July Meetings

Thursday, 7/13/2000 AT&T's PocketNet
Wednesday, 7/26/2000 CompuJOY, Inc. & PC Cables

SVCUG Website

www.svcug.org

Volume XVI, Issue VII | "The All Types of Computers" Club | July, 2000

User Group Officers

President	*Barbara Cott*	*bobbie@wgn.net*	*barbara@svcug.org*
Vice President	*Gaylord Trubey*	*gaylordt@juno.com*	*gaylord@svcug.org*
Vice President	*Roger Freeman*	*update1@ez2.net*	*roger@svcug.org*
Secretary	*OPEN*		
Treasurer	*Howard Engel*	*engelh@gte.net*	*howard@svcug.org*
M.C.	*Dennis Atherton*	*dennis_atherton@yahoo.com*	*guru@svcug.org*

Internet Capable Phones - July 13th

Mike Morgan of Jade Communications will demonstrate AT&T's new PocketNet access on Thursday, July 13th at 7:30 pm at the Simi Valley Public Library.

AT&T Wireless now offers unlimited PocketNet access with any AT&T Wireless calling plan on a wireless internet ready phone, i.e. Ericsson R280 LX and Mitsibishi T250. You can get stock quotes and latest financial news; sports; travel information and directions; news; weather; entertainment news - movie schedules at local theaters, restaurants, concert listings; and shopping for books, videos, etc on E-bay; free!!!!

You can stay connected with wireless e-mail service available with AT&T Pocketnet Plus and Premium plans. You can exchange information by sending, replying, or forwarding messages to any internet e-mail address, when it is convenient; all for 6.99 per month.

The Premium plan gives you the tools to stay in control. Access your Personal Web site to view and update your calendar, address book (5,000 entries) aqnd to-do lists; all for $14.99 per month.
AT&T Digital PocketNet service gives you unlimited wireless Internet access in addition to the monthly airtime minutes included in your calling plan for wireless calls. Faxing pages of e-mail is available on the Plus and Premium Plans (150 pages per month) is included. None of the internet time is charged against your cellular calling plan.

See you there...

CompuJOY, Inc. & PC Cables - July 26th

CompuJoy's recent acquisition of PC Cables has further expanded our product line offering. We are now Your one stop Computer source in Ventura County.

With a complete line of name brand name products, cables, accessories, and Services capabilities, we are ready to meet your requirements.

Visit our new showroom for a hands-on evaluation. We are here to Help. Help is our specialty! Professional, friendly service, and quality products, at competitive prices.

Ed. The new owners of this local Simi Valley store will visit us on July 26th. They also carry ergonomic furniture, complete systems, hardware and the PC Cables inventory we see at the swap meets.

Wireless Credo: Coverage Before Speed

Customers can expect broader reach and capacity before they see faster networks

Informationweek, July 3, 2000

Two words strike fear into the hearts of IT managers looking to deploy wireless applications and services: coverage and bandwidth. Wireless operators have been throwing big bucks at both concerrns recently, but customers will see broader coverage before they see faster networks.

Case in point: AT&T recently spent $3.3 billion for wireless systems in San Francisco, San Diego, and Houston that will give it 3.3 million customers. But AT&T doesn't plan to adopt faster wireless technologies, which support data speeds of 384 Kbps, until 2002. Its current technology, cellular digital packet data, runs at only 14.4 Kbps.

"It's a safe bet that operators will spend the bulk of their money on expanding the reach and capacity of their current networks before massive upgrades. There's intensifying competition for wireless customers, which means the top priority is to get these people on the network," says Lisa Pierce, a director at Giga Information Group. "That doesn't diminish the importance of testing high-speed technologies; it's just a case of first things first."

Although most wireless operators are reviewing technologies to support faster speeds, such as versions of Code Division Multiple Access and Enhanced Data for Global Evolution, few will say when those technologies will be deployed.

Why is it taking carriers so long to boost their networks to meet rising demand? The carriers boost their networks to meet rising demand? The carriers say wireless data technologies are still emerging and need to be tested. Plus, the equipment is expensive and installation is both costly and time-consuming.

"Nationwide coverage is a misnomer, as operators need far more cell sites to expand their networks, keep connections up, and improve their quality," says Maralyn Rosenblatt, VP of Internet technologies at Countrywide Home Loans Inc. in Calabasas, Calif. "And the combination of incomplete coverage and low data speeds has been acting as an impediment to rolling out wireless applications and services - 14.4 Kbps isn't cutting it throughput-wise.

