ce that was fixed for the C= world by Mad Max and sent to us for the group and board use. All C= hacking mags have been removed from the BBS. We found that converting them to normal PET. Destroyed the UUENCODE files. Lord Ronin DL-ed all 20 issues and they are now being split up, arc-ed and sda-ed. Then back on the BBS. By the time this issue reaches the members. All 20 will be up for DL.

Amiga Librarian: Lord Alberonn stated that "A bit of news that's actually late

THE VILLAGE GREEN

for the newsletter. For the past two weeks Amiga Inc. ran a very limited time offer for the Amiga Party Pack. This included the Amiga S.D.K. and sample games and applications for the new Amiga D.E. system. It also includes an offer for a \$100 discount coupon off an AmigaOne PPC/1200 or a free copy of Amiga OS 4.0 & 4.2. These ran for \$99 each. There is a version that runs on top of Linux, another for on the Windblown system. The AmigaOne mother board has been slightly delayed. However actual mother boards were seen at the Amiga Kick Start Show. According to Amiga, OS 4.0 is moving along pretty good, and it along with the AmigaOne should be out later this summer."

Editor: Lots to say and a little space to say it this issue. As I don't know at this time how much the Maurice article will take in space. So pardon for the more abrupt style of writing these notes.

Cameron Kaiser has released Hyper Link 2.5. I'll have more on that in future issues. Including price and features. We have been testing the Load Star .D64 creator and with the help of #30. there are now some more RPGs on the BBS. #30 has also been working on walkthroughs and manuals. Writing work has been fine. As of this date of writing. The first of the series for the Wanderer's World E-Text Mag has started. This one is on BBS and today. *<ed note: Wanderer's World has now folded for several months to come>* Thanks to #4 and his help. The screen shots were converted to gif. I zipped the files and sent them to Allan for Commodore Scene. Six files were sent and more are being worked upon for the first series on RPG tools. *<ed note: the intro appeared in C.S. #34>*

Demos: Wheels 128 and Wave 128 were shown on the system. Also the new GeoZip tool. This months disk and how to use the UUDECODE tool as well as the start of the race game. Some GeoPaint files were shown in how they are tested and then converted and zipped in one motion with the GeoZip prg.

S.I.G.s: In the RPG group. Work has been on saving games and making them into files for the BBS. this has been done mainly

by #30. who has also been making manuals and walkthroughs with wrong is write and Geos. helping future C= users. These when finished and made into sda files and put on the board. Gained primarily from Project 64 web site.

The PRG group is almost finished with the first of the three C.B.M. books on programming. Discussed was where we would like to go after the books are finished. Game creation, sprites music.

Geos S.I.G. has a new member #22. Who has factory copies of 1.2 and 1.3. just starting on learning the enjoyment of Geos. Many lessons and discussions held on how to use the GeoWrite and GeoPaint prgs.

Discussion: Newcomer game 14 disks sides plus new and old sid file disks. Not NTSC compatible and in 40 tracks. *<ed note: if I can get a PAL machine. I have been asked to write the review.>* Making the "I Adore My 64" buttons with the Post Script system. A good idea if we can learn how to do it correctly. making Village buttons for the board members with their ID numbers. Also a good idea and time and another tool is needed for the physical work. More talk on the CatMarks, club money. This is on hold till shop reopens. No refund yet on the damaged Optra printer. Getting a funny run around.

Close: 9:10

Lord Ronin's Ramblings

O.K. the following is what I abbreviated the meeting notes for, in the desire to make certain this reaches our readers. Both members and exchanges. The text is from Maurice Randall's Click Here Software site. Gaelyne Gasson posted the entire bit to the mail list and I have just edited out some small parts. So that it would fit in this space. keeping as much as possible intact. Great news for all of the C= users.

Here is the text on the next page with the ordering information for you. Thank you Maurice for helping to preserve and improve the C= World.

