



March 2002

Volume 13, Issue 3

Meeting Preview

Viruses: Fact & Fiction

By M. Gaberel

DACS' general meeting on March 5 will explore computer viruses. Facts and myths will be explained and illustrated by DACS' own computer viruses expert, Jeff Setaro.

Among the different topics that Jeff will explore are:

- How serious are those email messages from friends and co-workers warning about dire consequences if we open such and such a file?

- Differences between viruses, worms, Trojan horses, and other types of viruses.

- The advantages and pitfalls of virus protection software all computer users should have installed on their machines.

- What to have at the ready, should a virus become a reality on our computers. Jeff's first advice is: do not panic and second: regularly back-up what you consider are your important files, but of course before disaster strikes.

Jeff will dispense additional recommendations so that we are ready if a virus becomes reality.

Virus protection, or "safe hex," to use one of Jeff's terms, may not always be our top priority. As I was preparing this preview, my own virus prevention software came to mind, and I have to admit that my antivirus software is not up-to-date.

As we need to stay vigilant on what could possibly affect our computers and our lives, and as it seems a lot revolves around the computer, the March computer viruses prevention meeting is very timely.

The presentation will take place at

Danbury Hospital Auditorium. It will start at 7 p.m. with Bruce Preston leading the questions and answers session, followed by brief announcements. The virus prevention presentation will start at 8.00 p.m. Check DACS' web site at <http://www.dacs.org> for additional information on the meeting and other DACS related activities.



Meeting Review

Digital Video for All of Us

By Jack Corcoran

Our February DACS General Meeting was what we always hope for, good speaker, hot topic, bargain prices. On February 5, Richard Katz came to town and brought it all. He also spoke at our DACS meeting four years ago and a number of members remember him very well. They remember his presentation as being both entertaining and topical. He spoke about Quicken then, and those who took his message to heart have never regretted it.

Richard certainly has the credentials to speak at user group meetings. He was a principal at West Coast user groups for many years before he and Matt McCann started their business, McKatz Brothers Marketing. As much as any speaker we have had, Richard knows what user groups respond to and he knows how to deliver. As a speaker he is witty, sharp, and presents exactly the right level of technical detail. He is one of us and it comes across.

As the name of his company states, his business is marketing. In the computer field, this is a tricky endeavor. If you are marketing pizza or palaces, you know the purchasing volume will be there and you go after a little bigger chunk of it. With computer products, however, the market may never develop for a new product, or it may explode. Technical promise is not always a sure thing. Speech recognition had all the promise anyone could imagine, but it never took off. The Internet was only a modest extension of existing technological capabilities and look what happened.

So while Richard must work at the cutting edge, he has to be very, very careful what he commits his time and effort to. Four years ago he was riding Quicken, this time a completely different vehicle. This time he was promoting image processing and digital video, something that up until recently was only realistic for

Digital Video Continued on page 5

President's File



Rich Skrenta was a ninth-grade student in Pittsburgh in 1982 when he started playing around with the operating system on his Apple II computer. He inserted some extra code in an unused space on track 2 around sector 8 of the OS, and then placed an ID in the disk's table of contents that activated the code every time a catalog command was made. The tiny program would keep track of boots, and every fifth time the computer was turned on it would play subtle tricks. Then, on each 50th boot, it would display a message:

*It will get on all your disks
It will infiltrate your chips
Yes it's Cloner!*

*It will stick to you like glue
It will modify ram too
Send in the Cloner*

A thousand clones

At the same time, Joe Dellinger, a student at Texas A+M University, was experimenting with a similar string of code to see how fast it could replicate on his disks. The virus escaped and began smearing the graphics displayed on pirated games copied to other disks. A revised version of the virus was quickly assembled which reversed the effects of the first. Like his near-namesake who had a preference for robbing banks, Dellinger probably created viruses because that's where the payload is.

Global worming

From these innocent beginnings, computer viruses have multiplied, along with their code, to the point where their combined cost has drained more resources from the economy than all the bank robberies ever conceived or pulled off. A survey in

1990 by ICSA Labs, a leading computer security firm, said companies with 500 or more PCs suffered an average of 525 infections, with about two servers down for about 21 hours each. Fixing these attacks consumed an average of 344 person days and about \$120,000 in costs. ICSA estimates the average company spends \$100,000 to \$1,000,000 annually to deal with virus disasters. The CERT Coordination Center at Carnegie Mellon University, which tracks IT issues for the federal government, reports that computer security incidents rose from 9,859 in 1999 to 21,756 in 2000 and 34,754 for just the first 9 months of 2001. It was added that about 80 percent of actual incidents are reported.

Code wars

According to McAfee Associates, about 10-15 new viruses are discovered in the wild each day. Although older viruses are becoming extinct due to changes in operating systems, newer worms and Trojan horses are easier to create, spread much faster and carry more destructive payload. The General Accounting Office warns that "a potential hacker can literally download tools from the Internet and 'point and click' to start a hack." The potential for disaster has increased as hackers have become more professional and more directed. The Defense Intelligence Agency reports that at least 20 countries are known to be developing information warfare strategies targeting the United States, and terrorist groups are actively seeking ways to disrupt Internet commerce through denial of service and other types of attack. A sort of digital cold war is even going on in the background between rival groups of *hacktivists*, and a coalition of antiterrorist hackers dubbed *Yihat* (Young Intelligent Hackers Against Terrorism), has asked for official recognition from Western governments to help track down and interrupt illegal money transfers.

