



ExpNews

VOLUME 3, NUMBER 2, February 1996

George & Gracy our new Computers!

Calendar of Events:

March 30	Scout Show
January 3-12, 97	10MegaVenture
July 28-Aug5 1997	BSA Jamboree

Happy Birthday

Mar 24 1975	Andrew P. Drake
Apr 6 1975,	Roy Niedzielski
May 9 1963,	Steve Weller

What to do with an SP2

Andy P. Drake

I've got it! I think I know what to do with an IBM SP2 IBM rewired it to play chess against Gary Kasparov and called it Deep Blue. Now, my only question is, Gary Kasparov is multipurpose and can do things other than just play chess -- can the SP2 still crunch databases as well as it play chess, or is it a really a big expensive video game chess set? We'll we may never know...



New Equipment

James D. Corder

I am pleased to announce that Explorer Post 369 is the proud recipient of a generous donation of another Sun 4/110 a 19" Color monitor and approximately 2GB of disk drives. We will name this one Gracy!

Your First Computer, Part 3

Andy Drake

Commodore got the early lead because of previously established support from the Commodore Pet community, excellent packaging, deep cost cutting, and aggressive marketing (but smaller advertising budgets) through large retail chains like K-Mart, Woolco, and Sears, etc. Commodore's President, Jack Tramiel, took an amazingly far sighted view - instead of concentrating on relatively low volume, high markup machines, he saw the market potential for a series of machines that were affordable to the masses. At the same time, with the MSX threat looming, he decided to embark upon what would be considered the most aggressive "campaign" of the early home computer wars - he would launch the machines in Japan. The machine he used was the Vic-20. Up until the Vic, machines were always compromised in

some way when costs were reduced, Sinclair deleting a full size keyboard, or TRS-80 forgoing color capabilities. Commodore decided to ship a relatively powerful machine for the money, a full color, full keyboard, completely expandable, music generating computer for under \$300. When announced, Commodore was completely taken off guard by the demand for the machine, as well as it's peripherals, the Commodore Color monitor, and the VicModem 300, a 300 baud modem. In two years, it would be the first computer that would break the 1 million machine sales mark. By this time, the next generation Vic was already well into pre-production stages, what would later become the C64.

The Explorer Code

As an Explorer-

I believe that American's Strength lies in her trust in God and in the courage and strength of her people

I will, therefore, be faithful in my religious duties and will maintain a personal sense of honor in my own life.

I will treasure my American heritage and will do all I can to preserve and enrich it.

I will recognize the dignity and worth of my fellowmen and will use fair play and goodwill in dealing with them.

I will acquire the exploring attitude that seeks the truth in all things and adventure on the frontiers of our changing world.

Atari was at this point by no means sitting still. Rather, it fielded a group of more expensive, slightly more capable machines against Commodore. The first in the series, the Atari 400, had a number of serious flaws. First, it utilized the nasty, flat membrane keyboard that Sinclair made famous. Second, Atari's development policy was one of the most closed in the industry, and it wasn't until some time later that Atari felt the need for external development of peripherals and software, a considerable problem when most people went to buy software and found there was not less than either Apple or Commodore.

Texas Instruments was gearing up for what it thought to be the kill of a lifetime, what with all the smaller, less technologically advanced computer companies building machines. Yet again, market forces, bad management, and some would say bad luck, combined at a particularly bad time. The TI 99/4 was perhaps the most advanced machine for the early 1980's, being a full 16bit when most machines were crawling along at 8bit. TI even came up with an integrated voice synthesizer which simply plugged into the side of the machine and gave it amazing speaking capabilities for the time. However, TI initially misjudged the market, and introduced the machine with a "chiclet" style keyboard, rather than full travel keys. This flaw was quickly remedied, only to be replaced by another one - cost and a safety recall. The

machine itself was terribly expensive to manufacture, despite TI's incredible, fully integrated manufacturing capabilities. In fact, by some estimates, TI lost money on every machine made, and only recouped some investment in software and peripherals. Being clearly market uncompetitive was bad enough, but in early 1982, TI found that most of its shipped machines potentially had safety problems with their power packs. So much so, that TI had to completely recall all of the known packs and then issue safety checks on each one, not a very inexpensive process, and particularly damaging to its reputation. Later Commodore and Atari ad campaigns would point out the difficulty and expense that TI owners were forced to go through just to expand the machine to have a disk drive, and indeed, in order to do any kind of expansion, a large and clunky TI expansion box was needed. Work on a second generation machine was cancelled, and by 1985, TI was completely out of the home computer business.

