UNDERSTANDING THE TECHNOLOGY

FUNCTION KEY

FLOPPY DISK

APPLICATION SOFTWARE

INPUT

USER INTERFACE

MAIN STORAGE

NORMAL FLOW OF OPERATION

CENTRAL PROCESSING UNIT

SURGE CONTROL DEVICE

OUTPUT

PERIPHERALS (HARDWARE)

OVERFLOW (INPUT/OUTPUT ERROR)

DEBUGGING TOOL

SUPPLEMENTARY DATA

MOUSE

BACKUP
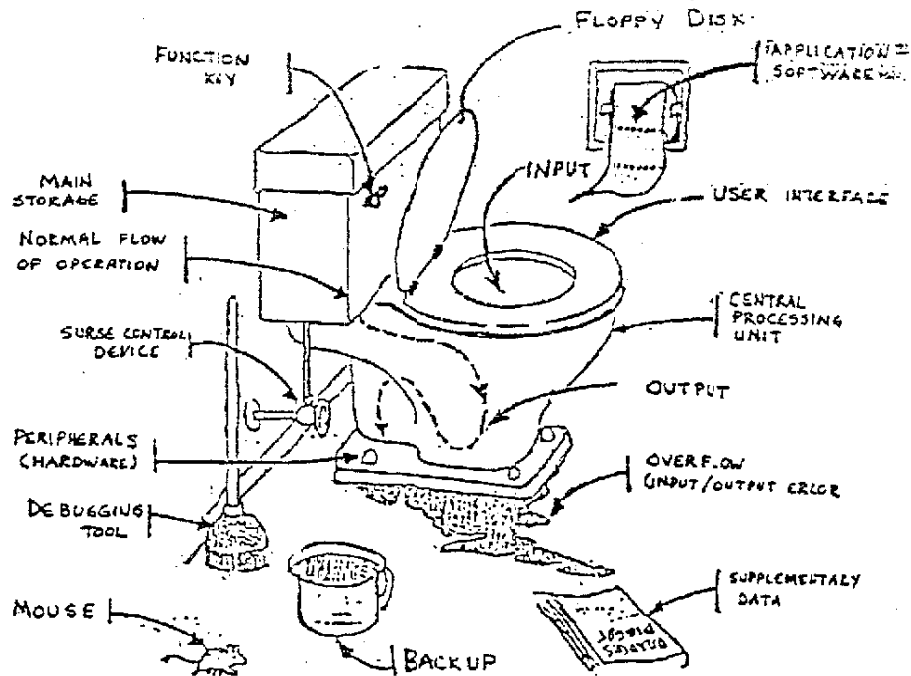
PENN-OHIO USERS GROUP
71 ELM STREET
STRUTHERS, OHIO 44471-1905

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PENN-OHIO USERS GROUP

Dedicated to the TI and IBM user

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NEXT MEETING: JULY 10, 1989
          7:00 pm
AMERICAN RED CROSS BUILDING
  Fifth and Wood Streets
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CREDITS

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Editor: . . . . Ed Luptak
Asst. Editor: . . . Dave Tranovich

INVITATION

Please take this opportunity to challenge yourself. Write an article for the newsletter. Send your copy to Ed Luptak, 71 Elm Street, Struthers, Ohio 44471 or, if you wish to send it via modem, call Ed at 755-7691 to make arrangements. You may write or type but the easiest to handle is an ASCII file made with your favorite word processing program.

DUES

Dues for the Penn-Ohio Users Group are $15.00 per calender year for an individual membership, $20.00 per calender year for a family membership and $10 per year for an associate membership. Dues go to the cost of newsletter publication and library expenses.

(Due to technical difficulties, there is no President's corner this month.)

Dave's Droolings
By VP Dave Tranovich

At times, at least for me, it gets tough to find an interesting topic for the newsletter. I have tried to have some sort of item each month but that has not always been the case. Well, things are again slim this month. However, I did run across some interesting new features that are available from GEnie.

Of interest to all those who use GEnie from the Youngstown area is a new phone number which is NOT surcharged. The number is 216-713-2116. The elimination of the surcharge is a welcome change. It was just a short 18 months or so ago that GEnie finally installed its Youngstown line after many Youngstown area users pushed for it. This eliminated calling Akron or going through Tymnet. Now the $2 surcharge has been lifted making GEnie an even greater bargain for Youngstown area users.

Also, GEnie has added the Zmodem download protocol to its list of those available. This gives users a choice of Xmodem, Kmodem 1k, Ymodem or Zmodem. To you TI users, I have seen several Zmodem protocol programs available for the TI on GEnie.

WordPerfect users will be glad to hear that GEnie now offers product support from WordPerfect Corp. When I was on-line the other day, I

checked into this section and found many supporting WP features available. You can find info on print drivers, macros, graphics for WP 5.0 among others.

Other new features include a section for Hayes hardware and software, a section supporting Borland products such as Turbo Pascal, a law enforcement roundtable, Support for Ashton-Tate products, and many specials in the GEnie Mall.

That is all I have for this month, see you at the meeting!

