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From the Editor's Desk…

Acquisitions, Mergers, Buyouts, Sellouts... the scrambling is on! Much like the game of Monopoly, the stakes are high, the game is fast and the rewards are big time all the way. That's what's been going on throughout the computing world's business end.   The scenarios to watch at this time are actually in two areas. The world of Internet servers and the recognition of certain fonting procedures in the world of HTML 3+. Seems Adobe, Apple and Netscape want their choice of fonts (type one $$$) and Microsoft is offering the TrueType Technology at the opposite end of the "schtick". Personally, I prefer TTF.... Why?? It offers extremely nice fonts and you are not "hammered" every time you wish to obtain a new font. In the server area, Microsoft has taken the first steps to remove the ridiculously high price levels often associated with setting up an Internet Site. Of course, there are going to be casualties but then... back when I was in school, the key phrase was "diversify"…. Those who failed to listen then failed. Those who are not diversified in the world of the Internet will likely do so at this time too. If you listen carefully, you can almost hear the crying about MS knocking down the exorbitantly high prices.

Have you tried the NEW Microsoft Internet Explorer?? Version 2.0? It embarrasses the "competition". Once

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you run it, you'll never look back. WebSites literally come alive with motion and music when setup to be compatible with IE2.0.. The part is it does not "eat up" half your hard disk at installation time like some "nifty" can't do without browsers do. Expect some spectacular "happenings" now on the Internet side of things at Microsoft... Keep an eye on the "human dynamo, Brad Silverberg, (Mr. Win95). He is now at the helm of the Internet division. Its going to get very interesting. Odds are, MS comes on in a very big way with the Internet and.. it will get done right the first time with Brad calling the shots.

On a sad note... Windows 95 has been out now since August 24th, 1995.. NT since when?? Its now March 01, 1996 and STILL CANON has yet to produce the often promised 32bit drivers for their scanners. Whatever became of dependability and customer support?? CANON??? Oh, Canon... will there EVER be drivers?? Or, are you simply killing time 'till a stupendous announcement of a new piece of whatever to take the place of the current crop of ORPHAN SCANNERS?? According to our research, Canon has blown away a good 40% of is scanner customer base with their footdragging, "DRIVERGATE".   Canon is HP's best scanner PR advantage.... Ask anybody waiting for the 32 bit drivers for Canon's Scanners which crop of scanners they'd recommend.

Ralph....

Of Special Note:

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STReport is now ready to offer much more in the way of serving the Networks, Online Services and Internet's vast, fast growing site list and userbase. We now have our very own WEB/NewsGroup/FTP Site and although its in its early stages of construction, do stop by and have a look see. Since We've received numerous requests to receive STReport from a wide variety of Internet addressees, we were compelled to put together an Internet distribution/mailing list for those who wished to receive STReport on a regular basis, the file is ZIPPED, then UUENCODED. Unfortunately, we've also received a number of opinions that the UUENCODING was a real pain to deal with. So, as of October 01,1995, you'll be able to download STReport directly from our very own SERVER & WEB Site. While there, be sure to join our STR list. In any case, our current Internet mailing list will continue to be used for at least the next eight weeks. Each of our readers will have by then, received their information packet about how they may upgrade their personal STR News Services.

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STReport Headline News

Online Firms Sue Over Telecom Law

CompuServe is among 23 information providers and computer companies filing a federal lawsuit today against the new ban on indecency on the Internet. The coalition's suit characterizes the new law as misguided and unenforceable. The suit seeks to overturn the Communications Decency Act, which, signed earlier this month, imposes a $250,000 fine and up to six years in prison for transmitting indecent material in such a way that children could find it on the Net.

As reported earlier, enforcement of the "Cyberporn" provision already has been blocked temporarily as a result of another lawsuit, filed by a coalition led by the American Civil Liberties Union. U.S. District Judge Ronald Buckwalter said the definition of indecency in the act was too vague. The Justice Department said Friday that it would not investigate or prosecute Internet users for indecent or offensive material until it receives a ruling from a three-judge panel of the U.S. District Court in Philadelphia, which is to consider the issue beginning March 21.

Reporting from Philadelphia, Associated Press writer Christopher McDougall says today's suit "broadens the battlefield" by including more than 50 pages of explanation about "why the Internet is a new technology deserving of new laws." Attorney Bruce Ennis, who filed the lawsuit on behalf of the Citizens Internet Empowerment Coalition, noted anyone can anonymously post images and messages over the Internet from anywhere in the world, adding, "How can you track down offenders in a worldwide and often anonymous system? Something like 40 million now have access to the Internet."

Besides CompuServe, members of the coalition filing the suit includes Apple Computers Inc., Microsoft Corp., America Online, the American Library Association and the Society of Professional Journalists. McDougall notes the federal government has a history of restricting broadcast speech because the channels are limited and listeners and viewers don't have much control over what they see and hear. The lawsuit maintains that Internet companies are more like book or magazine publishers than TV stations.

"The coalition contends that rather than a ban, there are less restrictive means, such as in-home blocking software, to protect children or other users from offensive content," AP observes. The full text of the new complaint is available at the Web site of the Center for Democracy and Technology (which can be reached at Web address http://www.cdt.org/).

Telecom Bill Suits to Be Combined

A suit brought by a coalition of information providers, computer companies, and writers and editors against the new federal ban on indecency on the Internet is likely to be combined with a similar action filed earlier this month by civil libertarians. As reported, the suit filed by 23 firms -- including CompuServe, America Online, Prodigy, Netcom On-line Communications Services, Apple Computer Inc., Microsoft Corp., the Newspaper Association of America, the American Library Association, the Association of Publishers, Editors and Writers and the Society of Professional Journalists -- characterizes the new Communications Decency Act, signed into law earlier this month, as misguided and unenforceable.

Meanwhile, in another development, Playboy magazine has filed yet a third suit against the controversial new law. "The Communications Decency Act is a dangerous attack on constitutionally protected speech," CEO Louis Rossetto of Wired magazine's parent Wired Ventures Ltd. told Linda Dailey Paulson of United Press International. "Wired magazine -- whose content is completely legal and acceptable in print form -- would be prevented from reproducing portions of the

magazine online, or from offering an online forum for free-spirited debate about the stories we publish."

Wired editor Todd Lappin adds, "This is not a leftist freak issue. It is not a 'card-carrying member of the ACLU' issue. It is a First Amendment infringement issue that is intolerable." The suit augments a similar action spearheaded by the American Civil Liberties Union earlier this month and seeks to have the legislation of this section of the Telecommunications Act declared unconstitutional. The new suit also seeks to have the unique characteristics of the Internet formally recognized within a legal context. The law at issue imposes a $250,000 fine and up to six years in prison for transmitting indecent material in such a way that children could find it on the Internet.

Paulson reports the new suit differs from that filed by the ACLU in that "it represents the unique interests of those who rely on the Internet as a mode of communication." Says UPI, "In addition to challenging the 'indecency' language, this suit holds that because the Internet is a uniquely democratic medium, it deserves robust First Amendment protection." Another plaintiff in the suit is an umbrella group known as the Citizens Internet Empowerment Coalition, which hopes to mobilize individual Internet users by encouraging them to join the organization and the suit, thus demonstrating the unique character of the Internet in court.

Writing in an essay distributed on the Internet recently, Microsoft chief Bill Gates said, "The Bill of Rights is the foundation on which our nation is built. The Internet is an enormously valuable place in which those rights must continue to thrive. Both the Bill of Rights and the Internet are potentially fragile. Mess with either of them too much, and we might ruin them. We can't let this happen." On the other side of the debate, Sen. Jim Exon, one of the law's sponsors, accused the computer companies in the new lawsuit of being "more interested in profits from pornography than protecting children." Associated Press writer Christopher McDougall quotes a statement from Exon (D-Nebraska) as saying, "We don't allow children to walk into adult bookstores, and shouldn't allow them to freely browse the red light districts of the Internet either."

As reported earlier, enforcement of the new act has been blocked temporarily by the ACLU's suit, filed Feb. 8. U.S. District Judge Ronald Buckwalter said the definition of indecency in the act was too vague. (The law defines indecency as "any comment, request, suggestion, proposal, image or other communication that, in context, depicts or describes, in terms patently offensive as measured by contemporary community standards, sexual or excretory activities or organs.") Bruce Ennis, Washington attorney for the coalition, told McDougall the new complaint will be consolidated with the ACLU lawsuit. A three-judge panel of the U.S. District Court in Philadelphia is to consider the issue beginning March 21.

Meanwhile, Playboy Entertainment Group Inc. has sued the U.S. Department of Justice, Attorney General Janet Reno and the Federal Communications Commission in a constitutional challenge to the telecommunications act. Reporting from Wilmington, Delaware, the Reuter News Service quotes an information paper filed yesterday in the U.S. District Court in Delaware as saying Playboy seeks a restraining order against the same controversial section of the Communications Decency Act. "Playboy's constitutional challenge invokes the First and Fifth Amendments," Reuters says.

PLAYBOY SUIT CHALLENGES TV LAW

Playboy magazine's suit against the new Telecommunication Act targets the law's provisions on cable TV, contending the ban on obscenity discriminates against adult-oriented services. As reported, Playboy has filed the third suit against the Telecommunications Act since its signing in law earlier this month. Associated Press writer Jeannine Aversa reports this morning that at issue in the Playboy suit is a section of the telecommunications act that requires cable companies to block sexually explicit programs so nonsubscribers can't hear them or see even distorted images.

The section, which takes effect March 9, applies only to channels that are "primarily dedicated" to sexually explicit programs -- for instance, Playboy's channels, Spice or Adam & Eve -- but not to sexually explicit programs carried on HBO, Showtime or other cable channels.

Playboy has asked a federal court in Delaware to suspend enforcement of the provision on the ground that it is unconstitutional. As noted, the new law also is being challenged by a coalition of information providers, computer companies and writers and editors who characterize its Communications Decency Act as misguided and unenforceable.

The suit likely will be merged with a similar action filed earlier this month by the American Civil Liberties Union and 19 other groups, questioning the constitutionality of the online obscenity ban.

COMPAQ, PACKARD BELL SETTLE SUITS

Compaq Computer Corp and Packard Bell Electronics Inc. have apparently settled the unfair competition lawsuits they filed against each other last year. The Reuter News Service reports that documents filed in U.S. District Court of Delaware show a settlement between the computer makers, with only details yet to be completed. Trial had been scheduled to start on Monday.

In a suit filed last April, Compaq alleged that Packard Bell had violated federal law by failing "to disclose to potential purchasers of their products that they may be buying a computer that contains used components." In a countersuit, Packard Bell accused Compaq of unfair competition and defamation and alleged that Compaq had failed to disclose that its PCs could contain "retested" components.

Reuters says the documents show that no money is involved in the settlement. The settlement includes the dismissal of Packard Bell's libel charges against Compaq Senior Vice President Ross Cooley, but doesn't include a patent lawsuit brought by Compaq against Packard Bell in U.S. District Court in Houston. In that suit, Compaq alleges infringement of patents for power conservation, video display and high-speed switching.

COURT LETS STAND COPYRIGHT RULE

Without comment, the U.S. Supreme Court today let stand a copyright ruling that observers say could jeopardize the existence of independent companies that service and maintain computers. Reporting from Washington, Associated Press writer Richard Carelli says the justices rejected an appeal "that urged them to say a temporary, electronic copy of a computer program created in a computer's random access memory is not capable of being a copyright infringement."

Last year, a federal judge in San Francisco ruled Southeastern Express Co., a small computer service and maintenance business, had infringed on the software copyrights of Triad Systems Corp., maker of computers and software programs. (Triad's products are used by automotive parts stores, enabling them to automate their sales, inventory and accounting tasks.)

Carelli notes Southeastern was founded in 1989 by former Triad employees and is in business to service Triad computers, putting it in direct competition with Triad. The 1992 lawsuit alleged Southeastern infringed on Triad's software copyrights by routinely maintaining Triad computers for owners who sign Triad licensing agreements. To service a Triad computer, a Southeastern technician used the software in a Triad customer's possession.

In the lower court ruling, U.S. District Judge Fern M. Smith ordered Southeastern to stop servicing Triad computers after concluding that the loading of Triad's operating system software into the RAM made a "copy" under federal copyright law. The 9th U.S. Circuit Court of Appeals upheld the preliminary injunction against Southeastern last August.

In its Supreme Court appeal, Southeastern was supported in friend-of-the-court briefs submitted by various electronic service business groups, one of which commented, "The 9th Circuit's misinterpretation of copyright law will prevent independent service companies from competing with manufacturers" in various high-tech endeavors that use computer software programs.

BILLS ADDRESS NET ENCRYPTION

A deadlock between the White House and the Internet industry over software encryption is addressed in two bills to be introduced in Congress soon, but observers find industry executives lukewarm to the proposals. Writing in The Wall Street Journal this morning, reporter Jared Sandberg says the bills -- sponsored by Democratic Sen. Patrick J. Leahy of Vermont and GOP Rep. Robert W. Goodlatte of Virginia -- seek to loosen government restrictions on encryption, the mathematical formulas used to scramble data beyond recognition of eavesdroppers.

At issue is the government's banning export of strong encryption because, it says, it hampers its efforts to monitor the actions of terrorists and foreign governments. As noted, the Clinton administration wants to set up government approved repositories that keep copies of mathematical keys for decoding encrypted information, so law enforcement officials can decode private communications if granted a court order.

Net executives counter that widespread use of strong encryption is essential to the success of electronic commerce over the Internet, arguing export restrictions on strong cryptography hurt business abroad where competitors can freely offer stronger encryption software.   "Producing a separate weaker version of encryption software for foreign markets," says Sandberg, "not only raises costs but is becoming pointless because hackers can now access computers powerful enough to break the weaker code."

Leahy told the paper, "The federal government's ideas on encryption are based on a situation which may have existed 10 or 20 years ago with very little realization of the realities of today. We're not going to sell our computer programs if we have outdated computer technology, especially if people can buy it in Europe or Asia." The Journal says the two new bills would allow for the export of much stronger encryption provided that level of security was "generally available."

Leahy's proposal states the key-escrow scheme will be voluntary, and establishes rules by which companies -- rather than government agencies -- would hold the keys for decoding data. These companies would be liable for abuse of keys and subject to strict procedures for releasing the keys to law enforcement. While industry executives welcome the bills, "they say the measures don't go far enough to unshackle high-tech companies," Sandberg reports.

For instance, product manager Thomas Parenty of Sybase Inc. told Sandberg that while both bills represent "a good start," allowing U.S. companies to export encryption only as strong as that which is available overseas, the bills won't allow them to innovate and produce superior products. And, he said, putting keys in the hands of third-party companies is still likely to meet industry opposition. Sandberg adds, "People familiar with the bills said one motivation is to build support for a private version of the key-escrow concept, which could be an opportunity for several companies who are selling products based on the idea."

SILICON GRAPHICS EYES CRAY

Word is 3-D graphics leader Silicon Graphics Inc. is set to acquire control of supercomputer maker Cray Research Inc. Citing anonymous sources, The New York Times reports this morning that Eagan, Minnesota-based Cray initiated talks because it has been struggling financially and government customers were reluctant to continue buying. "There are certain obvious synergies between the two that could be explored through other ways than an outright acquisition," analyst Gary Smaby at Smaby Associates in Minneapolis told Eric Auchard of the Reuter News Service.

Smaby said Cray computers use chips from Sun Microsystems Inc. and Digital Equipment Corp., two of Silicon Graphics's biggest competitors. Auchard says an acquisition or other form of alliance could give Silicon Graphics a new market for its computer chips as well as access to Cray's supercomputer expertise, which could be used in machines aimed at businesses managing big databases. Reuters notes the market for supercomputers has been shrinking because of declining government sales and competition from Silicon Graphics and other companies. Of a possible acquisition of Cray, Gruntal analyst Roxane Googin says, "What it shows to me is that (Silicon Graphics is) continuing to retreat from the low end into a rather profitless high-end business.

The best thing for them to do is to face the pressure of (Microsoft Corp.'s) NT and Intel Corp. and the low-end computer makers head-on." (She refers to growing popularity of PCs based on Microsoft Windows and Intel's Pentium processors.) Meanwhile, the Associated Press quotes "one person familiar with the talks" as saying Silicon Graphics is to acquire a majority interest in Cray, but not buy the entire company, a plan meant to protect the firms' stock prices.

CRAY RESEARCH DEAL PUT AT $739M

In a stock and cash deal valued at $739.2 million, Silicon Graphics Inc. has agreed to buy supercomputer maker Cray Research Inc. As reported, Eagan, Minnesota-based Cray initiated talks because it has been struggling financially and government customers were reluctant to continue buying. Writing in The Wall Street Journal this morning, reporters

Joan E. Rigdon and William M. Bulkeley say Silicon Graphics's buyout is "a move that it hopes will eventually bolster its presence in corporate America's back office."

The deal calls for 3-D graphics leader Silicon Graphics to offer $30 a share for 19.2 million Cray shares, or 75 percent of the company. It would then convert Cray's remaining shares to Silicon Graphics stock on a 1-for-1 basis. The deal is expected to close April 1. "Some analysts said Silicon Graphics got a good price, given Cray's $437 million order backlog and its expectations to complete a turnaround this year," the Journal comments. "But analysts said Cray, which is an unprofitable leader of a shrinking supercomputer market, could not have gotten a higher bid."

AMELIO CONFIDANT JOINS APPLE

Apple Computer Inc. has named George M. Scalise to the position of executive vice president and chief administrative officer, effective March 11. Scalise will be a member of Apple's executive leadership team, reporting to Chairman and CEO Gilbert F. Amelio. Scalise, 62, worked with Amelio at National Semiconductor Corp., where he was also executive vice president and chief administrative officer. At the chip maker he oversaw the company's human resources, business development, corporate communications and external affairs.

