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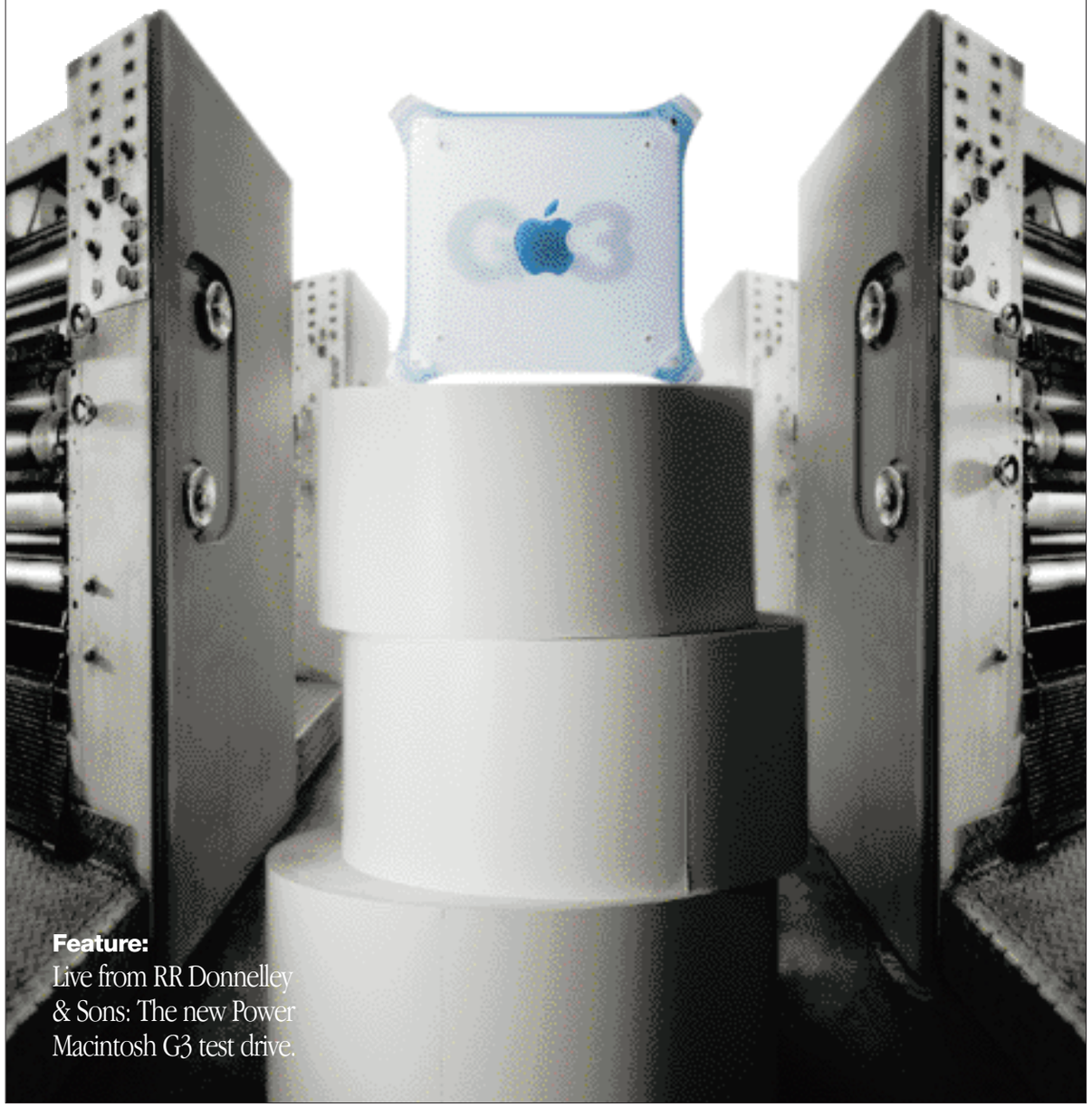
News for the Creative Community

Vol. 2 No. 1 Winter 1999

Apple Media Arts



Feature:
Live from RR Donnelley & Sons: The new Power Macintosh G3 test drive.

WGBH Converges on Everest

Convergent media, bringing together the Internet, film, and an interactive audience, is fast becoming the standard for information distribution. Boston's public television station, WGBH, has embraced this new strategy and the Apple technology that makes it possible, both in the office and over 29,000 feet.

In 1953, Sir Edmund Hillary and Tenzing Norgay stepped onto the summit of Mount Everest. Norgay had a look around, took a shallow breath, and recorded some thoughts for later: "It was such a sight as I had never seen before and would never see again: wild, wonderful, and terrible."

Had Norgay and Hillary been equipped with Macintosh PowerBook computers, a digital camera, and QuickTime VR technology, the world could quickly have experienced the sights and sounds of standing at the highest place on the planet. Alas, the populace would have to wait for the book version.

WGBH's 1,250 Mac systems are used for everything from copyediting to video editing for nationwide broadcasts.

First Online Adventure

In 1996, *NOVA Online* producer Liesl Clark from WGBH public television in Boston set out for Mount Everest to create *NOVA*'s first-ever "online adventure." Her mission was to document the making of an IMAX feature film on Everest (currently playing in IMAX theaters). Carrying a PowerBook and a digital camera and following the IMAX filmmaking team, led by David Breashears, Clark brought the climb, the climbers, and the mountain to life for the Internet community at www.wgbh.org. The web site was a remarkable success, with online interest and interactivity eventually driving a second expedition in 1997. This second project would mark the beginning of real media convergence at WGBH, as a film and interactive web site were created simultaneously from the mountain.

