HARD COPY

What's New

By Bob Ward, Secretary

As usual, our Christmas give-a-way was a giant success. George and I figure between $3,000 and $4,000 worth of software went out the door, not counting all the cookies and coffee that left by another means. We had fun and the winners were happy. By the looks of the number of tickets left in the drawing bucket, we'll be able to give everyone something within a couple years. We handed out about 75 to 85 prizes. Some of the "biggies" included two copies of dBase IV, Paradox for Windows and a couple of my famous "I've been smoked by lightning, computer board clocks from George's unfortunate incident with a lightning storm several years ago. We must also mention a couple OsoSoft tee shirts and personally autographed copies of Georges Campbell's WordPerfect books.

Before the feeding frenzy, we opened the floor to nominations for club Directors. Those individuals in nomination are George Campbell, Sam Powers, Marlyn Jenkins, Bob Ward, Kathy Yakal, and Bob Hunt. From this list we will vote for 5 at the next meeting. For the purposes of voting, only one member per household can vote in the election.

Following the nominations, we spent the next 20 minutes selling all the computer parts and software which all members have lurking in the corners of their computer rooms. Personally I think maybe this should wait to the end of the Christmas meeting so people and trade and swap all those great prizes they won at the give-a-way.

This coming month I look forward to a demonstration by Micrologic Inc. They will be demonstrating Printmaster Gold. These programs have come a long way since they first hit the market years ago. Come to the meeting and see the latest.

How Does It Know? The Hot New Product from Cypherscan

By Gus Thomasson

Well the politically incorrect joke goes like this, "What's the greatest thing ever invented?" One says the rocket ship, another says the theory of relativity but I see it as the thermos jug. The thermos you say? Yes you see it keeps cold things cold in summer and hot things hot in winter. So, you say, well so what! Ah but says I, "How does it know?"

So each year I look forward to Comdex. I travel a bit more than I care to, so the prospect of a week away from family is not particularly inviting to me but the allure of all that technology in one place (even if it is Las Vegas) forces me to go. After all, someone has to. I would miss my friends too but they're all there. We act like kids, check into Motel 6 with one key per room (they don't trust you with more than one), and giggle a lot at stupid things which under any other circumstances I would think were intolerable. Frankly Comdex has too much to

Club Calendar

JANUARY 2

Election of the 1994
SLO Bytes Board of Directors
&
Micrologic Software will
demonstrate Printmaster Gold

FEBRUARY 6

Corel Corp. will demonstrate
Ventura Publisher 4.2
for Windows

MARCH 6

Caere, makers of Omnipage, will
demonstrate their products

APRIL 10
(2nd Sunday this month)

Staker Electronics will
demonstrate their
compression software

In this Issue —

Reflections

By Bob Ward, SLO Bytes PCUG

SLO Bytes first Newsletter occurred March 8, 1984. It consisted of directions to Camp San Luis USPFO building where a dedicated few met in the vending/lunch room all huddled around a computer. The agenda included the agreement of a $10 membership fee to cover expenses of newsletters and software library. There was also a brief presentation of four "magazine on a disk" products including 1-Ringy Dingy and PC-File. Boy have we come a long way since then.

The club was started through a group purchase of 8088 IBM-PC's at Computerland in SLO. A few of the "originals" are still around including Ray Miklas. Others, who still live in the area, (Byron Smith, Rick Racouillat and Carole Larson) started the group but are no longer members.

I first put my hands on a PC around the end of 1984 when the Biology department became "computerized". Immediately I was looking for support which was non-existent on campus at the time. So I subscribed to PC Magazine which had a user group finder service. It took about 3 months before the "S's" came up and to my surprise there was a group listed in San Luis Obispo. The contact person was Rick Racouillat who I immediately called, spending the next hour on the phone talking about computers. I was eager to attend my first meeting which was at Camp San Luis. Actually I thought the location was great (right next to the vending machines!) but with 12 to 15 people all huddled around one or two computers it was more like a small SIG rather than a meeting. At the end of the meeting I mentioned to Rick, or maybe it was Byron, that I thought we could meet at Cal Poly in one of the labs of Science North. In those days there was little bureaucracy so on March 28th, 1985 we started meeting in a 24 station lab at Cal Poly. French Morgan set up a couple large monitors with about 500 wires all over the place and we had our first meeting at in the lab. The adjoining prep-room became our shareware library with two IBM PC computers.

At the first meeting in our new home, French Morgan spoke to us about "Sex and the Surge Suppressor." I really can't recall the lecture but the title drew a crowd! I don't think this meeting involved a demonstration. In August of the same year I was volunteered or was that, I volunteered to do a newsletter. Till that time Rick was putting out a very effective one page club information sheet and agenda. I wanted to enlarge the scope of the newsletter to include articles and "how to do" information since computers were still relatively new to all of us. The programmers corner included the following BASIC program:

```
10 DEF SEG=0
20 POKE 1047, PEEK (1047 OR 64
30 SYSTEM
```

Does anyone remember what it does? Probably nothing in DOS 6.2.