He will handle similar functions at Apple although his role is not yet fully defined, says the computer maker. Before joining National Semiconductor in 1991, Scalise was president and CEO of disk drive maker Maxtor Corp. Previously, he held various executive management positions at Advanced Micro Devices and Fairchild Semiconductor. "George Scalise has been an outstanding member of the senior management team at National Semiconductor and has exceptional skills and experience in a number of business areas," says Amelio.

"At a time in Apple's history when flawless execution is particularly important, he will be a valuable addition to our management team. We're delighted to have him aboard." "Apple has a tradition of excellence in people, products and technology," says Scalise. "I look forward to building on that foundation as a new member of the Apple team."!

MOTOROLA, SUN SET CYBER ALLIANCE

Motorola Inc. and Sun Microsystems Inc. are joining forces to help cable operators bring high-speed data communications and Internet services to the home. The deal will merge Motorola's cable modem technology with Sun's highly touted Java Web-oriented programming language. The partners describe their new "Cyberspace Alliance" as a significant step toward the industry's overall goal of interoperability of broadband data technologies based on open standards and protocols.

The companies will integrate Motorola's CyberSURFR cable modem technologies with Sun's head-end server and Internet server and Java software. Sun's Solstice Enterprise Manager software will be used for integrated network management of telephony and data solutions. Motorola will also work to optimize the performance of its CableComm and CyberSURFR data systems for Java applications as well as future Java-based network appliances.

Sun and Motorola say they will establish a team to formulate technical guidelines for open systems-based solutions. The companies notes they will work with industry leaders and standards bodies to promote open protocols for broadband solutions.

"Sun's server and systems implementation expertise will strengthen Motorola's ability to deliver complete voice, video and data solutions to our broadband customers and accelerate the deployment of high-speed data networks throughout the U.S.," says James M. Phillips, Motorola's corporate vice president.

"We believe the powerful combination of Sun's Internet and server technologies with Motorola's cable modem technology will give cable operators a distinct competitive advantage in delivering consumer based broadband services," adds Scott McNealy, president and CEO of Sun Microsystems. "Similar to the Internet revolution, the widespread deployment of broadband Internet services to the home will be driven by technologies that are based on open -- not single vendor -- standards."

ORACLE PREVIEWS NET MACHINE

Oracle Corp. says its new $500 system designed specifically for accessing the Internet is expected to go on sale in September. Demonstrating a prototype of the company's new Network Computer in San Francisco, Oracle CEO Larry Ellison told reporters the device will let people exchange e-mail, do word processing and get onto the Net. He expects the machine also will have voice mail and fax capabilities.

Business writer Karyn Hunt of the Associated Press observes, "In addition to being less expensive than a typical $1,500 personal computer, the device most used for going online now, Oracle's machine is supposed to be easier to use. But it will not perform many of the useful tasks that personal computers do, such as running the huge variety of existing programs for balancing their checkbooks, planning new gardens or figuring out taxes. Eventually, programs sent over the Internet may provide such capabilities."

Oracle Vice President Andy Laursen of the network computing unit told Hunt, "It's not so much a computer as it is an information device. We're not trying to build a stripped down PC. It's not competitive with a PC. A PC does a lot but is complicated to learn to use. A network computer is more like a telephone set in that it's easy to use."

AP says the Network Computer will come in several designs:

- One plugs a keyboard and mouse into a television set to use the TV as the screen.
- Another uses a remote control device with the television screen.
- A third plugs a small screen into the telephone.
- A fourth is more like a laptop computer.
- A fifth is a desktop version, like a personal computer.

Hunt reports Ellison says several consumer electronics companies have agreed to license Oracle software to make the devices, though he did not identify them. Oracle hopes greater usage of the Net will drive demand for its server software, which allows storage and transmission of virtually any type of data, including video, music, maps, text and numbers. As reported, Oracle is not alone in this new market. Several other manufacturers also are exploring the possibility of offering lower-cost, less powerful computing machines that can access the Net and other data networks.

HP TO INSTALL ZIP DRIVES IN NEW PC

Under a deal with Iomega Corp., Hewlett-Packard Co. will become the first retail PC vendor to install a Zip drive in one of its systems. The new HP Pavilion 7110Z PC minitower system will ship with a built-in 100MB Zip drive. The machine also features a 120MHz Pentium microprocessor, 16MB of RAM, and a 1.260MB hard disk. HP says it expects the new model to become available this spring for $2,349.

The Zip drive, which uses removable floppy-like disks, is designed to store to store infrequently used data as well as to back up files. "Iomega's Zip drive enables HP to give Pavilion PC customers built-in storage capabilities that they cannot currently get from any other retail PC vendor," says Harry W. McKinney, general manager of HP's home products division.

"The ability to back up programs and files, expand hard disks and simply use a higher capacity disk for today's popular multimedia applications lets customers extend the capabilities of their HP Pavilion PC." The Zip drive is also available in external and internal add-on versions for most PC and Macintosh systems.

SEAGATE OFFERS SUPER DISC

A disc drive capable of storing 23.4 billion bytes of data – the highest-capacity to date in the industry -- has been introduced by Seagate Technology Inc., which says the device will be on the market by the third quarter of this year.

Reporting from Seagate's Scotts Valley, Calif., offices, United Press International quotes company officials as saying the 5.25-inch Elite 23 provides more than 2 1/2 times the capacity of the next largest disc drive currently available and can be used with mainframes, servers and digital audio/video applications. Seagate did not disclose what it plans to charge for the device. The company said the drive can transfer data at speeds of up to 12.1 million bytes per second.

SOFTBANK COMPLETES ZIFF-DAVIS BUY

Japan's Softbank Corp. says it has completed its acquisition of Ziff-Davis Publishing Co. from Forstmann Little & Co., a New York investment firm. As previously announced, the purchase of Ziff-Davis was made in conjunction with Mac Inc., Softbank's majority stockholder. The purchase price was $2.1 billion, with $1.8 billion coming from Softbank and $300 million from Mac.

Softbank says Ziff-Davis will continue to be operated and managed as a single entity. Its current management team will remain in place and Eric Hippeau, chairman and CEO of Ziff- Davis, will report to Masayoshi Son, president and CEO of Softbank. All of Ziff-Davis's current business units and products will remain together and all of its development projects will stay on their respective courses, says Softbank, which affirms there will be no changes in the way Ziff-Davis interacts with the marketplace.

"Since we first looked at acquiring Ziff-Davis more than a year ago, the company has performed above expectations," says Son. "We look forward to strong growth ahead for its core business and also see Ziff-Davis as a source of major new ideas and initiatives. Its exceptional management team and world-class employees should feel excited to be part of Softbank. We respect their expertise and dedication, value the quality of their products and fully endorse their extremely high standards of editorial excellence, independence and integrity."

"We are very proud and happy that Ziff-Davis attracted such an ardent suitor," says Hippeau. "Masayoshi Son is committed to the computer industry and shares our belief in its continued growth. He has a long-term vision for Softbank and it includes investing aggressively in its various groups."

Founded in 1981, Softbank is Japan's largest distributor of computer software, peripherals and systems, as well as Japan's largest publisher of computer-related magazines and books. Ziff-Davis publishes a wide range of computer magazines and online computing content. In the U.S., the company publishes PC Magazine, PC Week, PC Computing, Computer Shopper, MacUser and MacWEEK, among other titles. Internationally, Ziff-Davis publishes computer magazines in Britain, Germany, France, Mexico and China.

NEW WEB TYPE FONTS PLANNED

Adobe Systems Inc., Apple Computer Inc. and Netscape Communications Corp. say they will work together to define and deliver HTML extensions that will allow a new array of type fonts on the World Wide Web. The three companies expect to provide an open, cross-platform technology solution for using Type 1 and TrueType fonts in Web HTML and Adobe Acrobat PDF documents.

The firms say the new web font technology marks a significant advance in the visual appeal of Internet information. They note that people viewing information on the Web will benefit from a rich font assortment on a page with excellent performance. People creating information for the Web will be able to choose from numerous fonts and ensure that users see their pages as they were originally intended to be seen.

The companies plan to submit the technology to the World Wide Web Consortium (W3C) and Internet Engineering Task Force (IETF) as a proposed extension to HTML. The technology will be usable by style sheet designs, such as the one the W3C is developing for HTML 3.0.

"This new web font technology adds dramatic new dimensions to the Internet experience enabling Netscape users to view and create pages with new richness," says James Clark, chairman and founder of Netscape.
"We intend to bring to the Internet the kind of visually compelling information users have come to expect in other media, such as print publications and CD-ROMs," adds John Warnock, chairman and CEO of Adobe.

WOW! COMPUSERVE NAMES NEW SERVICE

CompuServe Inc. has unveiled the official name and logo of its new consumer online service. The service will be known as "WOW! from CompuServe." The company says it made the name selection after extensive consumer market research. "WOW! from CompuServe is a dynamic new online service. Its name reflects the excitement and energy of the service itself," says Scott Kauffman, CompuServe's vice president of consumer markets and general manager of WOW! "Furthermore, the WOW! name allows us to build upon the established credentials of CompuServe -- the most extensive online information service in the world -- in a consumer-friendly way."

WOW! from CompuServe is a new consumer online service created specifically for at-home use. CompuServe notes that the service offers each household member easy access to information, entertainment and communication -- including the Internet -- combined with the flexibility to customize and control the online experience. It includes distinct views for grown-ups and children, easy electronic mail, seamless Internet access and multimedia that enlivens the service with sound and motion.

"All elements of WOW! from the design and structure of the service to the marketing and distribution channels -- and even the selection of its name -- have been developed with the consumer in mind," adds Kauffman. "We intend to establish ourselves in the increasingly competitive online marketplace as the best service for the at-home consumer, backed by the most comprehensive and sophisticated systems infrastructure in the industry."

The WOW! from CompuServe logo features the word "WOW" with a gray starburst behind it. A key feature of the logo is the distinctive exclamation mark in bold red. The words "from CompuServe" are an integral part of the mark. CompuServe will preview the new service and announce the start date and pricing at a press event in New York City on March 13. Windows 95 users can reserve their copy now by calling 1-800-9GETWOW (1-800-943-8969).

AT&T ANNOUNCES INTERNET SERVICES

AT&T today unveiled its plans to offer access to the Internet nationwide, saying existing long-distance customers will get the service for free for the first year if they use the network for five hours a month or less. The free access is available only for a year to people who sign up during 1996.

Business writer Evan Ramstad of the Associated Press quotes AT&T will charge $19.95 a month for unlimited access to the Net by existing customers, while customers of other long-distance or cellular services will be able to sign up for AT&T's Internet access at a higher rate.

"The move," Ramstad comments, "represents a price challenge to other services, which generally start with monthly charges of $5 to $10 and can range to many times that for heavy users. It also represents another step in the company's ability to combine several kinds of telecommunications service."

Vice President Tom Evslin of AT&T WorldNet Service told Ramstad his employer is able to offer the service because it faces lower costs for signing up customers than companies that just provide online access. "It's a lot cheaper to sell a new service to an existing customer," he added, noting AT&T has 80 million long-distance customers.

AT&T said it will take orders immediately for WorldNet Service, which begins March 14. AP says AT&T will charge people who do not use any of its other phone services $4.95 for three hours of access per month, plus $2.50 per hour for each additional hour. Unlimited monthly access will cost $24.95 to non-AT&T customers.

Meanwhile, the Reuter News Service says AT&T planned to phase out the Interchange Online service, which it bought from Ziff Communications Co. in December 1994 for an estimated $50 million. Worldnet will include Netscape Communications Corp.'s Web browser software, Reuters added.

TOSHIBA UNVEILS FAST CD-ROM DRIVE

Toshiba America Information Systems Inc. says it has developed the industry's fastest slimline CD-ROM drive. Toshiba's new XM-1402B is a six-speed internal drive that offers a 900K per second data transfer rate as well as 160ms random seek and 190ms average access times. Toshiba says the drive's performance, attributable to its high rotation speed, was accomplished by accelerating the processing speed of the digital signal processor used in error correction and by improving the pick-up motor to support higher speed data accessing.

Designed for use in notebook computers, the drive has a 3.7 watt average power consumption. The unit incorporates a power-saving function that cuts consumption to 85 milliwatts when the drive is in a wait state. The drive operates with a 5 volt power supply. The XM-1402B is priced from $140 in manufacturer quantities. Toshiba America Information Systems Inc. is headquartered in Irvine, California.

ZEOS PCs BITE THE DUST

Micron Electronics Inc. reports that it will discontinue sales of its ZEOS PC line. The Boise, Idaho-based company also says it will close its Minneapolis manufacturing operations effective April 30. Approximately 300 jobs will be eliminated by the shutdown. Micron notes that qualified candidates will have the opportunity to apply for other positions within the company, including positions in the firm's Minneapolis call center and other locations. Micron plans to take an approximate $30 million restructuring charge to pay for the closing. The company notes that the charge will result in a net loss for its second fiscal quarter when results are announced in March.

INTRANET GENIE STR INFOFILE

FRONTIER TECHNOLOGIES ANNOUNCES INDUSTRY'S FIRST TURNKEY INTRANET SOFTWARE SOLUTION

Intranet Genie Uses Web-centric Paradigm to Enable Companies to improve internal communications and automate everyday procedures

Mequon, WI -- February 26, 1996 --Frontier Technologies today unveiled the first ready-to-use Intranet solution designed to bring the benefits of the Internet computing paradigm to businesses that do not have extensive in-house computing expertise. Intranet Genie provides both client and server software that will, from day one, allow employees to improve internal communication and automate numerous everyday functions.

"Although 1995 was a watershed year for the Internet, it is clearly still the domain of early adopters," said Dr. Prakash Ambegaonkar, Frontier Technologies Chief Executive Officer. "Frontier's goal is to offer turnkey solutions for companies that are not populated with UNIX gurus and who do not wish to make a large investment hand-crafting an Intranet system. Now small to medium-size companies can realize the benefits that large firms have found from using internal web servers."

Intranet Genie offers -- on a single CD-ROM -- both the client and server software required to install a secure, fully-functional Intranet. The components include Frontier's Windows NT-based SuperWeb Server, complete with advanced search capabilities and numerous small applications, as well as client software, including an Internet browser, web administration and authoring tools, and secure email.

"Intranet Genie is a ready-to-use solution but is based on open standards such as TCP/IP and HTTP," said Dr. Ambegaonkar. "That makes the system completely customizable and extensible. Our customers will never be locked into a single-vendor solution, and this is what makes the Intranet paradigm so much more valuable than proprietary groupware solutions."

Intranet Genie will work either with the provided browser and web server or with platforms of the user's choice such as Netscape Navigator or Microsoft Information Server.

Frontier Technologies Unique Advantage The strength of Intranet Genie offering rests on three distinguishing features:

High-performance Web Server:
SuperWeb Server, designed from the ground up for Intranet use, is optimized for Windows NT, making it especially suited for smaller companies that have no UNIX experience. The server supports remote administration and content creation, allowing multiple people within a company to create and update web pages. For example, the HR manager can not only update employee benefit information directly from his or her desktop, but can also control access to the information, perhaps limiting access to confidential data to a select group of employees. The remote administration tools are extremely graphical and intuitive, with full WYSIWYG editing capabilities.

Single interface for finding information:
A common problem in any organization is finding internal information quickly, whether it is last month's press release, or a product spec sheet. Frontier Technologies' award-winning CyberSearch has been enhanced to allow users to search any collection of data indexed by the Verity search engine, internal information stored on Intranet web servers or file servers, internal discussion groups, or any live data feed such as Reuters financial information. The information can be "bookmarked" in user-defined categories. CyberSearch is unique in that it also includes a version of the well-respected Lycos catalog of the Internet, allowing users to locate both internal and external Internet information through one interface and a single query. The Lycos catalog is available both on CD or for LAN access.

Overall value proposition:
Complete Intranet solution on one CD: Intranet Genie is designed to be installed within hours. Frontier's unique web builder set-up program is a step-by-step guide to establishing an Intranet. WebBuilder will set up folders for each department, convert existing documents, such as press releases, from their original format into web pages, and also establish lists of users with appropriate access levels. The Web Builder will also allow the user to choose whether to install or customize a number of useful web-based applications provided by Frontier to automate everyday internal tasks, such as conference room management or purchase requisition.

Security For Internal Information
When used in conjunction with a firewall product, Intranet Genie offers protection of internal communications. Only authorized users may access both Intranet and Internet resources. Intruders are prevented from obtaining sensitive company information.

Frontier Technologies will partner with several Firewall vendors to ensure interoperability of each supplier's products.

Pricing Strategy and Availability
Intranet Genie will be available in 2Q, 1996. Pricing will be announced at that time and will be extremely competitive. Some components (for example, email and TCP/IP, which many customers will already have) will be charged a la carte. Frontier expects this product will be very attractive to its distribution channel, which has experience in targeting the small to medium sized business. Frontier is therefore committed to building a strong Frontier Technologies Internet Partners program which gives resellers the marketing and training required to profitably sell and support Intranet Genie.

About Frontier Technologies
Frontier Technologies Corporation's mission is to pioneer Internet and Intranet applications that make individuals more productive and businesses more competitive in a global market. The company is a proven technology leader with award-winning networking products for Microsoft Windows, Windows95, and Windows NT environments, including SuperWeb Server, CyberJunction, SuperHighway Access 2, CyberSearch, and SuperTCP Suite 96. Frontier Technologies is a global company with headquarters near Milwaukee, Wisconsin. With offices in California, Pennsylvania, and India, Frontier Technologies now employs more than 150 people worldwide.

SuperWeb Server, SuperHighway Access, SuperHighway Access 2, CyberSearch, CyberJunction, SuperTCP Suite 96, SuperTCP Suite, SuperTCP/NFS, SuperTCP, SuperNFS, SuperX, Internet Organizer, and CyberMark Organizer are trademarks of Frontier Technologies Corporation. Other trade names,trademarks, and registered trademarks are the property of their respective holders.

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WILDCAT! 5 95/NT STR FOCUS   "THE BEST KEEPS GETTING BETTER!"