It's a jungle in there

The mounting threat of viruses and hacker attacks has produced a growing awareness and alarm among computer users, but as yet too little active response. Only a few years ago, the president of another user group wrote in his monthly column that computer viruses were largely a hoax perpetrated by the purveyors of security software. According to InterSurvey, 92 percent of Americans were aware of the

President's file *Continued on page 11*

Membership Information

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Don Neary
APCUG Liaison
203-746-5538

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HelpLine

Volunteers have offered to field member questions by phone. Please limit calls to the hours indicated below. Days means 9 a.m. to 5 p.m.; evening means 6 to 9:30 p.m. Please be considerate of the volunteer you are calling. HelpLine is a free service. If you are asked to pay for help or are solicited for sales, please contact the dacs.doc editor; the person requesting payment will be deleted from the listing. Can we add your name to the volunteer listing?

d = day e = evening

Program	Name	Phone #	
Alpha Four	Dick Gingras	(203) 426-0484	(e)
AOL	Marc Cohen	(203) 775-1102	(d e)
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Windows	Nick Strother	(203) 743-5667	(e)

Directors' Notes

A Regular Meeting of the DACS Board of Directors was held at the DACS RC on February 11, 2002. Present were Messrs. Bovaird, Buoy, Cohen, Greger, Neary, Ostergren, Pearson, Scheef and Setaro and Mrs. Gaberel. President Ostergren presided. The minutes of the last meeting held January 7 were approved with corrections.

Treasurer Bovaird reported total cash and bank accounts of \$20,822.75, less pre-paid dues of \$7,731.00, a net of \$13,091.75. He also reported current membership of 467. Foregoing bank accounts include two CDs totaling \$10,819.00, leaving available working cash of \$2,272.73, advisability of moving some of the CDs to a Money Market Account was discussed. Rates of return will be explored prior to the maturity of either of the CDs and before any further action is taken.

Jim Scheef then demonstrated various aspects of the new email system installed on the server at the RC, facilitating communication between members of the Board and their peers.

The Directors then considered the effectiveness of the advertising program, and it was unanimously agreed to continue such for the next six months, modified to one newspaper insertion per meeting. It was also suggested that advertising rates appearing in *dacs.doc* newsletter be reformatted to allow emailing of same to potential advertisers.

President Ostergren inquired as to whether there had been any response to the search for any member of this Board able or willing to accept the office of President upon his retirement from same in April.

With respect to DACS membership growth, it was suggested that members be canvassed for those who may be willing to and capable of making presentations, either on behalf of DACS itself or on DACS-oriented subjects, to business or service oriented groups. In addition, the possibility of expanding the DACS "market" to subjects such as digital photography, transcribing and editing of analog video and sound sources to digital media and MP3 and other formats of music downloading, was discussed. The possibility of a sort of "potluck" General Meeting, where members could demonstrate favorite shareware, utilities, etc., was also put forth.

Jim Scheef then reprised the set-up of the email system at the RC, emphasizing default passwords and the method of

Directors' Notes, Continued on page 5

Book Review

Fire In The Valley

The Making of the Personal Computer, Second Edition

by Paul Freiberger and Michael Swaine,

Reviewed By **Jim Scheef**

The first edition of this book was published in 1984 and is a classic of personal computer history. The second edition updates many chapters and adds several significant stories about the industry from '85 to the end of the Nineties. The authors make each segment interesting and eventually link everything together.

While *Fire In The Valley* is ostensibly the story of the computer industry that grew up in Silicon Valley, it begins at the beginning with the first computer designer and the first programmer. Charles Babbage worked most of his life designing the "Analytical Engine", a mechanical computer that could perform integrals. Babbage's patron was Lord Byron, the poet, and his assistant was Lord Byron's daughter, Augusta Ada Byron, the future Lady Lovelace. Ada was the first programmer, as she defined the procedures needed for the analytical engine to solve mathematical problems. The reason I'm telling you all this is that I think Babbage and Steve Wozniak would have been best friends. See if you don't agree.

Fast forward to 1943 with the world at war: the U.S. Navy needs to compute artillery trajectory tables. At that point in time a "computer" was (typically) a young woman with a Monroe calculator. The state of the art for automated computing was a room-

sized machine using mechanical relays to perform arithmetic operations. Two men at the Moore School of Engineering proposed an all-electronic calculating machine. The ENIAC was completed too late for the war effort but proved the concept and moved computing forward.

Of course ENIAC was years before a series of events made it possible for ordinary people to own their own computers. It is that series of serendipity that produced the personal computer and the information revolution that is the key story of *Fire In The Valley*. I read the first version of this book back in the late 80's and have read many books on industry history since then, and I am amazed at how complete this book really is. From the development of the first microprocessor by Ted Hoff at Intel (for a Japanese calculator), to Ed Roberts and the Altair 8800 (and the industry it spawned), to Jobs and "The Woz" and the emergence of Apple as a Fortune 500 company. Not to mention the growth of the software companies. Bill Gates was not the only person to realize that software was the key to making personal computers useful.

The book covers the many failures as well. IMSAI, ComputerLand, VisiCalc, Radio Shack Computer Centers, CP/M and Osborn Computers are all gone - and all for

different reasons. There were other failures and fiascos like the Apple III and Next Computers.