This really limits the services IT managers can deploy. Says Mark Lowenstein, executive VP at the Yankee Group's wireless practice, "The services that win today are those that only require the transmission of minimal text to mobile devices and don't need much interaction. *Bob Wallace. More on wireless: http://informationweekdf.com/793/wireless.htm*

Kodak Offers Digital Photo Finish *Alorie Gilbert*

July 3, 2000, p.18, Informationweek

Targeting the digital photo enthusiast, Kodak last week unveiled an Internet photofinishing service called Print@Kodak. The service offers prints of digital photos that customers submit on the web. It's available through Kodak's web site and photo-sharing sites, including Ememories.com, MyFamily.com, NuWave Technologies, Photo-Access.com, PhotoPoint.com, PicServe.com, Snapfish.com, and Weave Innovations.

When ordering directly from the Kodak Web site, customers follow a three-step ordering process. The service accepts images only in the JPEG file format and offers a range of print sizes. Prices for the service range from 49 cents to $4.49 per print, depending on the size, and shipping and handling are extra. Kodak offers other photo services on the site. Customers can choose from photo-specialty items such as photo mugs, T-shirts, sweatshirts, and jigsaw puzzles.

PCs Hit the 'Outer Limits'

Linking computers to search for intelligent life in space could have implications for business.

by Kathleen Melymuka, Computerworld Online
July 7, 2000, 6:25 p.m. PT

When you have a big job--like searching the universe for signs of intelligent life--you need all the help you can get. That was the idea behind the May 1999 launch of SETI@home, an imaginative application of distributed computing that could have far-reaching implications--for business. SETI@home, a project supported by the nonprofit SETI Institute in Mountain View, California, and other groups, has harnessed the Internet--and people's imaginations--to organize almost 2 million volunteer PCs into a virtual massively parallel computer.

(continued on page 11)

Distributed-Computing Goes Commercial

Inspired by the success of SETIatHome, companies are now offering number-crunching at supercomputer speeds, for a fee.

By Elinor Abreu

When David Anderson launced a project to utilize the unused processing power of idle personal computers scattered around the Internet in May 1999, he had no idea of the groundswell he was creating.

The PCs are linked online to crunch data of radio signals from space to assist scientists working on the Search for Extgraterrestrial Intelligence. The project, also known as SETIatHome, quickly escalated into the world's largest distributed computing effort, involving 2.1 million people (and their machines) in 226 countries.

"During that one year," says Anderson, a former University of California at Berkeley computer science professor, "we accumulated 300,000 years of computer time."

And now, the SETI project has inspired commercial clones: companies that sell distributed computing for large-scale research projects that need supercomputing resources. Anderson is CTO of United Devices, a commercial spinoff of the SETIatHome platform. Later this summer the Austin, Texas-based company will offer a way for commercial labs to use idle computers over the Internet for data processing, and also let participants donate computing time to non-profit research projects.

The idea for SETIatHome came from David Gedye, a friend and former graduate student of Anderson's. "In 1995, soon after the 25th anniversary of the landing on the moon, I was thinking, "What event could make our generation sit up and think about its place in the universerse as much as landing on the moon did in 1969?" recalls Gedye, now CTO at Apex Learning in Seattle. "I think the answer to that is {discovering} some evidence of life on another planet. The question was whether we could use distributed computing on this."

Gedye and Woodruff Sullivan, an astronomy p;rofessor at the University of Washington, worked on provoing the concept, and enlisted Anderson to help develop a prototype. Sever years passed while the team wrote the computer programs to link servers with scattered computers.

Eventually, the nonprofit SETIatHome got funding from the Planetary Society, an amateur astronomy group, and from Paramount Pictures. ("The plan was to have Patrick Stewart flip our switch," Anderson chuckles.) Since then, the project has received an additional $300,000 - half of that from University of California grants - along with around $500,000 worth of hardware from Sun Microsystems.

For volunteer computer owners, SETIatHome entails downloading a program that operates much like a screensaver, which kicks in when a computer is idle. The program also can be set to run in the background while the computer runs other programs. The SETIatHome program takes about 20 hours to process a set of data, and uses the machine's Internet connection to send the results back to the SETIatHome server before downloading more data to process while the user is offline.

The project averages 12 teraflops, or 12 trillion floating operations per second, compared with a supercomputer that can run at 3 teraflops.

"It's the world's largest supercomputer," says Dan Werthimer, chief scientist at SETIatHome and director of the Berkeley SETI program. "It's made our search 10 times more sensitive, so we can find weak signals and pulse signals, things we couldn't look for because we didn't have enough computing power."