WGBH was already an Apple-based production house, using Macintosh technology for everything from copyediting to video editing for nationwide broadcasts such as *NOVA, Frontline,* and *The American Experience.* The Mac is involved in everything they do, from high-end Avid nonlinear editing to print design to on-air promotions to web sites. So the WGBH team knew the value that Apple technology would add to the process.

On Everest, PowerBook computers were used to send digital images, text, and e-mail messages through a satellite phone, allowing a web site to be built and modified daily from one of the most remote areas of the world. Online users could access regularly updated visuals and information and communicate directly with the climbers and the *NOVA* crew. Rather than waiting for the broadcast of a complete edited television show, viewers were able to participate directly in the climb and the web site production as it proceeded.

When things went awry on the mountain, leading to the death of eight climbers, attention to the Internet grew. As events unfolded by the second, the rapid uplink of information kept Internet users abreast of the situation on a daily basis.

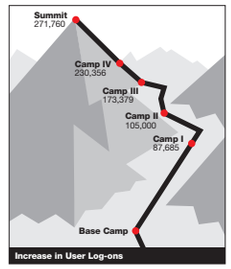
Tailoring Content to Interest

"Users were particularly interested in the physiological effects of altitude on the mind and body," recalls Clark. Specific queries such as this gave new direction to the content added to the site. The users asked questions, and the onsite producers were able to respond with visuals, climber testimony, and physiological information collected daily on the mountain.

The demands on producers and equipment were severe. With Clark and her team constantly sending images and information, the PowerBook systems were in use from morning till night—"when it got just too cold for us to type," recalls Clark. The ease and durability of the Apple technology facilitated the process substantially. "Apple has an intuitive interface," says Dave MacCarn, chief technologist at WGBH. "It allowed our producers, who are nontechnical people, to use the technology." Despite consistent subzero temperatures, there was no trouble with the machines. "I was especially impressed," comments Clark, "with the ease of use, dependability, and how quickly I could troubleshoot a problem when something went wrong."

In the end, the only technical problem was cold batteries. "We had to put the batteries in plastic freezer bags and boil them to warm them up," says Clark.

The interactivity of the 1996 project became the modus operandi for 1997. Previously, recalls MacCarn, World Wide Web content was considered "a supplement to the broadcast, a source of additional information." The 1997 Everest expedition was the first foray into true web and television convergence for WGBH.



As climbers ascended Everest, more and more people logged on to *NOVA*'s web site to follow their progress, with interest peaking when climbers reached the summit.

According to Annie Valva, director of technology at WGBH Interactive, convergence is more than simply "having your television on your computer or your computer on your television. It is how we think about content development, how we make our content, and how we present our content." With the Apple technology facilitating near-real-time contact between producers on Everest and viewers at home, the experience and the content—for both film and the web—became fundamentally intertwined.

Parallel Production

"It is parallel production," says Valva, "but like railroad tracks with ties," where the two sides are inherently connected. The web site and the broadcast become inseparable, each driven by and enhancing the other, and executed simultaneously. In 1997, Internet viewers participated as they had in 1996; now, however, their input not only drove the content for the web, but influenced the television program as well.

Again, Apple technology was critical to the convergent production. "With Apple technology, our production teams are able to stay focused on creating the content without having technology get in the way," says Valva. And, as usual, Apple technology was involved at every stage—from immediate web site updates to e-mail communications to the creation of traditional film shipped back to the Mac-powered Avid editors at home.

New Online Expeditions

With Everest as the model, other *NOVA*/PBS online expeditions—Easter Island, Egypt, Peru—now develop content with a convergence-based philosophy. Valva believes convergence with Apple technology is the future for WGBH and for broadcasting in general. "When we use the kind of technology Apple provides us, it gives us the ability to experiment and try things we couldn't try before." And she believes the technology is applicable to all forms of television and screen media—from network news to TV series to Hollywood movies.

The goal, as Valva says, "is to teach—to allow people access to information and experiences they wouldn't normally have." Convergence creates an active relationship between viewer and viewed, rather than the passive relationship necessitated by standard television media. For WGBH, web site traffic during the 1997 Everest expedition reached new heights for *NOVA* before the film aired on television—heights that doubled after the February 1998 broadcast, proving that the web had not diverted interest from television, but expanded it.

The climbers experienced only one technical difficulty with their PowerBook computers: cold batteries. Each nickel-cadmium unit had to be boiled in order to function properly.