MINUTES & COMMENTS
June 11, 1989
By Frank DePinto

Well, another month has passed since the last POUG meeting. Tonight's meeting was opened by President Ed, who discussed several letters that he had received during the previous month and commented about a local BBS. He also addressed the fact that other user groups have expressed concern because they hadn't received our newsletter for a couple of months. I guess we should have notified the other groups that we were switching to a quarterly exchange of newsletters due to the high postage costs. So, with this newsletter, we should be caught up with our exchange. We send our apologies, and to answer the question from one club, YES!, POUG is alive. Our TI members are dwindling, but our IBM compatibles section is growing.

The newsletter takes a lot of time to type, print, fold, and mail. Ed, Dave, Herb, and Frank are to be commended for the great job that they have done in the past. Since these guys are doing this job in their "spare time", the newsletter may be late or just doesn't get printed one month.

A letter was received from

M.U.N.C.H., our neighbors from Worcester, MA. Jim Cox, the club's treasurer/editor stated that Jack Sughrue was involved in an automobile accident that left him with numerous head injuries. Jack is the creator of PLUS! and writes the IMPACT/99 articles. Hopefully by the time you read this, Jack will be fully recovered; just in case you would like to send him a get well message, his address is:

Jack Sughrue; Box 459; East Douglas, MA 01516. The POUG members are sorry to hear about the accident, Jack, and hope for a speedy and complete recovery.

Ed also read a few advertisements about computers and peripherals. The one from ABACUS Market in Columbus, OH has several "good buys". Another from CompuAdd and the last from Corporate Systems Center in Sunnyvale, CA., all dealing with compatibles.

One of the topics that came up for discussion concerned "Rusty n Edie's BBS". Ed was impressed with the local board which has 9 lines and 762 megs. There is one hitch, after July 4th, in order to use the board, a $39.00/year fee must be paid. I guess if you're into telecommunications, this one would be worth a try. The board does have subscribers from all over the world. If you are interested, the BBS number is 216-726-2620.

We didn't have a treasurer's report as Herb was busy putting the newsletters together for the other groups. He and Frank will have spent about three hours preparing the newsletter for mailing.

And in other news, "the list goes on!" Ron Baker and Ed now have approximately 600 programs in the IBM compatible library. That's almost a 200 program increase in two months. If they keep up at this rate, their library will

contain well over a thousand programs by the end of the year. Now's the time to find a few new members, either TI or IBM, or both.

This next item has nothing to do with computers, but in light of Doc Krautter and those plates of "goodies" at the meetings, we will need a good diet! The item comes from the May issue of the "Observer"; a newsletter published by the Western Reserve Care System. It is called "The Good Humor Diet".

1. If you eat something and nobody sees you, it has no calories.

2. If you eat with other people, calories don't count provided you don't eat more than they do.

3. Food used for medicinal purpose (i.e. Kandel's Chocolate Pecan, has no calories).

4. Cookie pieces contain no calories. The process of breaking up causes calorie leakage.

5. Movie related foods (milk duds, buttered popcorn, etc.) does not have any calories because it is part of the entire entertainment package.

6. Food licked off knives and spoons have no calories if you are in the process of preparing something.

7. Foods that have the same color have the same number of calories (i.e. spinach and pistachio nut ice cream, mushrooms and vanilla ice cream).

NOTE: Chocolate is a universal color and may be substituted for any other food color.

Interesting diet to say the least. I'm sure these are some of the excuses (reasons) that Frank uses to justify sneaking those delicious pastries into the meetings.

Oh well, back to the computer world. That is the reason for this newsletter. The following program came from the September, 1988 issue of "HOCUS 99". It is supposed to extract routines from a program to be used in another program saving you from re-typing lines that have already been typed. I haven't tried it yet, as I haven't done very much programming lately.

1 !SUBROUTINE EXTRACTOR by George F. Steffen. Save in MERGE format. MERGE into any program (with line # starting above 8). RUN to extract
2 !selected lines. Deletes itself. Then be sure to SAVE the selected lines in MERGE format because the remaining lines are still in memory!

3 CALL CLEAR :: CALL INIT :: INPUT "Line numbers of root line to be saved: First, Last? ":L,M :: G=256 :: CALL PEEK(-31952,H,I,J,K)

4 C=INT(H/G):: D=H-C*G :: F= (J-G)*G+K :: FOR E=(H-G)*6+I TO F STEP 4 :: CALL PEEK(E, A,B):: IF A=C AND B=D THEN 6

5 NEXT E :: PRINT :"LINE";M; "NOT FOUND!" :: STOP !@P-

6 H=INT(E/G):: I=E-(G*H):: H =H+G :: C=INT(L/G):: D=L-C*G :: FOR E=E+4 TO F STEP 4 :: CALL PEEK(E,A,B):: IF A=C AND B=D THEN 8 !@P-

7 NEXT E :: PRINT:"LINE";L;" not found!" :: STOP !@P-

8 E=E+3 :: J=INT(E/G):: K=E- (G*J):: J=J+G :: CALL LOAD(- 31952,H,I,J,K) :: STOP !@P-

Looks like quite a program; I sure could have used this back when I was writing some programs.

I guess that's enough for now. Summer is here and most of my time is spent outdoors (when it isn't raining, if it ever stops that is).