Along with his programming expertise, the 44-year-old Anderson's range of interests and broad worldview have fueled his passion for distributed computing. A computer scientist by training, he's also an accomplished pianist, often giving classical concerts in his home and performing at friends' weddings. Weekends find him rock-climbing at Mission Cliffs in San Francisco or at Berkeley's Iron Works.

"David is a genius computer programmer," says Werthimer. "I think he's done an amazing thing. Not only has he made our search more powerful and built the world's largest supercomputer, but it has also helped us bring people into a community."

United Devices was born after Anderson received e-mail last year from Ed Hubbard, an engineer and marketer with experience at Dell, Intel and Microsoft. Realizing the commercial potential of the SETIatHome platform, Hubbard invited Anderson to consider a spinoff.

Things like Napster came along," Hubbard explains, "and it became so clear all of a sudden that the PCs out there were becoming more resourcelike than consumers of resources."

Founded in December, United Devices is operating on seed money from private investors, including CTOs at Dell and the Sun-Netscape alliance iPlanet, along with executives at Intel and Recourse Technologies. Hubbard, the CEO, hopes to raise $9 million to $12 million in a first round of funding, and says he's in talks with several prospective customers, including firms dealing with bioinformatics, like the just-completed Human Genome Project, and companies that provide quality-of-service analysis, such as load testing of Web sites.

For-profit companies would pay United Devices to have their data processed; nonprofit research labs would get processing time for free. Volunteers interested in particular scientific research would donate their unused PC processor cycles, some of which would also be used to process data from the for-profit customers. Nonprofit deals in the works include projects involving research on global warming and on biodiversity.

SETIatHome's success has already fueled a nascent distributed-computing industry, which includes companies like Centrata, Entrophia, Popular Power and Parabon Computation. Entropia, which started in 1997 a a mathematical research project to find rare Mercenne prime numbers, has about 60,000 participating computers. Entropia, based in San Diego, will charge anywhere from $10,000 to more than $1 million per month for the service, according to CEO Jim Madsen, Fairfax, VA.-based Parabon Computation, founded a year ago, has about 500 computers in its network and will launch commercially this fall. Both Entropia and Parabon plan to donate processing time to nonprofits.

Meanwhile, two other companies, Mithral Communications & Design and Active Tools, are developing software that will let researchers set up their own distributed-computing networks over the Internet, without paying a company like Entropia to host the project.

The distributed-computing model could be one of those rarae cases where capitalism and pure scientific research mesh. Not every lab can afford to pay $200,000 for an eight-processor Origin 2000 SGI supercomputer, much less $1 million for a 40-processor machine, says David Fenstermacher, director of scientific computing for the medical school at the University of North Carolina at Chapel Hill. (Fenstermacher is also acting director of the campus' Center for Bioinformatics and a United Devices adviser.) And even the most powerful supercomputers need time to process data. A project that would take several months on a supercomputer - creating a 3D model of a protein's linear sequence, for example - can be accomplished in much less time using thousands of distributed computers.

"A lot of new approaches are really computer-intensive, where you work out how much computer time it will take and it comes to 100,000 years," says Anderson. "And you say 'That's ridiculous; we can't use this approach.' SETIatHome has proved you can use that approach, so all those ideas can be resurrected from the wastebaskets of academia."

Entrepreneur/E.T. hunter: Now there's a job description for the new economy.

E-mail: elinora@thestandard.com

Web Apps Take To The Airwaves

The Wireless Application Protocol is providing corporate and commercial developers with a standard framework for building browser applications for handheld devices, extending the write-once, run-anywhere model for Web development to mobile users

By Jason Levitt

It's been hard to find a major trade show this year that hasn't featured at least one keynote speaker hyping the convergence of wireless communications and the Internet. In the same breath, those speakers also mention the Wireless Application Protocol- the infrastructure technology expected to make this convergence possible.

An entire suite of protocols and programming tools, WAP is a framework that brings the Internet Web application programming model to handheld devices that have tiny displays, very low bandwidth connections, and extremely minimal storage and CPU resources. It isn't so

much that WAP will enable the deployment of mobile applications that would be impossible otherwise. Rather, WAP offers a standard way to build these applications. For businesses, WAP means there is now a global standard for developing mobile applications. The write-once, run-anywhere model of Web application development is now extended to any cell phone, handheld device, pager, or other properly connected device with a WAP browser. With estimates of more than 1 billion mobile subscribers by 2003, that's a compelling reach.

With handheld devices growing more powerful each year and wireless bandwidth similarly increasing, it might make more sense to use TCP/IP over wireless links instead of WAP. Devices already arriving are proving the viability of such solutions. However, there will always be a need for a very low resource solution, and WAP has, for the moment, no real competition.