The first newsletter was two pages and quickly grew to three by the second month. Because of the newsletter's size and the number of members we mailed them in envelopes, first class mail. Dues were raised to $18.00 per year due to the overwhelming response to French's sex lecture. We started selling generic 360K disks to members for a whopping $1.25 each! (and people bought them at that price because it was a cheap price). Speaking of disks, by this time our library had reached its first 100 public domain (as they were called in those days) disks.

Newsletters were printed on a dot matrix printer. The club banner was done in PrintShop and the columns printed in compressed text on a dot matrix printer and pasted up on to the master sheet. All was taken downtown to Rick Racouillat's office where it was printed.

We first made the Telegram Tribune in the form of a PSA (Public Service Announcement) in August '85 when we announced our guest speaker, David Dickey, president of Cuesta Systems, makers of standby uninterruptable power supplies. By this time our membership was 45 and growing.

The October newsletter had such "specials" as a 21.3 MEG hard disk from I-2 for $765.00. For that price they threw in the controller card. (I've seen Connor, 360 MEG hard disks today for $249.00).

November's newsletter had such jewels as Rick Racouillat's tie being sucked into one of his disk drives. His tie appeared with 56K of correspondence on the back and his wife's recipes on the front. This was obviously two sided drive. (Apple was still dealing with single sided drives). Dick Trueman had just purchased his first AT&T computer from the Cal Poly bookstore. Ray Miklas was still working with his Genealogy programs but couldn't get his offspring count down to less than 34. (Bug in the program, I hope). We also discovered our first bulletin board in SLO lurking in the shadows. (Not ours yet). Byron Smith was president and Tom O'Malley was holding onto the money as treasurer. I don't know that I

Library News

by Bob Ward, Librarian

This month the the additions to the library will be simple and short. All you Wolfenstein nuts out there, get ready for Blake Stone. This program is in the same format as "Wolfi" but better sound, better graphics and more. Unfortunately the file is GIANT! over one MEG. So it will be found on numbers 587-590.

This brings up a point that's worth investigating. At the last meeting when we were giving away disks, no one wanted 5.25 X 360K disks. Now I'm dense, but I do catch on after awhile. I'm assuming by the number of raised hands, that everyone has a computer with a 1.44 Meg floppy disk drive. If this is the case, I propose that starting with disk #500 we switch the library over to 3.5" X 1.44 Meg floppy disks. No you won't be getting 4 or 5 of these a month filled with new software. Only one or two at the most.

The problem comes with our computers. With the exception of one computer, all are PC's or XT's. These machines will not support high density 3.5" floppy disks. We are looking into special 8 bit controller cards which will work in the PC's and read, write and format high density 3.5" diskettes. Conversion, including a new floppy drive will be around $100 per machine. We will still have some 5.25 disk drives as the first 499 disks are still in that format. Sounds like a good summer job converting the whole library over to high density. We will keep you posted as to our decision. I need to know if any member in the club doesn't have a 3.5" high density floppy disk drive. Maybe it's time to upgrade.

My Favorite Program—Perform by Delrina

By Gus Thomasson, SLO Bytes PCUG

I missed d-Base. Well I was into Paradox databases at the time of my formal training in database management and d-Base seemed so unfriendly. I could never convince myself to deal with the obtuse dot prompt interface of d-Base when the Paradox interface was so much more intuitive to me. I have regretted the omission in my education ever sense. But this article is not about d-Base or Paradox, it about Perform, a sophisticated form designer. Oh, but it's much more. To my astonishment Perform is also a sophisticated database front end. That is to say the form you create in Perform can save its data to a database in either d-Base or a Paradox format. But wait there's more! Not only can Perform create those databases independent of either of the two database programs, it can create multiple databases and relate them in various relational or 3-dimensional ways to better meet the needs of database users. I can now design sophisticated forms which can then fill themselves in with the data from a look-up table or related yet independent database. Wow, you say or was that a ho-hum so what. Check this out.

Perform comes in two parts. First there is Perform in which you design forms. All the windows related tools are there to replicate a form you may already posses or the thing may live only in your demented mind. The tools to import scanned images in any graphic format including MAC stuff (sorry) are included. You can also gray the scanned image so it can be traced easily. Fields are tagged as fallible or merely pre-filled text. The next part of the program is called Per-Fill. It's where the forms previously created can be filled in. The filled in data as stated earlier is stored in a database to be manipulated independently or by the Per-Fill program itself.