WILDCAT! 5 - PROJECT ANNIHILATOR - PREVIEW INFORMATION SHEET

January 1, 1996

The Overview

Interactive Multimedia Reaches the On-line Application Market

Mustang Software is developing a system to empower the corporate, business, small office and hobbyist community to offer full on-line multimedia to customers, staff and prospects. The development name of the project is Annihilator and it has entered beta testing at several hundred locations. It will be released as Wildcat! 5 for Windows 95 and Windows NT.

Annihilator is a true Windows 95 or Windows NT client/server application designed to provide a BBS-based solution for a broad range of customers. It delivers an exciting interactive multimedia experience for callers by allowing the system operator to make use of familiar multimedia tools, including JPEG and GIF editors, for customization of the caller interface. For backward compatibility all aspects of the system are accessible via standard ANSI connectivity but when accessed using the free remote client, the caller is greeted with an exciting multimedia experience. The support engine for offering remote graphics to the caller is included at no additional cost, and the Wildcat! Navigator suite is slated for free distribution.

Annihilator takes full advantage of the new multitasking in Windows 95 and the robust server operations in Windows NT to provide a solution for every online need. The Windows 95 platform has been selected to support small to medium load systems while the Windows NT platform was chosen to provide high performance on-line solutions utilizing its single and multi-processor support.

True Client/Server Technology

The Bulletin Board System arena is the latest market segment to be courted by advertisements touting the benefits of "client/server" technology. However, upon closer inspection, "client/server" is often used to refer to the use of a proprietary remote program (the client) to dial into a BBS application (the server). While the use of a remote graphic client is an exciting aspect of many of the newer BBS technologies including 'Annihilator', it does not represent true client/server functionality at the application program level, the location where its true power can be unleashed.
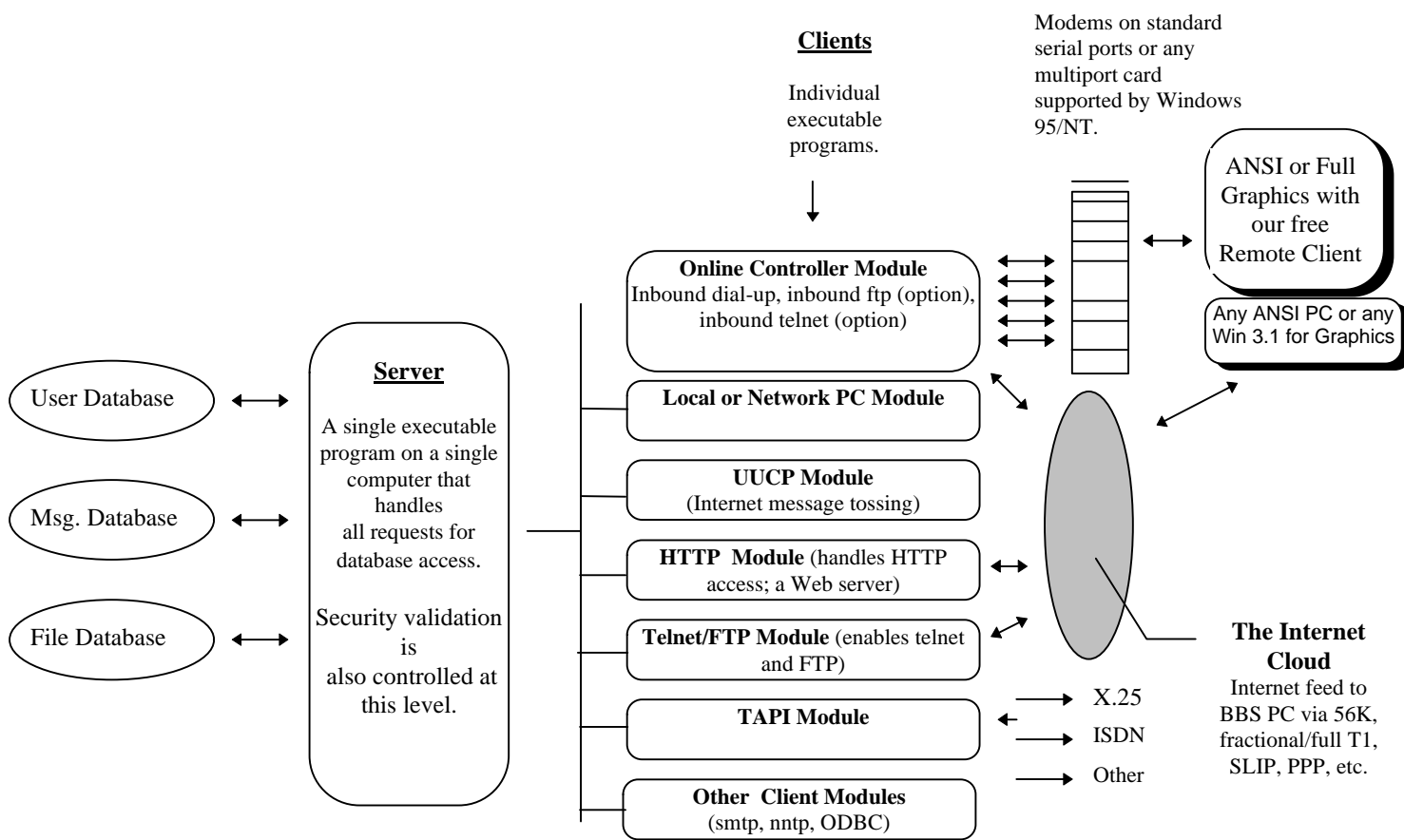
So What is Client/Server?

Client/server, at its simplest level, is an architecture that involves client processes requesting service from server processes. Client/server computing recognizes that those client modules need not all be executed within the same memory space, that is, the processes that distribute the information need not all be a part of the same single program. Separation of the client and server modules provides improved security and performance. By implementing a BBS with a

16

core information server, and routing that information using a number of application clients at the sysop's location, a system can be established that delivers more information at greater speed, even on a single PC running Windows 95.

Isn't It Complicated?

Client/server can be as simple as running two or three familiar programs on a single PC or as intricate as a multiple-PC network running several applications on each PC. The beauty of client/server model is that once you understand the relationship between the different executable programs (the clients and the server) you can set it up in any of several ways that best meet your needs.

Clients

Individual executable programs.

Modems on standard serial ports or any multiport card supported by Windows 95/NT.

ANSI or Full Graphics with our free Remote Client

Any ANSI PC or any Win 3.1 for Graphics

Online Controller Module
Inbound dial-up, inbound ftp (option), inbound telnet (option)

Server

A single executable program on a single computer that handles all requests for database access.

Security validation is also controlled at this level.

User Database

Msg. Database

File Database

Local or Network PC Module

UUCP Module
(Internet message tossing)

HTTP Module (handles HTTP access; a Web server)

Telnet/FTP Module (enables telnet and FTP)

TAPI Module

X.25

ISDN

Other

The Internet Cloud
Internet feed to BBS PC via 56K, fractional/full T1, SLIP, PPP, etc.

Other Client Modules
(smtp, nntp, ODBC)

Single PC running Windows 95 or Windows NT

The client/server model of Annihilator above is a simple setup with the server and all clients running on a single PC (inside the dotted line). The computer can operate under Windows 95 or Windows NT Workstation or Server. This configuration offers the most compact system and allows for total management from the single BBS computer.

An alternative to operating all client executables on a single PC is to distribute the processing over a Microsoft Network. The server executable runs on a Windows NT (workstation or server) PC while the client modules can be run on either the server PC or networked PCs running either Windows 95 or Windows NT. The advantage of separating some client operations from the server is increased power through distributed processing. For example, in an extremely active system the sysop may find it advantageous to establish three PCs, one for the Server and TCP/IP connectivity, including WWW access, and two others, each running a rack of 32 modems with its own copy of the Modem Controller Client.

Use of the client/server model provides a number of advantages:

- 32-bit Windows multitasking means no additional multitasking software is needed and 16-32 lines can be run easily without loading multiple copies of the BBS.

- The entire BBS configuration in our client/server model can be modified even while in full operation, but only by authorized personnel. The system server accepts change requests and implements them as soon as usage permits.

- The number of inbound sessions on a single computer is significantly increased. Thanks to the enhanced multitasking of both 32-bit Windows platforms, a much larger number of connections is possible on any given PC. As inbound access (via modem, telnet, HTTP, etc.) reaches the processor limits for any given PC, additional client PCs can be added which communicate automatically with the server. Clients for modems, HTTP, telnet and other activities can be operated on a single PC or on a variety of additional systems, depending on load.

- This new generation BBS can truly isolate the core of the host activities, providing secure, private system access even to local users. The server portion of the system is established in an area on disk with restricted user access. The server controls all access to messages, files and other system information. Requests are submitted to the server by all support programs and third-party utilities through an easily adopted application program interface (API). This methodology has the added advantage of allowing the actual BBS program-flow code to be written in wcCODE and to be fully customizable.

True Client/server technology provides total flexibility. It allows the sysop to offer a BBS on a desktop platform and to expand the system capabilities as desired.

Standard *Annihilator* Modules Included With Every BBS Create a Foundation

The following modules and clients come with the standard Annihilator Wildcat! 5 package.

Server module

This module provides the base functionality for processing all database and configuration requests through a published API structure.

Local or LAN Client

This module is included with every package and is used by anyone connecting at the host PC. It can also be used by anyone on the network for local login. It is an ANSI text connection. Note that the graphical Wildcat! Navigator which is designed for remote connection also can be used locally for a graphical local connection.

Online Client

This module is included with every package and answers the phone for all dial-in lines. It can present the BBS information to a caller in ANSI, ASCII or in full graphics when called with the free Wildcat! Navigator.

QWK Echo Client

This module is included with every package and handles QWK mail exchange processing between the host and other BBSs.

TAPI Client

This module is included with every package and provides a link to the Windows Telephony Application Program Interface. It talks to TAPI-aware add-on cards or hardware that offer ISDN, X.25 or other connectivity.

Wildcat! Navigator

This module is a set of freely-distributable Windows programs for callers to experience full multimedia when connected. This program suite operates on Windows 3.1, Windows 95, Windows NT and any OS/2 release with Windows support. It can also be run locally, over a LAN or via a telnet connection. The core language of the Wildcat! Navigator is HTML, the language of the World Wide Web.

Optional *Annihilator* Modules Increase Client/Server Power

The following modules are optional add-on accessories and are purchased separately.

Internet Connectivity Package

This optional accessory package handles Internet connectivity and includes several individual clients:

UUCP Module

This module handles Internet email and newsgroup support via UUCP. It includes a program for connecting to an internet service provider via dial or UUCPD, and tosses messages into the Wildcat! system. Callers can send and receive Internet email and participate in newsgroup message exchange. It also supports feeding messages to downline nodes. (available as part of the initial release)

Telnet Module

This module enables the Online Module to also answer inbound telnet callers. It connects callers to the BBS when they connect from a remote internet site. In this mode it acts as a telnet server. With the telnet module installed the BBS also supports outbound telnet sessions requested by callers, connecting them to other locations on the internet. In this mode the BBS acts as a telnet client for the caller. Inbound telnet connections support ANSI, ASCII and the Wildcat! Navigator interface. (available as part of the initial release)

FTP Module

This module enables the Online Module to also answer FTP connection requests. It responds to inbound FTP file requests and functions as a FTP server. Requests can be made anonymously for a restricted file set, or using a name and password on the BBS for FTP access to files based on the caller's access profile. This module also allows callers to make FTP requests to locations outside the BBS. (available as part of the initial release)

WWW Module

This module functions as an HTTP proxy server that allows inbound callers using the Wildcat! Navigator to surf the World Wide Web. It also supports inbound HTTP connections from callers using any browser, allowing them to view the BBS HTML screens. (available as part of the initial release)

PPP Module

This module allows callers to make a connection to the BBS with any Winsock layer to establish a path for true TCP/IP connectivity. With a PPP connection callers can run their choice of applications while connected to the net, including mail applications such as Eudora, other telnet clients, and browsers other than the Wildcat! Navigator, such as Netscape. (available as part of a maintenance update after initial release)

Dynamic HTML Module

This module provides BBS connectivity to inbound callers connecting using a WWW browser. It functions as an HTTP server that dynamically creates HTML files for file and message data and is fed by a set of display files in HTML format customized by the sysop. (available as part of a maintenance update after initial release)

SMTP Module

This module provides support for simple mail transfer protocol. It provides full management for sending and receiving internet email. (available as part of a maintenance update after initial release)

IRC Module

This module provides a link to internet relay chat to expand the live discussion capabilities of the BBS. It functions as an irc client for callers. Note that standard inter-node chat is supported without this module.

NNTP Module

This module provides support for network news transfer protocol messaging and processes mail from an Internet NNTP server (many providers offer nntp mail services). It provides the link to allow callers to read and reply to usenet newsgroups.

Exchange Mail Client

This optional module provides a link to Microsoft Exchange using the Windows Mail Application Program Interface. It provides a mechanism to have both email and conference mail be routed to Exchange on a local area network.

wcCODE Development Package

This optional package is a new, enhanced high-speed 32-bit development language so powerful that all standard BBS functions are written in it. The wcCODE package allows the sysop to create custom BBS operations and programs to be run by the caller.

Source Code

For total customization of all online activity the wcCODE source for all BBS functions is available for purchase. (Requires wcCODE)

Database Client

This optional module provides remote connectivity to database processing using the ODBC standard, accessible via wcCODE applications.

Reports Client [wcPRO]

This optional module provides extensive reporting on BBS usage and activities.

Billing Client [wcBILLING]

This optional module provides a complete billing for pre-pay or post-pay systems.

How Do I Set Up a Client/Server BBS?

The configuration of Annihilator is very similar to the DOS Wildcat! BBS except that all configuration programs are 32-bit graphic Windows applications. Once you have run the installation and configuration programs you maintain the BBS using other Windows applications that provide functionality similar to the DOS Wildcat! MAKEMENU, MAKEWILD, MAKEQUES, wcFILE, and other support programs.

How Do Callers Connect?

There are several methods for callers to connect to your Annihilator (Wildcat! 5) BBS and several types of presentation:

- Dial-in modem callers using a standard comm package receive standard ANSI screens, just like WC4.
- Dial-in modem callers using the free Wildcat! Navigator package receive a full graphical HTML presentation. The BBS main "page" and all other informational pages such as bulletins, etc. are created by the sysop as HTML (www) documents using any HTML editor. We expect to bundle an HTML authoring tool with the package.
- Telnet inbound connections using a standard telnet or comm package receive ANSI screens, just like WC4. (requires the Internet Connectivity Package)
- Telnet inbound connections using the Wildcat! Navigator receive a full graphical HTML presentation. (requires the Internet Connectivity Package)
- FTP inbound connection requests can log in as "guest" or "anonymous" for limited file access as set by the sysop, or can log in as a BBS user with the correct password for full file lists based on BBS access profiles. (requires the Internet Connectivity Package)
- HTTP inbound can be made using any browser (Netscape, Mosaic, etc.) and will receive dynamically generated HTML pages for files and messages, with other information and other "pages" prepared by the sysop as HTML documents. (requires the Internet Connectivity Package with the Dynamic HTML Module, expected in 2nd qtr '96).

What Internet Services Can I Offer?

If you add the Internet Connectivity Package your callers can make use of a number of Internet services by dialing in using any ANSI terminal. By connecting to you over a standard phone line they are able to establish an internet email address, telnet to any other internet location, access files via ftp at any other location, and they can participate in internet newsgroup discussions. If they dial-in using the free Wildcat! Navigator they can do all the above plus surf the World Wide Web using the browser included in the Navigator.

After the release of the additions to the Internet Connectivity Package expected in 2nd quarter '96, callers can expand their Internet connectivity to allow them full use of any internet applications they desire since you will be able to provide them with a PPP connection.

What Hardware Will I Need?

Annihilator was designed to provide a platform for everything from a single line BBS to a 1,000 line corporate connectivity server. The same set of client/server modules are used in all installations.

For a simple one or two line BBS the easiest installation platform would be a 486/66 PC with 8 MB of memory running Windows 95. The standard communications ports in the PC can be used and the sysop just needs to run the Server Module and the Online Client. Minimize these two programs on the desktop and your BBS is operational. To login locally you run the Wildcat! Navigator for a full graphical BBS session.

As the BBS expands the sysop might add a multiport card from Digi, Comtrol, Stallion, Equinox or any other manufacturer that offers Windows 95 or NT support. A 4 or 16 port card can be installed in the same 486 PC to increase line count and the only additional hardware changes might be to add additional memory to 16 MB. The same Modem Client will handle the additional lines with the installation of a line count increase module.

Further expansion of the BBS can be accomplished in many ways. As line count increases the power of the PC can be increased to handle the added load by moving to a Pentium 90-120 MHz CPU. With the technology available today it is entirely possible to operate a single-box PC that can address hundreds of incoming lines and other connections by taking advantage of the multi-processor capabilities of the Windows NT platform. Multiport cards from 16 to 128 ports are readily available for the NT platform.

For those that would rather make use of a LAN environment for BBS connectivity the Annihilator project also has a solution. By using Windows NT (Server or Workstation) the sysop can establish a server PC that handles the core server duties and allows separate PCs to handle different aspects of the remote connection. Each Client module can be operated on a networked PC running Windows 95 or NT, and will communicate with the server PC automatically. No messy drive mappings and no specific Networking components are required, other than those that come with Windows NT (workstation or server) and Windows 95. This type of distributed processing system really make sense for large systems with several different types of access, including local, TCP/IP, modem, X.25 and ISDN. Different client processes can be run on less-powerful PCs depending on their load.

What about Novell andLANtastic Networks?

Annihilator is totally compatible with NetWare or LANtastic. A workstation PC on a LAN can run Windows 95 or Windows NT and operate the complete BBS. Other LAN PCs can access the BBS using the Local/LAN client.