The WAP model of programming is, in some ways, both simpler and more complex than the Internet model, and anyone looking to develop or deploy WAP applications needs to be aware of developer issues.

WAP is a standard created by the WAP Forum (www.wapforum.org), a consortium of companies that includes all the major wireless infrastructure companies, such as Ericsson, Motorola, and Nokia, as well as computer-industry vendors such as IBM, Intel, Microsoft, and Hewlett-Packard. At a cost of $27,500 per company to join, the WAP Forum represents an elite business proposition.

The WAP 1.0 specification was released in April 1998 (WAP 1.1 was released in June 1999), primarily on technology created by WAP Forum member Phone.com (formerly known as Unwired Planet). Phone.com, in turn, had relied heavily on the Internet Web application programming model. The result is that WAP protocols and developer languages have corresponding counterparts in the Internet domain.

The programming and display languages in the WAP environment are WMLscript, a lightweight scripting language that looks something like JavaScript, and the Wireless Markup Language (WML), an Extensible Markup Language (XML) derivative *o*ptimized for tiny displays.

In order to bridge the Internet and wireless environments-that is, to get content from a Web server on the Internet to a mobile device running a WAP browser-a WAP gateway is necessary. WAP gateways are also called WAP proxy servers, WAP proxy gateways, and Uplink servers, which refers to Phone.com's own WAP gateway product, the Up.Link Server.

A WAP gateway performs the needed protocol and format conversions to transmit content to a mobile device such as a cell phone. It's typically, but not necessarily, located in the network service provider's machine room.

If the whole world had already implemented WAP 1.1, life would be simpler for developers. Instead, WAP development comes complete with its own pre-WAP legacy browsers and gateways. Thus, developers working on WAP applications need to make sure they check their HTTP headers to retrieve the version of the WAP browser and the version of the WAP gateway that a cellular handset is using.

Depending on these versions, a somewhat different content syntax will need to be sent back to the handset. This is an unfortunate situation, but developers who create ap-plications and content for the Internet are used to doing the same thing for the various versions of Netscape and Internet Explorer browsers.

The highest level of compatibility with handsets in the United States and Canada is achieved by coding in HDML (Handheld Device Markup Language) 3.0, the proprietary precursor to WML. For applications in the European and Asian markets, WML 1.1 is the most widely used display language.

In the United States and Canada, major WAP service providers such as AT&T Wireless' PocketNet service, which uses the packet-switched Cellular Digital Packet Data (CDPD) network, and Sprint PCS's Wireless Web, which uses the circuit-switched Code Division Multiple Access network, haven't deployed WAP at all yet. Instead, Sprint and AT&T use Phone.com's pre-WAP browser (version 3.1.x and earlier) in their cellular handsets, as well as Phone .com's pre-WAP gateways (version 3.x).

The problem here is that the pre-WAP browser only understands HDML, the language from which WML was derived, and it doesn't understand WML- script at all. This turns out to be only a partial hassle since Phone.com's WAP gateway automatically translates WML pages into HDML. The translation isn't perfect because not all WML functionality is available in HDML, but many applications will work.

In many cases, you can still use WAP's standard WML to write your applications, but not WMLscript. The upside of this is that older handsets, which might support only early versions of HDML, are supported by the Phone.com *gateways.*

If possible, you'll always want to code in WML instead of HDML simply because WML is an XML language and HDML is not. Coding in WML will give you more options for dynamically generating and manipulating your data in the future, and will almost certainly allow eas-ier interoperability with other data assets.

In contrast, most of Europe and Asia support the WAP 1.1 standard in both handsets and gateways. In these markets, applications written using HDML may or may not work, depending on the type of WAP gateway used. If the gateway automatically translates HDML to WML, such as Phone.com's version 4.x WAP gateway product, then you might be OK-provided your HDML can be accurately translated into WML.
For many businesses, the biggest hurdle with WAP is simply getting their existing Web content into WML. Compared with HTML, WML is a stark, threadbare display language, but is also quite simple.

As a rule of thumb, only the most essential information ends up on a WML page, since WML pages are typically less than 50 characters long. Thus, HTML Web pages aren't simply reduced to fit onto wireless devices-they're usually completely reengineered. For example, graphics are rarely, if ever, used in the wireless domain.

WAP allows only its own 1-bit graphics format, called Wireless BitMap, which is typically only used for applications that demand graphics, such as map-locator applications.