Thus sophisticated database front ends can be created by non programmers such as myself and sold for big bucks to people who do not wish to deal with even this much complication. Recently I met a filling station operator who daily had to track his gasoline sales and plot gallons sold against money earned. A simple calculation but one that had to be performed 8 times daily. He gave me his form and mentioned how he had a phobia against computers. I duplicated the form in Perform and in his AUTOEXEC.BAT file had the form come up when he turned on the 380-40 MHZ computer which was included with the slick custom program. He simply filled in the numbers he read off the meters in the office each day. The computerized form filled out the rest of the data and then drew a graph relating the database information. In addition he could now see trends and relate seasonal sales with the actual stored data. Well I was impressed, anyway.

I used Perform to design my business invoices. It opens a window of all my customers when I click on name. Once the clients name is selected from the window opened by the look-up table taken from a client database, the rest of the data, address, phone number, and sexual affiliation, (just checking to see if you were paying attention) and related sales information is automatically added to the data. The form acts as a template to ask the necessary questions. The answers are once again stored in a database of my choosing. Next the form stores a list of all the sales items the client needs the price automatically multiplied by the profit margin I think I can get away with and then the sales tax is added. Next the labor added and finally the whole thing is printed out in duplicate, one for each of us.

Delrina wrote this great program, you might recognize the name. They also write the easy to use Win Fax Pro program so often used to send and receive faxes. As a final endorsement I might add the excellent support Delrina gives to the Perform family. Although the company is located in Canada and you call on your own dime still the waiting time was not too long and each time I've called about something I could not understand the technicians had the answers.

New Members

Welcome to the new members of SLO Bytes PCUG. You started out on a great month with all the freebee's. Now for the bad news. We only do that once a year. The rest of the time hopefully you will be learning more about PC's.

Deneyse Alexander	922-2430
Richard Barkley	929-5497
Bud & Mary Huston	543-9044
Jim Post	489-0874
Terry Stahl	929-3071

Also welcome to last months new members who did not make it into the November newsletter—Sorry!

Newell Beck	489-0109
Eugene Peters	
Gary Peterson	438-5837
Donna Sylvester	773-1866
Wayne Williams	543-5181

CYPHERSCAN
—continued from page 1

absorb in a single week. Indeed, a year at least would be necessary to absorb what Comdex has become. Some things do stand out in my mind, not because they are the best of the show or that they were so great but because I could focus on them for a moment among all the glitter of the Comdex's song and dance routines.

One of the neatest programs I saw at Comdex this year was a program called Cypherscan HF. This great Windows based program is, in short, a business card reader. That's right, I said a business card reader. Cypherscan is not merely a scanner program which supports Optical Character Recognition (OCR). (OCR is a technology which changes a bitmapped graphic image into a text file which can be manipulated by a word processor.) The Cypherscan OCR is accurate, sophisticated, and smart. It actually recognizes the different areas of the card, differentiates the graphic logo from text and then by some miraculous 20th century programming, creates a database, placing the company name, person's name, address and phone number in their CORRECT

I heard it on the Internet...

Beware of the following new computer viruses:

Federal Bureaucrat Virus—
Divides your hard disk into hundreds of little units, each of which do practically nothing, but all of which claim to be the most important part of the computer.

Dan quayle Virus—
Their is sumthing rong with your compueter, ewe just can't figyour out watt.

Gallup Pole Virus—
68% of the PC's infected will lose 38% of their data 14% of the time (plus or minus a 3.5% margin of error).

Paul Revere Virus—
Revolutionary virus doesn't horse around. It warns you of impending hard disk attack once if by LAN, twice if by C.

Politically Correct Virus—
Never calls itself a "virus", but instead refers to itself as an"electronic micro-organism."

Right to Life Virus—
Won't allow you to delete a file reardless of ho old it is. If you attempt to erase a file, it requires you first see a counselor about possible alternatives

Ross Perot Virus—
Activates every component in your system just before the whole thing quits.

Mario Cuomo Virus—
It would be a great virus, but it refuses to run.

Oprah Winfry Virus—
Activates every component in your system just before the whole thing quits.

AT&T Virus—
Every three minutes it tells you what great service you're getting.

MCI Virus—
Every three minutes it reminds you that you are paying too much for the AT&T Virus.

Ted Turner Vires—
Colorizes your monochrome monitor.

Arnold Schwartznegger Virus—
Terminates and stays resident... I'll be back.

Government Economist Virus—
Nothing works, but all your diagnostic software says everything is fine.

New World Order Virus—
Probably harmless, but it makes a lot of people really mad just thinking about it.

Terry Randle Virus—
Yells "Oh no you don't" whenever you choose "Abort" from the "Abort, Retry, Fail" message.

Texas Virus—
Makes sure that it's bigger than any other file.