Although the BBS PC can access files located on the NetWare or LANtastic server drives, all BBS server and client files must be located on PCs running NT or 95 with the exception of the downloadable files, which can be located anywhere on the LAN. The same cabling for NetWare or LANtastic connectivity (ethernet is assumed) is automatically used by the Windows networking to share BBS client/server data using TCP/IP.

Can it Run Doors?

Annihilator supports DOS-based doors on all port connections, and includes a program for DOS program redirection. However, operation of 16-bit DOS doors does limit the number of lines that can be supported on any given PC. Programs specifically written in the new 32-bit wcCODE are an exception, and do not cause this system degradation. Testing is the only method to determine the actual impact of a specific DOS door on your Annihilator system. Each DOS door affects system performance differently depending on the language it was developed in and what resources it uses.

Doors under Windows NT

> Doors do not require any modification and operate in their own memory session for each node. Door operation is virtualized, a process that isolates the door itself from the port, and prevents it from knowing whether it is talking to a standard com port, a DigiBoard or a telnet connection. All doors all think they are talking to a standard COM 1. For specifics on how to run doors, see Part 2 of this document.

Doors must be able to talk to the actual port in use for each node via DOS. Unless the door is written in wcCODE it will not be able to access multiport boards that use a Windows 95 driver. For specifics on how to run doors, see Part 2 of this document.

Release Information and Pricing

No specific release date has been set for project Annihilator, but the target date is early 1996. The majority of the program modules are expected to be available in 1st quarter '96 but some optional modules will not become available 2nd quarter or later.

The Wildcat! Navigator will be posted for download and wide-area testing in January. A patch upgrade to the wcSERVER component of the Preview CD ROM will also be made available at that time to enable CD owners to make use of the Wildcat! Navigator for their callers.
How to order Wildcat! 5 for Windows95/NT

To order or get more information on Wildcat! for Windows 95/NT, call the Mustang Sales Office at 1-800-208-0615 or 1-805-873-2500. We encourage Annihilator CD owners, currently registered Wildcat! Sysops and Sysops with competitive products to call for limited-time, special pricing.

Product	MSRP	Availability
Wildcat! 5 M2 (two node + local)	$149	Initial Release
Wildcat! 5 M16 (16 node)	$349	Initial Release
Wildcat! 5 M32 (32 node)	$699	Initial Release
8 Pack Node Increase	$199	Initial Release
32 Pack Node Increase	$699	Initial Release
Internet Connectivity Package	$249	Initial Release*
wcExchange	$499	Initial Release
wcCODE Development Language	$149	Initial Release
wcSource Plus Pack	$349	Initial Release
HoTMetal Pro with Metal Works	$129	Initial Release
Platinum Support Plan	$199	Initial Release
Auto Update Plan	$149	Initial Release
If paying monthly, first 3 months	34.95	Initial Release
If paying monthly, additional months	12.95	Initial Release
1 year (paid in advance)	$149	Initial Release
2 years (paid in advance)	$275	Initial Release
ODBC Database Client	$799	Second Quarter
wcReports Client	$149	Second Quarter
wcBilling Client	$149	Second Quarter
wcSubscribe	$99	Second Quarter

* Portions of this product will be added following the initial release, see previous text for details.

MSRP - Manufacturers Suggested Retail Price

What are the Plans for the DOS Version of Wildcat!?

The current DOS version of Wildcat! will continue to be supported and updated by its own separate team of engineers. We have no current plans for a native OS/2 BBS system and do not anticipate such development in the foreseeable future.

MICROSOFT EXTENDS TRUETYPE FONTS TO THE WEB
ENABLING RICHER WEB PAGES

For Release 6 a.m. EST

27 February 1996

Forty Industry Leaders Including Hewlett-Packard, Macromedia and Oracle Support Solution Based on Industry-Standard TrueType Technology

BOSTON - Feb. 27, 1996 - Microsoft Corp. today announced that its TrueType® font technology has been extended to the World Wide Web, allowing designers to create great-looking Web pages that consumers can view - even if they haven't bought the specific typefaces for their PCs. Forty industry leaders - including Hewlett-Packard Company, Macromedia and Oracle Corp. - have announced support for the Microsoft® solution. The TrueType-for-the-Web solution will include a core set of no-charge fonts designed for superb on-screen appearance and readability; embedding technology that downloads TrueType fonts to consumer PCs as needed; and a royalty-free cross-platform licensing program for Microsoft's high-performance TrueType rasterizer, which allows all platforms to support TrueType technology.

"For too long, Web designers were free to use any font - as long as it was Times," said Brad Silverberg, senior vice president of the Internet platform and tools division at Microsoft. "Web designers have been demanding the same typographic flexibility on the Web as they have in print and in other PC applications. By extending the industry-standard TrueType technology to the Web, we have combined the best of Windows® with the best of the Internet to unleash a new generation of dazzling creativity, style and individuality on Web pages that will make the Internet a more attractive and compelling place to be."

Microsoft Builds on Font Expertise to Offer Complete, Cross-Platform Solution for Web
Today, most Web designers who want attractive typefaces are forced to turn their type into bitmapped graphics that are memory-intensive, take a long time to download, cannot be updated easily, cannot be resized by the user, and are invisible to search engines looking for text. By extending TrueType to the Web, Microsoft will expand the typographic options for Web designers. TrueType is already integrated into the Microsoft Windows 3.1, Windows® for Workgroups, Windows® 95 and Windows NT TM operating systems as well as the Apple® Macintosh®, making it the most-used font technology in the world, with over 3 billion TrueType fonts shipped. Unlike other font technologies that optimize type for the printed page at the expense of the screen, anti-aliased TrueType fonts provide the highest-quality text on screen as well as on the printed page.

"TrueType is the best solution for type on the screen," said Roger Black, president of Interactive Bureau. "Microsoft's new set of fonts gives people a better way to read the billions of words available on the Internet, and the font-embedding technology allows content providers to show their sites in their own chosen typefaces. It's like getting to wear your own clothes instead of a uniform."

"Microsoft's TrueType and anti-aliasing technologies give everyone the opportunity to use and experience better fonts," said David Siegel, president of v e r s o. "This technology will take the quality of on-screen type up two full notches."

Also, TrueType technology can be supported on all computer platforms with Microsoft's high-performance TrueType rasterizer, which extends the TrueType solution to platforms, such as UNIX®, that do not already support the technology.

Hewlett-Packard is the first to announce that it will license the TrueType rasterizer, for implementation on HP-UX®, and will distribute the core set of fonts to HP-UX users. The TrueType rasterizer is already shipping with HP® printers and HP personal computers.

"The licensing of this technology means that the same set of fonts and font technology will now be available across the entire HP product line," said Richard (Dick) C. Watts, vice president and general manager of the computer systems organization at Hewlett-Packard. "For document authors, these common fonts and font technology will provide enterprisewide sharing across heterogeneous environments."

TrueType Font-Embedding Technology Enables Faster Download, More Functional Web Pages
With TrueType font-embedding technology, Web designers and users can access high-quality fonts without having to download entire font files across the Internet. Authoring tools will provide the option to download only the characters used, saving bandwidth and enabling pages to download faster. Users can view Web sites as intended by the designer, without having to purchase special font software. In addition, a font manufacturer can specify an embedded font as read-only, for viewing and printing; editable within that particular document; or fully installable, therefore helping protect the intellectual property of font designers. The technology will be incorporated into Microsoft Internet Explorer and Microsoft authoring tools later this year.

"The ability to embed TrueType fonts creates a clear market for fonts on the Web," said David Berlow, president of The Font Bureau. "It allows Web publishers to buy and include read-only fonts in their Web sites without licensing hassles. It gives readers the quality of well-hinted TrueType fonts, and gives font publishers protection, with read-only embedding. It's a win for everyone concerned."

TrueType Fonts and Technology Broadly Available
Microsoft will make available to developers a core set of world-class, royalty-free TrueType fonts designed to look good on computer screens. They include fonts developed by Matthew Carter, one of the world's premier font designers. The first set of TrueType fonts designed for the Web is expected to be available this quarter from the Microsoft TrueType Web site (http://www.microsoft.com/truetype). Any Internet browser that implements the proposed hypertext markup language (HTML) stylesheet standard from the World Wide Web Consortium (W3C) can use these core fonts immediately.

Microsoft will submit the technology for embedding TrueType fonts to W3C as a proposed specification to support the W3C's efforts to define stylesheets, a standard graphic design language for HTML. Microsoft has been working with W3C and its members on HTML stylesheets since last fall.

Microsoft will also freely license the technology for downloading fonts to developers of browsers, authoring tools and other applications, enabling the thousands of TrueType fonts already on the market to be used on the Web.

Broad Industry Support
Web site and font designers, publishers, software developers and hardware manufacturers supporting TrueType for the Web technology include:
AGENCY.COM, Chan Suh or Kyle Shannon, (212) 522-6882
Agfa Division, Bayer Corp., Greg Porell, (508) 658-0200 ext. 2015
Atomic Vision Inc., Jennifer Petersen, (415) 522-5542
Benjamin Graphics, Frank Campanaro, (805) 642-9080
Blue Hypermedia Inc., Timothy Roven, (212) 995-2096
Carter & Cone Type Inc., Matthew Carter, (617) 576-0398
Cerebral Systems Development Corp., Leslie Owens, (416) 651-6818
Ethos Corp./Investors Edge, Patrick Connolly, (415) 389-4799
FontHaus Inc., Andrew Schwartz, (203) 367-1993
Font Shop, Bruno Schmidt, +49 (30) 69579200
Galápagos Design Group Inc., Larry Oppenberg, (508) 952-6200
Garagefonts, Betsy Kopshina, (619) 755-4761 or (619) 755-3913
Glyph Systems, Steven Reef, (508) 557-9001
Hewlett-Packard Company, Gary McCormack, (970) 229-2370

House Industries, Rich Roat, (302) 888-1218
InContext Corp., Marianne Kupina, (416) 922-0087
Interactive Bureau, Michael Kaminer, (212) 627-8098
Lanston Type Company Ltd., Gerald Giampa, (902) 676-2835
Macromedia, Mary Leong, (415) 252-2118
Meta Design, Bruno Schmidt, +49 (30) 69579200
Micrografx, Margaret Turbeville, (214) 994-6288
Monotype Typography Inc., Steve Kuhlman, (312) 855-1440
NCSA Mosaic, Briand Sanderson, (217) 244-7404
NetManage, Donna Loughlin, (408) 973-7171
Oracle Corp., Jennifer Keavney, (415) 506-3429
Projective Solutions Inc., Henry Pinkham, (212) 678-6595
QMS Inc., Robson Grieve, (415) 363-0982
s.a.x. software GmbH, Aurel Chauane deDalmassy, +49 (72) 1490020
SoftQuad, Lucy Ventresca or Linda Hazzan, (416) 239-4801
Spyglass Inc., Randy Pitzer, (217) 355-6000
Starwave Corp., Rebecca Levy, (206) 637-9097
Sub Pop Advanced Media, Ian Dickson, (206) 441-8441
The Font Bureau, David Berlow, (508) 627-9042
Treacyfaces Inc., Joseph Treacy, (203) 389-7037
TypeHaus Inc., Bill Bailey, (214) 690-1770
Type Solutions Inc., Sampo Kaasila, (603) 382-6400
URW America, Henry Mikiewicz, (603) 664-2130
(URW) ++ Design & Development GmbH, Gerald Gabriel, +49 (40) 606050
US News & World Report, Bruce Zanca, (202) 955-2578
Visio Corp., Morgan Brown, (206) 521-4449

Founded in 1975, Microsoft (NASDAQ "MSFT") is the worldwide leader in software for personal computers. The company offers a wide range of products and services for business and personal use, each designed with the mission of making it easier and more enjoyable for people to take advantage of the full power of personal computing every day.

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FONTS FOR THE WEB STR INFOFILE

CORE FONTS FOR THE WORLD WIDE WEB

Microsoft Internet Explorer supports the <FONT FACE> extension to HTML that lets Web page designers choose which fonts should be used in their on-line documents.

However, it has been difficult for authors to fully exploit this feature, as they can not be sure which fonts a Microsoft Internet Explorer user will have installed on their system. This is where the Internet Explorer Font Pack will come in. The pack will provide a range of high quality TrueType fonts which Internet Explorer users can download and install free of charge. Web page designers can specify these fonts for use with their pages in the knowledge they are freely available

to any Microsoft Internet Explorer user.

Unlike bulky bitmap fonts supplied as GIF graphics, the "hinted" TrueType fonts included with the pack are fully scaleable, so they are extremely legible on screen and do not become distorted or jagged when output on high resolution laser and inkjet printers.

Discussion Summary

Summary
The last thing the world needs is yet another font format for the World Wide Web, especially since one exists today which is already available on the vast majority of Web clients, could easily be made to run on all systems, has had hundreds of man-years of development, was specifically designed for high-quality screen display, and in which thousands of typefaces have already been produced to support a huge range of languages from English and Cyrillic to Japanese, Thai, Simplified Chinese, Arabic and Hebrew.

TrueType. It already ships on every single Windows and Macintosh computer, and will appear on other systems. TrueType was designed from the outset for high-quality screen display, and can be hinted to give screen text of unsurpassed quality. A core set of fonts already ships on every single Macintosh and Windows machine, and this core set could be easily extended. Under Windows, TrueType can be anti-aliased "on the fly", giving all the visual benefits of anti-aliased bitmaps without sacrificing the portability, editability and other advantages of keeping content in raw HTML text.

TrueType is an outline format, already well-understood by all of the font manufacturers, and thus resolution-independent and infinitely scalable. It carries no royalty to either Microsoft or Apple. It is easily embeddable in documents, while still protecting the Intellectual Property Rights of the font vendor. The embedding process was agreed by all the major font vendors in 1992 at a Windows Open Services Architecture (WOSA) review, and gives four levels of embedding: read-only (print & preview), editable, fully installable and do not embed. Fully installable allows fonts to be distributed and installed freely when required. This functionality exists on both Microsoft Windows and the Apple Macintosh today. Development work is part of our cross-platform development strategy for our own applications such as Microsoft Word and PowerPoint. Microsoft will license TrueType to developers of other platforms as well. Fonts are rapidly becoming one of the hottest topics on the Web. As Web page design becomes more and more like the design of conventional magazine pages, designers want to have the same level of access to fonts as they have today for print publishing.

A great deal of misinformation is being disseminated by groups and companies whose agenda is to push their own products. Issues have been raised regarding portability of documents and fonts, rendering at screen resolutions, character encoding, anti-aliasing, and more. Fortunately, the font industry has already developed and standardized solutions addressing many of these issues.

Microsoft believes that the logical choice for a font format for the Web is TrueType, for the following reasons:

- It is a scalable outline font format that allows screen rendition and printing at any size.
- It was designed from the outset for better screen readability, and can be hinted to give superior screen quality at the low resolution of monitors.
- Thousands of fonts already exist in the marketplace, including core fonts on both Windows and Macintosh in a huge number of languages, and many of them have been hinted for excellent screen quality.
- The tools and expertise needed to make it are already in place in the font industry.
- It is free of royalties to either Microsoft or Apple.

- Technologies for embedding fonts within documents already exist and can be extended to cover Web documents.

With a minimum amount of development work, TrueType can support all Web authoring/browsing needs.

FUTURE DEVELOPMENTS

As part of Microsoft's commitment to the Internet, we plan to:

- Assemble a set of high-quality multiple-language, Web Fonts.
- Work with browser manufacturers and Operating System vendors to help implement TrueType on Unix browsers in addition to the current Macintosh and Windows platforms.
- Continue to develop solutions for font embedding, compression etc. in collaboration with font vendors, operating systems manufacturers, and Independent Software Vendors.

MICROSOFT'S STRATEGIES

TRUETYPE FONTS, BROWSERS, AND OPERATING SYSTEMS

The TrueType fonts a user sees on Web pages result from the interaction between the operating system, font files, the browser, and the HTML source. Web font solutions may have engineering ramifications at many levels.

- Operating system - handles rasterization, scaling, anti-aliasing, hinting and installation.
- Font - contains outline and hinting information.
- Browser - allows user to control relative font sizes and default faces.
- HTML source - may contain font face and size information.
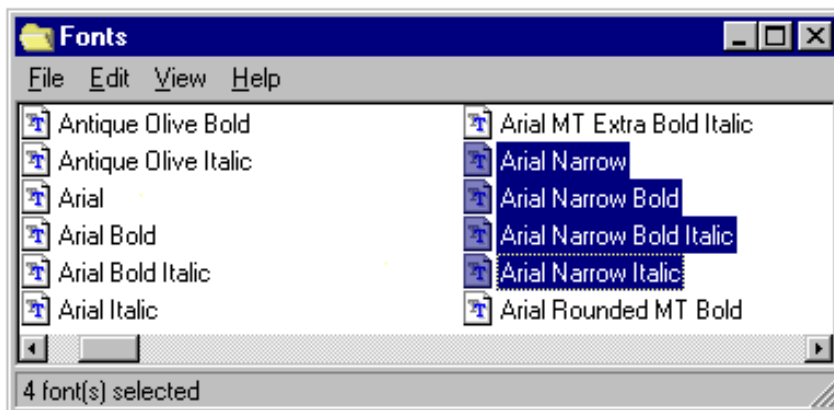
THE TRUETYPE FONT FILE FORMAT

TrueType was designed to address the many issues surrounding on-screen display of text. The TrueType Font File Format is well-established and currently supported by the bulk of Web clients. The TrueType Font File Format is a publicly-available font specification and fonts can be created with no royalties due to either Apple or Microsoft. There are several mass-market tools for creating TrueType fonts, and there are well-developed specialty tools available to higher-

end font developers.

Thousands of TrueType fonts exist, including many free. Core sets of fonts exist on both Macintosh and Windows platforms, allowing users certainty that common fonts will exist on client machines. For more information on the TrueType Font File Format, see our Introduction to TrueType. TrueType specification documents may be accessed from our Specifications page.