I'll be on vacation this month, so I will miss the next meeting on July 10 at the Red Cross building in beautiful downtown Youngstown, Ohio! That's why YOU should be at the meeting to see first hand how everything is doing (and to get in on the cookie tasting party).

DON'T FORGET, JULY 10 AT 7:00 P.M.

NEW TI SOFTWARE

M U S I C   P R O

Asgard Software, David Caron, Lucie Dorais, and the Ottawa TI-99/4A Users Group are proud to announce the release of a new concept in music creation software for the TI-99/4A - Music Pro!

Music Pro is very much a word-processor for music (or, a MUSICal PROcessor). Music Pro has a full-featured editor that will allow you to create music by typing notes on a staff - even directly off of standard piano sheet music. You can easily move your cursor around to delete and insert notes and phrases, and even transform blocks of music to different durations or frequencies.

Very fast and friendly, Music Pro will let the professional as well as the novice musician, or even just a music buff, quickly and easily enter large pieces without having to learn any special notation particular to the program. Unlike some music programs for the 99/4A, you don't have to make all the notes the same length within a measure - Music Pro will automatically take care of different voices with different durations playing simultaneously.

After entering in the music, you can compile the music into assembly language data for rapid playing. Or, you can save or load in pieces for editing at any time.

Finally, Music Pro is the only music program for the 99/4A that will allow you to print out your work in sheet music form (one voice at a time) on your Epson or compatible printer!

Music Pro includes a detailed, well-written manual by Lucie Dorais, and includes many sample songs and a keyboard overlay strip and keyboard note map in TI-Writer format. It requires a TI-99/4A with 32K, disk and Extended BASIC (*Note* will NOT function with the Geneve 9640 due to differences in the key-scanning routines). It is available for a suggested retail price of $17.95.

For more information, or to order send to:

ASGARD SOFTWARE
P.O. BOX 10306
ROCKVILLE, MD 20850
(703)255-3085

Payment by check or money order in U.S. funds, credit card (Mastercard/Visa) and COD accepted. Please add $0.75 shipping and handling within the U.S. or Canada, or $3.00 for Airmail shipping else. Credit card orders please add $1.00 bank processing fee (their charge - not ours). Distributed in Canada by LaFlamme & Wrigley Wholesale.

Program by David Caron in conjunction with Lucie Dorais. Copyrighted to the Ottawa TI-99/4A Users Group. All rights reserved.

P A G E   P R O   9 9

Asgard Software and Ed Johnson are pleased to announce the release of

Page Pro 99.

A project whose development spans the last two years, Page Pro 99 is an extremely powerful but very easy to use page-making program for the TI-99/4A and Myarc Geneve 9640. Ideal for dozens of different applications - from making letterheads, signs, charts, maps and graphs to business forms, and even short documents and newsletters. The program is written on the principal of "what-you-see-is-what-you-get" - the printed page will literally look exactly like what is on the screen, so you know exactly what you will get at all times. Page Pro 99 is the only page-making software for the TI-99/4A or Geneve that has this feature.

Written entirely from scratch in assembly language, Page Pro 99 will allow you to create an entire 8 1/2" by 11" page - 66 lines - at once. You can place up to 28 pictures at one time, of any size, anywhere on the page. Page Pro 99 permits you to type in either of two fonts at once - a small 8x12 pixel font for regular text and a large 16x24 font for titles. The program will also allow you to draw lines anywhere on the page with any of two linestyles at the same time.

Page Pro 99 contains many features to help making your page easier. It includes a full-complement of text editing features for inserting and deleting characters and lines. It will also let you import text files from TI-Writer or other word processing programs - so you can use your favorite text editor to create text. The standard TI-Writer windowing keys are also supported for quickly and easily getting around the page. Page Pro 99 will allow you to type in any direction (up, down, left or right) for easily making vertical titles. It will also let you delete pictures

at will, as well as load pictures at any time at the cursor location. You can also load in new fonts and line styles at any time (though you can only have 2 fonts and two linestyles in memory at once). Finally, you can quickly save and load your page for later use.

After you've created your page, you can print it out in any of three dot-densities on your Epson or compatible printer - single-density "rough draft" up to "reproduction-quality" quad-density.

If this wasn't enough, we've also included utilities for converting TI-Artist (tm) fonts and instances easily into Page Pro 99 format, and a utility which turns a text file into two-column text for Page Pro 99 - so you can easily create two-column newsletters. We've also included many example pictures illustrating various points of the program, and an art disk full of pictures and fonts you can use in Page Pro 99 right out of the box.

The program includes an extensive manual which describes the various functions of the program, includes a tutorial, and even an advanced section for programmers interested in making Page Pro 99 compatible utilities.

Page Pro 99 includes a version optimized for the Geneve 9640 and one for the 99/4A - an 80-column version of each as well as a Prowriter version are planned in the not-too-far future. It requires either a TI-99/4A with 32K, disk and either Extended BASIC or Editor/Assembler, or a Myarc Geneve 9640 with a single disk drive. Multiple disk drives, all RAM-disks and even the Myarc Hard & Floppy Disk Controller are supported (full path-names allowed).