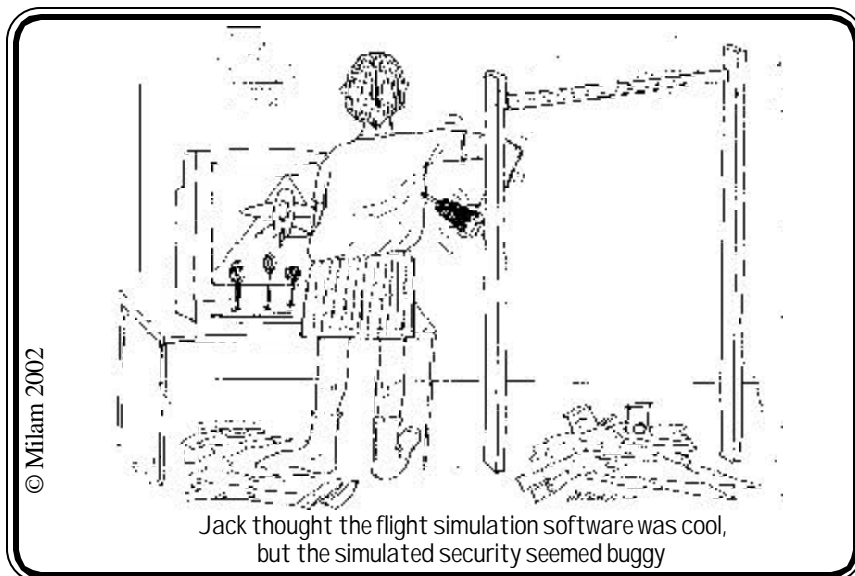
The Second Edition updates many of these stories with what happened in the 90's. Like how come Steve Jobs is still rich after the failure of Next Computer? Hint: it has more to do with movies than the fact that he sold Next to Apple a few years ago so it could become the basis of OS-X. Who could forget the browser wars of the late 90's? From the day Microsoft became the standards setter, Gates has had the fear that "some clever hacker" could undo it all. Of course this fear was based on what Gates himself had done to build Microsoft, and when Marc Andreessen created Mosaic and then morphed it into Netscape, Gates saw his nightmare unfolding. Of course we are still living the end-game of this particular story with the Microsoft anti-trust case.

Ok, so what's missing? Well, I would have liked to see more about how IBM blew it with the PS/2 computer series and the OS/2 operating system. This was a turning point in the computer industry.

Perhaps the best feature of this book is that each story is related in enough detail to give you a sense of what is happening without bogging you down in minutia. If you can only read one book on the history of the personal computer, this is the book. Read it!

**Published by McGraw-Hill, 2000,
paper back, 463 pages including index.**

JIM SCHEEF is the Mad Scientist at Telemark Systems Inc. where he develops custom software using Visual Basic and SQL Server and provides networking services using Windows NT/2000. He has been a DACS member since the day DOG became WC/MUG.



New Members

1/22/02/thru 2/17/02

Gary Stone
Stephen Palmer

THIS IS YOUR LAST NEWSLETTER

If the membership date on your
mailing label reads

EXP 1/2002

or earlier

You need to renew your
DACs membership
NOW

Digital Video *Continued from page 1*
professionals with very expensive equipment. His presentation covered the features of his products, of course, but even more he kept telling us why it is now feasible for us to be doing video and photographic editing. He also proved that the cost of the editing software is well within our budget for new toys.

Richard brought three software packages from Ulead to the meeting. He started his presentation describing PhotoImpact7 which edits and manipulates whatever graphic images you can get into your system. He queried the audience on who had digital cameras, scanners, camcorders, etc. and demonstrated the point that everybody has the equipment to get images into their computer. By playing with some of his own home images, he then demonstrated that it is feasible for any of us to get some pretty remarkable results from them. He emphasized that PhotoImpact7 as well as the other Ulead programs are designed for non-professionals. He also emphasized that the products are right for the Web, home slide shows, and all the other non-professional uses that we would make of them.

His enthusiasm for what he could do with PhotoImpact7 carried him away a bit and he spent more than half his allotted time on that product. He had to rush the next product, VideoStudio6. The complications of editing digital video clips is an order of magnitude more than those of working on single graphic images and Richard had his problems getting his demo production working. The techniques available in VideoStudio6 are familiar to those who have used Adobe's Premiere, but were probably too much for anyone else. He finally got his production working, however, and the message got across that it is now realistic for us to make movies, and burn them onto DVD disks or even CD-ROM disks.

The third Ulead product that Richard demonstrated was PhotoExplorer7. This package provides for handling images and video clips. He showed us how to create a calendar, filter out red eye, make a slide show and other manipulation-type operations. It is a low price product and it is not obvious why these capabilities are not part of the other products. You really need this to be able to effectively use the others. It did feature a unique capability, Cool 360, of combining images into a 360 degree

panorama. Richard did a very effective job of putting one together and showing us the effectiveness of it.

Richard donated a copy of each of the products that he demonstrated to the raffle and the lucky ones were delighted to win. After the meeting, Richard sold copies of each of them as well as copies of Quicken 2002 at special user group prices. A long line of DACS members quickly formed to take advantage of the opportunity. The line also bore testimony to the fact that Richard's message came across; image and video editing has arrived and we can do it.

JACK CORCORAN is an old, retired computer programmer who enjoys playing with video and graphics projects. He can be contacted at corcoran@snet.net.