Click Here Software Co is currently finalizing a deal with Creative Micro Designs in order to take over the licensing, manufacturing, and distribution of their entire Commodore-related product line. We intend to keep these products available for many years to come in addition to continued support of all the existing products through new and exciting upgrades. The CMD staff is taking the 4th of July week off and when they return from vacation, I will be making a trip to East Longmeadow, Massachusetts to spend a week learning all the tricks involved in getting each CMD product produced and running. Following that, I will be returning back to Michigan with a truck and trailer full of anything and everything that CMD has that is Commodore-related. And I mean EVERYTHING! CMD is getting out completely. Their current business simply doesn't provide them with enough time in the day to continue producing the Commodore related equipment. While I'm at CMD, I will also be helping to fill some of the orders that were taken during the final two weeks prior to June 4th. However, the bulk of the orders will be filled by myself at my shop in Michigan once I'm all set up for production.

I have a 13,000 square foot building here that includes a machine shop and metal fabrication area. I can set up equipment here to fabricate the special cases needed for products such as the RamLink. This capability will save me from having to hire an outside fabrication shop to do the work. This also means that the RamLink will remain in production since the per-unit cost of the cases will be lower. The same will hold true for the HD, FD, and SCPU cases. CMD always had the cases built by one outside shop and then shipped to another shop for painting. The whole process including the baked on paint finish can be performed "in-house" now. Now for the only problem I've got right now. I've been trying to get the financing for this acquisition. However, the two finance companies I've tried have not been helpful. The computer industry is obviously not as sound as it was a couple of years ago, and they are leary of it. Add to that the fact

this business is targeted at Commodore owners and you can imagine what the finance people think. However, with some of my own money and with the help of another individual, I'm able to come up with a good portion of what I need to finish this deal. Presently, I'm lacking about \$10,000 to complete the deal. I'm trying to work this deal in a way that I don't get myself into a financial mess. The only way this takeover can happen is if I make it a successful and profitable venture. So far, I'm OK. Another idea I have to raise some capital is to announce some of the new products I plan to introduce soon. If I can pre-sell enough of these, I would have the remaining amount of money that I need to finish the purchase. In exchange, everyone will get a nice new product that will truly be enjoyed.

THE NEW HD-DOS I'm doing an upgrade to the HD-DOS and it will contain many new features. Remember the talk about the print spooling? That's what the auxiliary port is for. You can plug in your Commodore-ready printer or printer interface into the auxiliary port and the HD can act as if it were the device 4 printer. The HD intercepts the printer data when an application tries to print. The HD will then store the data into the printer partition. It will then either send the data immediately to the printer or save it for later printing. There will be several configuration modes. For instance, the incoming data can be sent out as-is. In this case, a program such as TWS might be sending data as if the printer were in Epson mode. How can a hard drive do all this? CMD made this possible by putting a 64K computer inside the HD case. Yes, there's something very similar to a Commodore64 sitting inside that case. If it had a video chip, think what we could do with it! Some users are presently connecting a CD-ROM to the HD, but special programs are needed to handle the data transfers. To make things easier, the new HD-DOS will incorporate a new partition type called "CD ROM". Just create a CD ROM partition and when you switch to that partition, you will be able to access the CD ROM drive just like you would any partition on the hard drive. Plug in a second cd rom drive and create a partition

for that one too! There will be other features added to the new DOS such as the ability to recognize a disk change for those who have installed Iomega Zip drives into their units. You will no longer have to partition all your disks the same way and you will not have to press the reset button during a disk change either. When a disk change is sensed, the DOS will automatically re-read the partition table from the new disk just like the FD drive does when you insert a new disk. The new HD-DOS will include a new BOOT ROM which is very easy to install and a new DOS disk which will also include some new utilities. I'm estimating this upgrade will be sold for about \$40.

THE NEW HD-ZIP DRIVE Another nice new product will be an official production HD-Zip drive. For us Commodore users, this makes much more sense than having a hard drive with gigabytes of storage. You'd be surprised at how much stuff you can put on a 100 megabyte Zip disk. If you get low on space, just get another Zip disk! Or keep different projects on different Zip disks. The HD-Zip drive will also include the new HD-DOS mentioned above.