Developing WAP applications turns out to be much like creating Web applications for the Internet. The main difference is that your Web server will be serving up WML pages instead of HTML pages. Just as with Internet Web applications, Common Gateway Interface programs, Java servlets, and other server-side mechanisms can be used to help create interesting and dynamic WAP applications.

In addition, several comprehensive free toolkits that include software cell phone emulators, WAP gateway scaffolds, and WML syntax checkers to help build and test WAP applications are available.

However, if your WAP application is going to be deployed in the United States, then using Phone.com's UP.SDK 3.2 is almost essential to ensure that your application will work properly across Phone.com's version 3.x gateways. If you choose to code in HDML 3.0, then this toolkit is your only choice.

Although any application server is capable of serving up WML pages, the leading-edge method of generating WML pages is to store your Web content in XML format and apply XML style sheets on the XML to generate WML.

Cocoon, a set of open-source tools offered by the Apache XML project (xml.apache.org) is Java servlet technology that can easily transform XML-encoded Web content into WML using XML Style Sheet technology. If you're interested in this approach to generating WML content, Cocoon is a good place to study how these transformations can be accomplished.

Similar capabilities are offered by the Art Technology Group's Dynamo 4.5 application server (www.atg.com) and the open-source Enhydra application server (www.enhydra.com), both of which take different approaches to compiling content into Java classes.

It's easy enough to deploy your WAP application and let the network providers handle all the WAP gateway chores. In fact, the location of the WAP gateway that your cell phone uses is usually preprogrammed into your handset. But there are cases when having the network service provider's WAP gateway handle all the format and protocol conversions between the Internet and WAP may not be in your best interest.

In particular, when secure connections are required between the cell phone and your server, you may want to manage the entire connection yourself. That's because a potential security hole opens up where the WAP gateway translates between Wireless Transport Layer Security (WTLS) and Transport Layer Security (TLS) connections since the encrypted channels essentially must be stopped and restarted.

Some businesses will prefer to run their own WTLS sessions from behind the corporate firewall. The WAP Forum is working on a new standard to allow companies to run their own secure, direct connections. That standard, called the Proxy Navigation Model, will let network service operators such as AT&T Wireless and Sprint PCS temporarily cede control of their WAP gateways to a WAP gateway located behind your company's firewall.

For companies that need a high level of security now, the only choice in the United States is to run a private Internet connection, such as a T1 line, directly to the network service provider and use a dedicated WAP gateway in the service provider's machine room.

Secure channels, of course, require use of digital certificates. Unfortunately, cell phones lack both the secure storage for digital certificates and the computational power necessary to handle encryption algorithms. Benchmarks conducted by Ericsson have found cell phones taking as long as 15 minutes to handle the RSA handshake necessary for WTLS connections-far longer than any user would wait.

The lack of secure storage is addressed in the WAP 1.2 standard, released in December, but it may be another year or so before we see compatible handsets in the United States. Those handsets will probably look like the European WAP handsets, which have a small card slot under the battery that holds a Subscriber Identity Module (SIM) card. That device, which in Europe holds cell phone subscriber identification data, could contain digital certificate information for the subscriber and possibly even a co-processor to aid in numerical calculations.

The WAP 1.2 standard defines a WAP Identity Module standard for holding all the user identity and security information necessary for secure connections with WTLS. It's not clear yet whether a new WIM card will be developed or simply an updated version of the SIM card with WIM information on it.

The WAP 1.1 and 1.2 specifications let Web sites retrieve only certain information about client cell phones that request WML pages. That information includes the version of the WAP browser used on the cell phone, the version of the WAP gateway, the cell phone model, and assorted details about the display capabilities of the cell phone.

By far the most interesting information about a WAP user, however, is physical location and phone number. Although it's unlikely that cell network providers will ever release their customers' cell phone numbers to servers on the Internet, location information is a different story, and, in fact, the WAP Forum is working on a standard way for Web servers to retrieve location information about cell phone clients.

Knowing the physical location of a user offers new WAP application possibilities. Sale-force automation is an obvious application where knowledge of your physical location makes it possible for a WAP application to feed numerous types of pertinent data to your cell phone display.

Direct marketing is also seen as a likely application in which users will opt to accept advertisements pushed to their cell phone in exchange for free services. The "infotainment" industry sees location-based technologies as an easy way to give consumers and business travelers instant information about restaurants, movies, and other entertainment options, as well as provide maps and directions based on location.

Once user location data is available to WAP applications, the most interesting applications will be possible on packet-switched networks such as CDPD or SMS, used by AT&T's PocketNet service. That's because packet-switched networks, the same type of networks that mobile pagers use, don't require a phone call to connect to the Internet.