Directors' Notes, Continued from page 3

changing same, and the possibilities of expanding the system to handle general (email) mailings to the membership and within SIGs.

President Ostergren updated the meeting with regard to the status of the continued involvement of Shirley Fredlund with the Voice for Joanie SIG and hoped for support of DACS volunteers.

LARRY BUOY

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Special Interest Groups

SIG NOTES: March 2002

ACCESS. Designs and implements solutions using Microsoft Access database management software.

Contact: Bruce Preston, 203 431-2920 (bpreston@mags.net). Meets on 2nd Tuesday, 7p.m., at the DACS Resource Center.

Next meeting: March 12

ADVANCED OPERATING SYSTEMS. Explores and develops OS/2, Linux, and NT operating systems. For meeting notes and notices, follow link to Don's site on dacs.org.

Contact: Don Pearson, 914 669-9622 (pearson@attglobal.net). Meets on Wednesday of the week following the General Meeting, 7:30 p.m., at Don Pearson's office, North Salem, NY.

Next meeting: March 13

BACK OFFICE. Explores Back Office server and client applications, including Win NT Servers and MS Outlook. The SIG meets 2nd Thursday, 7 p.m., at the DACS Resource Center.

Contact: Jim Scheef (jscheef@telemarksys.com)

Next meeting: March 14 (Note name change to Server SIG)

GRAPHICS. Create/print high-quality graphics and images.

Contact: Ken Graff at 203 775-6667 (graffic@ntplx.net). Meets on last Wednesday, 7p.m., at Best Photo Imaging, Brookfield.

Next Meeting: March 27

INTERNET PROGRAMMING. Programs for Web site/server.

Contact: Chuck Fizer (cfizer@compuserve.com). Meets on 1st Wednesday, 3-5 p.m., at the DACS Resource Center. Members' suggestions are welcome.

Next Meeting: March 6

INVESTMENT STRATEGIES. Discusses various investment strategies to maximize profits and limit risk.

Contact: Paul Gehrett, 203 426-8436, (pgehr4402@aol.com). Meets 3rd Thursday, 7:30 p.m., Edmond Town Hall, Newtown.

Next Meeting: March 21

SMALL BUSINESS. All aspects of small business management.

Contact: Matthew Greger, 203 748-2919, (matthewg@thebusinesshelper.com).

Meets on last Wednesday, 1-3 p.m.

Next Meeting: March 27

VISUAL BASIC. Develops Windows apps with Visual Basic.

Contact: Chuck Fizer, 203 798-9996 (CFizer@compuserve.com) or Jim Scheef, 860 355-8001 (JScheef@Telemarksys.com).

Meets on 1st Wednesday, 7p.m., at the DACS Resource Center.

Next Meeting: March 6

VOICE FOR JOANIE. Provides and supports people with Lou Gehrig's disease with special PC computer equipment.

Contact: Shirley Fredlund, 860 355-2611 ext. 4517 (voiceforjoanie@juno.com).

Look for announcements

Next Meeting: Suspended until further notice.

WALL STREET. Examines Windows stock market software.

Contact: Phil Dilloway, 203 367-1202 (dilloway@ntplx.net). Meets on 1st Monday, 7p.m., at the DACS Resource Center.

Next Meeting: March 25

WEB SITE DESIGN. Fundamentals of design for the Internet.

Contact: Matthew Greger, 203 748-2919 (matthewg@thebusinesshelper.com)

Meets second Wednesday, 7p.m. at the DACS Resource Center.

Next Meeting: Suspended. (See Small Business)

SIG News & Other Events

Back Office. The Back Office SIG team upgraded the Resource Center PC to a Windows 2000 domain controller. This process creates an Active Directory that manages the resources of the domain. This completes the process of installing Windows 2000 Server as the core of a network in the Resource Center.

A good part of our meeting was devoted to the future of the SIG. The decisions we reached:

- Change the name of the SIG to the "Server SIG"
- Install SQL Server 2000, build a sample database and demonstrate using attached tables from Microsoft Access.
- Investigate using Linux to replace Windows 2000 Server to run a network. We'll decide what this means when we get there.

The name change mirrors the change in how Microsoft's marketing has eliminated the "Back Office" server product bundle and the fact that no one knew what 'back office' was. The "Server SIG" will concentrate on server products, setup and management. It will be fun!

The next meeting of the Server SIG will be Thursday March 14 at 7pm in the DACS Resource Center. At the meeting we will install SQL Server 2000 and connect to a database using MS Access as mentioned above.

Web Design. Matthew and Nancy Greger want to thank everyone who participated in our Wednesday evening Web Design SIG.

Our last meeting, held on February 13, ended with a total attendance of 17, the largest number we have ever had since we started. We wish everyone continued success and should you have any Web Design questions we will be available via email at: Matthewg@thebusinesshelper.com.

Starting in March, a New SIG titled **Small Business** will cover aspects of interest to the small business owner. Topics such as Marketing, Workflow Automation, Computers & Networking, Presentations, Database, Office Applications and so much more will be covered. See the next paragraph for a description of the Small Business SIG meeting.

The first **Small Business** SIG will meet on March 27, from 1pm to 3pm at the Resource Center in the Ives Manor. Our first topic will be developing a Marketing Strategy. Should you have any questions please feel free to contact Matthew Greger at Matthewg@thebusinesshelper.com.