Once the initial acceptance of computers began to rise after 1980, it was up to manufacturers to provide continuous technological advancement, a planned obsolescence that affects us even today. At this point, the market was still very much in two segments, the first being the home computer market where the Vic, Atari 400, and TI have been selling for more than 3 years. Apple, the new IBM machine and the other business

machines such as Kaypro and Osborne were supporting a second, more lucrative, profitable, and not nearly as price competitive market in the \$2000 and up range.

Apple by this point was working past the failure of its Apple III, and moving into Steve Jobs second techno-thriller, the Lisa. Lisa promised to be innovative, and was, being the first machine besides the Xerox Star to ship with a mouse and graphical user interface. Lisa also carried a \$10,000 to \$12,000 price tag which put it out of the reach of most people, except for executives who could afford such a box. Apple went back to the drawing board, and 1984 would make one of the most dramatic announcements of all time.

Early 1983 proved the turning point in the home computer wars, and the real revolution began. Spurred by strong, strong sales of its VIC machine, Commodore introduced VIC's successor, the Commodore 64 or C64 for short. Featuring backwards compatibility with the Vic, the C64 featured hardware that quite literally until it had been invented by Commodore Semiconductor Group engineers had been unavailable unless through expensive and custom products. High resolution color graphics, 3 voice stereo sound, an advanced BASIC interpreter, and loads of I/O ports made this the gamer's machine. Quickly games, more than any other application software arrived on the market, and the C64, building on and upgrading the VIC sales lead, surged into front place as the #1 selling home computer. It had the power, expandability, ease of use, and most importantly, low price to take on firms like Apple right where it hurt, the home and education markets. The VIC continued to sell well, and in fact was the first machine to sell a million units. But the C64 would take the lead, being sold in outlets across America to ordinary people who could finally afford a computer powerful enough to do something other than learn BASIC.



Samba: UNIX Beating Windows NT on its Home Ground

Karl N. Matthias

Since the Introduction of Microsoft/IBM LAN-Manager, Microsoft clients have spoken NetBEUI and NetBIOS, neither of which networking protocols is compatible with anyone else's equipment, much like AppleTalk. However, with the introduction of Windows for Workgroups, Microsoft introduced a client package which allowed TCP/IP communication on a Windows network. For the first time ever, Windows machines experienced something UNIX users had for ten years, a routable protocol. NetBIOS was not gone, however, the packets were simply encapsulated in TCP/IP packets. This ability was built into Windows NT, and following that, Win95. The default is still NetBEUI, because some people will never learn.

LANManager, which runs on OS/2, was replaced by Windows NT Server when Microsoft broke off cooperation with IBM. NT Server has been touted by many as "The UNIX killer" or "The New UNIX." This is a vast misunderstanding for many reasons, but here I intend only on dealing with one in particular: supporting a network of Windows machines. NT has a lot of features built in which are intended to service a Windows Network specifically, aside from its other, more general abilities.

Microsoft clients do not support such networking standards as NFS or NIS, rather they use their own proprietary systems. NT is built to manage these Microsoft specific networking systems. Others have joined the party, however: IBM has introduced a Server OS called OS/2 Warp LANServer, which will manage Microsoft clients, and SCO supposedly has something in the works. These are commercial products, but there is a free UNIX alternative, a package called Samba, programmed by an Australian named John Tridgell.