HD-ZIP KITS Do you already have a CMD HD? How would you like to put a Zip drive in it? I will be selling a kit in two forms, with or without the actual Zip drive mechanism. The kits will also include the new HD-DOS mentioned above. The kit will give you the necessary bracket and screws, a template for cutting the front panel, a new front panel decal, and an instruction sheet. Currently, I can only estimate what the selling price of these kits will be. Most likely, the kit without the Zip drive mechanism will be somewhere around \$55. (remember, that includes the new HD-DOS)

MY REQUEST AND MY PROMISE Once again, I'm putting out a request for anyone interested in the above products to go ahead and send me your order. Or maybe you're still thinking about ordering a SuperCPU, or an FD drive, or whatever. Go ahead and send me an order and I'll get this deal going and get your order to you just as soon as I finalize everything with CMD and get up and running with production. Naturally you

won't get your order shipped in 24 hours, so please be patient with me. HD-Zip drive (complete) \$299 plus \$15 shipping HD-DOS upgrade (for existing units) \$40 plus \$4 shipping HD-Zip kit without mechanism (includes HD-DOS upgrade) \$55 plus \$4 shipping HD-Zip kit with mechanism price not yet determined. The above prices will be guaranteed on pre-sold orders. If I determine at the time of production that I can lower the prices, then I will refund the difference. Please send your order to: Maurice Randall% Click Here Software Co426 Sumpter St P.O. Box 606 Charlotte MI 48813 You can call me or email me with any question you'd like to: PH: (517) 543-5202 maurice@ia4u.net A big thank you in advance...Maurice



Now about this issue. As you can see there are some changes. I am using some new fonts for Perfect Print. Ones that I found on a website. Won't be able to see what they really look like, till printed. My hope is that they will give a clearer reading for our members and for our exchanges.

Announcements:

A pleasant vacation to #22. As he visits family in Calif. We hope to connect him with Civic as he will be in the area for a couple of months.

Amiga users: Recently I picked up a collection of Amiga disks. Along with some manuals and what appears to be a device for connecting a SCSI. Members can view the items at the Kibbutz. Testing is going on this month.

Scope out Data Stores 2.3 for RPGs and 1.91 for the manuals.

Data Store 1.2 has the C= Hacking Mags full of information on the C=

Remember that this month is the time for Elections and our 23rd anniversary. Party is on hold till the new shop is opened. Cat Box Cake is a must for the party. <VBG>

The Tally Ho!

The ACUG
Amiga Section
& Comics!
Issue 23-July, 2001ce

Eyetech's Updated AmigaOne Timeline

Updated 27 June 2001

It's now several months since this timeline was last updated as most of the day-to-day news items have been posted to the <http://www.yahooogroups.com/group/amigaone> mailing list. However lots of things have happened since we launched the AmigaOne project which have had an influence on the specification of the final product and therefore the timetable leading up to delivery.

The main change has undoubtedly been the decision by Amiga to use the current Amiga OS as the basis for a home server solution and as an alternative (to Windows and Linux) hosting environment for the Amiga DE.

This has meant that when it is first launched the AmigaOne 1200 will be a substantially improved product to what was originally envisaged. The majority of the improvements come from Amiga's commitment to develop OS4.0 specifically to run on the AmigaOne-1200 at launch. This is far more than the 'fixed' version of OS3.9 that was originally envisaged (pending the development of the native PPC Amiga DE implementation that was originally planned). The new OS4.0 will come with a high performance file system, virtual memory, high performance PPC-native TCP/IP stack, 1GB main memory support, UDMA IDE and SCSI and ethernet drivers and Picasso96 2D retargetable drivers for Voodoo3 PCI/AGP and Matrox G450 PCI/AGP & G550 AGP only graphics cards. Warp3D/Mesa 3D drivers will also be shipped with the first release of OS4.0.