Finally, this remarkable program has a remarkable price - only

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$24.95 for one of the most capable, and by far the easiest to use, Page making program for the 99/4A and Geneve.
For more information about Page Pro 99, or to order, send to:
Asgard Software
P.O. Box 10306
Rockville, MD 20850

Payment by check or money order, Credit card (Mastercard/Visa) and COD orders accepted. Please add $0.75 for shipping and handling within the U.S., and $3.00 for airmail elsewhere. Credit card orders please add $1.25 bank processing fee.

FREE COMPUTER TRADE MAGAZINES

These publications are free on a "qualified" subscriber basis. Write to them at addresses given and request a subscription application. Each year you will be asked to renew your request to remain on their mailing list by updating a subscriber information form.

Some of these publications are affiliated closely with their advertising support (their only source of revenue), so don't expect unbiased reviews, but for the most part they are worth thumbing through each month, and some, like EE Times provide extremely timely information on a weekly basis.

Business Computer Systems
PO Box 17452
Denver, Colorado 80217

Computer Decisions,
Management Magazine
Hayden Publishing Co., Inc.
PO Box 1417
Riverton, NJ 08077

Computer Design
Reader Service Dept.
PO Box 591
Littleton, MA 01460

Computer Graphics News
c/o SCHERGO ASSOC.
10th floor Reader's Service
1515 Broadway
New York, New York 10109-0153

Datamation
875 Third Avenue
New York, NY 10022

Digital Research News
POB 579
Pacific Grove, CA 93950

EDN
PO Box 5262
Denver, CO 80217

Electronic Design
Hayden Publishing Co., Inc.
PO Box 1418
Riverton, NJ 08077

Electronic Engineering Times
Subscription Department
Electronic Engineering Times
111 East Shore Road
Manhasset, NY 11030

Infosystems
Hitchcock Publishing Co.
PO Box 3007
Wheaton, Illinois 60189-9933

Mini-Micro Systems
PO Box 5051
Denver, CO 80217

Office Systems '84
POB 7459
Philadelphia, PA 19101

Small Systems World
950 Lee Street
Des Plaines, Illinois 60016

Solutions
INTEL Corporation
3065 Bowers Avenue
Santa Clara, Ca 95051

Systems & Software
Hayden Publishing Co., Inc.
PO Box 1411
Riverton, N.J. 08077

Computer Virus Myths
by Rob Rosenberger
with Ross Greenberg

A number of myths have popped up recently about the threat of computer "viruses". There are myths about how widespread they are, how dangerous they are, and even myths about what a computer virus really is. We'd like the facts to be known.

The first thing you have to understand is that a virus is a programming technique that falls in the realm of "Trojan horses." All viruses are Trojan horses, but very few Trojan horses can be called a virus.

That having been said, it's time to go over the terminology we use when we lecture:

BBS - Bulletin Board System. If you have a modem, you can call a BBS and leave messages, transfer computer files back & forth, and learn a lot about computers. (What you're reading right now most likely came to you from a BBS, for example.)

Bug - an accidental flaw in the logic of a computer program that makes it do things it shouldn't really be doing. Programmers don't mean to put bugs in their program, but they always creep in. The first bug was discovered by pioneer Grace Hopper when she found a dead moth shorting out a circuit in the early days of computers. Programmers tend to spend more time debugging their programs than they do writing them in the first place.

Hacker - someone who really loves computers and who wants to push them to the limit. Hackers don't release Trojan horses onto the world, it's the wormers who do that. (See the definition for a "wormer".) Hackers have a healthy sense of curiosity: they try

doorknobs just to see if they're locked, and they tinker with a piece of equipment until it's "just right."

Shareware - a distribution method for quality software available on a "try before you buy" basis. You pay for the program only if you find it useful. Shareware programs can be downloaded from BBSs and you are encouraged to give an evaluation copy to friends. There are few advertising & distribution costs, so many shareware applications can rival the power of off-the-shelf counterparts, at just a fraction of the price.

Trojan horse - a generic term describing a set of computer instructions purposely hidden inside a program. Trojan horses tell a program to do things you don't expect it to do. The term comes from a historic battle in which the ancient city of Troy was offered the "gift" of a large wooden horse that secretly held soldiers in its belly. The Trojans rolled it into their fortified city....

Virus - a term for a very specialized Trojan horse that can spread to other computers by secretly "infecting" programs with a copy of itself. A virus is the only type of Trojan horse which is contagious, like the common cold. If it doesn't meet this definition, then it isn't a virus.

Worm - a term similar to a Trojan horse, but there is no "gift" involved. If the Trojans had left that wooden horse outside the city, they wouldn't have been attacked -- but worms can bypass your defenses. An example is an unauthorized program designed to spread itself by exploiting a bug in a network software package. (Such programs could possibly also contain a virus that activates when it reaches the computer.) Worms are usually

released by someone who has normal access to the computer or network.

Wormers - the name given to the people who unleash destructive Trojan horses. Let's face it, these people aren't angels. What they do hurts us. They deserve our disrespect.