March 2002

Danbury Area Computer Society

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<div>February 02</div> <div>S M T W T F S</div> <div>1 2</div> <div>3 4 5 6 7 8 9</div> <div>10 11 12 13 14 15 16</div> <div>17 18 19 20 21 22 23</div> <div>24 25 26 27 28</div>		<div>April 02</div> <div>S M T W T F S</div> <div>1 2 3 4 5 6</div> <div>7 8 9 10 11 12 13</div> <div>14 15 16 17 18 19 20</div> <div>21 22 23 24 25 26 27</div> <div>28 29 30</div>		1	2	
3	4	<div></div> <div>7:00PM GENERAL MEETING ULEAD</div>	<div>3-5 PM Internet Programming Chuck Fizer</div> <div>7:00PM VISUAL BASIC Chuck Fizer 203 798-9996</div>	7	8	9
10	<div></div> <div>7:30PM BOARD OF DIRECTORS</div>	<div></div> <div>7:00PM ACCESS Bruce Preston 203 431-2920</div>	<div>7:30PM ADVANCED OS Don Pearson 914 669-9622</div>	<div></div> <div>7:00PM SERVER SIG Jim Scheef 860 355-0034</div>	15	<div></div> <div>NEWSLETTER SIG NEWS DEADLINE</div>
17	18	19	20	<div></div> <div>7:30 PM INVESTMENT Paul Gehrett 203 426-8436</div>	22	23
24	<div></div> <div>7:00 PM WALL STREET Phil Dilloway 203 367-1202</div>	26	<div>1-3 PM Small Business Matthew Greger 203 748-2919</div> <div>7:00 PM GRAPHICS Ken Graff 203 775-6667</div>	28	29	30

Embedded Web Servers

By Rich Chernock

Close your eyes. Picture a web server. I'd bet that what comes to mind is at least a tower PC, if not an array of machines. Now, try going in the other direction—how small can a web server be and still do something useful? I'd bet that few of you went far enough. The topic of this article is a web server that the folks at NetMedia have come up with—the SitePlayer (www.siteplayer.com)—a 1" square, 2- chip web server with ethernet, serial and I/O connections. Not too long ago, this device was being referred to as the world's smallest web server, but I doubt that distinction still holds true.

There are currently two contrary trends in the computer industry, exemplified by the thought exercise above: The most familiar leads to faster, more powerful systems with more functions; while at the other end of the spectrum is a trend to move intelligence and connectivity down the food chain—to devices that were never envisioned to be intelligent. Evidence of the latter trend includes the increased use of microprocessors in formerly dumb things: cars, appliances and the like; the spread of networking into the home and even in the underlying protocols of the internet itself. Most of us are using IPV4 (Internet Protocol—the IP part of TCP/IP), where one of the base design features is an address space based on a combination of 4 eight bit numbers (the familiar dotted-quad address: *xxx.yyy.zzz.aaa*). Not long ago, it was realized that these addresses were running out, so IPV6 was developed, with a much larger address space—one that was half-jokingly characterized as being able to assign an IP address to every lightbulb in the world (something that might not be too farfetched!).

In a previous *dacs.doc* article (www.dacs.org/archive/0002/feature2.htm), I wrote about the use of embedded processors, using an example of distributed control for an audio system. That article addressed distributing the intelligence, but not the connectivity (a direct wired connection was used). Recently, I've been experimenting with more uses for my home network (100Mb ethernet

wired to most rooms in the house) beyond the obvious internet connection sharing and music distribution. The siteplayer has opened up many new possibilities by providing an easy-to-use ethernet connection and a common communications protocol (http). First, I'll describe the siteplayer in more detail, then outline some of the uses I'm developing.

The siteplayer itself consists of a Philips 89C51 microcontroller coupled with a Realtek RL1019AS Ethernet transceiver chip. Beside the ethernet port (meant to be hooked up to an RJ45 LAN connector with built-in transformer), there are eight general purpose I/O lines and a serial port. The siteplayer has 48Kbytes of flash memory to hold web pages and 1Kbyte of SRAM is available for storage. There is no conventional operating system available; instead, there is a small control program that supports internet protocols (which currently include ARP, ICMP, BOOTP, UDP, TCP/IP, and HTTP) and the way that it deals with web pages. Aside from some simple math functions which are used in conjunction with variable replacement on web pages (described below), the siteplayer has no real computational facilities available—if general processing is required, it would be expected to be provided by a companion processor.

The 48Kbytes of flash can be used to hold any web pages that fit (as well as the associated assets—for example graphics files and sound clips). Besides creating the web page, "programming" also involves defining variables (which are mapped to memory locations in the 1Kbyte SRAM space). A value can be associated to a variable through a communication on the serial port, or by mapping the variable to the address of one of the I/O lines, where a change in state on a given pin will be directly reflected in the variable's value. On a web page, the use of a special leading character (^) in front of a variable name results in the replacement of the variable with the value found at the associated memory location when the web page is delivered. Conversely, by use of the query parameters in an http get request, variable values can be directly set from clicks on a web page. This seems quite

confusing at first, so a few examples might be in order:

- Assume that during programming, a variable called TEMP is defined. An external thermometer periodically measures the temperature and passes the value to the siteplayer using the serial port. The following HTML statement in a web page:

The temperature currently is ^TEMP

will result in the current temperature being displayed on the page (replacing the ^TEMP in the text string above).