Sound card (with Paula emulation), USB (keyboard and mouse) drivers will follow as downloadable updates - ie you won't have to wait until OS4.2 (which we don't expect to ship until mid 2002) for these facilities.

The whole AmigaOne-1200 project is suddenly much bigger and very much better as a result. The small downside however is that during the several weeks leading up to the OS4.x announcement (at St Louis at the beginning of April) and more particularly since then, we and Amiga Inc have had to redirect much of our efforts to carefully defining, planning and allocating tasks and responsibilities to OS4.0 development and integration with the A1-1200. The extra work involved has also, inevitably, meant that timeframes

have slipped. Although this has also meant that the end time for hardware delivery has moved back actual progress has, so far, been ahead of plan with the development currently looking like it will come in at less than the estimate for elapsed engineering time. As reported earlier in the AmigaOne FAQ's, beta testers will not now be needed for the hardware which is being independently tested/validated as development progresses.

As most people probably know, Continental Europe (where most of the AmigaOne and OS4.0 development is being carried out) closes in August, making it a bad time for beta testing and the associated feedback. As you'll see below, application software/OS4.0 beta test boards are therefore now scheduled for release at the beginning of September. Manufacture of production AmigaOne1200 boards will now start in mid September, and be released for distribution as soon as OS4.0 is signed off for release in early October.

Timeline summary:

Mk 2 PCB production and testing - Complete

All major custom chip logic building block development and testing - Complete

CPU module design - Complete

Custom chip PCI development - Complete

Custom chip memory and CPU controller integration - June/July

Bootstrap, flashrom maintenance and basic drivers implementation - July/August

OS4.0 build and 68K emulator porting/testing - July/August

Application software beta tester systems shipped - End August/Start September

AmigaOne 1200 boards into production - Mid September

Application software & OS4.0 beta test sign off - End September

AmigaOne-1200 boards and OS4.0 available to dealers - 1st week October

©2001 Eyetech Ltd.



AmigaOne SCSI Standards:

A Technical Report

In a message to the AmigaOne Maillist about SCSI on the Amiga, Fleecy had this to say:

"As you are all asking so many questions, I will post the Amiga internal report on SCSI - we didn't just pick SCRIPTS because it sounded cool ;-)"

AmigaOne SCSI standards

Fleecy has also asked me to recommend a PCI SCSI card or chipset on which to standardise, and I'm fairly sure I know the right ones to pick. I've been a SCSI enthusiast since 1987, and written drivers for (very) dumb and smart controllers. I do understand the options and the issues, as I'll show. We should standardise on an 'NCR SCSI scripts' processor, for the following reasons. These are low-cost high-performance single-chip PCI bus-mastering SCSI controllers. They are widely available in SCSI 2 FAST and Ultra/SCSI-3 versions, originally from NCR then Symbios, now a brand of LSI logic, <http://www.lsilogic.com/>. There is a good OEM support program there - another reason for choosing this rather than an Adaptec proprietary part, for example - and they encourage people to buy either boards with chips on (e.g. from lots of firms in China, Korea and Taiwan) OR the chips themselves for integration (as on Commodore's A4000T) so programming and electronic specs are both good and easy to get. Hence they are widely supported with free and compatible drivers, and as close to a commodity as controller chips get.

You can buy PCI cards in this architecture from ASUS, Diamond Multimedia, DTC, Intraserver, Lomas Data, SW Technology, Topsy and Tyan, among others.

Each offer versions that match several variants of the SCSI standard - unsurprisingly, as the software drivers and PCI connector stay almost the same, and only the integrated controller/interface chip and SCSI sockets need to change (basically).

There are lots of chips in the 'SCSI scripts' family and they all have a similar programming interface, which I'm very familiar and happy with as both a user and a programmer.