Viruses, like all Trojan horses, are purposely designed to make a program do things you don't expect it to do. Some viruses are just an annoyance, perhaps only displaying a "Peace on earth" message. The viruses we're worried about are the ones designed to destroy your files and waste the valuable time you'll spend to repair the damage.

Now you know the difference between a virus and a Trojan horse and a bug. Let's get into some of the myths:

All purposely destructive code comes as a virus. Wrong. Remember, "Trojan horse" is the general term for purposely destructive code. Very few Trojan horses are actually viruses.

All Trojan horses are bad. Believe it or not, there are a few useful Trojan horse techniques in the world. A "side door" is any command not documented in the user manual, and it's a Trojan horse by definition. Some programmers install side doors to help them locate bugs in their programs. Sometimes a command may have such an obscure function that it makes sense not to document it.

Viruses and Trojan horses are a recent phenomenon. Trojan horses have been around since the first days of the computer. Hackers toyed with viruses in the early 1960s as a form of amusement. Many different Trojan horse techniques were developed over the years to embezzle money, destroy data, etc. The general public wasn't aware of

this problem until the IBM PC revolution brought it into the spotlight. Just five years ago, banks were still covering up computerized embezzlements because they believed they'd lose too many customers.

Computer viruses are reaching epidemic proportions. Wrong again. Viruses may be spread all over the planet but they aren't taking over the world. There are only about fifty or so known virus "strains" at this time and a few of them have been completely eliminated. Your chances of being infected are slim if you take proper precautions. (Yes, it's still safe to turn on your computer!)

Viruses could destroy all the files on my disks. Yes, and a spilled cup of coffee will do the same thing. If you have adequate backup copies of your data, you will be able to recover from a virus/coffee attack. Backups mean the difference between a nuisance and a disaster.

Viruses have been documented on over 300,000 computers. This statistic comes from John McAfee, a self-styled virus fighter who seems to come up with all the quotes the media love to hear. We assume it includes every floppy disk ever infected by a virus, as well as all of the computers participating in the Christmas worm attack. (That worm was designed for a particular IBM network software package; it never infected the computers. Therefore, it wasn't a virus. The Christmas worm attack can't be included in virus infection statistics.) Most of the media don't understand computer crimes, so they tend to call almost anything a virus.

Viruses can be hidden inside a data file. Data files can't wreak havoc on your computer -- only an executable program can do that. If

a virus were to infect a data file, it would be a wasted effort.

Most BBSs are infected with viruses. Here's another scary myth drummed up in the big virus panic. Very few BBSs are really infected. (If they are infected, they won't be around for long!) It's possible a dangerous file could be available on a BBS, but that doesn't mean the BBS itself is infected. BBSs and shareware programs spread viruses. "The truth," says PC Magazine publisher Bill Machrone, "is that all major viruses to date were transmitted by commercial packages and private mail systems, often in universities." The Peace virus, for example, made its way into a commercial software product sold to thousands of customers. Machrone goes on to say that "bulletin boards and shareware authors work extraordinarily hard at policing themselves to keep viruses out." Many reputable sysops check all new files for Trojan horses; nationwide sysop networks help spread the word about dangerous files. You should be careful about software that comes from friends & BBSs, that's definitely true -- but you must also be careful with the software you buy at computer stores. The Peace virus proves it.

My computer could be infected if I call an infected BBS. BBSs can't write information on your disks -- that's handled by the communications software you use. You can only transfer a dangerous file if you let your software do it. (In rare cases, a computer hooked into a network could be sent a dangerous file or directly infected, but it takes specialized software to connect a computer into a network. BBSs are NOT networks.)

My files are damaged, so it must have been a virus attack. It could also have been caused by a power flux, or static electricity,

or a fingerprint on a floppy disk, or a bug in your software, or perhaps a simple error on your part. Power failures and spilled cups of coffee have destroyed more data than all the viruses combined.

Donald Burleson was convicted of releasing a virus. A recent Texas computer crime trial was hailed all over the country as a "virus" trial. Donald Burleson was in a position to release a complex, destructive worm on his employer's mainframe computer. This particular worm wasn't able to spread itself to other computers, so it wasn't a virus. The prosecuting attorney, Davis McCown, claims he "never brought up the word virus" during the trial. So why did the media call it a virus?

1. David Kinney, an expert witness testifying for the defense (oddly enough), claimed he believed Burleson unleashed a virus. This is despite the fact that the program in question had no capability to infect other systems. The prosecuting attorney didn't argue the point and we don't blame him -- Kinney's bizarre claim on the witness stand probably helped sway the jury to convict Burleson, and it was the defense's fault for letting him testify.

2. McCown doesn't offer reporters a definition for the word virus. He gives the facts behind the case and lets the reporters deal with the definitions. The Associated Press and USA Today, among others, used such vague terms that any program could be called a virus. If we applied their definitions in the medical world, we could safely claim penicillin is a biological virus (which is absurd).

3. McCown claims many of the quotes attributed to him "are misleading or fabricated" and identified one in particular which

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"is total fiction." Reporters occasionally print a quote out of context, and McCown apparently fell victim to it. (It's possible a few bizarre quotes from David Kinney or John McAfee were accidentally attributed to McCown.)