Adam and Eve Virus—
Takes a couple of bytes out of your Apple.

Michael Jackson Virus—
Hard to identify because it is constantly altering its appearance. This virus won't harm your PC, but it will trash your car.

Congressional Virus—
The computer locks up, screen splits eratically with a message appearong on each half balming the other side for the problem.

Airline Virus—
You're in Dallas, but your data is in Singapore.

Freudian Virus—
Your computer becomes obsessed with marrying its own motherboard.

PBS Virus—
Your PC stops every few minutes to ask for money.

Elvis Virus—
Your computer gets fat, slow and lazy and then self destructs, only to resurface at shopping malls and service stations across rural America.
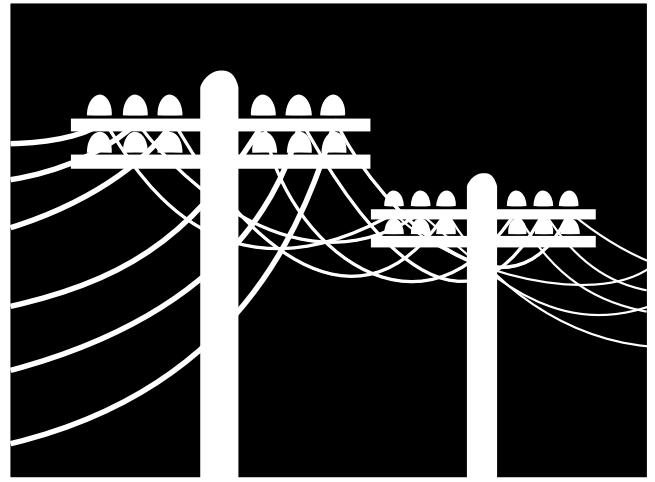
Ollie North Virus—
Turns your printer into a document shrdder.

Nike Virus—
Just Does It!

Sears Virus—
Your data won't appear unless you buy new cables, power supply, and a set of shocks.

Jimmy Hoffa Virus—
Nobody can find it.

Congressional Virus—
Runs every program on the hard drive stimutaneously, but doesn't allow he user to accomplish anything.

Kevorkian Virus—
Helps your computer shut down whenever it wants to.

Imelda Marcos Virus—
Sings you a song (slightly off key) on boot up then subtracts money from your Quicken account and spends it all on expensive shoes it purchases through Prodigy.

Star Trek Virus—
Invades your system in places where no virus has gone before.

Health Care Virus—
Tests your system for a day, finds nothing wrong, and sends you a bill for $4,500.

George Bush Virus—
It starts by boldly stating, "Read my test... no new files!" on the screen, proceeds to fill up all the free space on your hard drive with new files, then blames it on the Congress Virus.

Cleveland Indians Virus—
Makes your 486/50 machine perform like a 286/AT.

LAPD Virus—
It claims it feels threatened by the other files on your PC and erases them in "self-defense."

Chicago Cubs Virus—
Your PC makes frequent mistakes and comes in last in the reviews, but you still love it.

CYPHERSCAN

respective fields of the database! It doesn't matter if the order on the card is different or the location on the card isn't where you would expect to find a name and address, it still fills in the database with amazing accuracy. The program supports most hand held and full page scanners. Each version comes with its own little template which holds the business cards to be read. With the flatbed version of the software, you can select to scan a single card or numerous cards. I was amazed. How does it know?

The technology is a new form of artificial intelligence, called the expert technology. The system is about 98 % accurate. The ability to correct misread images is impressive. The technology is so advanced as to merit comment. The card image is also represented during the OCR process. If part of the graphic is misread one merely draws a box around a the area which was miss-interpreted and then drags the box to the proper area of the database. In an instant the correction is made. The program is well designed and stable. It took a little tweaking to install. The drivers for my HP scanner had to be found manually. They were finally found in the Cypherscan subdirectory, imagine that! Cypherscan technology is incorporated into several business and personal organization packages of note, one of which I am aware is Pak Rat by Pioneer.

For those people not affluent enough to own a flat bed scanner, you can purchase a card reader from Cyphertech which takes one card at a time (similar to a dollar bill changer), reads the information and creates the database. I'm sure within a couple years every company represented at Comdex will have one to process all the business cards they receive on a daily basis. It's new, it's different and it WORKS!

Cyphertech, Inc
250 Caribbean Drive
Sunnyvale, CA 94089

REFLECTIONS

had appointed myself secretary yet (what a loose organization).

Our first Comdex report appeared in the January, 1986 newsletter. At that time Comdex had 1,100 vendors and maybe 60,000 attendees. (This year's report: 2,000 vendors and 170,000 attendees). Hot things in those days were Epson's LQ-1000 24 pin dot matrix printer and a new digitizing system that took a "frozen" picture from a video camera, ran it through a mysterious black box and produced a picture on your computer screen.