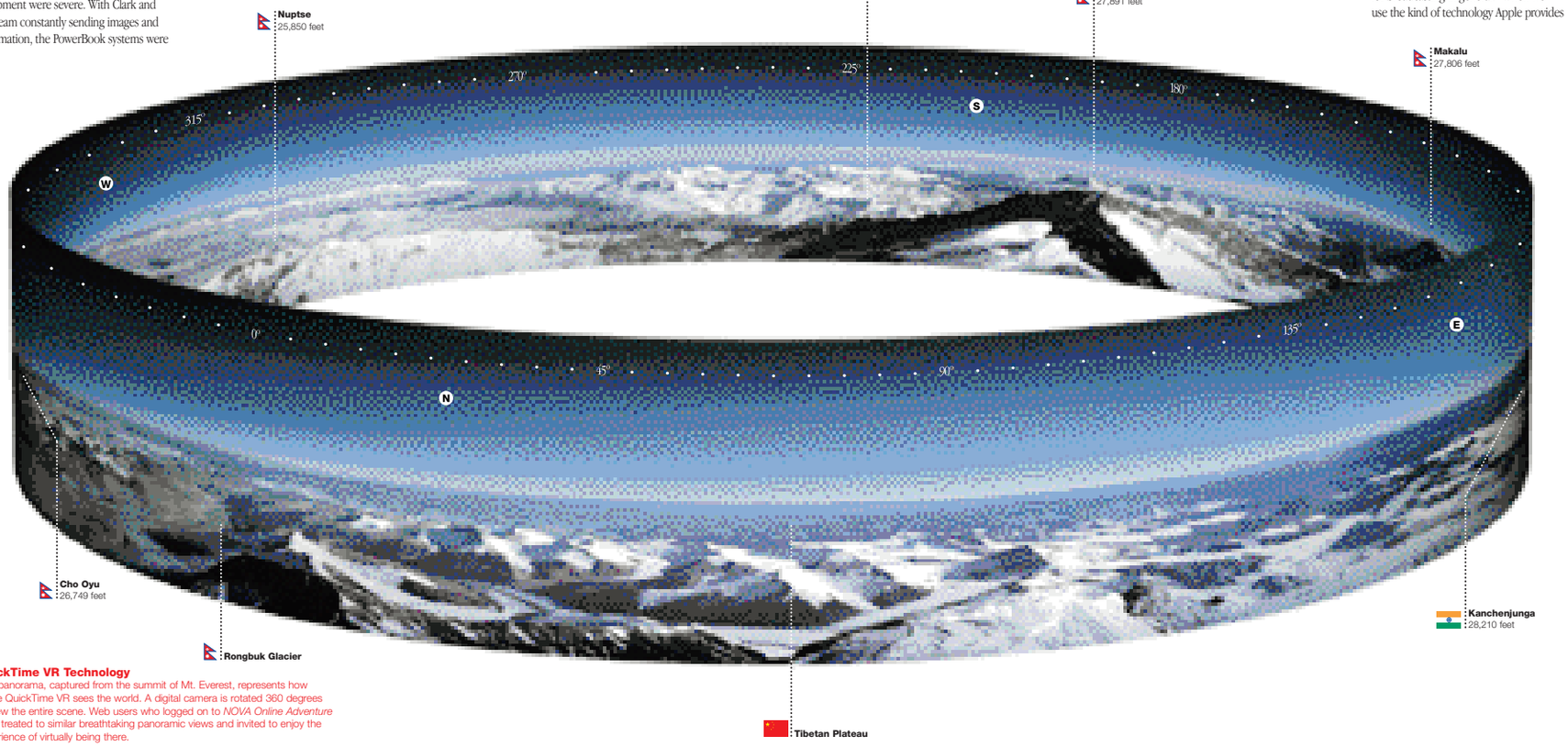
"Apple technology, and the new advances of QuickTime in particular, facilitate our move toward parallel production and convergent technologies," says Valva. "At WGBH we are committed to working with technologies that adhere to industry standards so we can produce our content once and have it play everywhere."

Because QuickTime recognizes and plays almost 90 file formats, WGBH can "easily share assets across a variety of departments and projects—allowing us to produce our television films simultaneously with the accompanying web sites and print materials," says Valva. "We can archive these materials for later internal use, or for easy access to our stock footage collection."

Dave MacCarn is currently experimenting with QuickTime to build a comprehensive film archive for the WGBH Film & Video Resource Center. "Ultimately," he says, "we hope to be able to catalog every piece of film, making it readily available for retrieval and delivery for whatever platform—film, television, Internet—and allowing for convergence in all projects in the future."

Visit www.wgbh.org to go to *NOVA Online* and other WGBH web sites.

Panoramic photo courtesy Roddy Mackenzie.



QuickTime VR Technology
This panorama, captured from the summit of Mt. Everest, represents how Apple QuickTime VR sees the world. A digital camera is rotated 360 degrees to view the entire scene. Web users who logged on to *NOVA Online Adventure* were treated to similar breathtaking panoramic views and invited to enjoy the experience of virtually being there.

QuickTime

QuickTime™

Go to Level 3

QuickTime is the Apple technology that makes video, sound, music, 3D, and virtual reality come alive for Macintosh and Windows users. Now QuickTime takes your multimedia capabilities to the next level—and the one beyond.

Get QuickTime 3, the next-generation version of the standard for digital video. QuickTime is the core multimedia technology used in 11,500 CD-ROM titles and hundreds of new DVD titles. For instance, Broderbund's Myst uses QuickTime, and so do Id Software's DOOM II and Microsoft's Encarta. And entertainment giants like Fox Interactive, CNN, Disney, and Pixar use QuickTime to deliver digital video.

See It to Believe It

Watch video previews of what's on Fox, check out Disney's trailer for *A Bug's Life*—or enjoy the latest iMac ads with no programming interruptions. QuickTime 3, which includes cutting-edge compression technologies from Sorenson and QDesign, actually compensates for network bottlenecks—letting you enjoy streaming video, audio, and virtual reality, even at extremely low data rates.

You Heard It Here First

Want to hear an entire music CD? Check out the classic Blue Indigo. QuickTime includes the QDesign Music Codec, a breakthrough digital audio compression technology that provides high-fidelity audio at low bit rates. Inside your computer, there's a boom-box waiting to sound off—and you can turn it on with QuickTime 3.

To Get QuickTime 3

Visit www.apple.com/quicktime. Then check out cool examples of QuickTime in action at the following sites.

Fox Video Preview
www.fox.com/previews.htm

A Bug's Life
www.apple.com/hotnews/features/bugslife/pixarstory.html

The X-Files
www.apple.com/hotnews/features/x-treme.html

Austin Powers
www.austinpowers.com/Mov/AustinQT3hi.mov

iMac Theater
www.apple.com/imac/theater/index.html

Apollo 11
www.apple.com/quicktime/samples/stream/apollo11.html

Pop Music
www.apple.com/quicktime/samples/stream/pop.html

Blue Indigo
www.apple.com/quicktime/samples/stream/indigo.html

Think Different
www.apple.com/quicktime/samples/stream/think.html

Christine Kane
www.apple.com/quicktime/samples/stream/kane.html

Final Cut Pro

Lights, Camera, and Lots of Action

For independent video producers, TV ad agencies, graphic artists, webmasters, and anyone with a camera trying to make a professional video at an affordable price, now there is Final Cut Pro—a product that capitalizes on the revolution created by digital video and built-in FireWire connectivity.