Robert Morris Jr. released a benign virus on a Defense network. It may have been benign, but it wasn't a virus in the strict technical sense. Morris, the son of a chief scientist for the National Security Agency, allegedly became bored and decided to take advantage of a tiny bug in the Defense Department's network software. (We say "alleged" because Morris hadn't been charged with a crime when we went to press.) That tiny bug let him send a worm through the network and have it execute when it reached certain computers. Among other things, Morris's "Internet" worm was able to tell some computers to send copies of itself to other computers in the network. The network became clogged in a matter of hours. The media called the Internet worm a "virus" (like it called the Christmas worm a virus) because it was able to spread itself to other computers. But it didn't infect those computers, so it can't be called a virus. (We can't really fault the press for calling it one, though. It escapes the definition of a virus because of a technicality.)

A few notes:

1. This worm worked only on Sun-3 & Vax computers with a UNIX operating system that was linked to the Internet network;

2. The 6,200 affected computers should not be counted in any virus infection statistics (they weren't infected);

3. Yes, Morris could easily have added some infection code to make it a worm/virus if he'd had the urge; and,

4. The network bug Morris exploited has since been fixed.

Viruses can spread to all sorts of computers. All Trojan horses are limited to a family of computers, and this is especially true for viruses. A virus designed to spread on IBM PCs cannot infect an IBM 4300-series mainframe, nor can it infect a Commodore C64, nor can it infect an Apple MacIntosh.

My backup disks will be destroyed if I back up a virus. No, they won't. Let's suppose a virus does get backed up with your other files. Backups are just a form of data, and data can't harm your system. You can recover the important files from your backups without triggering the virus.

Anti-virus software will protect me from viruses. Anti-virus packages offer some good front-line protection, but they can be tricky to use at times. You could make a crucial mistake in deciding whether to let a "flagged" event take place. Also, Trojan horses can be designed to take advantage of holes in your defense. Copy-protected software is safe from an attack. This is totally wrong. Copy-protected software is the most vulnerable software in a Trojan horse attack. You may have big problems trying to use or re-install such software, especially if the master disk was attacked. It should also be noted that copy-protection schemes rely on extremely tricky techniques which have occasionally "blown up" on users. Some people mistakenly believe they were attacked by a clever virus.

Viruses are written by hackers. Yes, hackers have written viruses -- just to see how they operate.

But they DON'T unleash them to an unsuspecting public. Wormers are the ones who do that. (You can think of a wormer as a hacker who was seduced by the Dark Side of The Force.) Hackers got a bum rap when the press corrupted the name.

We hope this dispels the myths surrounding the virus scare. Viruses do exist, many of them will cause damage, and all of them can spread to other computers. But you can defend yourself from an attack if you keep a cool head and a set of backups.

The following guidelines can shield you from Trojan horses and viruses. They will lower your chances of being attacked and raise your chances of recovering from one.

1. Download files only from reputable BBSs where sysops check every program for Trojan horses. If you're still afraid, consider getting your programs from a BBS or "disk vendor" company which gets its programs directly from the author;

2. Let a newly uploaded file "mature" on a BBS for one or two weeks before you download it (others will put it through its paces).

3. Set up a procedure to regularly back up your files, and follow it religiously. Consider purchasing a user- friendly backup program that takes the drudgery out of backing up your files.

4. Rotate between two sets of backups for better security (use set #1, then set #2, then set #1...).

5. Consider using a program which will create a unique "signature" of all the programs on your computer. Once in a while, you can run this program to determine if any of your applications have

been modified -- either by a virus or by a stray gamma ray.

6. If your computer starts acting weird, DON'T PANIC. It may be a virus, but then again it may not. Immediately re-boot from a legitimate copy of your master DOS disk. Put a write-protect tab on that disk just to be safe. Do NOT run any programs on your regular disks (you might activate a Trojan horse). If you don't have adequate backups, try to bring them up to date. Yes, you might be backing up a virus as well, but it can't hurt you as long as you don't run any of your normal programs. Set your backups off to the side. Only then can you safely hunt for the problem.

7. If you can't figure out what's wrong with your computer, and you aren't sure of yourself, just turn it off and call for help. Consider calling a local computer group before you hire an expert to fix your problem. If you need a professional, consider hiring a regular computer consultant before you call on a "virus expert."

8. If you can't figure out what's wrong with your computer, and you are sure of yourself, execute a low-level format on all of your regular disks (you can learn how to do it from almost any BBS), then do a high-level format on each one of them. Next, carefully re-install your software from legitimate copies of the master disks, not from the backups. Then, carefully restore only the data files (not the executable program files) from your backup disks.

If you DO find a Trojan horse or a virus, we'd appreciate it if you'd mail a copy to us. (But please, don't handle one unless you know what you're doing.) Include as much information as you can, and put a label on the disk that says it contains a Trojan horse or virus.

PENN-OHIO USERS GROUP

Send it to Ross Greenberg, 594 Third Avenue, New York, NY 10016. Thank you.
Ross Greenberg is the author of a popular Trojan/virus detection program. Rob Rosenberger is the author of a modem analysis program. These men have never met in person; they worked on this story completely by modem.

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You may give copies of this to anyone if you pass it along in its entirety.