- Assume that the goal is to be able to remotely monitor the on/off state of a device and that the device is able to place a logic high ('1') on one of the I/O pins when on and a logic low ('0') when off. If a variable named STATE is mapped to the I/O pin address and two graphic files are placed in the siteplayer (led1.gif for on and led0.gif for off), then the following HTML statement in a web page:

```

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would result in displaying the appropriate image file to show whether the device is on or off.

- Assume that the goal is to be able to set an LED to be on or off based on which link was clicked on a web page. The LED would be appropriately wired to an I/O pin and a variable named LED mapped to the address of the I/O line. The following link would turn the LED on:

```
Turn LED <a href="tr.spi?LED=1">on</a>
```

and this one will turn it off:

```
Turn LED <a href="tr.spi?LED=0">off</a> .
```

As you might guess, the discussion above only scratches the surface of what can be done. To summarize, the siteplayer allows both the setting and reading of variables and I/O connections through simple interactions with a web page. It should be noted that while these interactions would be done via a web browser most of the time, it's a relatively simple matter to use http transactions from any sort of program to achieve the same results.

Now, what am I doing with these devices? As usual, none of my playing is absolutely necessary, but from a techie's viewpoint, it's fun.

1. Network connected character display: One of the items that's been lying around my surplus collection for many years is a serially connected 16 character vacuum fluorescent display. This display

is quite easy to read from a distance, but had turned out to be difficult to interface. The siteplayer has pre-defined variable "COM", which is directly mapped to its serial port. Any data assigned to the COM variable through an http transaction will be directly output on the serial port. I'll be mounting this display in the kitchen, connected to my LAN through the siteplayer's ethernet. Most of the time, one of my servers will be periodically sending weather information scavenged from the internet (to provide a real-time weather display in the kitchen). The siteplayer will also hold a web page that will allow my kids to send messages to the display from their computers (an alternative to the normal yelling back and forth that goes on around dinner time).

2. Remote temperature sensing: I've cobbled together a basic stamp with a Maxim (Dallas) 1620 thermometer chip, which will be mounted outside of the house. By having the stamp communicate with a siteplayer through the serial port as described above, I'll be able to add the current outdoor temperature to my home web pages. This capability will be expanded to other forms of monitoring, once I figure out how.

3. Web interface for remote audio preamp: I'm going to attempt to replace the "physical knobs on a box" interface for the remote preamp I referred to earlier in this article with one that utilizes a web interface (I have an Audry internet appliance near where the box currently is). The siteplayer will be located near the serially controlled preamplifier, with a basic stamp in between to handle the protocol conversions. A web site will be loaded into the siteplayer that gives the normal control interface for a preamplifier (volume, bass, treble and the like) that will talk to the preamp through the basic stamp. This project will take a bit of work, but should be possible.

Hopefully, this article has started you thinking about the small end of the hardware spectrum and gives a preview of some of the things that are likely to start emerging on the consumer market in the future.

Rich Chernock is currently working on digital television and networked multimedia at IBM Research. He is still leading many of the ATSC standards activities for broadcast High Definition Television. Earlier this year, he co-authored "Data Broadcasting: Understanding the ATSC Data Broadcast Standard." He can be reached at mpeg2@earthlink.net.

Small Business

Marketing Basics

By Nancy Greger

For small or large companies, marketing your business is an important aspect of insuring your company's longevity. Whether you set aside a monthly budget or have no budget, simple yet consistent marketing is necessary.

Business owners may find marketing to be very difficult. I suggest you begin your process by defining your Mission Statement in 25, 50 and 100 words and your slogan(s). Since you may use different media to market your company, such as newspaper, magazine, web site, radio etc. you will need to be very precise in delivering your message. Knowing this in advance will clearly help others understand what your company is all about.

Examples of Mission Statements:

25 Words: We integrate the traditional with New Media by creating clear, concise, easy-to-use Web Sites and database programming for small businesses along with affordable quality printing.

50 Words: The Business Helper Inc "On-The-Mark Solutions for Small Business" provides quality service targeted to specific small business needs. TBH focuses on clear, concise, easy-to-use Web and Software/Database Solutions tailored to fit those needs.

Additionally, our Printing Solutions, Engravalith® Stationery, and The Leading Edge in Print, offer unique alternatives in print.

100 Words: The Business Helper "On-The-Mark Solutions for Small Business." Our unique services and products consist of eBusiness Solutions and Print Solutions—integrating the traditional with today's New Media.

Our eBusiness Solutions will help you develop a web presence that is clear, concise, and easy-to-use, along with database programming that is tailored to fit your specific small business. Our Print Solutions and Engravalith® Stationery, offering a unique alternative in print. Let our eye-catching and innovative product deliver your first impression with style.

Visit our web site at www.thebusinesshelper.com and discover how we can be-

come an important ally for your future business needs.

Examples of Slogans:

The Business Helper Inc., "On-The-Mark Solutions for Small Business," "Engravalith® Stationery", "The Leading Edge in Print," "anything else is just flat."

Now you can build your marketing strategy around your mission statement and slogan. Whatever advertising medium you choose, remember consistency is important (one ad in the newspaper will not necessarily mean an instant sale). Some suggestions for marketing your company are listed below:

- Carry Business cards at all times (you never know when or where a client will come).