"We wanted Final Cut Pro to be a natural extension of the Mac," says Tim Myers, senior product marketing manager for Apple video products. "And it is." Users can edit, compose, and create effects in a plug-and-play setting that outpaces existing systems and bypasses once-necessary technology. "Digital video used to be the most painful and PC-like thing on a Mac; you had boards, SCSI cards, and drivers," Myers adds. "Now all you need is a camera."

Developed by a team of world-class engineers, Final Cut Pro includes professional editing and compositing tools, integrated logging, media capture, media management, audio mixers, and filters. In addition, it includes many high-end editing features, such as three-point editing, match frame, multitrack trimming, and robust sync management, as well as support for third-party Adobe After Effects plug-ins. Final Cut Pro delivers digital video, functions in an open-systems market, and offers editing features now seen only on $100,000 systems.

Award-winning film editor Larry Jordan, a 17-year industry veteran of feature films and hired gun on *NYPD Blue,* Jodie Foster's *Little Man Tate,* and Warner Brothers' Michael Keaton vehicle *Jack Frost,* recently ran Final Cut Pro on a Power Macintosh G3. "As an editor, I appreciated the intuitive and streamlined editing functions," Jordan says. "With the feel of a much higher-end system, Final Cut Pro will open doors to a lot of people."

For storing and sorting media, creating subclips, and even automatically logging footage as it is being digitized, Final Cut Pro "is a terrific product for all different types of video," he adds. And its ability to print to tape without making a movie file is a serious bid for the affections of leading professionals. Matching Final Cut Pro with QuickTime and the new Power Macintosh G3 with built-in FireWire provides a complete nonlinear video editing solution—creating the best real-world synergy possible: People who make video for a living are actually able to make video for a living.

Feature

Turbocharging Donnelley

The new Power Macintosh G3 advances the "wow" factor with the synergy of brawn, brains, and beauty. Put to the test at RR Donnelley & Sons, the new Power Macintosh showed it could accelerate prepress performance and handle vertical applications with lightning speed.

Like Olympic contenders vying for the gold, commercial printing companies know that every second counts in prepress production. File transfer rates, screen refresh speeds, and network throughput are critical measures of prepress efficiency in the hypercompetitive printing industry. Nowhere is this more true than at RR Donnelley & Sons Company, the largest commercial printer in the U.S. From 41 printing facilities run by some 26,000 employees, RR Donnelley produces everything from books, magazines, catalogs, retail inserts, and telephone directories to financial documentation. In 1997, sales topped $4.9 billion.

Moving a Trillion Bytes a Month

When Apple set out to test its new Power Macintosh G3 in the toughest environment it could find, RR Donnelley came immediately to mind. Operating constantly under tight deadlines and strict quality standards, Donnelley has been a longtime Apple user. Macintosh computers are in continuous use in all of its worldwide locations. Currently its prepress facilities move more than a terabyte (one trillion bytes) of data across a local area network each month.

Under a cloak of extreme secrecy, Apple delivered the new Power Macintosh G3 to Donnelley's Prepress Service Center in Elgin, Illinois, for testing. At this dedicated prepress facility, 100 employees electronically produce an average of 25,000 pages a month for such clients as The Good Guys, True Value Hardware, J.C. Penney, and Sears. Technical director Kevin Hekman, who heads the Elgin plant, says he took Apple's instruction to "do your damnedest" literally and set about testing the Power Macintosh G3 with all of their vertical-market apps. These included Adobe Photoshop, Scitex VIP RIP, FileMaker, AppleScript, interaction with AppleShare IP 6 servers, Windows NT servers, Shira's Super Combine, and whatever else they could find.

Going the Distance

The advantages of the new Power Macintosh G3 can be summed up in two words: More and faster. More bays, more slots, and more on-board features; faster processors, faster caches, faster memory, faster PCI slots, faster drives, faster networking, and faster I/O. Donnelley's observations matched Apple's. "BYTEmark processor performance tests have shown us that the new Power Macintosh G3, even on the low end, outperforms systems using the Pentium II 400 and the Pentium II 450," says Kendall Laidlaw, Apple Power Macintosh G3 product marketing manager.

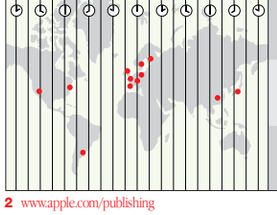
Donnelley's test model included a 400-megahertz PowerPC G3 processor, 1MB of backside cache running at 200 megahertz, and 1GB of high-performance memory. It also sported 400-Mbps FireWire, 10/100BASE-T Ethernet, and four PCI slots, one of which is dedicated to an ATI RAGE 128 graphics card with 16MB of graphics memory.

Donnelley began testing the Power Macintosh G3 cautiously by transferring files to a Windows NT server. "That was the last thing we did slowly," says Hekman. "The network copy to NT was very fast, and the file transfer times were great on the new Power Macintosh G3."

Then Hekman's prime tester, Tony Grondin, exposed the Power Macintosh G3 to "real world" situations to see how it handled the load. Images were opened from the server in Adobe Photoshop and

With up to a 400-megahertz PowerPC G3 processor, 1MB of backside cache at 200 megahertz, and a system bus running at 100 megahertz, the Power Macintosh G3 is the machine of choice for power Photoshop users.