THE LITTLE GREEN COMPUTER NERD
By Dan Gutman
(Downloaded from GEnie)

The personal computer is so difficult to operate; the video casette recorder so simple. So it makes perfect sense to use a VCR to help people learn how to use a PC.

If you're stuck trying to figure out "PageMaker," "Excel," "dBase," "WordPerfect," "Lotus" or just about any other sophisticated business software program, there are videotapes available that will make things easier.

"The Desktop Professor" (American Business Computer Information, 313-547-3300) is one of the better tapes on the market. Using zooms, overlays and other special effects, it teaches the essentials of "Ventura Publisher" in a little over two hours.

The video was highlighted as an Editor's Choice in an overview of tapes in the May 16th issue of PC Magazine. At $295 it's a bit steep, but so are human instructors, and you can't rewind them to play them over and over again.

The reason why video instruction is

so helpful is simple--nothing else works. Despite all the talk about "user friendliness," computers are harder to use now than they were five years ago. They're more powerful, more sophisticated and more confusing.

Computer classes are expensive and time consuming. Instruction manuals are often terribly-written. Even when they're good, after a hard day of work most of us would rather veg out in front of a video than slog our way through 300 pages of documentation. This is, after all, the TV age.

I've often had the fantasy that stuffed into the box of every computer program was a little green computer nerd. If I couldn't figure out how to load the program, he would hop out and tell me. If I couldn't figure out how to make the thing print, he would demonstrate.

Because that's all we really need--somebody to tell us which keys to press. In my experience, the only way to get past computer problems is to have someone who knows more than me physically sitting there showing me what I'm doing wrong.

Little green computer nerds don't exist, but a video is the next best thing. It won't hop out of the box and address you personally, but a good tape will cover most problems in a non-threatening and understandable manner while you mimic the procedure on your computer.

True, you can learn the same material by reading a book, but books are static. Seeing something on a TV screen that is identical to what you'll be seeing on your computer screen is an excellent way to learn.

A few other video/audio-based training aids for computer users...

--MicroVideo Learning Systems (800-231-4021) makes two-hour videos on "dBase IV," "WordPerfect 5.0," "Lotus 1-2-3," "Microsoft Excel for Windows," and several others. The tapes include a workbook and data disk, and sell for $295-$895.

--AT&T (800-554-6400) will teach you how to use the MS-DOS and UNIX operating systems, as well as "WordPerfect," "dBASE III Plus," and several others. ($700-$2625).

--Video Logic (800-421-5355) has the best price--$19.95 to learn computerized accounting, project management, "Microsoft Works," "PFS: First Choice," and others.

--Other companies that make training tapes: Training Specialties (619-481-4858), FlipTrack Learning Systems (800-222-FLIP), VideoTutor (800-252-1225), American Training International (213-823-1229).

As far as the quality of these tapes goes, they range from mediocre to excellent. None of them rival "Star Wars" in production values, but we're just trying to use our computers here, not save the world.

Editors: The manufacturers of tapes mentioned should have stills available.

The Lighter Side

Ron Baker ran across this text of the famous Abbott and Costello skit of "Who's on First?" I felt that I would include this classic bit of comedy in the newsletter just for fun. Enjoy...

Dave

Abbott & Costello
Who's on first?

Abbott: Well Costello, I'm going to New York with you. The Yankee's manager gave me a job as coach for as long as your on the team.
Costello: Look Abbott, if your the coach, you must know all the players.
Abbott: I certainly do.
Costello: Well you know I've not met the guys. So you'll have to tell me their names, and then I'll know who's playing on the team.
Abbott: Oh, I'll tell you their names, but you know it seems to me they give these ball players now-a-days very peculiar names.
Costello: You mean funny names?
Abbott: Strange names, pet names...like Dizzy Dean...
Costello: His brother Daffy
Abbott: Daffy Dean...
Costello: And their French cousin.
Abbott: French?
Costello: Goofe'
Abbott: Goofe' Dean. Well, let's see, we have on the bags, Who's on first, What's on second, I Don't Know is on third...
Costello: That's what I want to find out.
Abbott: I say Who's on first, What's on second, I Don't Know's on third.
Costello: Are you the manager?
Abbott: Yes.
Costello: You gonna be the coach too?
Abbott: Yes.
Costello: And you don't know the fellows' names.
Abbott: Well I should.
Costello: Well then who's on first?
Abbott: Yes.
Costello: I mean the fellow's name.
Abbott: Who.
Costello: The guy on first.
Abbott: Who.
Costello: The first baseman.
Abbott: Who.
Costello: The guy playing...
Abbott: Who is on first!
Costello: I'm asking you who's on first.
Abbott: That's the man's name.
Costello: That's who's name?
Abbott: Yes.