Chips in this family include the

53C710 used in the Warp Engine, CSA Magnum and A4091 (Zorro 3 cards and accelerators - I've written drivers down to the metal for these, in Amiga Qdos) which are SCSI 2 FAST. These were the fastest, lowest-overhead SCSI 2 controllers for Amigas, and in my experience very tolerant of cable and termination mistakes that clobber rivals. This feature is trademarked as 'TolerANT' and involves the controller monitoring the bounce on the I/O lines and tuning the line drivers accordingly. It works. :-)

The Cyberstorm 3 and Cyberstorm PPC were based on a Symbios clone of the NCR53C770 Ultra SCSI script processor. Phase 5 abandoned the Elonex FAS216 they had inherited from the Fastlane Z3 cards and used in Mark 1 and 2 Cyberstorms, and so the Mark 3 was faster and more reliable, with lower CPU overhead than earlier models, even on 'narrow' SCSI drives. The main snag of the Mark 3 SCSI was that it only shipped with wide (68 pin) connections and required expensive connectors and cables to work with cheap and common SCSI 2 gear. It's important that we should offer a choice of SCSI 2 FAST and 'Ultra Wide SCSI 3' (pick your labels :-)) controllers so people can use their existing equipment (scanners, DATs, ZIPs as well as intelligent fixed drives) with low cost, and those who have or want later 'wide' gear can use it, without us having to write new drivers.

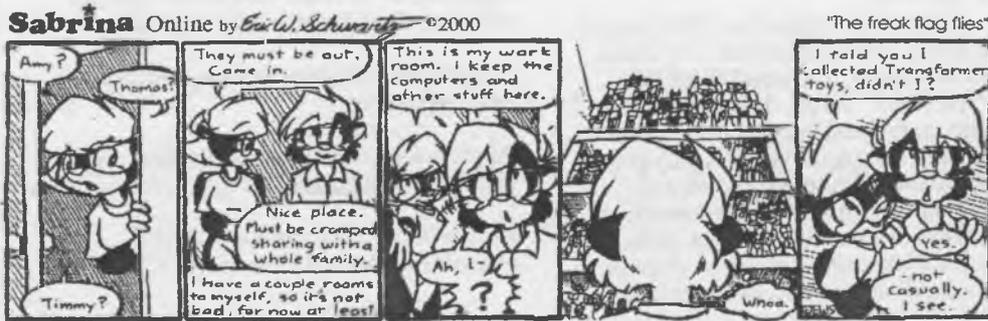
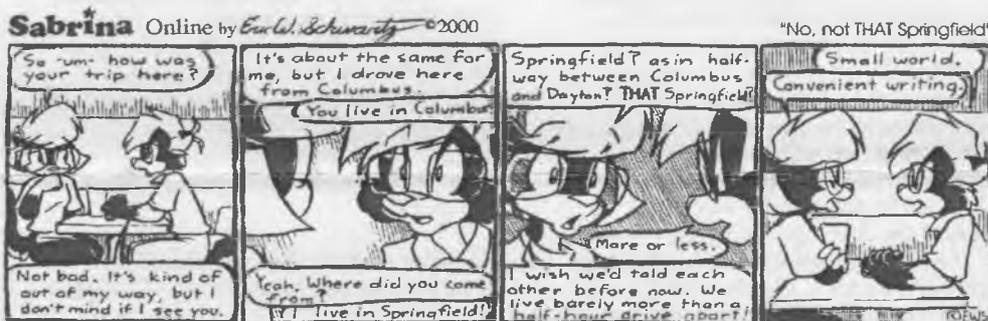
The most basic PCI version of this is the 53C810, which I use (in the Symbios remix) in my Devbox. The chip has the same advantages but even higher integration as it drops onto PCI rather than the CPU bus or - via glue - to Zorro 3. However SCSI 2 FAST is a minimum, these days; raw IDE can outrun it, though not if you have several drives active at a time. There are ultra wide and differential versions of the PCI chips, too.