Apple Worldwide Events Calendar



Asia Pacific	Finland	France	Germany	Japan	Spain	Sweden
March South China Int. Exhibition Guangzhou, China	**February 10–11** Print Media Fair Helsinki	**February 9–12** Milia '99 Cannes	**March 18–24** CeBIT Hannover	**February 18–20** Macworld Expo Tokyo	**February 3–6** MundoInternet '99 Madrid	**April 13–15** Computer World—Expo '99 Stockholm
March 23–26 Comdex '99 Beijing, China					**March 4–5** DVI '99 Barcelona	
					May 28–June 13 Feria del Libro Madrid	

Profile

Making Money on the Mac

On January 1, 1999, member nations in the new European Union (EU) officially adopted the euro as its common currency—a move intended to build a single European market with a single, stable monetary system. But before the EU could issue new money, it first had to design it.

Most designers see their Apple computers as a way to make money, but Austrian graphic designer Robert Kalina is more direct in pursuing this objective. He uses his Power Macintosh to design real money. Kalina has done this so successfully that he was chosen in a competition to design the first series of euro banknotes for the new European Union (EU). The euro will be the common currency for some 280 million Europeans in 11 countries from Portugal to Finland, and soon Kalina's designs will be recognized and coveted around the world.

Experience Necessary

Kalina is well qualified to create the new banknotes. Since graduating from the School of Graphic Arts in Vienna in 1975, he has worked at the Austrian National Bank designing Austrian currency. In February 1996, when the European Monetary Institute, or EMI (now called European Central Bank), invited experienced banknote designers to vie for the opportunity to design the euro, he was an obvious contender.

The EMI gave entrants until September 1996 to submit their proposed designs. To promote the goal of a united Europe, it specified the theme "Ages and Styles of Europe," and strictly forbade any images that could be associated with a particular country, including portraits of famous composers and artists. It also designated the basic colors for the seven banknotes, in denominations of 5, 10, 20, 50, 100, 200, and 500 euros. Even for seasoned banknote designers, these were daunting guidelines, since national heroes and landmarks are favorite visual themes.

Kalina started his research by going to the library to identify potential subjects. At first, he says, he considered ways to depict people, since "it is an old tradition to have portraits on banknotes," but ruled out that approach because "there's no value in using an unknown, anonymous face." Instead he hit on the idea of windows, gateways, and bridges to symbolize "the spirit of openness and cooperation in the European Union." These visual subjects also allowed Kalina to address EMI's theme of ages and styles by representing Europe's illustrious architectural heritage.

Euro designer R. Kalina, Oesterreichische Banknoten und Sicherheitsdruck GmbH

Kalina chose windows, gateways, and bridges to symbolize "the spirit of openness and cooperation in the European Union."

"In the beginning, I scanned pictures into the Mac from books and then changed them in Adobe Photoshop," explains Kalina, who uses Macromedia Freehand for sketching. "For me, it is very easy to work on the Mac. It is quick and I can see results quickly. When you work by hand, it may take some weeks, and then it may not be right." With only about seven months to develop his entry, Kalina was able to make three or four series, ultimately submitting two. "It was a print output directly from the computer," he says.

Creating Mass Appeal

EMI decision makers tested public perception of the leading designs by first surveying some 2,000 taxi drivers, retailers, and others who handle a lot of cash, and then soliciting the opinions of artists and communications experts. Kalina's design prevailed, much to his astonishment. "I didn't believe I had a chance to win because of my decision not to use portraits," he says.

There was still much work to be done. The final banknote designs demanded overlaying numerous exacting printing techniques intended to foil counterfeiters. These techniques included offset printing, letterpress, silk screen, intaglio, watermarks, and foil applications. Other sophisticated anticounterfeiting measures, ranging from special inks and micro-printing to covert security details that can't be mentioned, had to be integrated into the design as well. "I start first to design for aesthetics," explains Kalina, "but I must have in my head the different techniques that will be built in by specialists after my design is complete."

Another EMI requirement was that the currency serve the needs of the blind and partially sighted. That meant creating notes in different sizes and colors and giving them tactile properties and highly legible numerals.

In addition to these challenges, Kalina had to make sure that his architectural images were indistinct enough not to be identified with any known structure, yet true to the architectural styles of the seven "ages" of European cultural history—Classical, Romanesque, Gothic, Renaissance, Baroque and Rococo, the Age of Iron and Glass, and 20th-century modern. Even though Kalina altered the images on the Mac, at least one bridge-engineering expert recognized the Pont de Neuilly in Paris and several other well-known bridges. That sent Kalina back to his Macintosh to further disguise the sources of his inspiration. Following that, he had to consult with engineers to make sure that he hadn't inadvertently distorted the "bridges" so severely that they would collapse if actually built.

Despite these complications and revisions, Kalina presented the EMI Council with finished designs for approval by June 1997—a quick six-month turnaround from the time he was awarded the commission. "The Mac gives me many choices and allows me to try different things quickly," Kalina praises.

Government mints in Europe have already begun printing some 13 billion copies of Kalina's designs to have banknotes ready for widespread circulation by 2002, when EU member nations will change over to a single currency. As of January 1, 1999, the euro is recognized as legal currency in financial markets. With the clout of so many EU nations behind it, the euro is likely to become one of the most powerful monetary symbols in the world.