TRUETYPE OPEN

TrueType Open is an extension to the TrueType font standard. TrueType Open fonts contain additional information that extends the capabilities of the fonts to support high-quality international typography:

- TrueType Open can associate a single character with multiple glyphs, and - conversely - it can associate combinations of characters with a single glyph.
- TrueType Open includes two-dimensional information to support features for complex positioning and glyph attachment. TrueType Open contains explicit script and language information, so a text-processing application can adjust its behavior accordingly.
- TrueType Open has an open format that allows font developers to define their own typographical features.

THE RASTERIZER

The TrueType Rasterizer is built into Windows 95, Windows NT, the Macintosh, and a variety of printer hardware. The Rasterizer is extremely stable, efficient, and well-tested. The TrueType Rasterizer can be licensed for use on other operating systems or within applications.

CORE FONTS FOR THE WEB

Microsoft currently ships a selection of common fonts as "Core Windows Fonts." (For a list of fonts supplied with Windows 95, the Plus! pack and Microsoft Office please see our Popular fonts list.) Knowing that these fonts are available under Windows on any machine allows users more certainty in the portability of their documents. Microsoft is enlarging the set of core fonts to include on-line and Web-related fonts, thus avoiding issues of embedding or downloading for common documents. This set of core fonts will contain large international character sets, and virtually guarantee that users can view text on any Web page in the world.

HINTING

Quality hinting is essential to ensure the readability of text on screen. TrueType fonts can be hinted to higher standards than other font formats because the TrueType instruction set is so rich and powerful. To ensure the availability of well-hinted TrueType fonts, Microsoft and others have created TrueType hinting tools that are available under license.

Atavistic aardvarks voracious   Atavistic aardvarks voracious
ATAVISTIC AARDVARKS   ATAVISTIC AARDVARKS V

Wibbly wobbly weebles wob   Wibbly wobbly weebles wob
WIBBLY WOBBLY WEEB   WIBBLY WOBBLY WEEBL

The above examples show hinted and unhinted text. On the left an example of unhinted text. On the right an example of hinted text where stroke weight is consistent, diagonals and curves are controlled, and the overall effect is much more appealing than the example at left.

ANTI-ALIASING / GRAYSCALING / FONT SMOOTHING

Microsoft has built anti-aliasing into the Windows 95 operating system (and soon into Windows NT). ANY TrueType font can be anti-aliased on-the-fly in Windows 95. Font vendors can put information into TrueType fonts controlling the size ranges at which anti-aliasing occurs. Users can turn anti-aliasing on or off.

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one,

By a typographer I do not mean a printer any more than Dr Dee means a carpenter or a mason to be an architect; but by a typographer I mean such a one,

The above examples show a passage of text, before and after smoothing is switched on.

EMBEDDING FONTS

TrueType embedding technology has already received approval during a Windows Open Services Architecture review by major font vendors. In fact, TrueType pioneered font embedding and the industry has been supportive of these embedding methods. Font vendors can specify several levels of distribution and use within a font file, and the operating system and applications legally mediate license protection. Subsetting and core Web fonts can provide good solutions to the problem of downloading and embedding large fonts.

UNICODE

The TrueType Font Format has supported Unicode from the start. Unicode encoding provides the only means of unambiguously identifying characters, especially across different fonts. Windows and NT support Unicode. Apple has stated that Unicode will be supported in the next generation of Mac system software.

SPECIFYING FONTS AND SIZES IN WEB DOCUMENTS

Microsoft supports a strategy allowing designers to specify fonts and size ranges, but also allowing users to override designer choices. The Microsoft Internet Explorer allows HTML authors to specify font face and font size using the <FONT FACE> and <FONT SIZE> tags.

FONT NAMING AND MAPPING

To help mediate font naming conflicts and assist the operating system (or application) in mapping fonts appropriately, TrueType fonts contain information that identifies vendor ID, PANOSE information, and character sets. Font vendors are responsible for making their font names unique. An operating system can legally contain tables that map copyrighted font names to alternate fonts.

information for Type Creators

WELCOME TO TRUETYPE OPEN

TrueType Open is an extension to the TrueType font standard. TrueType Open fonts contain additional information that extends the capabilities of the fonts to support high-quality international typography:

- TrueType Open can associate a single character with multiple glyphs, and - conversely - it can associate combinations of characters with a single glyph.
- TrueType Open includes two-dimensional information to support features for complex positioning and glyph attachment. TrueType Open contains explicit script and language information, so a text-processing application can adjust its behavior accordingly.
- TrueType Open has an open format that allows font developers to define their own typographical features.

This overview introduces the power and flexibility of the TrueType Open font model. The rest of the document describes the TrueType Open components in technical detail that will be useful to font vendors and software developers creating TrueType fonts and the text-processing applications that use them.

TrueType Open at a glance

TrueType Open addresses complex typographical issues that especially affect people using text-processing applications in multi-lingual and non-Latin environments.   TrueType Open fonts may contain alternative forms of characters and mechanisms for accessing them. For example, in Arabic, the shape of a character often varies with the character's position in a word. As shown here, the ha character will take any of four shapes, depending on whether it stands alone or whether it falls at the beginning, middle, or end of a word. TrueType Open helps a text-processing application determine which variant to substitute when composing text.

Figure 1a Isolated, initial, medial, and final forms of the Arabic character ha.

Similarly, TrueType Open helps an application use the correct forms of characters when text is positioned vertically instead of horizontally, such as with Kanji. For example, Kanji uses alternative forms of parentheses when positioned vertically.
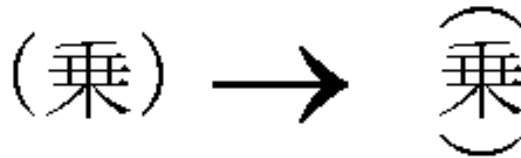
Figure 1b Alternative forms of parentheses used when positioning Kanji vertically.

The TrueType Open font format also supports the composition and decomposition of ligatures. For example, English, French, and other languages based on Latin can substitute a single ligature, such as "fi", for its component glyphs - in this case, "f" and "i". Conversely, the individual "f" and "i" glyphs could replace the ligature, possibly to give a text-processing application more flexibility when spacing glyphs to fill a line of justified text.

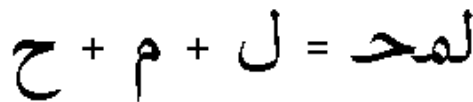Figure 1c Two Latin glyphs and their associated ligature.

Figure 1d Three Arabic glyphs and their associated ligature.

Glyph substitution is just one way TrueType Open extends font capabilities. Using precise X and Y coordinates for positioning glyphs, TrueType Open fonts also can identify points for attaching one glyph to another to create cursive text and glyphs that need diacritical or other special marks. TrueType Open fonts also may contain baseline information that specifies how to position glyphs horizontally or vertically. Because baselines may vary from one script (set of characters) to another, this information is especially useful for aligning text that mixes glyphs from scripts for different languages.

Figure 1e A line of text, baselines adjusted, mixing Latin and Arabic scripts.

TrueType versus TrueType Open

A TrueType font is a collection of several tables that contain different types of data: glyph outlines, metrics, bitmaps, mapping information, and much more. TrueType Open fonts contain all this basic information, plus additional tables containing information for advanced typography. Text-processing applications - referred to as "clients" of TrueType Open - can retrieve and parse the information in TrueType Open tables. So, for example, a text-processing client can choose the correct character shapes and space them properly.

As much as possible, the tables of TrueType Open define only the information that is specific to the font layout. The tables do not try to encode information that remains constant within the conventions of a particular language or the typography of a particular script. Such information that would be replicated across all fonts in a given language belongs in the text-processing application for that language, not in the fonts.

TrueType Open terminology

The TrueType Open model is organized around glyphs, scripts, language systems, and features.

Characters versus glyphs

Users don't view or print characters: a user views or prints glyphs. A glyph is a representation of a character. The character "capital letter A" is represented by the glyph "A" in Times New Roman Bold and "A" in Arial Bold. A TrueType font is a collection of glyphs. To retrieve glyphs, the client uses information in the "cmap" table of the font, which maps the client's character codes to glyph indices in the table.

Glyphs can also represent combinations of characters and alternative forms of characters: glyphs and characters do not strictly correspond one-to-one. For example, a user might type two characters, which might be better represented with a single ligature glyph. Conversely, the same character might take different forms at the beginning, middle, or end of a word, so a font would need several different glyphs to represent a single character. TrueType Open fonts contain a table that provides a client with information about possible glyph substitutions.

Figure 1f Multiple glyphs for the ampersand character.

Scripts

A script is composed of a group of related characters, which may be used by one or more languages. Latin, Arabic, and Thai are examples of scripts. A font may use a single script, or it may use many scripts. Within a TrueType Open font, scripts are identified by unique 4-byte tags.

Figure 1g Glyphs in the Latin, Kanji, and Arabic scripts.

Language systems

Scripts, in turn, may be divided into language systems. For example, the Latin script is used to write English, French, or German, but each language has its own special requirements for text processing. A font developer can choose to provide information that is tailored to the script, to the language system, or to both.

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Language systems, unlike scripts, are not necessarily evident when a text-processing client examines the characters being used. To avoid ambiguity, the user or the operating system needs to identify the language system. Otherwise, the client will use the default language-system information provided with each script.

A charming mess

Le cahier français

Das Wasser war heiß

Figure 1h Differences in the English, French, and German language system.

Features
Features define the basic functionality of the font. A font that contains tables to handle diacritical marks will have a "mark" feature. A font that supports substitution of vertical glyphs will have a "vert" feature.

The TrueType Open feature model provides great flexibility to font developers because features do not have to be predefined by Microsoft Corporation. Instead, font developers can work with application developers to determine useful features for fonts, add such features to TrueType Open fonts, and enable client applications to support such features.
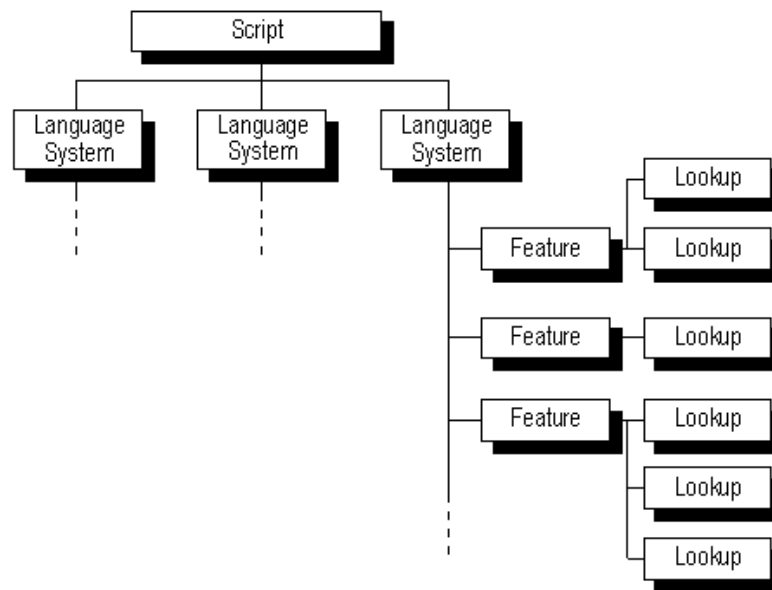
Figure 1i The relationship of scripts, language systems, features, and lookups for substitution and positioning tables.

TrueType Open tables
TrueType Open comprises five new tables: GSUB, GPOS, BASE, JSTF, and GDEF. These tables and their formats are discussed in detail in the chapters that follow this overview.

GSUB: Contains information about glyph substitutions to handle single glyph substitution, one-to-many substitution (ligature decomposition), aesthetic alternatives, multiple glyph substitution (ligatures), and contextual glyph substitution.

GPOS: Contains information about X and Y positioning of glyphs to handle single glyph adjustment, adjustment of paired glyphs, cursive attachment, mark attachment, and contextual glyph positioning.

BASE: Contains information about baseline offsets on a script-by-script basis.

JSTF: Contains justification information, including whitespace and Kashida adjustments.

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GDEF: Contains information about all individual glyphs in the font: type (simple glyph, ligature, or combining mark), attachment points (if any), and ligature caret (if a ligature glyph).

Text processing with TrueType Open fonts

A text-processing client follows a standard process to convert the string of characters entered by a user into positioned glyphs. To produce text with TrueType Open fonts:

1. Using the cmap table in the font, the client converts the character codes into a string of glyph indices.
2. Using information in the GSUB table, the client modifies the resulting string, substituting positional or vertical glyphs, ligatures, or other alternatives as appropriate.
3. Using positioning information in the GPOS table and baseline offset information in the BASE table, the client then positions the glyphs.
4. Using design coordinates the client determines device-independent line breaks. Design coordinates are high-resolution and device-independent.
5. Using information in the JSTF table, the client justifies the lines, if the user has specified such alignment.
6. The operating system rasterizes the line of glyphs and renders the glyphs in device coordinates that correspond to the resolution of the output device.

Throughout this process the text-processing client keeps track of the association between the character codes for the original text and the glyph indices of the final, rendered text. In addition, the client may save language and script information within the text stream to clearly associate character codes with typographical behavior.

TrueType Open fonts in Windows 95

The core system fonts in the Middle East and Far East versions of Windows 95 are TrueType Open fonts. These fonts demonstrate aspects of TrueType Open's versatility.

Middle East Windows 95

Middle East Windows 95 uses several Arabic TrueType Open fonts: fixed regular weight, proportional regular weight, fixed bold, and proportional bold. These fonts take advantage of many glyph substitution features available in TrueType Open, namely simple substitution (one-to-one contextual), ligature substitution (many-to-one), and mark set substitutions. In Middle East Windows 95, the operating system itself handles glyph substitution, using data in the GSUB table of each font.

Far East Windows 95

Far East Windows 95 also uses several TrueType Open fonts: fixed serif, proportional serif, fixed sans serif, and proportional sans serif. The Japanese fonts take advantage of a subset of TrueType Open features, including vertical glyph substitution and baseline positioning. As with Middle East Windows 95, the operating system in Far East Windows 95 will handle glyph substitution, using data in the GSUB table in each font. However, the text-processing client will need to handle baseline positioning, using data in the BASE table in each font.

FREQUENTLY ASKED QUESTIONS

Q Is TrueType Open a new font format?
A No. TrueType Open fonts are TrueType fonts with extensions. TrueType Open introduces new table structures that contain additional typographical data.

Q To ensure compatibility, do I need to revise all my fonts to be TrueType Open fonts?
A No. TrueType fonts that do not contain TrueType Open information are still valid fonts. A client can determine which, if any, TrueType Open features a font contains and make decisions accordingly.

Q Can I use TrueType Open fonts on Windows 3.1x?
A Yes. Because the basic TrueType font format has not changed, TrueType Open fonts can be used by operating systems and applications that support TrueType but do not implement TrueType Open functionality.

Q Which TrueType Open features are supported by Windows 95?
A A text-processing client can access all TrueType Open tables by using the GetFontData API and requesting a TrueType Open table by name. The client is responsible for placing text appropriately according to the information retrieved.

Q Is Microsoft developing tools for creating TrueType Open fonts?
A Microsoft is working with Independent Software Vendors (ISV's) to enhance their font development tools to handle TrueType Open information. Internally, Microsoft uses a proprietary tool for assembling TrueType Open binary tables from TrueType Open data in text format.

Q What is the difference between Apple's TrueType GX and Microsoft's TrueType Open?
A TrueType Open and TrueType GX address some of the same issues, especially those arising from one-to-one relationships between characters and glyphs. However, TrueType Open has a richer two-dimensional positioning model than TrueType GX. TrueType Open also contains explicit script and language support, so a text-processing application can adjust its behavior accordingly.

Another major difference between the two font formats is that TrueType GX fonts contain "state machines," which choose and position glyphs. This format requires that clients follow a particular model of text processing, and TrueType GX fonts are difficult for a client to decode. In comparison, TrueType Open fonts are simple to read and support clients in making their own decisions regarding text processing.

Q When will the TrueType Open Font Specification be finalized?
A The TrueType Open font format is essentially final. The specification will be enhanced during the next few months to include more examples and illustrative art. The specification for TrueType Open System Services will be available at the end of 1995.