In effect, they're always on, and can receive data at any time. In contrast, Sprint PCS's Wireless Web is a circuit-switched Internet connection, which means that your cell phone dials a phone number in order to access the Internet.

So-called push applications, which automatically send data to your cell phone when you want it, are possible using WAP. The Push Access Protocol, part of the WAP 1.2 standard, offers up a standard, programmable way of pushing data to a cell phone. In the United States, PAP isn't yet available, but similar, proprietary capabilities can be developed using Phone .com's software developers' kit.

Proponents of wireless applications like to point out that cell-phone customers are used to paying for services, unlike Internet customers. But whether or not customers are willing to pay for services, the opportunity for E-commerce vendors to extend access to their sites into the wireless space is too compelling to dismiss.

Similarly, with proper security mechanisms in place, corporate intranet applications such as E-mail and scheduling can enhance employees productivity via the convenience and ubiquity of the cell phone.

The fact that the United States must deal with three major bearer networks, CDMA (code division multiple access), TDMA (time division multiple access), and GSM (global system for mobile communications), while Europe only has GSM, is certainly slowing U.S. WAP deployment. But with standardized, end-to-end security still on the drawing board, and location-based technologies even further away, widespread deployment of many interesting WAP applications is probably still several years from realization.

Illustration by David Golden

The Benefits of WAP

The Wireless Application Protocol is a collection of standards that deliver Internet access to wireless devices.

It's attributes include:

An Internet programming model

A wirelsss markup language

A protocol stack optimized for wireless networks

A de facto standard supported by most manufacturers of wireless devices

Data: Ericsson

Need Help?

Dennis Atherton
hardware - any, networking , WIN95 setups
dennis_atherton@yahoo.com 7-11 evenings
Steve Carter
OS/2 - scarter@vcnet.com 805-598-8455 til 9 pm
Barbara Cott desktop publishing, Excel, Photoshop, web pages bobbie@wgn.net 805-581-2495 weekends
Howard Engel
Word 6, programming in PASCAL or ADA
engelh@gte.net 805-523-7602 9 am - 10 pm
Will Fiske
Win95/3.11/3.1, DOS 6.2 and down to 5 wfiske@juno.com after 6 pm
Roger Freeman
online researching
update1@ez2.net 805-579-8426 before 10
Spencer Hartman Digital Research DOS 6, Novell DOS 7.0 WordPerfect 6.1 for DOS, batch files
805-522-7212 if no answer, lv msg 10 am - 10 pm
Gordon Huff modems, Telix, FDISK
wa6fmx@worldnet.att.net 805-499-3494
Lucy Lediaev Basic Windows & Office, Basic HTML & graphics concepts
lucyl@cnmnetwork.com evenings 6-9:30 pm & wknds
David Ringwood
hardware - jolyon@mail.westworld.com
Oliver Stockton
MS Word , Wndows 95, Beginners
SimiClown@aol.com 805-581-2991 24 hours / 7 days
Robert Sully
Hardware Questions, OS's (Win95 and OS/2)
BASIC Programming, Beginning Visual Basic
rcs@malibyte.com
Dee Tillman
Office 97 Word & Excel, WordPerfect, Commodore, Apple II dtillman@juno.com 805-526-1395, after 4
Gaylord Trubey
DOS internet, WIN 3.x, WIN 95, software hardware
gaylordt@juno.com 805-526-2077
Dick Uhlman
XTree (1-3), Windows, DOS Excel
computerwizard@juno.com
805-583-2174 & 805-583-2804 5pm - 8pm
Karleen Volz
BASIC questions, DOS WIN 3.11, WIN 95 WIN NT, basic hardware questions
kvolz@juno.com 7pm - 9:30pm & weekends

Simi Valley Computer User Group is a non-profit special interest group for the benefit of anyone interested in learning more about computers and how to use them.Meetings are held twice a month. The General Meeting meets at 7:30 pm on the second Thursday of each month, the Hardware / Software Meeting is held at the same time on the fourth Wednesday of each month. The meetings are held at the Simi Valley Public Library, in the Community Room.

If you need further information about the meetings, call Barbara Cott at 805-581-2495. Further information can be found at www.svcug.org or send email to info@svcug.org. Visitors are welcome to come and see what our group is all about without obligation to join. However, if you find our meetings to be beneficial to you, we hope you will join and support our group. Dues are $24 per year or $13 for 6 months.