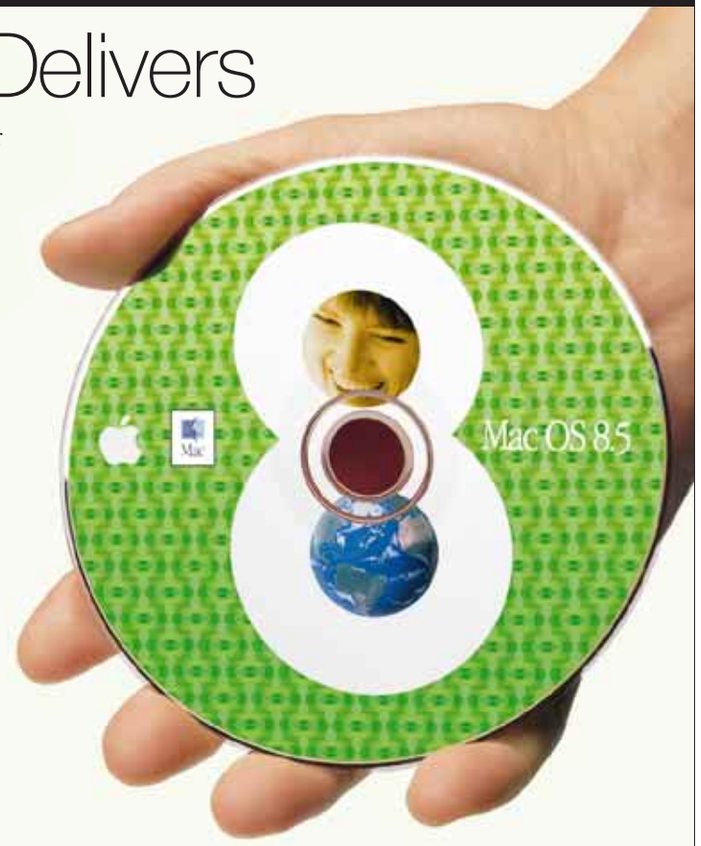
The new Mac OS 8.5 incorporates the euro symbol. You can enter it by typing Option-Shift-r on an AZERTY keyboard or Option-Shift-2 on a QWERTY keyboard.

Draft banknote design © European Monetary Institute, 1997/European Central Bank, 1998.

Technology Update

Mac OS 8.5 Delivers

Mac OS 8.5 delivers new productivity features for the Power Macintosh desktop: superfast network performance, task automation with AppleScript, and state-of-the-art color matching with ColorSync 2.5.1. Not to mention Sherlock, a tool that could revolutionize searching for information on the Internet. All of this—and more—for only $99.*



Smart Self-installation
Loading new system software can intimidate even the most experienced user; deadlines wait for no data disaster or downtime. But installing Mac OS 8.5 is a snap. You don't have to worry about system conflicts—the Installer takes care of that. And you don't have to worry about being offline for long; the built-in Internet Setup Assistant reconnects you easily to your ISP.

A Gumshoe in the Machine?
Just how nifty is the new Sherlock search feature? First of all, starting a web search is easy. You launch Sherlock, click the Search Internet tab, and then enter key words or phrases. And here's the best part: You don't type in special signs like + or ? or :-). You use natural language to send Sherlock off and running—using multiple search engines simultaneously to find information on the Internet. When the search is complete, Sherlock sorts and summarizes the results by relevance to your topic. In one convenient window, you can scroll through the results and then click the URL to go instantly to a listed site. You can even save search results to reuse later.

Yes, Sherlock performs the routine "find file" search. But it also searches any volume on your system by content. Let's say you want to find a paper you know you've seen in your department on the topic of birth order and sports ability. Launching Sherlock, you'd select the Find Content tab, and then enter your key words—something like "relationship between birth order and sports ability"—to send Sherlock off to search all indexed volumes.

Speaking of Speed . . .
Mac OS 8.5 also speeds file transfer. With the built-in Network Browser, navigating network file servers is as quick and easy as opening a folder on the desktop. This new operating system was designed for speed. And we've got the data to prove it. With earlier versions, copying a huge graphics file took almost 40 seconds—even longer on a busy network. However, in tests, Mac OS 8.5 copied a 185MB Adobe Photoshop file in 18.8 seconds, as opposed to 23 seconds on Windows NT.** Smoking.

AppleScript Automation—Your Desktop Valet
With new, improved AppleScript, it's easy and fast to script networking, printing, and ColorSync processes. From executing commands in applications such as Adobe Photoshop, QuarkXPress, or Microsoft Word to customizing how windows appear on the desktop, AppleScript can improve any workflow—and save time and money. Mac OS 8.5 offers several preinstalled scripts, but you can also easily create your own.

Use AppleScript to combine text and images in a brochure template inside a scripted Create folder.

With new, improved AppleScript, it's easy to script networking, printing, and ColorSync processes. Mac OS 8.5 offers several preinstalled scripts—or you can create your own.

Here's a possible graphics or desktop publishing production scenario. Let's say you want to automate the process of creating a product brochure for print in QuarkXPress. First you create a folder in which you will perform specific tasks, or actions. You create these Folder Actions by attaching scripts to the folder—in this case, the Create folder. You then initiate the AppleScript Folder Action by dragging text and image files and the brochure template into the open window of the Create folder. The QuarkXPress application and template file open, beginning the process of creating the brochure.

AppleScript matches images and text files to their respective pages and placeholders according to filename. For example, an image with the filename P-01 can be cross-indexed to the product image placeholder on the first product page. Similarly, an image with the filename P-02 is placed in the product image placeholder on the second page, and so on.

The script continues to build the brochure, adjusting the images to fit the designated QuarkXPress image placeholders. The script then applies character styling to the imported text files—in this case, depending on whether the text is a product description or a specifications list.

When the script finishes processing the brochure, it creates a new folder on the desktop named "Brochure." It then saves the brochure file in the new folder, along with the related image files. A final script action closes the document and switches to the desktop. Voila!

And that's not all. Next, we can drop the brochure file into a scripted folder labeled "Convert" to transform it into a web-ready piece. Here, scripted processes convert Photoshop images to GIFs, convert text to HTML, and create hyperlinks and buttons. In a matter of moments, AppleScript builds web pages from your QuarkXPress document.

Finally, we can drop both the brochure and the HTML pages into a scripted Catalog folder that will log the various items into a media asset management system. The script logs each item's information in the server log database, copies this information to the server, and then opens a media asset database and adds each item to it. The components of both the brochure and the HTML pages are organized and archived on the fly.