Costello: Well go ahead and tell me.
Abbott: That's it.
Costello: That's who?
Abbott: Yes.
Costello: Look, you gotta first baseman?
Abbott: Certainly.
Costello: Who's playing first?
Abbott: That's right.
Costello: When you pay off the first baseman every month, who gets the money?
Abbott: Every dollar of it.
Costello: All I'm trying to find out is the fellow's name on first base.
Abbott: Who.
Costello: The guy that gets...
Abbott: That's it.
Costello: Who gets the money...
Abbott: He does, every dollar of it. Sometimes his wife comes down and collects it.
Costello: Who's wife?
Abbott: Yes.
Costello: What's wrong with that? All I wanna know is when you sign up the first baseman, how does he sign his name?
Abbott: Who.
Costello: The guy.
Abbott: Who.
Costello: How does he sign...
Abbott: That's how he signs it.
Costello: Who?
Abbott: Yes.
Costello: All I'm trying to find out is what's the guys name on first base.
Abbott: No. What is on second base.
Costello: I'm not asking you who's on second.
Abbott: Who's on first.
Costello: One base at a time!
Abbott: Well, don't change the players around.
Costello: I'm not changing nobody!
Abbott: Take it easy, buddy.
Costello: I'm only asking you, who's the guy on first base?
Abbott: That's right.
Costello: Ok.
Abbott: Alright.
Costello: What's the guy's name on first base?

Abbott: No. What is on second.
Costello: I'm not asking you who's on second.
Abbott: Who's on first.
Costello: I don't know.
Abbott: He's on third, we're not talking about him.
Costello: Now how did I get on third base?
Abbott: Why you mentioned his name.
Costello: If I mentioned the third baseman's name, who did I say is playing third?
Abbott: No. Who's playing first.
Costello: What's on base?
Abbott: What's on second.
Costello: I don't know.
Abbott: He's on third.
Costello: There I go, back on third again!
Costello: Would you just stay on third base and don't go off it.
Abbott: Alright, what do you want to know?
Costello: Now who's playing third base?
Abbott: Why do you insist on putting Who on third base?
Costello: What am I putting on third.
Abbott: No. What is on second.
Costello: You don't want who on second?
Abbott: Who is on first.
Costello: I don't know.
Together: Third base!
Costello: Look, you gotta outfield?
Abbott: Sure.
Costello: The left fielder's name?
Abbott: Why.
Costello: I just thought I'd ask you.
Abbott: Well, I just thought I'd tell ya.
Costello: Then tell me who's playing left field.
Abbott: Who's playing first.
Costello: I'm not...stay out of the infield!!! I want to know what's the guy's name in left field?
Abbott: No, What is on second.
Costello: I'm not asking you who's on second.
Abbott: Who's on first!
Costello: I don't know.
Together: Third base!

Costello: The left fielder's name?
Abbott: Why.
Costello: Because!
Abbott: Oh, he's center field.
Costello: Look. You gotta pitcher on this team?
Abbott: Sure.
Costello: The pitcher's name?
Abbott: Tomorrow.
Costello: You don't want to tell me today?
Abbott: I'm telling you now.
Costello: Then go ahead.
Abbott: Tomorrow!
Costello: What time?
Abbott: What time what?
Costello: What time tomorrow are you gonna tell me who's pitching?
Abbott: Now listen. Who is not pitching.
Costello: I'll break your arm if you say who's on first!!! I want to know what's the pitcher's name?
Abbott: What's on second.
Costello: I don't know.
Together: Third base!
Costello: Gotta a catcher?
Abbott: Certainly.
Costello: The catcher's name?
Abbott: Today.
Costello: Today, and tomorrow's pitching.
Abbott: Now you've got it.
Costello: All we got is a couple of days on the team.
Costello: You know I'm a catcher too.
Abbott: So they tell me.
Costello: I get behind the plate to do some fancy catching, Tomorrow's pitching on my team and a heavy hitter gets up. Now the heavy hitter bunts the ball. When he bunts the ball, me, being a good catcher. I'm gonna throw the guy out at first. So I pick up the ball and throw it to who.
Abbott: Now that's the first thing you've said right.
Costello: I don't even know what I'm talking about!
Abbott: That's all you have to do.

Costello: Is to throw the ball to first base.
Abbott: Yes!
Costello: Now who's got it?
Abbott: Naturally.
Costello: Look, if I throw the ball to first base, somebody's gotta get it. Now who has it?
Abbott: Naturally.
Costello: Who?
Abbott: Naturally.
Costello: Naturally?
Abbott: Naturally.
Costello: So I pick up the ball and I throw it to Naturally.
Abbott: No you don't, you throw the ball to Who.
Costello: Naturally.
Abbott: That's different.
Costello: That's what I said.
Abbott: Your not saying it...
Costello: I throw the ball to Naturally.
Abbott: You throw it to Who.
Costello: Naturally.
Abbott: That's it.
Costello: That's what I said!
Abbott: You ask me.
Costello: I throw the ball to who?
Abbott: Naturally.
Costello: Now you ask me.
Abbott: You throw the ball to Who?
Costello: Naturally.
Abbott: That's it.
Costello: Same as you! Same as YOU!!! I throw the ball to who. Whoever it is drops the ball and the guy runs to second. Who picks up the ball and throws it to What. What throws it to I Don't Know. I Don't Know throws it back to Tomorrow. Triple play. Another guy gets up and hits a long fly ball to Because. Why? I don't know! He's on third and I don't give a darn.
Abbott: What?
Costello: I said I don't give a darn!
Abbott: Oh, that's our shortstop.

THE END