Samba is a remarkable piece of software that allows a UNIX box to function fully on a Microsoft Network, including run-

ning such Microsoft proprietary services as WINS resolution, something only an NT box could do before this. Best of all, it is free, contrasting drastically the price of Windows NT Server. When coupled with an operating system like Linux or FreeBSD, you can have a Windows Server for free and it doesn't have the larger RAM requirements of an NT box.

My experience with Samba comes from a desire to be able to operate my NeXTstation and Sun SPARCstation-2 on a network of PCs on my dormitory floor at OSU. There are 6 Win95 boxes, and one Windows for Workgroups box. A friend down the hall was also interested in getting his NeXTstation on the net. Previously I had set all the machines up on NetBEUI and IPX/SPX, because those are the defaults, but a some time ago I switched them all over to NetBIOS over TCP/IP, something which is built in to Win95 and supported in WfWg by a package on ftp.microsoft.com. Before I got Samba running, I made sure that NFS still worked between the two NeXTstations, and that my Sun was serving its drives. The Microsoft clients did not seem to be in the way, as everything worked fine. The next task was to get Samba running. I was a bit daunted when I read through the README and FAQ, because it seemed that everyone had lots of problems getting things working correctly. It turned out not to be a hassle at all. Certainly it was more difficult than setting up one of the clients, but the server is more difficult to set up in almost all cases, so this is not unusual.

Samba comes with switches to allow it to compile under about twenty different OSes, from NeXTstep to Linux, to Digital Unix. I simply set the machine options for my machines and then compiled with GCC on the Sun and NeXT CC on the NeXTstation. Everything worked beautifully. There are only four other files which need to be configured after the initial make install. First you have to edit /etc/services (nidump services. > tempfile on the NeXT) and /etc/inetd.conf. Both of these are routine for adding services to a UNIX box. After that is done, you need to create a file called /usr/local/samba/smb.conf. This

keeps track of just about everything that Samba does. You can lock security as tight as you want, or leave it as open as you want, depending on your needs. Samba is entirely configurable: if UNIX can do it, so can Samba.

Once you have set this file up (mine is only about 12 lines long), you just need to make sure your printcap is set up correctly. Now your machine will work on a Microsoft Network, just like an NT box. If you want to access services on another machine, a program called smbclient is provided, which works like ftp. It also allows printing from the UNIX box to a Microsoft Windows box, and vice versa. If you are running Linux, an add-on file system is provided to allow you to mount Microsoft client devices as if they were exported via NFS. This provides an advantage over the interactive smbclient program, clearly.

Many windows clients look for a DHCP server, something NT does naturally. This can easily be configured to work in unison with Samba on most machines. Coupled with Samba's WINS capabilities, you now have a machine capable of doing everything NT does for its clients.

I have been running Samba for awhile now, and frankly I am impressed with its stability. I have experienced no problems thus far, and neither have any of the clients. The UNIX community has responded to just about every need over the years, and this is no exception.

The intent of this article was to present some info on this remarkable piece of software, and perhaps spark some more interest. If you would like to check out Samba, lots of info is provided on:

<http://lake.canberra.edu.au/samba/>

There are documents provided which address most issues. A support mailing list is also available to Samba sysadmins at listserv@lake.canberra.edu.au. Just mail in the body the words, "subscribe samba Your Name."

Quote of the Month

Mark Twain

Always do right this will gratify some people and astonish the rest

Our Principals:

- 1) Honor before all else.
- 2) The difference between a winner and a loser is that the winner tried one more time.
- 3) K.I.S.M.I.F.

Our Creed:

Exploring: Enthusiasm, Energy, & Excellence.

Post Finances

Explorer Post 369 has -\$365.00.

Up-an-Coming Post Expenses

12/01/96 Post Charter	\$30.00
03/01/96 Scout Show	\$25.00
12/01/96 Post Insurance	\$85.00

Up-an-Coming Member Expenses

Registration 11/01/96	\$15.00
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Explorer Post 369:

Explorer Post 369 was chartered on December 31, 1994 to the Reformation Lutheran Church.