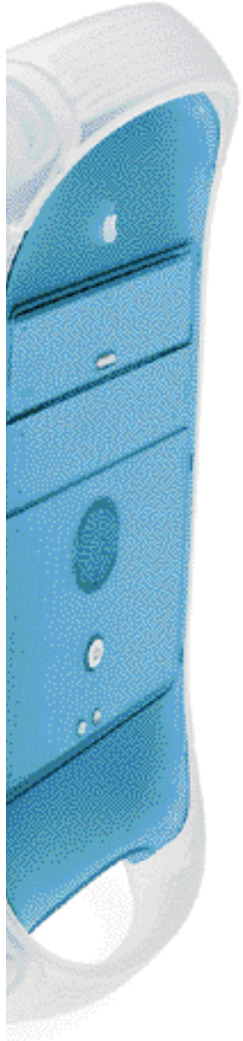
Achieving High-fidelity Color
Graphic designers and production artists rely on ColorSync, which maintains color in translation between scanners, cameras, monitors, printers, and the web. Now browser-savvy, ColorSync 2.5.1, bundled with Mac OS 8.5, provides color-matching control throughout the average graphics workflow, as well as CMM (color management module) support for Linotype, Kodak, Agfa, and Imation. A Monitor Calibration Assistant, support for 16-bit-per-channel images, and iMac display support are a few of the new features that help the graphics crowd achieve repeatable, reliable, and consistent color on screen, in print, for electronic delivery, or on the World Wide Web.

The Result? Improved Overall Performance
Other great things about Mac OS 8.5? The beefed-up Help Center is a more interactive HTML-based system, and includes both Mac OS and AppleScript info-packed help. The new Application Switcher palette lets you create a floating toolbar for one-click access to all open applications. Now you can print by dropping any file onto a desktop printer icon—without launching the application. And here's a favorite: Your Internet connection terminates automatically when it's been inactive longer than a specified interval. (This feature alone could save some users $99 in just a month!)

Note: Mac OS 8.5.1 corrects bugs and adds new Sherlock features. The software is available for download at www.apple.com/macos free of charge.

* Suggested retail price, tax not included. ** Based on performance tests conducted by Apple. Large (185MB) files were copied over 100-Mbps Ethernet from a 300-MHz Power Macintosh G3 client to two servers: a 300-MHz Macintosh Server G3 running AppleShare IP 6.0 and a 400-MHz Pentium II–based server running Windows NT Server 4.0.

edited and saved to the server. Low-resolution images were generated in Photoshop with Scitex PSImage export and saved directly to the server. Images were brought into QuarkXPress from the server. PostScript files were printed to the server and were ripped using Scitex VIP to generate Continuous Tone (CT) and Line Work (LW) files for proofing. CT and LW were combined into a composite TIFF and imported into QuarkXPress to print laser proofs on a Canon ColorPASS 1000. All files were opened, saved, and generated directly on the server. "The new Mac gives faster redraws in Photoshop and you don't have to wait as long for screens to refresh, so operators can spend more time doing productive work and less time waiting because their machines are locked up," Grondin notes.



In almost every instance, from job start to finish, the new Power Macintosh G3 was about two times faster than the Elgin plant's current systems—a Power Macintosh 8500 with a Newer Technology 233-megahertz card, a 266-megahertz Power Macintosh G3, and a 233-megahertz Power Macintosh G3. "Let it be said," Grondin reports enthusiastically, "that the new Power Macintosh G3 was much, much quicker in responsiveness." Pausing, he adds, "Quite a lot faster. Noticeably faster. Considerably faster!"

A Seductive Performance
That's just the inside. What Donnelley didn't see—since the system was delivered in a plain metal housing—was that the new Power Macintosh G3 looks as good on the outside as it does inside. Conceived by Apple's industrial design group, led by Jonathan Ive, the computer features a translucent enclosure with angled corners and cool colors. With the new swing-out side panel, accessing cards, drives, and memory is as easy as opening a desk drawer. The interior real estate houses everything—drives, slots, memory, and performance—with a keen eye to space efficiency.

Match all this with the new line of Apple Studio Displays, which includes the 15-inch active-matrix flat-panel Studio Display, the 17-inch (16.1-inch viewable) Diamondtron-based Studio Display, and the 21-inch (19.8-inch viewable) Studio Display complete with ColorSync technology, and you have one beautiful, brawny machine that will pull its own weight even under the most sophisticated and demanding conditions.

"In the printing industry, speed means productivity, and productivity means profitability," says Kirk Brauch, LAN/WAN specialist at Donnelley. "With the publishing industry switching over to digital formats, we believe that by the end of the year 2000, Donnelley prepress operations will be moving somewhere between 10 and 15 terabytes of data per month. The new Power Macintosh G3 is an important step toward making that happen."

Photoshop Runs 37% Faster*

The new Power Macintosh G3 outpaced the Power Macintosh 9600/300 when running a 20MB file through 16 common Adobe Photoshop 5.0 operations.

Memory-intensive Graphics Rendered 224% Faster*

In MacBench 5.0 publishing graphics tests, the Power Macintosh G3 sped past the Power Macintosh 9600/300 in rendering large graphic files on screen simulating QuarkXPress and Photoshop.

*Graphs reflect percentage increase in performance speed. Actual application performance may vary.

Point of View by Jeff Martin

Investing in the Artist, Not Just the Art

When I was a publishing customer, I remember being told that it costs about four times more to train a person on a computer than to purchase the desktop system itself. That sounded far-fetched until I realized that this calculation included the mistakes, inefficiencies, and misspent labor that came from inadequate training. This meant that if people were the largest cost, then training was the best investment.