Also during '86 we had demonstrations on archiving devices, spreadsheets, the wordprocessors PC-Write, Textra and WordStar, batch files and hard disk structure. French Morgan showed us how to extend the life of our printer ribbons with WD-40. Paradise Computer Systems had a club special: Kaypro PC two floppy disk drive, monochrome system with software for $1,495! WOW! Other super specials appeared in our newsletter; Avatex 1200 baud modems for $150.00, 10 disks for $12.50 with lifetime warranty, and a box of pinfeed printer paper for $37.00. High density disks were going for $2.00 each.

I started the file locator disk the middle of that year. Things were getting out of hand. There were so many library disks that we couldn't find anything. We had the hard copy pages in the green binders but nothing to quickly look up files or descriptions.

George Campbell came to his first meeting the middle of '86. I'll never forget the first time I saw him saunter into a meeting. In my typical conservative thought I wondered where this bearded weirdo came from and wondered what he knew about computers. I later found out he wasn't a weirdo at all, but well, I guess he'll never get rid of that beard. He was new to computers at the time but was eager to learn and read the manuals, unlike many computer users. George's first article in the newsletter was "Using BASICA/GWBASIC's PLAY Command to Control Program Timing". And this was without the sound of a Soundblaster card which hadn't been invented yet.

1987 brought us some new and some old officers. Byron Smith was elected president, George was first VP, Second VP Dick Trueman, treasurer Ray Miklas and Secretary Bob Ward (now official). Para-

dise was selling a new 286 monochrome Kaypro with a 30 MEG hard disk and one whole MEG of RAM for $3,100. Because we were getting larger in numbers we changed our meeting times to reflect a 45 minute time slot at the beginning of the meetings for neophytes and other computer questions. During this year our newsletter varied in size between 3 pages and 6 pages depending on how inspired I was to add pages of information so eagerly wanted by the members. In 1987, both Witco and Fisbosa computer stores opened their doors. We quickly outgrew our surroundings that year and moved our meetings to a lecture room downstairs. This room held 70 chairs.

Our first and only computer faire was held on Saturday, October 3rd at the Park Suite Hotel in the then new Central Coast Plaza. We sold raffle tickets (probably illegal now, maybe then also) and gave away a computer at the end of the year. The faire was a great success with over 750 people attending. A non member, Ann Stump from Arroyo Grande was the grand prize winner of the computer. We made $48 above cost from the raffle.

1988 saw another election for club officers. George finally made president after much campaigning, John Read VP, myself secretary/editor and John Rohde as treasurer. Sam Powers started as library monitor. We decided in March to purchase a computer and start a bulletin board. Our first system was an XT with 640K, a 30 megabyte hard disk and a 2400 baud modem. Our Sysop, George Campbell put the system on line March 6, 1988. We started with WildCat BBS software and are using it to this day (newer version, of course). We discussed purchasing a second computer at that meeting for demonstration purposes but could not come to an agreement on what to purchase. The next meeting we voted to purchase a Compaq portable with hard disk for our demonstrations. George took some time to demonstrate our new BBS, not a live demonstration but with overhead transparencies. There was enough demand that we ran a phone line down the hall to a jack the following meeting for a live demonstration.

In May we decided to move our meeting from Thursday nights (too many conflicts with evening classes) to the first Sunday of each month. We also moved to

Modem Basics: Part One

Modem Basics Outline

By Bruce Carson, Tulsa Computer Society

There are five things you should know something about to be comfortable with Modems:

1. Modem Hardware and how to set it up.
2. A modem program such as Procomm, Qmodem, Crosstalk, etc..
3. The Hayes "AT" Command set.
4. How the computer-to-modem and modem-to-modem communications links work.
5. The fundamentals of using a Bulletin Board System (BBS).

MODEM HARDWARE

Modems all fall into two families - Internal and External. There are advantages and disadvantages to each.

Internal modems are circuit cards that plug into a slot inside your computer housing. They do not take up desktop space. They are slightly less expensive than external modems. High speed internal modems come with a fast 16550 UART chip and they establish their own serial port.

External modems are in a small box that connects to an existing serial port (also called a com port). They are easily moved from computer to computer, and they are visible so you can watch the monitor lights on the front of the box. A fast external modem requires a serial port with a high speed 16550 UART chip to operate at optimum speed. Very few serial ports in use today have this high speed chip, so It may require purchase of a new input/output card.

Many modems today have a tiny bank of switches (called DIP switches) which can be tripped with a toothpick. These must be set according to the instruction book to match your computer's configuration.