These are some of them - there are probably others:

- 53C810A: Fast SCSI-2 (10 Mb/s)
- 53C815: Fast SCSI-2
- 53C825: Fast Wide SCSI-2 (20 Mb/s)
- 53C860: Fast-20 SCSI
- 53C875: Fast-20 Wide SCSI (40 Mb/s)
- 53C895: Ultra2 LVD (80 Mb/s)
- 53C896: Ultra160 (160 Mb/s, two channels)

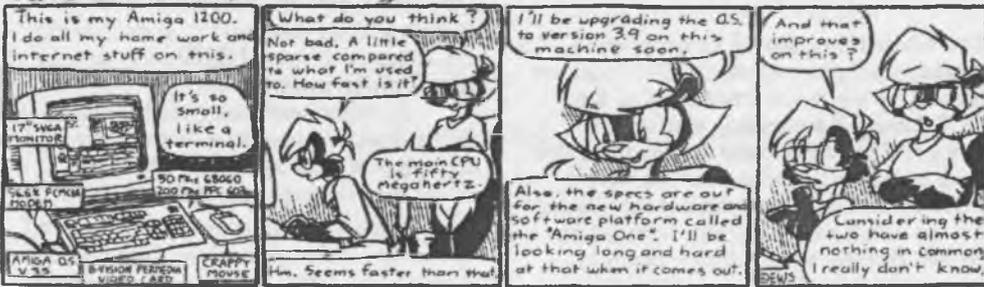
The part numbers might have NCR, SYM or LSI prefixes. The 5 suffix indicates support for a BIOS

Eric Schwartz's Sabrina Online Marathon - Episodes 161-170



Sabrina Online by *Eric W. Schwartz* ©2000

"The obligatory Amiga strip"



Sabrina Online by *Eric W. Schwartz* ©2000

"The trivial tribute to Tatsuya"



Sabrina Online by *Eric W. Schwartz* ©2001

"Klassics of komedy"



Sabrina Online by *Eric W. Schwartz* ©2001

"Disregard all other accounts"



Sabrina Online by *Eric W. Schwartz* ©2001

"Inseduction"



ROM - which can be serial or flash, programmable in situ - this is mainly to help ignorant PCs boot from SCSI. It's not clear if this will be needed for AmigaOne - probably not if there's room for a bootstrap loader in the ROM that configures PCI, but if not we should be able to put our own code in without much trouble.

Do not confuse these with the old 5380 chips used in old Macs (and Emplant). These were very limited in speed and required host interventions for every SCSI phase change. The 53C90 (in Mac 2s) could get by with about half as much driver code as it had hardware arbitration for common SCSI bus state changes, but it was still a 'dumb' chip reliant on interrupting the host whenever a decision needed to be made.

Drivers for all the smart chips are very similar, and a lot shorter and simpler than the drivers for rival SCSI controllers, thanks to a (very) RISC 'SCSI scripts' processor which takes all the load of SCSI bus phase control off the main system, and the programmer of the driver :-)

The SCSI scripts program and state machine works out whether we are handling commands or data, resolves contention and hard and soft errors, allowing drives to disconnect and reconnect so they don't clog the bus while they perform internal operations, etc... The result is a driver that looks simple but handles all complicated cases implicitly, and takes multi-threading in its stride.

SCSI scripts are made of 64 or 96 bit RISC instructions read from the host memory by DMA or from internal memory on later chips in the series. We don't need to write a SCSI script program, though it may be useful - NCR's standard ones cope with all the SCSI phases and types of transfer, and most implementations just use them and wrap host code around it to trap completion interrupts and set it off again.

The 53C7xx and 53C8xx parts have a relatively tiny host overhead - between one and five per cent of that for a second-generation 53C90 - because once you've told it what to do the controller goes ahead and does it, coping with disconnection and reconnection so other devices can share the bus and the host doesn't have to wait for seeks - a major advantage of SCSI over IDE - and scatter/gather operations for blocks fragmented through memory, which will be significant in implementing virtual memory.

Anyhow, arbitrarily-sized blocks of data are moved to or from host memory by PCI DMA and the only interrupt is at the end when the job - or a sequence of transfers - is done, or if an error occurs in the meantime.