EDUPAGE

CONTENTS

COMPAQ AND PACKARD BELL SETTLE LAWSUIT

Compaq and Packard Bell have settled the legal actions begun after Compaq accused Packard Bell of obtaining a competitive advantage by including used parts in computers sold as new. One of the attorneys said the lawsuit was dropped because of the likelihood that state and federal regulators would soon force computer companies to disclose when a new machine includes recycled parts. (Houston Chronicle 24 Feb 96 1C)

WISCONSIN GOV. WANTS TO GET WIRED

The governor of Wisconsin used his annual State of the State address to present plans for a $10-million project to link all 26 public university campuses in the state via computer, and to begin offering high school classes online by 1997. The University of Wisconsin system already offers Advanced Placement courses in mathematics and engineering via the

Internet, as well as nursing courses to adult learners. (Chronicle of Higher Education 23 Feb 96 A21)

SILICON GRAPHICS PLANNING TO BUY CRAY RESEARCH

Silicon Graphics is expected to announce that it is acquiring supercomputer maker Cray Research, a company whose fortunes have declined as a result of lower sales to the federal government and stiff competition from companies such as Silicon Graphics. (New York Times 24 Feb 96 p18)

TAX MAN TARGETS CYBERSPACE

The Nova Scotia government announced the province's 11% sales tax will be applied to Internet services, including flat monthly charges, time charges and registration, effective March 1. (Toronto Globe & Mail 23 Feb 96 B3)

IBM DEVELOPING LOW-COST PC DEVICES
AGREES TO BUY OJECT TECHNOLOGY

IBM is developing prototype set-top boxes that will both carry cable signals and offer Internet access. "We have prototypes and concepts that we're working on from the low-end consumer side of the business all the way to the commercial side," says VP "Ozzie" Osborne, who envisions a consumer appliance that's "hassle-free." The new devices will emphasize practical applications such as home banking and shopping, in addition to entertainment functions, such as game playing. (Broadcasting & Cable 19 Feb 96 p60) Meanwhile, IBM has announced its intention to acquire Object Technology International Inc., a maker of object-oriented software. The company says its decision will speed up its efforts to build object-oriented products, making software development easier, faster and cheaper. (Investor's Business Daily 24 Feb 96 A7)

HP BUYS INTERNET SECURITY FIRM

Hewlett-Packard has purchased most of the assets of SecureWare Inc., a maker of security software. SecureWare's technology is used by the Pentagon to encrypt transmission of classified military secrets, and has been used in various products made by HP, IBM and Sun Microsystems. SecureWare's team of about 40 programmers is considered one of the most advanced groups in the field of encryption technology. "These are a substantial fraction of the hired guns available in the online security world," says an industry consultant. SecureWare's "trusted operating system" imposes an additional layer of hacker-proof security on existing firewalls and more conventional measures. (Wall Street Journal 24 Feb 96 B2)

HIGH-TECH SUPERFUND

Canada is about to create "high-tech superfund" aimed at creating high quality, high paying jobs and developing new technologies and products, not as a subsidy but a partnership between business and government. The total amount of funding remains unknown at this time. (Toronto Sun 22 Feb 96 p33)

OBSTACLES TO DIGITAL TV

The head of a Canadian task force on digital TV in Canada warns that such advances could be jeopardized if industry players, including cable and phone companies, satellite service providers, equipment manufacturers, and broadcasters, do not agree on standardizing equipment as a mutual advantage and continue to divert resources away from the programs consumers want by spending money on incompatible technologies. (Ottawa Citizen 22 Feb 96 D13)

COMPUTER ARTS

Prix Ars Electronica 96, an international competition for computer arts, organized by the ORF - Austrian Broadcasting Corporation, will award prizes totaling $125,000 in four categories: WWW sites, Computer Animation, Computer Music and Interactive Art: < http://prixars.orf.at >

UNIVERSITY ONLINE

University Online, a small Internet publisher that licenses 200 ready-made high school and college courses, is working with George Washington and George Mason Universities to create tutorials and more online courses at the higher education level, and is seeking more universities for similar alliances. The company's president is working with textbook

publishers to obtain the electronic rights to their materials, and will then pay the publishers' royalties and split the tuition with the universities that license its products. (Wall Street Journal 24 Feb 96 B5D)

CASHLESS SOCIETY TO COST GOVERNMENTS

A report prepared for the Bank of Canada says that the advent of the cashless society could cost the federal government hundreds of millions of dollars annually through a drop in the use of coins and bank notes that generate monopoly royalties for the central bank. (Toronto Financial Post 21 Feb 96 p1)

THE COST OF DAWDLING

An econometric study issued last year by the WEFA Group estimates that the cost of delaying implementation of the telecommunications reform bill by three years will cost 1.54 million new jobs, and about $1.4-billion in gross domestic product. In other words, "Each month the FCC dithers around potentially costs us 35,000 fewer American jobs and about $3.1 billion…What's this potential loss in "human terms"? Well, to pick some U.S. communities at random, 35,000 is about the same size as the total workforce of Charleston, South Carolina," says the editor of Telecommunications Policy Review. (Telecommunications Policy Review 18 Feb 96 p1)

PORN DISTRIBUTOR NETS FIVE YEARS IN PRISON

A distributor of online of child pornography was sentenced last week to five years in prison for sending sexually explicit photos of children via his America Online account. The New York judge imposed the lengthy sentence in light of the man's crime and previous pedophile convictions. The conviction was the result of a nationwide FBI investigation of online porn. (Tampa Tribune 24 Feb 96 A6)

PLUG AND PLAY TOGETHER

A coalition of software companies, manufacturers and two universities are joining together in a $23 million effort to develop plug-and-play software for factories, linking production planning, scheduling and plant-floor execution. The ultimate goal is to help manufacturers migrate from one software package to another when their automation needs change. (Information Week 12 Feb 96 p22)

ARTIFICIAL-LIFE SIMULATION SOFTWARE

Software developed at New Mexico's Santa Fe Institute uses 3-D satellite maps of a geographical region and software "agents" that model such variables as weather and crop yields to study why an ancient Native American culture collapsed suddenly in the 12th century. The artificial-life simulation software, called Swarm, produces a generic modeling tool for studying ecological systems, economic theories and other complex systems. (Business Week 26 Feb 96 p75)

FUN AND TAXES ON WWW

The IRS is getting good reviews for its new Web site, < http://www.irs.ustreas.gov/prod/cover.html >. An IRS executive says: "The IRS is actually getting fan mail. We're not used to that." (New York Times 25 Feb 96 p24)

ORACULAR PRONOUNCEMENT

Oracle founder and chairman Larry Ellison, who says "we're moving toward a world where all of your data will be managed centrally," is now ready to demonstrate the stripped-down "network computer" (or NC), designed solely for connecting to the Internet and intended for sale at a price less than $500. Oracle is also ready to begin shipping a new version of its database software capable of storing and handling large quantities of multimedia information. (New York Times 26 Feb 96 C2)

CHALLENGE TO COMMUNICATIONS DECENCY ACT

The legal challenge to the Communications Decency Act has grown stronger with the merger of two civil lawsuits into a single action in which the plaintiffs include the American Library Association, the Center for Democracy and Technology, the American Civil Liberties Union, a number of other civil rights groups, America Online, CompuServe, Prodigy, Microsoft Network, Netcom, and Microsoft. The CDA makes it a felony to knowingly transmit "indecent" or patently offensive sexual material over communications networks where children may see it. Judith Krug of the ALA

says: "The Internet is the communications medium for the 21st century, and the most important thing that has happened to communications since the printing press. Our main argument is that you cannot limit ideas and information to the lowest common denominator, which is what this law does. It is unconstitutional to force adults to limit the information they can see to a level suitable for children." (New York Times 26 Feb 96 C2)

COURT UPHOLDS SOFTWARE COPYRIGHT PROTECTION

The Supreme Court yesterday upheld a lower-court ruling that said the act of making a temporary electronic working copy of a software program, which happens automatically when a software program is accessed on a computer, can violate the software company's copyright -- especially if the person using the computer is someone other than its owner. The original case arose when Triad Systems Corp., which sells customized computer systems to auto parts stores, had sued Southeastern Express Co., an independent computer repair firm, for violating the copyright on its diagnostic software. Triad maintained that while the diagnostic software was included in the systems it sold, it was intended to be used only by either the owner of the computer or Triad. Critics say the ruling potentially turns every person who uses someone else's computer into a criminal. (Investor's Business Daily 27 Feb 96 A11)

CONGRESS TACKLES ENCRYPTION ISSUE

Encryption software companies are trying to rouse congressional interest in an issue near and dear to their hearts -- the Clinton administration's ban on exporting encryption software more powerful than a 40-bit code. Sen. Patrick Leahy (D-Vt.) and Rep. Robert Goodlatte (R-Va.) plan to introduce bills in the Senate and House to loosen those restrictions: "This is a matter that should be decided by legislation," says Leahy. "We're talking about billions of dollars in revenues and thousands of jobs if we're handicapped in our global market, especially if what we're told to do is to build an export encryption program that is so outdated that our 12-year-old computer experts would laugh at it." (Washington Post 25 Feb 96 H1)

MOTOROLA, SUN SHOOT FOR HIGH-SPEED ACCESS

Motorola and Sun Microsystems have formed an alliance to develop a turnkey package of digital modems, computer network servers and networking software, along with installation and service, aimed at cable and telephone companies eager to offer Internet access. The Motorola-Sun products will compete directly against offerings by AT&T's Lucent Corp. and Hewlett-Packard, which are both developing their own strategies for garnering market share. "We'll give them a truly advanced multimedia platform, not just a bunch of components," says a Motorola VP. (Wall Street Journal 26 Feb 96 B4)

AT&T TO OFFER INTERNET ACCESS

AT&T Corporation will offer dial-up access to the Internet through its Worldnet service. Pricing will "be aggressive enough to make the industry sit up and take notice," says an AT&T spokesman. An update on New York Times Online says AT&T will give free subscriptions to its existing customers if they use the network for less than five hours a month, or charge existing customers $19.95 a month for unlimited Internet access. (New York Times 27 Feb 96 C1)

PICTURE PHONE MAKERS TARGET DESKTOP VIDEO

With prices of all computer-related peripherals continuing their downward spiral, desktop video conferencing equipment is no exception. A group manager for Connectix, a software company that sells a video-phone system for $150, says: "Within five years, every PC will have a built-in camera." Elliott Gold, who's covered the teleconferencing business for years, says, "We still don't know if people really want picture phones," but predicts that whether or not they want it, desktop video communications "will sneak up on them, like fax did." (Wall Street Journal 27 Feb 96 B1)

NETWORKED SCHOOLS UP 35%

A Department of Education survey shows the number of schools linked to the Internet is approaching 50%, with bigger, wealthier, suburban schools comprising the majority. Schools with 1,000 or more students are most likely to have access (69%); the Northeast has the highest number of connected schools (69%), followed by the Midwest, the West and the south; and the number of schools involved in accessing the Internet is up 35% from last year. (Miami Herald 19 Feb 96 p25)

DEFAMATION LIABILITY KNOWS NO BOUNDS

Steven Lieberman, an attorney specializing in First Amendment law, points out that the global reach of the Internet means added liability for U.S. companies that put information up on the Web: The defamation issue "has enormous economic implications for U.S. companies with assets overseas. It is theoretically possible for a company with a Web site accessible in Singapore to be sued in Singapore for defamation if someone puts up a message critical of the Singapore government. The same thing could happen in China, for that matter." (Investor's Business Daily 27 Feb 96 A10)

CHEAPER CHIPS COULD SPELL TROUBLE FOR JAPAN

The recent dip in prices for memory chips is bad news for Japan's Big Five (NEC, Toshiba, Hitachi, Fujitsu and Mitsubishi Electric Corp.), which rely on memory products for about a third of their semiconductor revenue. Even more distressing, analysts estimate that sales of memory chips account for one-third to three-fourths of the companies' entire profits. Some observers think the downturn is just a temporary phase that should level off in a month or two, but the Japanese press already is predicting "The Crisis of 1997," when a glut of new chipmaking capacity is expected to drive down prices further. In response, Japan's Ministry of International Trade and Industry recently announced a $100 million research program to develop "next next generation" electronics technologies. (Wall Street Journal 27 Feb 96 B4)

INVESTORS TRADE SHARES ON LINE

A New York-based brewery that raised $1.8 million from investors through an Initial Public Offering made via the Internet will now be allowing investors to trade shares online. < http://www.interport.net/witbeer/ > (Atlanta Journal-Constitution 27 Feb 96 E5)

NEWSPAPERS CAUGHT BY THE WEB

A Kelsey Group/Editor & Publisher survey of 190 U.S. daily and 205 weekly newspapers with circulations over 30,000 found that 44% of the dailies and 51% of the weeklies have a Web site; of those that didn't, 81% of the dailies and 46% of the weeklies are planning to create one. (Financial Times 26 Feb 96 p13)

PAYCHECKS SWEETENED AT IBM

IBM employees this year will receive (according to their merits) new salary increases that will average out at 8%, which is twice the amount workers at most other companies will be receiving. In the past decade, the company has restored its profitability by cutting jobs by more than half. (New York Times 27 Feb 96 C3)

OFFSHORE PROGRAMMING

India, Brazil, Ireland and Russia are countries whose software engineers increasingly are used as a resource by U.S. companies. India has about 130,000 software engineers; Brazil, 64,000; Ireland, 13,000; Russia, 60,000. A skilled programmer in India with five years' experience is paid about $10,000 (U.S.); top programming salaries in the other countries are: Brazil, $32,500; Ireland, $45,000; and Russia, $12,000. (Computerworld 26 Feb 96 p1)

AT&T INTERNET OFFER LEVERAGES ON "FREE" LOCAL ACCESS

Because of a 1983 FCC exemption inserted into telephone accounting rules to promote the development of the young field of data networking, Bell regional phone companies now find themselves unwilling and uncompensated partners in AT&T's plans to provide up to 5 hours of free Internet usage to AT&T customers. Whereas AT&T has to compensate Bell companies for "access charges" when customers use local phone systems to connect to use AT&T long distance services, they are exempt from access charges when the customers are using the lines for data transmission. (New York Times 29 Feb 96 C1)

AOL OFFERS CONNECTIONS TO U.K. SECONDARY

America Online and its European joint venture partner, the Bertelsmann media group, is offering to provide all British secondary schools with a free Internet connection. (Financial Times 27 Feb 96 p8)

$500 BOX DOESN'T WORRY ANDY GROVE

When asked about the impact that the $500 Internet PC might have on Intel's PC business, CEO Andy Grove says :

"Remember, the PC is not a thing. It's an organic phenomenon -- like a river, it flows. It constantly adapts to underlying technology changes, user demands, even market surprises. For instance, desktop conferencing was not anticipated. The profound and pervasive use of messaging mail wasn't anticipated. Commercial online services were not anticipated. And now the Web. The PC has perfectly adapted to all of these. Now compare that to the $500 box, which is a restricted viewing device that is going to have a restricted use… I don't think it will ever hit the tens-of-millions-of-units-a-year volume. And if I'm wrong, and they do, it will take several years for that to happen. Just think how great the PC will be in several years." (Forbes ASAP 26 Feb 96 p63)

AT&T ABANDONS NETWORK NOTES

Adjusting its strategy to reflect the growing importance of the Internet as a vehicle for corporate communication, AT&T is closing down its AT&T Network Notes service, which was designed to run on a private communications network. A vice president of the company says: "I am very proud of this decision because it shows that AT&T is committed to the Internet." (New York Times 29 Feb 96 C4)

GENERAL MAGIC CONJURES UP PAYMENT SOFTWARE

General Magic has developed payment software that runs on its Magic Cap operating system, allowing customers to use handheld devices made by Sony and Motorola to pay bills, transfer funds and conduct other electronic commerce. The company will provide the new software to Visa International, which will distribute it to member banks. (Wall Street Journal 28 Feb 96 B4)

HP OFFERS MULTIMEDIA PCs WITH BUILT-IN SCANNERS

Hewlett-Packard's latest line of Pavilion home PCs offer a new perk – a built-in color scanner right below the CD-ROM drive in the mini-tower. The PhotoDrive is designed to scan photos up to 5 x 7 inches in size, allowing users to create electronic photo albums, Web pages or newsletters. The RealLife Imaging line of computers will come with imaging and publishing software included, and should be on the shelves next month. (Investor's Business Daily 29 Feb 96 A6)

LIBRARIANS AT ODDS OVER CHARGING FOR ACCESS

While libraries all over the country strive for the American Library Association's goal of "equity on the Information Superhighway," opinions differ on what that actually means. Some libraries view the idea of charging as "anathema," says a spokesman for the Public Library Association, but in Baltimore County, for instance, a director says, "We're into fees big-time" as an additional revenue source. South Carolina libraries don't charge for computer costs, but do pass on the connection fees, and while more than half of New York libraries offer free access, the rest charge modest fees. Some libraries have even established their own debit cards to handle the payments. (Wall Street Journal 29 Feb 96 A1)

NO SAFETY ON THE NET

A recent survey of businesses found nearly one in four are staying away from the Internet because they worry about electronic security breaches. For instance, Merrill Lynch refuses to use the Net for any "value-bearing" business and has doubts about allowing customers to link up via the Internet. Meanwhile, if your company uses an Intranet, you're not immune to security problems -- experts estimate that as much as 80% of all security losses are committed by company insiders. The technical staff manager at Bell Labs notes: "Our firewall keeps the bad guys out. But you can't say there aren't bad guys inside the company." (Information Week 19 Feb 96 p34)

THESE CHIPS KEEP THEIR COOL

A Purdue University professor has developed a technique to keep superfast chips cool, embedding thermal microchannels in printed circuit boards. The heat is then drawn away by a special liquid flowing in the channels. Meanwhile, Superconductor Technologies Inc. has come up with a technique to chill chips to -55C or lower, using a small cryogenic cooler. The company says its device can speed up PC performance by 50% or more. (Business Week 4 Mar 96 p83)

MICRON BACKPEDALS ON $2.5-BILLION CHIP FACTORY

Micron Technology has stopped work on a $2.5-billion chip factory it was building in Lehi, Utah. The company said falling prices of memory chips and an anticipated chip glut as other new fabrication plants come on line caused it to rethink its strategy. Micron still plans to finish the plant within three to five years, but says the start-up date will depend

on market conditions. (Investor's Business Daily 28 Feb 96 A5)

THOMSON BUYS WEST PUBLISHING

Canadian publisher Thomson continued its diversification strategy to become a leader as an electronic information provider with the purchase of West Publishing for $3.4-billion. West holds hundreds of millions of dollars worth of communications assets in the U.S., and is the biggest fish in the niche sector with its massive online and CD-ROM database of American federal and state statute and case law. (Toronto Globe & Mail 27 Feb 96 B1)

SELF-PATROLLING THE WEB

The World Wide Web Consortium is pushing the Web page rating system that it developed in cooperation with the platform for Internet Content Selection, a group of 22 online firms. Operators at about 20,000 Web sites have already coded themselves using the Internet Relay System, which is similar to the rating system for films. To rate your Web site, go to the SafeSurf site at < http://www.safesurf.com/ > and fill out the form that helps them come up with a rating. PICS members plan to pitch the system to European governments in an effort to avoid continental content restrictions. (Investor's Business Daily 28 Feb 96 A6)

PHONE COMPANY BUYS CABLE BUSINESS

Regional Bell telephone company U S West is paying $10.8 billion to acquire Continental Cablevision, the country's third-largest cable TV operator, which has access to about one in every three American homes with cable TV service. The deal is the first under the new telecommunications laws that allows cable and phone service providers to compete in both lines of business. (Atlanta Journal-Constitution 28 Feb 96 F1)

KIDS COMPUTING CORNER
Frank Sereno, Editor

The Kids' Computing Corner

Mathemagics
Windows CD-ROM
ages 10+
street price $30

L3 Interactive
3000 W. Olympic Blvd.
Santa Monica, CA 90404
310-264-4188

Program Requirements

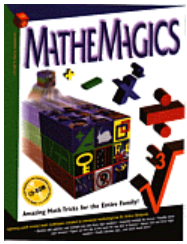|	
OS:	Windows 3.1
CPU:	486SX/33
HD Space:	8 MB
Memory:	10k
Graphics:	640 x 480, 256 colors
CD-ROM:	Double-speed
Audio:	16-bit sound card
Other:	mouse, printer optional

Have you been amazed by friends or coworkers who can easily add or multiply large numbers? Mathemagics teaches you their secrets and more in an entertaining video presentation. If you apply the lessons taught in this program, you will soon be the envy of your friends too.