- Ask clients why they hired your company and solicit suggestions for improvement. Also ask how did they hear about you; this will help you know which advertising medium is working.
- Develop a brochure of your services or products.
- Send hand-written "Thank You" notes.
- Join a Business network such as the Chamber of Commerce, Toast Masters, etc.
- Never let a day pass without doing at least one thing to promote your company.
- Advertise in specific trade newspapers, magazines, web sites etc.
- Link your web site with other organizations/companies that complement your products or services.

I also recommend reading EVEolution The Eight Truths of Marketing to Women, by Faith Popcorn and Lys Margold. It's filled with examples and insights in marketing that can be applied by any business owner.

Nancy Greger, President of The Business Helper, provides "On-the-Mark" tips to help the small business owner succeed. She can be reached at The Business Helper, Inc.; Web: www.thebusinesshelper.com; eMail: nancyg@thebusinesshelper.com; Phone: 877.81.SOLVE or 203-748-2919; Fax: 203-743-7915

Random Access

February 2002

Bruce Preston Moderator

Q. (AskDACS) Is there any place that I can go to report SPAM? I have gotten eleven e-mails from the same place, all of which contained a virus.

A. Go to the Coalition Against Unsolicited Commercial E-mail (CAUCE) at www.cauce.org. In addition, a group called the Spam Recycling Center has a program in place to lobby for anti-spam legislation—visit their site www.spamrecycle.com

Q. (AskDACS) Could you describe the differences between SDRAM and RDRAM?

A. RDRAM is also called “Rambus.” It costs more, but can make use of a front-side bus rate on the order of 1GHz as compared to the more common 133MHz or 266MHz rates. The technology is described by the inventor—www.rambus.com and is being recommended for use with Pentium IV processors with Rambus capable motherboards. Take a look at this page: www.rambus.com/technology/February2002technology_overview.html.

Q. I was poking around in my Aptiva with PC Doctor in my Windows 98 machine and came upon an entry Disk Cache Size=64KB, and a subsequent line: Disk Cache Not Installed. This sounds like something that I would want. How would I enable it?

A. With an IDE drive, the cache is already present in the drive. PC Doctor is reporting the cache that would have been used if you had an old ESDI or earlier drive. The other place that a disk cache might be used is if you have a large hard drive but with a BIOS that does not recognize the large drive. In that case, you need a DDO (Disk Drive Overlay) which adjusts the BIOS, and would also require a drive cache. Your machine is of an era that would not require DDO. In short, leave it alone.

Q. I ran a disk defrag on a fairly new Windows XP machine and found a

number of files that could not be defragged or moved. Is this a problem?

A. No. You can not defrag a file that is open. A few system files that are fragmented are not going to be a problem. If you can hear the drive head rattling on your machine, then you have a problem. It is important to keep the number of temporary files down, etc., as these can impact the responsiveness of your machine.

Q. On the topic of temporary files, how do you know if you can delete them?

A. Here is a simple guideline: By definition, any file that is in \TEMP, or \TMP, or \WINDOWS\TEMP, etc., is fair game for deletion if its creation date and time is earlier than the last time that you booted the machine. The contents of \Temporary Internet Files (which may be in any of several locations on your machine, depending upon which release of Windows you are running). These files are also called ‘the cache’ and consist of such things as images for the logos, icons, buttons, etc. that are/were on web pages that you visited. If you return to a page that you have visited before, the browser will usually download the page, and then as it finds references to objects (logos, images, etc.) it checks the cache first before it reaches out through the internet to gather them again. This will make your browsing faster up to a certain point. At some point it becomes slower to search through all of the files in the cache to see if the file exists locally than it would take to just go get it from the internet. Depending upon how much you surf the internet, and whether you return to the same page(s) a lot, you may want to consider establishing a frequency at which you periodically clear the cache.

Q. How do you go about clearing the cache?

A. In Internet Explorer, go to TOOLS then INTERNET OPTIONS... and then in the middle (Temporary

Internet Files) of the GENERAL page, click on the “Delete Files” button. In Netscape Navigator, go to EDIT then PREFERENCES. Expand the ‘Advanced’ item in the bottom of the list to get the button for clearing the disk cache.

Q. In Windows Excel is there a way to print a spreadsheet so that by default it does not print headers and footers?

A. It is not in the Page Setup as one would assume. Rather, take a look at the topic “templates, customizing workbook defaults” in Excel Help.

Q. I just upgraded from Windows 98 to Windows XP. Now the top of the displayable area of my monitor is no longer visible. Why did this happen, and how do I fix it?

A. Windows XP has more sophisticated hardware recognition and newer drivers. It probably identified your display adapter and monitor and set default settings for the combination. However, these assume that the ‘dials’ on the display are at or close to factory settings. If your monitor is fairly recent, it probably has on-screen digital display adjustments—the use of several buttons under the screen that are used to work through menus that control horizontal and vertical size and centering, pincushion—the image is wider (or narrower) in the middle than at the top of bottom, etc. Use these to make the adjustment.

Q. My machine is not connected to a LAN --but when I start it up, it insists upon asking for a password. How do I get rid of this? It is Windows 98.

A. Do a START/SEARCH/FILES and FOLDERS and look for files with the extension of .PWL. These are password-list-files. Delete them. Restart the machine. It will ask you for the password for the most recent username that you used. Do not fill in a password, and do not click the ‘X’ box to close the dialog box. Instead, just click OK with an empty password field. You may be asked to confirm that there is an empty password—do so. You will not be prompted for a logon again.

Q. Under certain circumstances, I get a web page and while at the page, the browser just locks up—the mouse won't do anything on the page—yet other windows and applications are responsive. The browser is Netscape.