Although desktop technologies have become more accessible with the emergence of the World Wide Web, digital video, and "drag and drop, point and click" publishing, the underlying technologies require more training, not less. Still, these sophisticated technologies are the very reasons people buy Macintosh computers: ColorSync offers consistent color fidelity between applications and media. QuickTime facilitates the creation of media-rich content and digital video. AppleScript automates repetitive computer tasks so users can focus on creative ones. These Apple technologies have become the "pillars of publishing"—tools for establishing a competitive advantage in the information age, or in the age of the cyberstudio. They let you master the media before it masters you.

Currently more than one million people are using ColorSync. AppleScript is the number one web programming language for CGI development. And QuickTime is the recognized standard for digital video, with over 344,000 content creators using it to create and distribute digital media.* What's more, publishers and designers have found that their computers are paid for faster when these technologies are used to their full extent. For example, studies reveal that running AppleScript for four hours a week to customize advertising layouts and convert print newspapers to HTML format for the web represents the equivalent output of five full-time employees for a week. Using QuickTime-supported software and hardware in a digital video workflow improves productivity 309% over analog methods. ColorSync has been shown to reduce approval times, mistakes, consumables, and proofing cycles when used as a color management solution for remote viewing, collaboration, and soft proofing. In fact, a study showed that when using ColorSync, the return on investment in hardware, people, and paper can be as much as 36 times higher than the original investment.*

When used as part of your graphic design workflow, the powerful Apple technologies hidden behind the Mac OS smiley face can make the cost of your computer incidental, or provide a financial return within weeks, not months or years. But that's only if you use them.

Apple Computer is launching "Apple Media School" at Seybold Boston in March to increase that probability. Apple Media School is a web-based certification and accreditation program sponsored and supported by top universities, graphic arts schools, and professional training organizations. The courseware and instruction spans curriculum and testing on the web and includes books and CDs provided by sponsoring schools or through local bookstores.

Our goal with Apple Media School is to get beyond the hype of "media convergence" and help publishing customers converge on new job opportunities and technology skills. As Apple continues to grow in the publishing industry, with our new Power Macintosh G3 computers and even more exciting versions of the Mac OS, we want to give back to our customers and ensure their growth in the ecosystem that makes up the worldwide design and publishing industry, and with Macintosh, help them stand above all others.

Visit Apple Media School at www.apple.com/publishing.
*GISTICS Primary Research, October 1998.

Apple User Bio

Designer Tamotsu Yagi

Well-known in Japan before coming to the U.S. in 1984, Tamotsu Yagi introduced his Asian aesthetic sensibility to American design and quickly won acclaim for creating the famous Esprit graphic look. In this Apple biography, he explains why his San Francisco studio is Mac-based.

First project on a Macintosh
My studio didn't use the Macintosh until after I left Esprit in 1991. Our first assignment was to produce a Japanese version of Irving Penn's book, *Passage*, using Japanese Mac software. Now the entire studio works on the Mac.

Main reason for embracing the Macintosh
It's clean, fast, flexible, and consistent. With Japanese and English software versions available, it is easy to work on a Macintosh; you can just click on the tool bar to switch between languages. The Mac facilitates teamwork, too. For example, an English-proficient designer can work on the English copy on one Mac, while someone else uses a Mac to work on the Japanese text, while another handles graphic details and someone else scans in images. Because our Mac systems are networked, we can electronically merge these elements into a final layout.

Most frequently used Macintosh technologies
We use available Japanese and English versions of everything, including FileMaker Pro, Adobe Photoshop, QuarkXPress, Macromedia Freehand, Netscape Navigator, Japanese Mac, Adobe Acrobat, and Microsoft Word.

The Mac is the common graphic language for all of us in the U.S., Japan, and Europe. We are all fluent in Apple.

Toughest project ever done on a Macintosh
No one project stands out as the most difficult, but we do have an ongoing challenge because we have so many Japanese clients and collaborate with creative people worldwide. As recently as three years ago, that meant sending full-size printer's "mechanicals" from our offices in San Francisco to clients and printers in Japan and Europe. Not only was this costly and slow, the risk of damaging artwork en route was a constant worry. Now for fashion ad campaigns, we often prepare rough sketches in our studio, e-mail them to photographers in Paris, produce finished layouts back in San Francisco, and then e-mail or send disks to printers in whatever market the ads will appear. The Mac is the common graphic language for all of us in the U.S., Japan, and Europe. We are all fluent in Apple.

Current projects on the Macintosh
World Company Ltd., one of the largest and most successful clothing companies in Japan, has kept us quite busy. Among its many enterprises are Indivi by Atsuro Tayama, which has stores in Paris and New York, and a new clothing brand, also by Atsuro Tayama, called Voice Mail. For World, we've done almost 50 brand identity programs, including name and retail concept creation, visual merchandising, retail interiors and showroom designs, advertising, and packaging. We also keep our Mac computers busy handling assignments for clients such as Benetton Italy, Esprit, Intel, and The Beyeler Museum in Switzerland. Our PowerBook is reserved mostly for administrative and bookkeeping chores.

Switzerland		United Kingdom	United States	Uruguay
January 21–23 Digital '99; ZOOM Bern	**April 14–18** Salon Multimedia Geneva	**January–December 1999** UK City of Architecture www.glasgow1999.co.uk	**March 1–5** Seybold '99 Boston	**April 5–9** Apple Punta Punta del Este
February 10–12 Internet Expo iEX '99 Zurich	**April 27–30** Computer '99 Beaulieu-Lausanne		**April 19–22** NAB '99 Las Vegas	
March 25–27 Professional Imaging Zurich				

Apple Fact

Application Update
148 new design and publishing applications were created for the Mac in 1998. 98 have been added or updated since fall 1998. Visit www.apple.com/guide.