The program is hosted by Dr. Arthur Benjamin, a college math professor. He has been using these techniques to amuse and amaze audiences at live presentations and on television for many years. Each technique is demonstrated and explained in a series of twenty-seven video and text lessons which are arranged in a three by three by three cube. The award-winning Learning Cube™ interface allows the user to easily move from lesson to lesson, from video to text and then back again. The glossary expands and defines terms used in the lessons. All information in Mathemagics is only a mouse click away. Another plus for the program is that it supports Autoplay in Win95.

The program teaches old math tricks such as "casting nines" and multiplying by eleven's to finding the cube root of any perfect cube. Benjamin also demonstrates addition, subtraction and multiplication of two- and three-digit numbers, squaring two- and three-digit numbers, and techniques for memorizing long strings of numbers. Most concepts are explained for mathematical soundness and can be used for everyday living.

While many of these concepts are useful and some tricks can be very entertaining, the program could use improvement. It should have had more examples and more sample problems for the user to solve to practice these new techniques and integrate them into his habits and thinking. The video from the professor's television show was too dark. The program permits printing of the TransporText™ lessons, but only one screen at a time rather than an entire lesson. You can print an entire lesson but you will be wasting a lot of paper in the process.

Mathemagics offers some intriguing educational and entertainment opportunities, but I feel it falls short of the mark. You may decide differently, but be warned that L3 Interactive only offers a warranty against defective media. Be sure to check with your local store on its return policy or try it in the store before purchasing.

New Offer from Sierra

I recently reviewed two titles in the Adi's Comprehensive Learning System. I found these titles to be challenging and entertaining. Each program is a two-disc set which covers two grades' worth of curriculum for each subject. Adi modules are available in second/third or fourth/fifth grade in math, English and Science.

These titles usually sell for $50 or more. However, Sierra is offering these titles direct to parents for $42.95 plus tax (where applicable), shipping and handling. As an added bonus, Sierra will include the latest version of Print Artist with any Adi purchase. Sierra is a name that means quality software. Every Sierra software package is backed by a 30-day moneyback guarantee. For more information, call 1-800-757-7707 and refer to offer AD96J.

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From Internet Wire News for immediate release:

VELOCITY ANNOUNCES ACTION-PACKED ADVENTURE FOR GAMING GURUS

Strife Combines Blazing First-Person 3-D Combat With Captivating Role-Playing Excitement

SAN FRANCISCO, CA -- Velocity Inc., the pioneer of the industry's first commercially successful multi-player networked game, today announced the release of its latest title Strife. Scheduled to begin shipping May 1, Strife is a challenging action adventure game that combines fast-action, first-person 3-D combat and the mythic intrigue of the best role-playing games. Strife thrusts players into a world of high stakes virtual combat while challenging them to successfully navigate through 28 levels of a tyrannical ruled city-state. Written using the enhanced id 3-D engine, Strife

takes DOOM-like gaming to a higher dimension.

"Strife constitutes a whole new type of 3-D combat game," said Russell Rheingrover, vice president of sales. "We expanded on the tradition of DOOM in a number of ways. Both by intensifying the fighting action with new weapons such as the Flame Thrower and by providing an enthralling interactive plot line complete with dramatic voice-overs, we've made Strife an example of what the next generation of PC games will look and play like."

Set in a world inspired by both alien and ancient medieval influences, Strife challenges players to an epic adventure in which they encounter a host of life threatening enemies, obstacles and mysteries. Players must defeat the Order, a quasi religious dictatorship that keeps the world of Strife mired in eternal warfare. The challenges take place throughout a virtual world of 200 square miles and 28 different levels of play, all of which represent varying states of technological development. Players interact with members of the underground rebellion, the Movement, who hold the keys to success. The allies are imperative to attaining information, conducting secret missions and furthering the cause against the tyranny of the Order.

New Weapons Systems

As players fight their way through the fanatical ranks of the Order, they encounter some of the most hideous and powerful adversaries imaginable including the Entity which feeds on violence, bloodshed and destruction. Fortunately, players will find a virtual arsenal of innovative and powerful weapons to combat the massive firepower of the Order. Weapons include the blistering Flame-Thrower, highly explosive Grenade Launcher, silent but deadly Crossbow, that shoots poisonous and electric arrows, the rapid fire Micro-Missile Launcher and the ultimate weapon of mass destruction: The "Sigil."

Strife contains a number of unique features not found in other action adventure games, including:

- Non-linear Plot Lines. Players experience different adventures and endings as they exercise the wide variety of choices that are available throughout the game.
- Complete Dialogue Interface. Players can interact with every character in Strife in order to unravel the story's insidious plot, complete with well directed voice overs by talented actors.
- Amazing Graphics. From medieval architecture to alien high technology, players of Strife will find graphics with a degree of depth and complexity unrivaled by other combat games.
- 8-Player Gaming. Strife offers improved multi-player real time gaming with up to eight opponents over a network and a 2-player option that works with a modem or null serial cable.
- Fully Interactive Environment. Players can trade gold for goods from characters like the Weaponsmith, explore vast cities and experience deadly confrontations with a dark cult of machines.
- As players complete special missions, skills such as weapon accuracy and stamina will improve.
- Extended Game Time. Players are challenged with more than 100 hours of non-repetitive game play ensuring long-term, intriguing play.

In addition, Strife has integrated a vastly improved 3-D engine that dramatically enhances the gaming experience. "The super-fast id engine has been enhanced to provide features like alpha blending, creating see-through stained glass and smooth fades between levels," said Gregory Slayton, acting president and CEO of Velocity. "This, along with intelligent interaction with a variety of game agents, provides players with a virtual world they will want to explore over and over again."

Strife runs on a 486 or higher processor and requires 4MB of RAM, a 256-color VGA monitor, a CD-ROM drive and supports most major sound cards (16-bit Soundblaster compatible or higher recommended). Strife requires 22MB of free hard drive space and MS-DOS 5.0 or higher. Strife will be available May 1 at an estimated street price of $49.95. Demo versions of Strife can be downloaded from Velocity's world wide web site at "http://www.velocitygames.com"

Strife is the product of a partnership between some of the PC gaming industry's hottest companies. Strife was produced by Rogue Entertainment and utilizes the id 3-D engine as the basis for its graphical interface. Chairman and founder of Velocity, Inc. Moses Ma remarked, "We're absolutely thrilled to work with id Software. They're terrific to work with and we look forward to additional collaborations in the future." Velocity is a leading developer and publisher of fast

action multi-player network games. The game play in Strife reflects the various strengths of each firm's contribution.

For additional information contact: Russell Rheingrover, Velocity Incorporated, Four Embarcadero, Suite 3100, San Francisco, CA 94111. Telephone (800) VLOCITY or (800) 856-2489, Fax: (415) 776-8099, Internet: strife@velocitygames.com
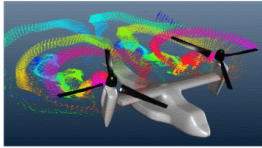
MICROGRAFX NEWSWIRE STR FOCUS

MICROGRAFX ANNOUNCES AGREEMENT TO ACQUIRE VISUAL SOFTWARE, INC.
Critically Acclaimed 3D Technology Innovator to Complement Award-Winning Graphics Products from Micrografx

Richardson, Texas (February 27, 1996) – Micrografx(R), Inc. (NASDAQ: MGXI), a leading graphics software developer, today announced it has signed an agreement to acquire Visual Software, Inc., a leader of 3D graphics, animation and publishing tools, for approximately 880,000 shares of Micrografx common stock subject to certain adjustments. The merger, which is subject to regulatory approval and other customary conditions, will be treated as a pooling of interests for accounting purposes and is expected to be accretive to Micrografx fiscal 1997 results. Revenues from Visual Software products were approximately $5 million for the twelve months ended December 31, 1995.

"With the power of today's computers, 3D is clearly the next progression for the PC graphics market," said J. Paul Grayson, chairman and CEO of Micrografx. "The acquisition of Visual Software allows us to both leverage Micrografx's previous experience in 3D, and infuse new concepts and talent into our development efforts. The result will be a rich set of graphics capabilities available for Windows(R) 95 and Windows NT."

"As a worldwide developer of 3D graphics and animation products since 1991, Visual Software has been focusing on developing tools to enable designers and artists to work easily and affordably in 3D," said Doug Richard, CEO of Visual Software. "The combination of both companies is a natural step toward shaping the future of the multimedia and 3D graphics arenas."

Visual Software's product line addresses the creative needs of home users, Web page creators and sophisticated 3D designers, and will become a key component of Micrografx's strategy to provide computer users with a full range of products to empower visual communication. In addition, Micrografx will leverage its core competencies in worldwide distribution, product localization, and award-winning interface design to bring even more compelling solutions to an increased number of PC users worldwide.

 "Micrografx's acquisition of Visual Software, a leading maker of 3D tools and content, is a great leap ahead for this earliest pioneer of Windows-based desktop graphics," said Bill Caffery, Gartner Group's vice president

of advanced technology strategy. "Second only to the Internet itself, 3D graphics will continue to be a realm of white-hot innovation. The rapid commercial evolution of 3D applications will effectively leverage such innovation to drive the future growth of the Internet to new heights."

"With approximately 85% of Visual Software's revenue coming from U.S. markets, we are poised to leverage their existing product line into our worldwide distribution, sales and support organizations," said Greg Peters, CFO of Micrografx. "Micrografx has successfully grown its business through acquisitions in the past, and these products are a natural fit with our existing customer base."

While specific plans are not yet public, Micrografx intends to continue marketing existing Visual Software products, while effectively integrating the company's advanced and comprehensive 3D technology into its award-winning graphics products, including Micrografx ABC Graphics Suite(TM) and Windows Draw(R). A strategic benefit of merging the two companies and product lines is the ability to deliver robust, easy-to-use tools and extensive 3D content required to create compelling virtual worlds.

Visual Software publishes a full range of 3D tools and extensive 3D data for Windows, Windows 95 and Windows NT. Their products include Instant 3D(TM), Visual Reality 2.0, Simply 3D, and Simply 3D SuperPack. Visual Software's products will continue to be available as standalone titles in retail outlets during the transition period, and through Micrografx channel partners in the future. Visual Software customers can be assured of continued quality service and support.

Micrografx is the global leader in developing and marketing graphics software which enhances visual communication and empowers creative expression. Founded in 1982, Micrografx has become a leading software publisher by responding quickly to customer and worldwide market needs. The company's U.S. operations are based in Richardson, Texas with a development office located in San Francisco. International subsidiaries are located in Canada, the United Kingdom, France, Germany, Italy, the Netherlands, Australia and Japan.

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THUMBSPLUS UPDATE! STR INFOFILE   STR'S EDITOR'S CHOICE!

THUMBSPLUS 3.0A RELEASE NOTES

NOTE: Several changes to the database format (both to fix problems and add functionality) mean that this latest release is not compatible with databases created with the first two 3.0 beta releases. You will need to delete any databases (.TDB files) created with these betas. This release is compatible with databases created using Beta 3.

BUGS FIXED IN 3.0A:
- Volume change problems (removable media), where ThumbsPlus would store the incorrect volume label in the database.
- After thumbnailing or viewing, fonts were left installed on Windows 95.
- Catalogs did not print correctly on Windows 95.

- The file list display was slow in directories with many files.
- If thumbnail display was not enabled, the file list was empty.
- Volume aliases are implemented.
- Superfulous "unable to retrieve volume data" messages no longer occur.
- Replacing thumbnails (thumbnail from selection or from video frame) did not work
- Clicking "OK" (or pressing ENTER) in the Comments windows would mark the image modified even if the comments had not changed.

HERE ARE SOME ADDITIONAL NEW FEATURES NOT LISTED IN THE HELP FILE:
- You can view images while loading them (Options > Preferences^Viewing). This works well with most video cards on most platforms, but it may make the overall time to load slower under some conditions.
- Shortcut menus have been added to change characteristics of the displayed file list (Options > Show for files, Options > Sort by and Options > Thumbnail size).
- You can select whether the default directory for saving files is the last directory saved or the current directory (Options > Preferences > General).
- In the shareware version, you can enter registration information and print (or fax) a form to register (File > Register).
- You can store assumed image gamma values for individual images in the database so they are always displayed with that gamma setting (View > Assumed Gamma).
- When copying or moving files, the "Replace" confirmation dialog box has been enhanced to show the thumbnail (if available) and information about both files, along with several option buttons: "Yes to all," "No to all," "Yes to Newer," "Yes," "No," and "Cancel."
- Most image editing functions can now be canceled using the ESC key.
- The ESC key is now the "off" key for the view window: if an operation is in progress, it is aborted; if an area is selected, it is canceled; if the image is full-screen, it is reduced to a normal window; otherwise, the window is closed.
- Most cursors are now in color on Windows 95 and NT.
- ThumbsPlus no longer accepts a username and code to eliminate the nag screens while waiting for the released version to arrive. This was being abused, and several codes were floating around on the Usenet newsgroups.
- The program to repair and compact (purge) databases is only available with the registered vesrion. It will also convert version 2 databases to the new format, with a few restrictions.

KNOWN PROBLEMS AND LIMITATIONS:
- Picture > Annotate is not functional. You can change the database annotation (comment) for a graphic using the Picture > Properties^Database tab.
- The background file option for contact sheets is not yet functional.
- You may occasionally have problems positioning buttons correctly when configuring the toolbar.
- TIFF images which are stored bottom-up do not display properly when "View While Loading" is on from Options > Preferences^General. You can resize or minimize and restore the window to see the image properly.
- "View while loading" is only implemented for TIFF, JPEG, PNG, PSD (Photoshop) and PCD (PhotoCD) files.

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ATARI INTERACTIVE - SOFTWARE/JAGUAR/COMPUTER SECTION
Dana Jacobson, Editor

FROM THE ATARI EDITOR'S DESK   "SAYING IT LIKE IT IS!"

It's been an extremely quiet week for Atari computing news. On the personal front, I have managed to finally obtain the Falcon donation (thanks go out to the Boston Computer Society's Atari group!) and a couple of Supra 14.4 modems. Since I'm currently running a MichTron bulletin board system with two lines, I decided to "pull the plug" on one of the lines and put the RATSoft BBS software on the second line to test it out "live". So far, it seems to be going well.. only one 'crash' while chatting with a friend of mine. Turns out that one of the configuration data files got zeroed out and the system went down. Easy to fix and all is well again.

Now I'm just waiting for the gigabyte hard drive and a CDROM or two to be approved so I can make the complete transfer of all existing files and such. The "new" system is essentially a message-based system for my old users to get accustomed to the new software, add a few downloads just to test downloading, etc., and a few other odds and ends to test out some of the feature. It's definitely different from the old software! Having fun, which is really what matters. If you feel like dropping by and adding to the message activity, feel free to give us a call. We're in Boston, in case you have an aversion to long distance madness - the number for the present system is 617-567-8642 and the new "test" system number is 617-569-2489. The initial call is a "register-only"; and validation occurs in less than 24 hours. Drop by and say hi!

Other than that, there's little else on the agenda this week.

Until next time…

JAGUAR SECTION

More JTS/Atari News
Ultra Vortek "Cheats"

All's Quiet…

After last week's deluge of Defender 2000 messages courtesy of Atari's Don Thomas' and his CatNips edition, it's been extremely quiet online. The UseNet still continues to be a forum for speculation with regard to the JTS merger, along with the usual game questions and the like.

I usually talk to some of the folks at Atari once or twice a week just to see what's new, but this week there didn't seem to be anyone around when I called! I made sure that my deodorant was still working and then the lightbulb appeared. My surprise turned to the realization that this week was likely a madhouse inside Atari headquarters as they're probably in the midst of a move to the new offices, as it's the end of the month (Happy belated Sadie Hawkin's Day!). As a result, there's no new "tidbits of info" for me to pass along to you this week. Oh well…

There's little to report this week (no new games are out) and there still hasn't been any kind of announcement of pending releases. We so have some information dealing with the Atari/JTS merger, perhaps old news for some of you, but here nonetheless. We also have some Ultra Vortek cheat notes for those of you who have been screaming for them, courtesy of the folks at Beyond Games.

It appears that a few of our reviewer staff members have become a little despondent over the merger news and been a little lax in their reviews as of late. We're working on them and hope that their reviews will be forthcoming! We're also trying to cut through the new red tape at Atari to get our hands on the latest batch of games for review ¬ it's amazing what a bunch of layoffs can do to the normal routine of a company! And, with the current move of staff and equipment, I just know that it'll still be awhile before the "normal" routine is re-established. So, like everyone else, we've adopted a waiting mode and hope that things get back on track, or at least some semblance of one.

So, we'll keep it short this week and start to get ready for a new week and issue. I hope that we'll have some new information regarding the merger, new games, and whatever else we come across in our travels!

Until next time…

MICROSOFT UNVEILS 3-D TECHNOLOGY

Microsoft Corp. has unveiled Direct3D, a new programming specification that aims to give interactive 3-D technology to mainstream PC users on both the desktop and the Internet. Microsoft says more than 80 software developers, hardware vendors and PC manufacturers have already pledged their intent to deliver products for the technology. Direct3D support software is now shipping to developers in beta form as part of a software development kit.