You don't /have/ to use DMA or SCSI scripts, though it is most efficient - for test purposes you can treat the controller as an entirely dumb one and peek and poke a byte at a time, which may be useful for a minimal bootstrap or support for sub-standard peripherals.

It can do more than just read and write the SCSI bus - as it has bidirectional DMA you can use it as a general-purpose block transfer device to take the load off the CPU when moving data around main memory or between motherboard RAM and video RAM, let's say. It can even do horizontal and vertical scrolling and window operations, though you'd probably want to do this

using the video card local CPU and bus in practice :-). The memory move instruction is stunningly simple, and a good example of SCSI scripts. It's 96 bits long. The first byte is 192 (top two bits set - these sift between four basic RISC instruction groups). The rest of the first (long) word is a 24 bit count of bytes to be moved. The next two words are the 32 bit source and destination addresses. The main limitation is that those must have the same byte alignment, as the chip does 32 bit transfers, and tries to collect them in line bursts if appropriate. We don't strictly need this, but if we were to make our driver offer this functionality to applications (with a hardware abstraction using the host processor or anything else appropriate if the SCSI copro is not present) we would be making better use of PCI and our choice of hardware than any other non-embedded system.

Likewise our SCSI device should support the whole SCSI spec - not just transfers between SCSI devices and memory, but between hosts sharing a bus - no problem as long as they have different SCSI IDs - we should eschew cards that fix the ID at 7 as it's an avoidable limitation - and then they can all share CD ROMs and other peripherals - even writable drives with careful (software) arbitration. And yes, I *know* this works, even on the old Amiga - I've seen Linux and AmigaOS sharing drives on a SCSI chain this way, and there's a SCSI networking example on Aminet that uses SCSI direct commands to make a fast parallel heterogenous drive and computer cluster. There are other ways to do this - Firewire, Ethernet, even USB at a pinch - and I don't suggest that we should put

effort into implementing it ourselves - but we should specify hardware and drivers that do not prevent it if we or third parties see value in the concept, later.

Software issues

The whole thing should be wrapped in whatever scheme we use for DMA device drivers, so we're not committed to the NCR family if something else comes along and we write fresh drivers for it. We have to support synchronous and async I/O, and SCSI-direct (which is the Classic Amiga scheme to allow any command to be sent directly to any device in a host-independent way). The existing API is fine, and hence any superset of it would be, except that the late addition of QuickIO - where a device call may take place in the caller's context, without context switching to another handler or device driver task, and does not return till complete - needs to be made a core, guaranteed part of the spec. QuickIO could have been very useful to address complaints about the OS getting in the way of dedicated high performance systems like multi-tracking, but wasn't useful in old Amiga products since not all handlers and device drivers implemented it and Commodore defined it as an option, not a requirement (so it was widely ignored). This was a good idea which we should follow through.

SCSI-direct allows custom support for new standard extensions, non-standard or broken devices (like the NEC drives that interpret binary parameters as BCD! 8-) by passing arbitrary SCSI commands to a device, and marsalling the results, in a way that does not obstruct standard uses or sharing of the SCSI bus. SCSI-direct allows specialist applications to use some of the SCSI features that are not available on IDE or other types of drive. For instance a SCSI drive can be programmed to search itself (with fields to skip and check) and call any other device back when it has found certain data. This requires a command with no equivalent for other types of devices, which would have to read all the data over the bus and check it with the main CPU. We could add this function to our API and do it the hard way for non-SCSI devices and cleverly for SCSI ones, but there is no need to make this a standard interface - as long as SCSI direct is available, programs for dedicated database or streaming applications can access the functionality without making life more complicated for conventional applications.

It would probably be worth adding this, especially if SCSI takes off on Amiga or other drives (e.g. over ATAPI or firewire) offer equivalent functions, but

this should not be a priority. For the time being SCSI-direct meets the requirement for those that understand and need it. As it is a low-level path into code that already exists to implement more abstract I/O operations, the cost of making it available is tiny, and we can build on it ourselves, for instance to extend third-party drivers in an Amiga-general way.