Explorer Post 369 specializes in UNIX for Programmers while emphasizing a deep theme of Engineering Computer Information & Science

Membership in Explorer Post 369 is open to young men and women between the ages of 14 [and in high school] and not yet 20. Annual Membership fees are \$15.00.

Let's Go Fishing

James D. Corder

A cute story: I don't know its veracity.

My youngest nephew, age 3, was longing for the warm spring days yet to come. Dreaming of going fishing with his grandfather. Consequently he began to place his toys in a circle like stones on the banks of a pond. Missing the blue calm waters he took his sand bucket and precede to fill it from the toilet bole and pour it in his make shift pond. He was caught dangling his bent pin over the side of his bed in the center of the mess that use to be his new carpet.

The views in this NewsLetter are strictly those of Explorer Post 369 and they do not necessarily represents the views or opinions of the Reformation Lutheran Church or the Boy Scouts of America and/or the Simon Kenton Council.

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Remember to add [.columbus.oh.us] to the end of the freenet accounts!!!



BOY SCOUTS OF AMERICA

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Meanwhile, Atari wasn't standing still. Jay Miner and his crew were busy putting the finishing touches on the 800XL series machines, ones which would be technically more advanced than the Commodore units but much less than a similar IBM style business machine. Still, Atari lacked the magic luster it seemed, for while it could produce innovative machines, and price them somewhat reasonably, a relatively closed software development system and continued strong growth from arcade video games lead to the development money needed for successors to the 800XL series being placed in other areas, like the hand held, personal game system Atari inherited from moribund Epyx, the Lynx. Designed by the same people who, after building a better machine with the 800XL, left Atari in disgust and decided to design something more revolutionary, the Lynx again ended up being a woefully under appreciated product. Which naturally, didn't do much for Atari's bottom line. It became clear that by the fall of 1984, Atari needed some kind of transition from its 8 bit series, something so advanced for its price category that it would sell well immediately. It needed advanced features, a low price, already completed development, and truly innovative thinking. Atari, like Apple, would pin its hopes on a Macintosh like machine.

Second Phase: Year of the Big Mac

The year 1984 represents the true splintering of the home computer revolution. It started off that still 8 bit machines like the Apple IIe/IIC, Commodore 64, and Atari 800XL were selling well. Then Macintosh arrived. Designed to ease the frustration most people still experienced with using computers, the Mac was, from the outset, thought to redefine the way people would interact with computers. Gone were cryptic command lines, replaced with a simple, straightforward graphical interface that would put ergonomics into computers. At the same time, the machine was relatively powerful, sporting a 16/32bit Motorola 68000 microprocessor running at 7.15 megahertz, high quality sound, and a relatively high resolution for its size. It even



utilized a new, high capacity floppy drive system from Sony that compacted 400k onto each disk. Granted, the Mac was in black and white, but for now, the concept that computers could be this easy to use was revolutionary.

So, hypothetically speaking, you are a computer maker in 1984 who is faced with a dilemma -- your market is maturing and beginning to expect more from a machine, something along the lines of Macintosh. However, even Apple realized that it took big research and development bucks to come up with something like Macintosh, and moreover, could the \$3500 price barrier be broken? This was the dilemma that Atari and Commodore were facing by 1984. Quite simply, the market was moving on, and they needed to as well if they wanted any piece of the pie, let alone the home computer market. It's also this time when Atari was going through serious financial problems of its own, not related so much to bad machines as to bad management. Atari's management up until this time was constituted by relatively non-techie type of people from Atari's corporate owners, Time-Warner. After

betting wrong that Atari's closed software system, plethora of initially poorly designed products, and bad marketing would save the day, and in the end, the day was in fact saved by Commodore, who decided that a management change of its own was in order, and ousted Commodore President Jack Tramiel, the man who decreed that computers should be affordable for everyone. Sitting in retirement with little to do, and motivated partially out of a want to leave some kind of nest egg for his children, Tramiel bought Atari from Time-Warner through a leveraged stock buyout and some cash. Immediately making changes, Tramiel sought to streamline Atari for what he knew would be a very fierce upcoming battle. In the long term, he cut back development on 8 bit machines, dumped excess inventory regardless of cost, and began the search that would end up on a collision course with his old employer Commodore.