It has to say this: Simi Valley Computer User Group (SVCUG), consisting of its officers and membership, is notaffiliated with any computer hardware or software manufacturers. Articles contained in this publication may not necessarily reflect the views and opinions of SVCUG. SVCUG makes no warranty of the suitability or inability to use any product or service.

Ad Rates

Small member ads are free.
(business card size)
1/4 page - $25/mo
1/2 page - $50/month
full page - $100/month.
Send your camera ready art to Editor at
bobbie@wgn.net.

Membership Rates

$24/year or $13/6 months.
Includes user group pricing, expert computer Q&A, newsletter (mailed/online),
BBS, email address, raffle.
For membership information,
email Howard Engel, Treasurer
engelh@gte.net

Local Computer User Groups

Appleholics Anonymous
Chuck Baca 805-650-7503
Tony Pizza 805-482-3453
2nd Sat 9:30 am
3169 Telegraph Road. Ventura

Conejo Valley Genealogical Society
Albert Richardson, Chairman (NEW)
(805) 492-2029
bf140@gte.net

CVMUG (Mac club)
Susie Herrera 805-484-2259
sherrera@vcnet.com
General Meeting: 1st Thursday, 7 pm
Novice SIG: 4th Monday
Internet SIG: Quarterly
Westminster Presbyterian Church, Camarillo

Commodore 64/128 Users
Loyd Couch: 805-483-9200
BBS: 805-382-1125
General Meetings: 1st Sat., 10 am
Cal Fed Bank, 430 Arneill Road, Camarillo
Tech Meeting: 2nd Sat, 10 am
Boys-Girls Club, 126 E. 7th Street, Oxnard

Channel Islands PC Group
Toby Scott, 805-981-1212
Website: www.cipcug.org
General Meeting: 1st Sat, 9 am Camarillo Airport
OS/2 Corner: 2nd Sat, 9:30 am

Gold Coast CUE of Ventura County
Tim Rainville, 805-525-3873 rainvilt@vcss.k12.ca.us
Days vary, 4 pm
Camarillo area or local school

Leisure Village Club
Neil Iven, 805-383-0016 lniven1@juno.com
1st Friday, 10am Camarillo
1st Monday, MAC group
2nd Friday, Communications
3rd Wednesday, Novice

Simi Conejo Linux User Group
Website: Valleywww.psilord.com/sclug
Meets every other Saturday at 6 pm at
Nortel, 4100 Guardian Street, Simi

MacValley Users Group
Daphne Gruberman (818) 998-7025
1st Wednesday
Wilkinson Senior Center
8956 Vanalden Street
Northridge

Simi Valley Computer User Group
Barbara Cott 805-581-2495 bobbie@wgn.net
Website: www.svcug.org
Main meeting: 2nd Thurs 7:30 pm
Hardware/Software Meeting: 4th Wed, 7:30 pm
Simi Valley Library

Thousand Oaks Personal Computer Club
Harry Isaman 805-405-8323
Website: www.vcnet.com/topcc\
4th Thurs: 6:30pm Jan-Oct
3rd Thurs: 6:30 Nov-Dec
Goebbel Sr Ctr or T.O. Library

TUGNET
Website: www.tugnet.org
meets every Tues, 7pm
Granada Pavilion
11128 Balboa.
Granada Hills.

Ventura Beginners PC Users' Group
Howard Wilson
805-647-0360
3rd Sat, 10 am
Club House
BenaVentura Mobile Home Estate
11407 Darling Road

Ventura Windows Publisher User Group
Bob Tracy 482-7092
bobtracy@vcnet.com
3rd Tuesdays, 7 pm
Cal Fed Bank Bldg
430 Arneill Road
Camarillo

PCs Hit the 'Outer Limits'

(continued from page 2)

The task: analyzing radio signals picked up by the Arecibo radio telescope in Puerto Rico--the one featured in the 1997 movie Contact. The goal: detecting the kind of deep-space radio signals that could indicate communication by other intelligence in the universe. The strategy: to link together as many of the world's computers as possible to accomplish the goal. The Internet lets us do that for the first time in the history of computers," says David Anderson, the SETI team's distributed computing guru. "It lets us, in effect, make them into one big parallel supercomputer." Moreover, the SETI@home software runs in the background or as a PC screen saver, so it doesn't interfere with users' normal computing tasks.

The search for extraterrestrial intelligence (SETI) may or may not find ET, but it has helped spur a change in thinking about the potential for distributed computing. Proponents say that linking computers through the Internet could enable long-term, computation-intensive tasks in aerodynamics, pharmacology, geophysics, biotechnology and manufacturing to be done in relatively little time. Suddenly, goals that were once tabled because they were deemed impractical are possible, Anderson says. "There may be some analysis you want to do, and you see it will take 100,000 years of computer time, so you would throw away that idea," he explains. But in one year, SETI@home has used more computer time than that. "So those ideas can be taken out of (the) wastebasket and reconsidered," he says.