Another neat trick possible with SCSI-direct, as long as you know the topology of your system in a bit more detail than device-independence allows, is to program a drive to copy or mirror itself to another. This can be done without host intervention (other than reselection when it is done) as all SCSI devices - not just the host - can master the SCSI bus and transfers can be between any two devices, without blocking processes of other transfers, subject to well-defined and efficient priority and bus sharing protocols.

Hurray for SCSI! Hurray for SCSI scripts processors!



Sabrina Online by Eric W. Schumacher ©2000

I believe in Santa Claus - and Columbus™

Play Your dreams come true this holiday season.

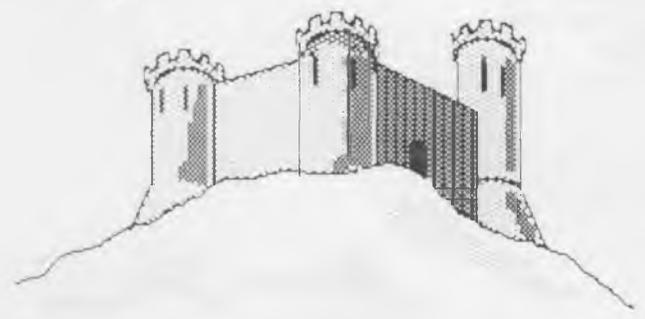
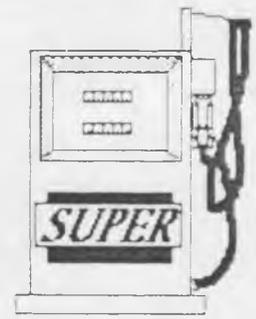
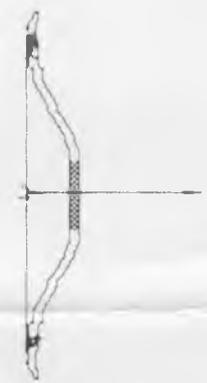
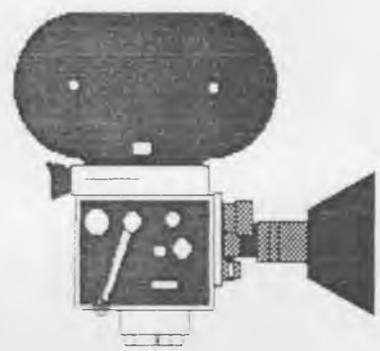
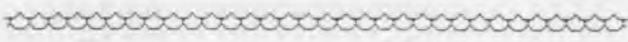
from the cast and crew of Sabrina Online

We have already started the 2001ce episodes in this issue!

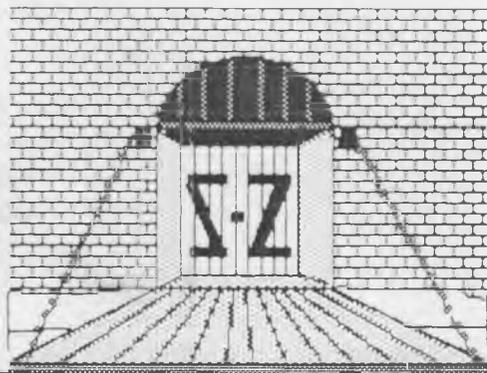
Sabrina Online Xmas 2000ce

As Promised at the meeting, I am including some of the clip art images that are now on the BBS for your collections

These first ones are from GOODIES #4



These are from the Castles file



These are from the Geos Icons album made by #30



Next Meeting 7pm on
19/july/01ce at the
Kibbutz. Got Coffee.
Demos and Smokers Welcome

Chancellor: Sensei David O.E. Mohr
Treasurer: Gary L. Dupuy
C- Librarian: Imperial Warlord
Amiga Librarian: Lord Alberonn
Editor: Lord Ronin from Q-Link
Deputies: #30, #3, #22

A.C.U.G. #447
623 29th St.
Astoria Ore.
97103