"Direct3D combines state-of-the art technology, high performance and unprecedented industry support," says Brad Silverberg, senior vice president of Microsoft's Internet platform and tools division. "PC users worldwide will soon experience a whole new level of 3-D realism in Internet, entertainment, education and business applications."
Direct3D is a major enhancement of the Reality Lab 3-D technology that Microsoft acquired last year through its purchase of RenderMorphics Ltd. Reality Lab has been used as the rendering engine for many groundbreaking 3-D games and Internet virtual world applications, notes Microsoft, including Microsoft Internet Explorer 2.0.

Microsoft says Direct3D and compatible tools will give developers access to 3-D hardware acceleration, integral support for the mapping of photographic textures and videos, the efficient mixing of animated 3-D and 2-D objects within a single scene and sophisticated object animation and scene management services.

"We believe Microsoft's Direct 3-D initiative will bring unprecedented 3-D graphics to home PCs and we are very supportive of this effort," says Rod Schrock, vice president of the consumer division at Compaq Computer Corp. "For the first time ever, consumers will be able to experience special game effects on their home PCs that surpass the performance of the latest game players and even today's arcade machines. By delivering a comprehensive 3-D standard

for the industry, Direct3D should greatly accelerate the availability of exciting 3-D products in the marketplace."

JAGUAR CHEATS, & HINTS STR INFOFILE - SOLVING THOSE RIDDLES!

From CompuServe's Atari Gaming Forum, thanks to Larry Tipton, a couple of Ultra Vortek tips:
The first confirmed POOPALITY in the game Ultra Vortek has been released by Beyond Games. It is for the character Lucius. Here it is:
 POOPALITY!
          * Down, Down, Away, Forward, Away, "A", Jab, Hold "B"
 Ummmm, enjoy!
Beyond Games has released a new code for the Game Ultra Vortek.
Here it is:
Press and hold simultaneously 1, 2, 3, 7, 9, Option and you access Test Mode.
 Enjoy!
 --Larry T.

From the Usenet and AEO's Mark Santora:
Here you go guys!
At the EYE Press Simultaneously 1,2,3,7,9 Option.
A NEW option screen will appear over the eye.

New Options Include
-1 hit kills player 1 -1 hit kills player 2
-# on back to daze (hits to daze someone)
-H Flip(flips every screen 180 degrees
-Annihilation Extra Time
-Tablet On
0 - fight all matches
1 - fight 6 matches
2 - fight 5 matches
        etc.
LUCIUS POOPALITY D,D,A,F,A,P,J,Hold K Enjoy!
Mark @ AEO

JAGUAR ONLINE STR INFOFILE - ONLINE USERS GROWL & PURR!

The following was printed in TWICE, This Week in Consumer Electronics. It's not new news but probably will clear up some of what's going on.

"ATARI, JTS MERGE FOR PRODUCTION OF DISK DRIVES"

"Atari is making its expected investment in the computer disk drive industry in an unexpected way - through a merger that will create new company in which no current Atari executives will hold a senior management position.
Subject to shareholder approval, Atari will merge with privately held JTS, a drive maker founded just two years ago by disk drive pioneer Jugi Tandon. Tom Mitchell, a co-founder of Seagate Technology, and one time president of Connor Peripherals is president of JTS.

Atari and JTS have agreed to merge into a new company that will retain the JTS name and be publicly traded. Although current Atari Shareholders will receive about 60% of the shares, all officers will come from JETS. The family of Atari chairman Jack Tramiel will have about a 28% stake in JTS.

Atari will continue as a separate, entertainment products division, but for just how long has become a subject of debate. Both Atari and JETS management say there is no current plan for Atari to abandon the video game and software business.

Atari laid off most of its game marketing and development staff last month, but there has been no sign yet of a widely predicted liquidation of Jaguar Game, peripheral and software inventory. There is speculation that Atari will seek to license out rights to Jaguar."

ONLINE WEEKLY STReport OnLine   The wires are a hummin'!

PEOPLE… ARE TALKING

On CompuServe

compiled by
Joe Mirando
73637,2262

Hidi ho friends and neighbors. It's been kind of a quite week here in AtariLand. Most of the talk is still about Atari buying into JTS and what will become of us poor Atari computer and game console users. I can't say for sure what will happen to our Jaguars, but I can make an educated guess about the computer portion…

Those of us with Atari computers will continue to use them to their fullest extent until they no longer do everything we want them to do. Then we will move on to other platforms. Of course, we will all reach that point at different times so the effect will be of a slow, gradual decline in usership from where we are now to oblivion.

Let's face it… when you look at the advances in the computer industry in the last… let's say five years, it's easy to see that any computer will quickly become obsolete. It's a miracle that computers last more than a year. To tell the truth, I think that the newer and bluer machines will be retired at a much higher rate than our old faithful STs. It's probably not because of the machines themselves, but because of the users. We ST users have learned to do much more than simply run programs.

We've had to learn how the machines work, how to get the most of what we have instead of running out and buying a new machine or a new suite of programs. That has made us what we are. Keep that in mind when your friends talk about their shiny new Pentiums with all that memory, hard drive space, and CPU speed. Then you can sit back and wait for the "easy" questions to start. You know, questions like "I paid good money for these blank disks, why should I have to format them?" Sometimes I wish that PC came with a special dial so you could turn up the intelligence.   The monitor has one labeled "brightness", but it doesn't seem to work. <grin> Thanks Gallager!

Well, let's get on with the reason for this column… all the great news, hints, tips, and info available every week right here on CompuServe.

From the Atari Computing Forums

Kris Gasteiger talks about a particular software mogul:

"I'm beginning to wonder when the anti-trust suits are going to break up Microsoft like they did AT&T. When one person has the control of such a huge portion of an industry, I get these huge doubts about their benevolence. I prefer to have a choice or two in all things."

Mark Kelling tells Kris:

"I do have to agree with you that most of us will be forced to use WINTEL machines if the current trend in disappearing computer platforms continues. When I bought my first ST there were Amiga, Mac, Atari, Intel(DOS & Windows), IBM(OS/2), and NeXT all selling what they felt was the perfect home computer or office computer or whatever type of computer. And you could find _all_ these machines in local computer stores.

Today, you have Windows or Mac. True, some of the others still exist in one form or another, but you can't just pop down to a local dealer and pick one up. One of the major reasons for this is price. Those now missing companies could not, or would not, keep up with the downward spiral of hardware prices. An example follows:

Several years ago, when I got my Mega 4 ST with color monitor (no hard drive or other extras included) I paid $2500.00 for the system. I purchased a hard drive for it later (a Mega file from Atari) and paid $500 bringing my total cost to $3000. Today, a Falcon (new) with 4 Meg RAM and no hard drive or other extras goes for about $1000.

In comparison, I purchased a Mac in November last year. It included 16Meg RAM, math coprocessor, 1.3Gig hard drive, 4X CD ROM, 28.8 fax modem, 15" color monitor, a load of software (including Works, Dictionaries, Encyclopedias, Fax software, etc), one year in home warranty service, an A/V card (TV tuner, direct to disk audio recording capabilities) and other things I'm sure I still haven't found yet! ;-) How much you may ask? $2500, the same

I paid for a bare bones ST in 1990. Looking through the Toad catalog and trying to put together as comparable Falcon as possible (14Meg RAM; 811M hard drive; 4xCD-ROM; inexpensive monitor) I come up with a grand total of $3260 … and still no software included. Why would someone spend that much extra to get less hardware? At one time Atari could boast "Power Without the Price!" and that is why I bought the ST instead of something else way back then. I could have bought a Windows machine with nearly the same specs as my Mac (8Meg of RAM instead of 16Meg) for nearly $1000 less. But just the mention of a WIN.INI file and my skin begins to crawl! ;-)

This shows the change in the market over the years. Most people getting computers today are _not_ doing it because they like to tinker and "hack" at the thing, they are getting one because it's the "cool" thing to do. After all, _everyone_ has a WWW Home page today, don't they?? When you are buying something that has become a household appliance sold in stores one aisle over from the clothes washers, are you going to put out the equivalent cost of a small used car? No way, you want something that costs about as much as your TV or sound system.

There will always be a market for other operating systems. Look around now at the specialty markets such as video, CAD, or digital music recording. There are Sun Systems, Silicon Graphics and the new B Box out there. They fill a special niche in the market place. And the best thing is these systems are what will lead to the eventual replacement of the WINTEL monopoly. People once thought IBM was the only type of computer to use in a big business setting -- look around nearly any big computer center today and Big Blue has one Small Corner of the floor. Faster, more flexible and less monolithic machines have pushed the giant into new directions (mainly out the door!). So shall Intel and Microsoft follow."

On the subject of the Tramiels' astounding reverse-alchemy trick (turning gold into lead), Gregg Anderson posts:

"So far everything the Tramiels have touched has died a horrible death after betraying their most loyal supporters time after time. I wonder if JTS realizes yet what they've put at risk by bringing them into their director's boardroom?

Anyway, I'm keeping my TT for as long as it will continue to run. Despite the lousy management they still put out some of the best computers on the market."

Paul O'Brien asks:

"…How can I transfer files from my Atari ST to a Mac?"

Keith Morton tells Paul:

"You have several options for transfer. Null modem transfer (slow). Disconnect hard drive from ST reconnect to Mac and access via Magic Mac. Copy files onto disks and recopy them to Mac. Use ST Zip to compress and Mac Zip to decompress. There are probably other ways too."

Albert Dayes of Atari Explorer Online Magazine adds:

"This forum is as good place to start. What type of files are transferring? The easiest method is to format a 720K disk on the MAC using Apple File Exchange and copy all your ST files to it. Then you can read them on the MAC. Exporting your data to ASCII first is the easiest way to move it over."

Mark Kelling jumps in and tells Paul:

"If you have one of the newer Macs which let you simply insert PC disks into the floppy drive and access them directly things are super simple!

You need to use 720K disks formatted on a PC or the Mac in 720K PC layout. (You can buy preformatted 720K PC disks too.) Copy the files you want to move onto the disk with your ST then place it into the Mac and move the files to where ever you want them. If you have a disk previously formatted on your ST you want copied into the Mac read the next paragraph carefully ;-)

IMPORTANT NOTE: _Always_ write protect the Atari disk _Before_ placing into the Mac drive. The Mac will write at least two files onto every PC disk it reads: FINDER.DAT and RESOURCE.FRK which will be used to hold information about any Mac file which may be copied to that disk. If the disk you insert in the Mac has been formatted to anything but standard 720K the Mac can trash it! I had an irreplaceable disk of data from my ST which I wanted to use in MagicMac. When I inserted it into the Mac, I didn't get the "This disk is Unreadable; Initialize it?" dialog you should get if the disk is unreadable; I just got a blank window. Taking the disk back to a PC, I discovered that it had been formatted originally on the ST with extra tracks. The Mac wrote its two files where it thought was empty sectors, totally destroying the structure of the files on the disk.

Chances are, if you attempt to read an ST disk formatted in any way other than pure 720K (such as Twisted, extra sectors, extra tracks, any Magazine format which is readable by single sided disk drives in the ST, etc.) all that will happen is you will get the "Unreadable" dialog box. But don't count on it because the Mac is trying its best to read that disk as a favor to you! ;-)

If you have an older Mac, things get more complicated. But overall, just treat the ST disk as if it were a 720K PC disk and use whatever method you have in your Mac to read those type PC disks."

Corey Klemow asks about the "grass-roots" effort to bring CompuServe's HMI protocol to the ST:

"Has there been any progress recently on an Atari HMI terminal program? Last I heard, a development team had been assembled."

Since I'm involved with the project, I tell Corey:

"I can only assume that Steven is awaiting a response from CIS about whether they are going to release the specs, code, or whatever to him… They said that they'd make it available, they didn't say that they'd make it easy. :^(

Yes, the development team has been assembled and we are anxious to get to work. I'm sure that Steven and the rest of us will begin posting when he hears from CIS."

Sysop Ron Luks tells us:

"After a CIS executive announced that CIS would make some HMI info available to outside developers (albiet without any guaranteed support) they were literally OVERWHELMED with requests. I personally passed along requests from 5 different develop groups supporting a variety of platforms including the Atari. Multiply that by the dozens of other people like me and you can understand that CIS was simply bowled over. There is some necessary paperwork involved and its (unfortunately) not trivial (you know how lawyers can be) but they are working to satisfy all the requests. Its just going to take a bit longer than anyone imagined or that CIS expected it to take."

I reply to Ron:

"I have no doubt but that CIS personnel are working at top speed to go through all of the requests. I can imagine that the interest and the associated requests for information is staggering to say the least.

My point was that just because CIS said that they would make it possible doesn't mean that they will simply be handing out copies of the HMI source code on every street corner. They have an interest in making sure that those involved are capable of releasing something that doesn't give CIS a black eye... or at least clog up their customer support lines. (Even though the responsibility for support will not fall on the shoulders of CIS, you _know_ that there will be those calling CIS and asking things like "do I need a modem to use COLUMBUS?")

And I'm sure that the announcement of the CIS public stock offering is just adding to the commotion.... I'll have to look into getting some shares.

Mark Kelling adds:

"We can hope that the overwhelming response may have woke up CIS to the fact that we _need_ the service they provide and don't want to lose access. Also, maybe they may have completely underestimated the numbers of people who still refer using a text based access system for whatever reason (simple reluctance to change or simple impossibility of obtaining a system to run the supplied software on).

Although the chance on CIS not going ahead with plans to eliminate text based access are probably zero, maybe they will take it a bit slower till the third party developers get a chance to put the HMI software out there. Or at least they may be more willing to help us get things done!"

Ron tells Mark:

"This may sound like double-talk or twisted semantics, but I promise its not. CIS is not doing anything to their existing software to eliminate ASCII access. i.e.-- its not a feature they plan to remove from the current system just to [tick] off current users.

Here's the story:

The CompuServe Information Service (as we know it) is 2 complete sets of system software (an ASCII interface and a graphical (HMI) interface) running on old 36-bit DEC mainframes. Highly modified, but dinosaur hardware nonetheless. CIS *has* to upgrade the system hardware. They have opted to use the plentiful and cheap 32-bit dual Pentium hardware in a client-server environment.

Therefore, the entire system's software needs to be rewritten for the new hardware. Its a complicated, expensive, time consuming process. The ASCII interface software was the original systemware and has been around since 1978 or 79. The graphical systemware was introduced in the mid 1980's and CIS has continued to update and improve both software systems over the years.

To switch to the new hardware (which is desperately needed because the old stuff has low capacity and cannot be replaced/fixed any longer), CIS needs to have the systemware completely re-written from the ground up.

Writing systemware for a multi-user, multi-server system that support thousands and thousands of simultaneous worldwide users in a proprietary environment is a huge task. 90% of the current users access the service under the graphical HMI interface while less than 10% use the old ASCII interface. The HMI userbase keeps growing and the ASCII interface userbase keeps shrinking.

Faced with these stats, CompuServe management decided to put 100% of their resources into developing the graphical HMI interface for the 32-bit environment first. Will they ever get around to developing the second ASCII interface for the 32-bit systems? I dunno, but THATS what people should be petitioning for if they want to have this (ASCII) again.

So, to make a long story short-- CIS is not taking away ASCII. They are just developing for HMI on the new hardware. Addressing 90% of the userbase first makes complete sense. The ultimate question will be: "after the HMI interface is ready, will CIS try to develop ASCII for the remaining minority (at considerable expense) or does it make more sense to try to convert the minority to HMI?"

Mark tells Ron:

"Sometimes my choice of words is not the best. "Eliminate ASCII access" I guess is not exactly what I meant. "No longer provide service upgrades for ASCII users" I guess is closer. There are many examples of this --the new mail system for HMI users only, new forum software for HMI users only -- which make us feel like we are being eliminated. True, CIS will not change or go away for us, it will just seem to get a little smaller when we can't access those other areas.

I can fully appreciate the complexity of the task CIS has set itself to. I work for a large bank which manages the entire Automated Teller network for the Texas Louisiana area. We must provide constantly improved and expanded services to both the end user (the person getting cash out) and the provider (the bank who issued the card). Also, we must _never_ experience any system outages for any reason. This means even when we installed new mainframes last year, the network never missed a transaction while the swap was made. We have approximately 30 thousand simultaneous users. CIS probably has more, but the overall picture is the same.

I don't see CIS reinstituting the dual system software. This would not only be outrageously expensive, but would really defeat the purpose of updating the whole thing. One of the benefits of the new system to CIS is the fact that everything will be neatly packaged HMI "events" and won't be strings of ASCII text. Now, if someone is logged in with an ASCII terminal system, every time a key is pressed the system has to take time to examine that character and decide if it requires action (such as a control Q to stop text output). This takes massive amounts of overhead. Under HMI, the user can type for hours composing a message (like this one! ;-) but the system can go do other things until the user selects "Send" then the entire message zips into CIS for processing. A much more efficient system. Also, the actual body of text of the message is compressed by CIM before sending and can be stored that way. When "read" it is transmitted and the receiver decompresses it and displays it. All in precise HMI "event" packages. So, instead of a full dual system, all that is needed is a program to take our ASCII stuff and repackage it as HMI data for the new CIS to work with. A routing system such as that used for PPP logins to move ASCII users' input over to an HMI translator sounds like a good idea if the development of third party HMI software does not produce acceptable products. Guess I'll contemplate that idea a while and go chat with Feedback.

Sorry to go on so long. Hopefully all this will lead somewhere for someone."

Well folks, that's about it for this week. Tune in again next week, same time, same station, and be ready to listen to what they are saying when…

PEOPLE ARE TALKING

EDITORIAL QUICKIES

"It is unconstitutional to force adults to limit..
the information they can see...
to a level suitable for children!"

... Judith Krug, Feb. 1996

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