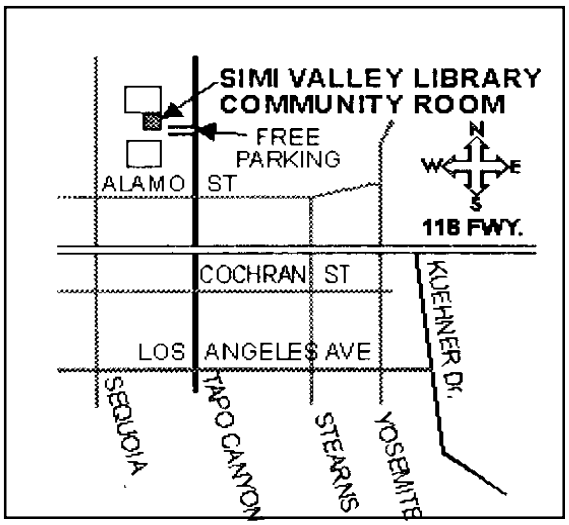
Potential users include energy companies that need to do seismic or geographic analyses before they start drilling for oil or digging for coal, manufacturers that do structural analysis or study fluid dynamics prior to transforming a design from a computer model into the real equipment, and engineering firms that stress-test everything from bridges to aircraft. The basic idea is simple, says Dave McNett, president of Distributed.net, a Birmingham, Alabama-based nonprofit research foundation founded in 1997 to compete in an encryption-breaking contest. The group has grown to 20 developers and has rallied a 190,000-machine network (93 percent are PCs) to break code and solve mathematical puzzles for fun and prizes.These kinds of networks can accomplish a great deal, McNett says, because 90 percent of most computers' processing power goes unused. Even when computers are in use, the majority of tasks aren't CPU-intensive. Working in a spreadsheet, for example, is CPU-intensive only when the columns are computed. CPUs are used only in short bursts," McNett says. "And that's not even mentioning 6 p.m. to 9 a.m. and weekends and holidays."

How SETI@home Works

"The hypothesis is that if there are other intelligent beings, they probably use radio waves to communicate among themselves, in which case we would have some chance of hearing leakage of that communication in the same way our TV and radio waves leak out into space," says David Anderson, a computer scientist who works on the SETI@home project. "Or they might be sending an intentional signal with the express purpose of telling other beings like us that they're there." Here's how the SETI scientists are harnessing the Internet to find such signals. As the world's largest radio telescope at Arecibo, Puerto Rico, slowly sweeps the sky, digital data is recorded on special magnetic tapes at the rate of about 50GB a day.

The tapes are mailed to the University of California at Berkeley, where the data is transferred to three Enterprise 450 servers donated by Sun Microsystems. The servers chop the data into "work units" of about a third of a megabyte each, and those are stored on a set of 500GB disks. \Volunteers initially download the SETI client software through the Internet onto Windows or Macintosh PCs, and it acts like a screen saver, starting when they're not using their computers. Versions for UNIX and Linux run in the background at low priority all the time. Volunteers then connect to the SETI server via the Internet and receive a work unit, which can download in just a few minutes even via a 28.8-kbps modem. A work unit represents a strip of the sky about the width of the moon and one-tenth the height, containing a frequency band of 10,000 hertz. Radio waves in nature are spread over different frequencies and come across as noise rather than a discreet wave, so the computer combs through that band looking for narrow-frequency radio waves, like the transmission from a commercial radio station at 90.1 megahertz FM, for example. Such waves may indicate a transmission.

When the work unit is finished, the software produces a short list of narrow-frequency candidate signals. Then it reconnects to the SETI server and exchanges the work unit and results for another work unit. Because our civilization is constantly leaking "radio garbage" into space, its difficult to say whether a detected signal comes from us or them. The candidate signals are put into a database where they can be examined and compared, but the best way to determine whether a signal is from space is to look for the same signal from the same point in the sky at two different times. SETI@home is just getting to the stage where it will have results of multiple runs through the sky that will enable that kind of analysis.



www.wgn.net
Ask for User Group Rate

Simi Valley Computer User Group

2718 Kadota Street
Simi Valley, CA 93063

July Meetings

Thursday, June 13th
AT&T s
POCKETNET
Jade Communications

Wednesday, June 26th
CompuJOY, Inc.
& PC CABLES