ACT Cuboree: Shaping our Future

Sarah Jones

Part 1

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Recently, 4 leaders, a Venturer and 3 Cub Scouts from Elizabeth District attended the ACT Cuboree held at Camp Cottermouth in the hills around Canberra. Like South Australian Cuborees, these events are held every three years and run to a theme.

The planning for the South Australian Contingent started back in late January 1995, when Alan Jones (Project Commissioner for Cub Scouts) approached the Branch Commissioner for Cub Scouts in the ACT with the idea of a group coming across from South Australia. Permission was given and from there things really started happening. At least in the Jones Household. The phone was constantly ringing and inquiries were a daily activity. The Contingent team was sorted out and who was in charge of what. Leaders were slotted into line positions and the rest went into activity areas.

The request was made that the South Australian Cubs to be in groups of 6 and then were teamed with a sub camp (or zone) and were only required to provide sleeping tentage for our cubs. This proved to be a plus as it meant we had less to transport across and everything was able to fit onto the 2 buses.

The Elizabeth Cubs were with me as their line leader and were in the High Tech Zone, Laser Sector. The Sectors in each zone were the ones we were to do activities with while at the Cuboree. They also included Cubs not only from Canberra, but from other states of Australia as well.

Finally the departure day arrived and with high expectations from all. This is

despite a few late pullouts and replacements, everything was go, go, go. As a Bus Captain, I had the pleasure (or should it be misfortune?) of boarding the Northern Suburbs bus at its first stop at Broadview, where we picked up the first of the leaders and cubs for bus B.

From there, we headed north with our final pickup at Gawler and then we headed for Merbiem (In Victoria) where we spent the night in the joint Scout-Guide Hall. This hall has to be seen to be believed. It was offices, but when they were vacated, were donated to the local Scout and Guide Groups. It is fully carpeted and air conditioned as well. It was a pleasant night's sleep (given we are in the middle of summer and it was warm-ish).

The trip across the Hay Plain was uneventful as we headed eastward towards Canberra. Lunch and a swim was enjoyed by all in Hay and we increased the population at the local swimming pool several times over. Wagga Wagga Rovers had us for tea and this is where we caused problems when bus A went to turn around and went into a spoon drain and dented the bar at the front of the bus. This was quickly fixed and we were soon on our way again. We arrived in Canberra around midnight, sleeping in tentage provided.

Saturday saw us all up bright and early and heading to meet the rest of our zones in time for breakfast. After having breakfast, we quickly set up tents so that we could make the opening ceremony of the cuboree. From here on in, time was busy. With the opening at 10am, we moved onto our first activity at 10:30am.

Each day saw us doing three activity bases of 2 hours duration each. One in the morning and two in the afternoon. Before the morning activity, we had a 30

minute activity prior to moving off to our first activity for the day.

The activities were all well done and certainly they kept the cubs moving the whole time they were there. All had a message that the cubs could take away and use in the future. Some were plain fun while others encouraged them to really think. All were linked around the theme of the Cuboree which was "Shaping our Future". In total there were nine activity bases that were done and they were....

- Inner Space: What is happening inside our bodies? Made popular by the exiting by the water slide.
- Outer Space: What do we know of other planets other than earth? (very popular as this had a mud pool and the kids got very muddy)
- Investment: What can be done to make sure we get what we want?
- Communication and Technology: all about communication and computers etc
- Decisions: How do group and individual decisions affect our life options?
- Leisure: If we have more time on our hands, how will we use it?
- Scout family: What is it like to be a Joey, Cub, Scout, Venturer and Rover?
- Water: A resource or play thing?
- Moving On: How do things move? How will we make them in the future?

We had programmed into the program ten activity bases. This meant that on Monday afternoon, everyone had a session off. It was either the 1:30 to 3:30 or 3:30 to 5:30 time slot. This allowed the Cubs a chance to either rest, shower, or simply to wonder around and swap badges with others on site.

Fun from Down Under!