A. Some releases of Netscape Navigator had a severe memory leak. Use the Task Manager (Ctrl-Alt-Del) to get to the application and end it. Note that Netscape Navigator is considerably less tolerant of malformed web pages. For example, if a table does not have a data cell closed, with the /TD tag, or a row closed, with the /TR tag, then the page will cease loading at the start of the table and lock the page. So it is possible that the page, while viewable in Internet Explorer, may not be viewable in Netscape. We have also observed problems (with any browser) with pop-up windows from pages (such as Yahoo personal pages) that come up behind the current window and expect some sort of input—thus taking focus away from the viewable page. The browser will not accept input for the page, because it thinks that the pop-up is expecting data. Sometimes there is a hint that this is the case if the popup created an icon on the taskbar.

Q. I have Windows 2000 on C and programs on D. Drive C is full. Can I move existing programs from C in the "Program Files" folder to D. Can I move these files?

A. You can't just copy the files. When you install an application, part of the installation process is to write to the Windows Registry where it put the support components for the applications—things such as the support .DLL files, things such as spelling checker files, help files, etc. If you move the application with a plain copy, it will not correct the registry entries. This is ONLY done programatically—either via doing an uninstall followed by install, or by using a specialized application such as "AppMover" which I believe came with various things such as Iomega drivers, and Partition Magic, etc.

Q. Can the CMOS battery on a laptop machine be replaced?

A. Yes, if the manufacturer put it in a socket. If not, then it was probably surface-mounted and soldered to the motherboard, in which case it is not a user-replaceable task. Most notebooks that I have seen have the battery soldered in. They are usually trickle charged so that they do not require replacement.

Q I want to grab a portion of the screen to use for documentation and training. How do I get just part of the screen?

A. Some applications will recognize Control-PrtSc or Alt-PrtSc and only save the 'current' window to the clipboard. Just plain PrtSc will save the entire screen. Either way, you may then use any photo-editor to crop out just the portion of the screen that you want. For screen dumps for documentation, I would then recommend that you save the file as type .GIF as it will give you a cleaner, compressed image. If you are going to be doing a lot of this, then take a look at this application: PrintKey Pro: www.geocities.com/SiliconValley/Bay/3053/

Q. My ISP drops the connection if I don't send commands fairly often. This can be a problem if I am doing a download of a large file. Someone suggested going to any site that broadcasts a radio station to keep the connection alive—would this do it?

A. That is a terrible way of doing it, as the radio data will be in competition with your download data. A much better solution is to first make sure that your dial-up networking connection doesn't have the 'disconnect after x minutes of inactivity' setting active, and if that isn't the case, then set your email to check for new messages every, say, 5 minutes. Also set it so that it only checks if you are online. This will cause a very brief 'send' message to your post office inquiring as to the presence of new mail—with a corresponding short response—but it should be enough to keep the connection alive.

Bruce Preston is president of West Mountain Systems, a consultancy in Ridgefield, CT, specializing in database applications. A DACS director and moderator of the Random Access segment at the monthly general meetings, Bruce also leads the Access SIG.

President's file *Continued from page 2*

Love Bug virus after the weekend it appeared in 2000, but only 12 percent reported that they were directly affected by the bug. Still, surveys are finding a growing sense of vulnerability among an increasingly Web-wise public. A 2001 poll conducted by Electronic Data Systems reported that two-thirds of Americans feel threatened by or are concerned about cyber crime. An Internet Tracking Survey by Princeton Survey Research Associates in May-June 2000 found that 54 percent of respondents were concerned that they might get a computer virus when they download information, and a McAfee poll a year later found that 86 percent thought the threat of virus attack had increased over the past year. Chinese polls show more than half of that nation's PC users had experienced a virus or Trojan attack, primarily from pirated compact disks or floppies.

But alarm does not always breed caution. In a February 2001 survey, by Bruskin Research, 41 percent of respondents said they do not personally back up their data, and 69 percent of home users and 46 percent of work users backed up once a month or even less often. The workplace is often the most fertile breeding ground for virus attacks, which arrive by e-mail or even from Web servers, and then hitch a ride via huge banks of e-mail addresses for business contacts. Corporate IT departments are typically slow to adopt new more secure versions of Internet software or the latest security patches. ICISA found that less than half of companies have any protection at their servers and gateways to filter e-mail attachments or contents of messages. And government IT security is even worse. The GAO, which routinely hacks into government agencies to test their defenses, reported to Congress that two-thirds of federal agencies failed the test. In some cases, computers were not protected by passwords, or lists of passwords were stored in plain sight.

Like safe sex, safe computing is a habit that must be actively promoted at all levels of use. At a time when destructive viruses or worms can spread world-wide in minutes, one's identity can be stolen and exploited, and companies can be humbled and put out of business by denial of service, the potential for havoc is enormous.

How do we protect ourselves? Find out at the next DACS General Meeting on March 5, for some sage advice from our resident security guru, Jeff Setaro.

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For more info, eMail Matthew Greger at
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Future Events


March 5 • Jeff Setaro, Computer Viruses Fact vs Fiction

April 2 • Rich Chernock, Whole House Audio

May 7 • TBA


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