If you have an external modem, it must be connected with a serial cable to a com port (also called a serial port). There are two sizes of serial ports - 9 pin and 25 pin. Both work equally well (or equally poorly if not set up right.) You must not have two devices contending for the same serial port at the same time! For instance, suppose that you have an I/O card with serial 1 connected to a mouse. Then you install an internal modem also configured for Com port 1. Absolutely guaranteed to be a problem!!! You can reconfigure the modem to com 2 and even that won't fix the problem if there is an active com 2 on your I/O card. You must disable the unused com 2 on your I/O card. You can only have one com 1 and one com 2 port. Please read carefully the rules summary which follows.

Modem Serial Port and IRQ Rules summary:

1. You can only have one of each Com Port. (You cannot have two com 1's, or two com 2's, etc.)
2. Two active devices cannot use the same interrupt request (IRQ).
3. Com Ports should be configured in consecutive order. In other words, if you have three com ports it is better for them to be configured as com 1, com 2, and com 3, NOT as com 1, com 2, and com 4.

Hardware summary: Read, read, read the books and follow the directions !!

MODEM PROGRAMS

Once you get your hardware correctly installed and set up the next thing you need is a Modem program. There are many good ones. The most common is Procomm for DOS.

Qmodem is very similar and also in wide use. Crosstalk is a little more difficult to learn than Procomm or Qmodem, but is also very popular. Procomm Plus for Windows is my program of choice when in Windows, and I use Qmodem when I am in DOS. Most of the newer versions of these programs have a built in setup or install routine that will correctly configure your particular modem for your system.

Points to Remember:

If you have your hardware and modem program set up properly, even before you connect to the phone line, you should be able to enter "AT" and get a response from the modem "OK". You must get this "OK" every time you type "AT" and press enter. If this doesn't work, something is wrong (usually your com port) and must be corrected before you go any further.

Once you consistently get the "OK" response from the modem to the computer, you are ready to attempt a telephone connection. You want your first connection to be to a "friendly" BBS, someone who will help you through the steps. You may dial TCS BBS at 836-7664, or call me and let me know you are ready and I will set up in BBS mode for you. My voice line is 272-2098. My modem is not on line full time, but when requested only. My modem line is 272-2099.

The most important key to remember in a modem program is the Help key!

If you have an old or a second hand copy of a modem program, it may be corrupted and will give you trouble. I recommend acquiring your own copy of Procomm Plus or Qmodem, or Procomm Plus for Windows. Another advantage to having a current version of a modem program is that it will likely have current initialization strings for your particular modem, making setup much easier.

HAYES "AT" COMMAND SET

The prefix for all modem commands is "AT" which means "Attention Modem, I am going to send you a command." It is not necessary to memorize the Hayes command set, I have never met anyone who did. It is necessary to know where to find specific commands and to have an understanding of how you can control the modem with AT commands. I recommend browsing through them and keeping your book close at hand. In addition to the AT commands there are the extended commands with an ampersand (&). For example, AT &W means to write existing commands into memory. AT &F means restore factory default settings. In most modem programs ^M (caret M) in a command string is an "enter". A "~" (tilde) is a delay or pause.

A word about case for AT commands. Upper case (capitals) always works with all modems and modem programs. Lower case works sometimes. If you try lower case and the command doesn't work, try upper case before you start trouble shooting.

Modem Basics: Part Two

Modem Protocol Summary

By Bruce Carson, Tulsa Computer Society

There are four classes of protocols associated with modems:

1. **MODULATION PROTOCOLS**
   Computers store and process data as ones and zeros (bits), while telephones can only handle information as sounds. A modem converts (modulates) the computer data in to sounds and transmits them over a telephone line to a remote modem. The remote modem then converts (demodulates) the signal back to ones and zeros for the remote computer to process. The word modem comes from MOdulator/DEModulator. There are several protocols that are used in the modulation process. V.21 and Bell 103 for 300 bps, V.22 and Bell 212A for 1200 bps, V.22bis for 2400 bps, V.32 for 9600 bps, and V.32bis for 14,400 bps.

2. **ERROR CONTROL PROTOCOLS**
   The error control process can be accomplished by software or by hardware. The newer high speed modems come with built in hardware error control, so that when connected to another similar modem errors are detected and corrected by the two modems without involving the computers. There are two error control protocols in common use today. They are V.42/LAPM and MNP.

3. **DATA COMPRESSION PROTOCOLS**
   Data can be sent faster if it is smaller, so a high percentage of the data transmitted today is compressed. Most Bulletin Board Systems (BBS's) have their files stored in a compressed (usually ZIPped) condition. but other systems may wish to transfer files as is without compressing them. In this case, modern modems can compress the data on the fly and uncompress at the receiving end. There are two hardware data compression protocols in common use today. They are MNP-5 and V.42 bis. MNP-5 will try to compress a file that is already compressed, so will slow down the file transfer, while V.42 bis is smart enough to not attempt compression on a ZIP file.

4. **FILE TRANSFER PROTOCOLS**
   To a modem data is data. It doesn't know or care whether the data is from the keyboard as you type, or streaming from the hard drive. It also does not know what a file is, it is all just data. For that reason file transfer protocols are necessary. Xmodem is probably the most widely known and also is the slowest. Ymodem is a little faster, and Zmodem is the fastest of the error correcting file transfer protocols. Ymodem-G and I-modem are very fast but only work with error correcting modems and do no error correction. Using Zmodem with an error correcting modem results in a little redundancy since hardware and software are both doing error correction, but the loss in efficiency is only about three to five per cent, and Zmodem's crash recovery capability may be worth that small penalty. If a long file transfer in Zmodem is interrupted, it can be resumed from the break point without starting over at the beginning.

Modem Basics: Part Three

Ten Rules for Highspeed Modems

By Bruce Carson, Tulsa Computer Society

1. 14,400 bps modems must connect to computer at 19,200 bps or faster.

2. 16450 UART chips on your IO card can only handle 19,200 bps modem communications.

3. 16550 UART chips can handle up to 57,600 bps depending on computer and modem.

4. Two active devices cannot share the same interrupt request (IRQ). Com 1 and com 3 are both on IRQ 4; com 2 and com 4 are both on IRQ 3.

5. Serial ports must be configured consecutively, com 1, com 2, com 3, NOT com 1, com 2, com 4.

6. You must not have two of any com. port, such as two serial 1 ports or two serial 2 ports.

7. When in your communications program in terminal mode, you must be able to type "AT" and get a response "OK" from your modem - every time! This should occur even without a telephone line connected to your modem.

8. Modems are like computers in some respects. When they are turned off they lose the active configuration, and when turned back on they must restore an operating configuration into active ram. ATZ as an initialization string will restore whatever you have saved in NVRAM.

9. File transfer problems are often caused by a software or setup problem. If your modem dials and connects but will not transfer files, check your communications program setup.

10. If you are running a Windows communications program, it is important to have your ports set at the proper speed in that program AND in the Windows control panel under ports.

Graphics Works for Windows

Andrew J. Gnoza, III

Micrografx single solution to ALL your graphics needs are included on the CD-ROM version (SRP $295) of Graphics Works. All the tools you need to create, newsletters, posters, presentations, free hand drawings, organizational charts, flow charts, photo editing, 10,000 pieces of clip art, 1,000 photos, and a slide show utility. With a street price of $189 the package is a steal. The clip art alone is well worth the purchase price of this orchestrated package.

ALL of the applications, documentation and tutorials found in the package are designed to make graphical applications very easy and fun to use, especially for first time users. The applications support object linking and embedding (OLE) technology, have similar interfaces, work with other Windows applications, and are mutually file compatible because all the applications were written in house by Micrografx developers without third party support.

One of the main features in this suite of applications is Windows Draw with its drawing and desktop publishing features which include drawing tools such as freehand and geometric shapes, with Bezier curve editing; object manipulation,such as reshape, rotate, duplicate, group, ungroup, smooth, flip and align; special effects, such as blend, slant and stretch; several gradient styles, including custom text flow along any curve; 150 Truetype and Type 1 fonts, and a clip art manager that allows you to preview the 10,000 images that are included on the CD-ROM.

PhotoMagic is a photo imaging and painting product, with features that include paint, clone, eraser, flood and gradient tools; color adjustment, contrast, brightness and hue correction tools and more than 30 special visual effects. The ImageBrowser feature provides visual thumbnails of image files, EffectsBrowser allows you to preview special effects prior to applying them and ScreenMagic which allows you to create special wallpaper screen backgrounds for Windows. File formats that are supported include TIFF, PCX, BMP, GIF, TGA, JPEG, and Kodak Photo CD.

System Requirements:
80386 PC, Windows 3.1, 4MB RAM, hard drive, DOS 3.1 or higher, mouse, VGA display (super VGA recommended). A CD-ROM is optional for programs and some images.

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El Paso, TX 79912

REFLECTIONS

our present location in Fisher Science. The club's next big step, for me anyway, came the following month, June of '88. The club purchased our first copy of Ventura publisher and went "big time" with the newsletter. Teri Sorgatz nursed me through my first VP page and we printed it out on a real laser printer!

Things were quiet in 1989. The club grew in numbers, Sam Powers became our VP (somewhere we lost our 1st and 2nd VP). Our newsletter remained somewhere between 6 and 8 pages until the end of this year when we settled on 10 pages. I went on vacation in August and was naive enough to let George write the newsletter that month. Teri Sorgatz, our then treasurer became a queen (or so the picture depicts) and was griping about not enough money in the club treasury to finance the officer's Hawaiian vacation, although the checking account went from $1,029 to $0 (just kidding, of course, she left at least $1.00 so the account wouldn't be closed.) Sam became a wizard that month and a Dr. Demento wrote a disgusting article on How to Destroy Your Hard Disk. Professor Ignatz had an article on Knowing Your Bugs which included pictures of the Disk Weevil, Virus Bug and RAM Worm. I came back the following month and rescued the newsletter. In October Teri designed our club logo. Although I haven't seen the logo in some time, since the newsletter looks different every month (I think she is using "morph" software to write the newsletter) it is still our official club logo. About this time we also started using a postscript printer which greatly increased our design options.

Since 1990 we have purchased and built several more computers for our shareware library. Our BBS has moved from George's house to my place and a CD ROM disk has been added increasing our selection of files on the BBS to over 10,000. The BBS has received over 35,000 calls since first put on line. We have added a CD ROM library with over 50 disks from which to choose. Our shareware library stands at 586 disks and increases monthly. We have had few setbacks in the club. A lightning strike at George's house wiped out our BBS. This is perhaps the worst thing to befall our group. Membership has turned over many times. Some have left us permanently, others have left but will return.

Many individuals have expended time and energy to bring our club to where it is today. We've had five editors and co-editors for the newsletter, including myself, Rick Racouillat, Jim Bigelow, John Ewing, and Teri Sorgatz. We've had 3 presidents including Leo Ingle, Byron Smith and George Campbell, 6 treasurers including Tom O'malley, John Rhode, Ray Miklas, Teri Sorgatz, Bernice Meador and Marilyn Jenkens and about 1 1/2 secretaries; Rick started it out and I've had it ever since. You can add a handful of 1st and 2nd VP's and some others whom I have forgotten as I'm writing this part from memory. We also have to thank our spouses who share their time between us and our fascination with computers. My wife seriously thought of starting a "Computer Widows" club that would meet during SLO Bytes' meetings. I thank her for putting up with my addiction.

For the time I have been involved with SLO Bytes I compare it to raising my children. You watch them crawl and grow, then they take their first steps and you worry when they go on their first date. (Mine haven't reached the date part yet.) It's been a good 10 years. Happy Birthday SLO Bytes, you're 10 years old next month!

Club Information

HARD COPY is a monthly publication of SLO BYTES PC User's Group located in San Luis Obispo, California. Information in this Newsletter is derived from both our own membership and other PC User Group Newsletters. The purpose of this publication is to inform our members of meetings and provide information related to the use of IBM PC's and compatible computers.

Membership: Dues are $20 per year. Newsletter only is $12 per year. Full membership entitles you to our monthly newsletter, full use of the public domain software library and discounts at local computer stores.

Article Submission: Deadline for submission of articles is the 15th of each month. Articles should be provided in ASCII format without any type of formatting from your wordprocessor including tabs, indents, extra spaces, or highlighting. We prefer articles on disk but will accept hardcopies if necessary.

Disclaimer: Neither SLO BYTES PC User's Group, its officers, editors, or contributors to this newsletter assume liability for damages arising out of this publication of any article, including but not limited to the listing of programming code, batch files and other helpful hints.

Reprinting of this Newsletter: Articles from this newsletter may be reprinted by other user groups if credit is given to both the author and newsletter from which it was taken. Reproduction of articles with a specific © Copyright notice is prohibited without prior permission from the original author.

Advertising: Commercial advertisers, request ad packet from Bob Ward. Members may advertise personal computer equipment or software for free. Submit your ad to Bob Ward.

Direct all correspondence and newsletter submissions to:

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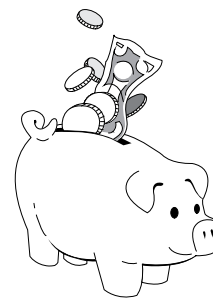2100 Andre Ave., Los Osos, CA. 93402
(805) 756-2164

Meeting Times

General meetings are held the 1st Sunday of every month, unless noted otherwise in the newsletter calendar, at 2:30 pm in the Cal Poly University Biology Department, Fisher Hall 286.

Special Interest Groups (SIGS)
meet at 1:00 to 2:00 pm.

General Information SIG:
Fisher Hall 286

New computer user SIG:
Fisher Hall 292

Slo Bytes Officers

President	George Campbell
Vice President	Sam Powers
Treasurer	Marilyn Jenkins
Secretary	Bob Ward
Editors	B. Ward & T. Sorgatz

Treasurer's Report

Slo Bytes BBS

(805) 528-6172
14,400 / 8 / N / 1
PC Files (9,000+)
and Message Section

Floppy Disks 4-Sale at the meeting

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