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Newsletter #216

December 1994

New Media For a New World

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Presented at Seminar 6, the CARF Breakfast Speaker Series, Toronto, November 16, 1994

I think the video ["Power is..." TV commercial featuring Oliver Stone shown at seminar] speaks clearly to both Apple's vision and action in the Multimedia Age — to provide the customer with more power. Power to communicate and power to achieve their visions.

Everyone agrees that multimedia is causing a revolution, but many of us are baffled when we're asked to invest in new systems or reconfigure our existing systems to take advantage of multimedia content and services.

Today I would like to let multimedia speak for itself by demonstrating a few examples of multimedia content, and showing you some new technology that will make the use of multimedia easier than it has ever been.

But first, I would like to set the context in which to appreciate Apple's approach to multimedia.

The convergence of industries is something that has been getting a lot of press lately. But this is not a "new" movement.

This convergence has been happening over a long period of time. Apple conducted a study along with Harvard University a few years ago, looking at the issue of convergence of

previously distinct industries in the U.S. to help give us a preliminary roadmap as to where multimedia and new media currently stood, and how they were changing over time. From this study and others like it, it was becoming clear that Apple had a role to play in this process as a facilitator and catalyst.

Convergence

One of the reasons The Convergence has been getting a lot of attention is the recent worldwide explosion of mergers, joint ventures and strategic alliances that have been forming between large corporations within these converging industries.

It was almost three years ago that Apple had a vision for the New Media Age: to establish a dialogue between the leading international corporations and visionaries from each of the converging industries. To achieve this vision, Apple sponsored a special forum: the Hakone Conference in Hakone, Japan.

Our goal was to get these people from all over the world in one place — diverse companies such as Mondadori, SONY, BBC, and Motorola. The dialogues that were started at this confer-

ence have developed into strong relationships between the attendees, and some have gone on to form alliances and joint ventures.

This is just one way in which Apple has helped to spearhead the development of New Media and move the industry from vision into action.

It was at Hakone that the visionary author George Gilder had an exciting vision to share: "...within 10 years we will have the processing power of a Cray supercomputer on our desktops."

As we harness this additional power, it will drive us down the Information Superhighway. But, will it be useful to the consumer?

Also at Hakone, Francesco Tato, the CEO of Fininvest/Mondadori, Italy's largest publishing group, discussed the need for standardization: "...Once we have an agreed platform then the editorial...investment can take place..."

Since then, Mondadori has been making significant investment in New Media. Mondadori recently launched an ISDN version of one of their best-selling magazines *EPOCA*. By ISDN,

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In this issue

- **Creation Of The Digiverse**
- **Canada's Information Highway**
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the full magazine is available online one day earlier than the newsstand version.

Building the Superhighway

Today much of the rhetoric has been centred on "who buys whom" and "who builds" the cables, the pipes, the infrastructure. Most users struggle to understand what steps they should take in order to take advantage of all this.

Someone said recently, "Don't tell me about the Superhighway, just tell me how to get out of the driveway."

Our view is that what is missing from the debate is the user. What added value services will the user get, and what will they pay?

There are three ways to get onto the Superhighway: the telephone, the personal computer and the television. Each one has to add something and re-invent itself if it is to become a device to deliver new, value-added services.

So we might expect a new generation of phones. So far it hasn't happened. In fact the services that exist in most phones today are not used. Most of us find it too difficult to set up a conference call on our office phone. Same with cellular phones, most people have not taken advantage of the so-called programmability of these phones — too complicated. Sounds like a problem of poor human-interface.

People have been trying to re-invent the television. Most of you remember the HDTV debate. There's still little progress. The personal computer, we believe, is already poised to allow people to take advantage of the evolution in communications technology and usage. It is already combining the best aspects of the telephone and TV with its own traditional strengths.

What you have seen from Apple in this regard, is to build communications into our products in an integrated fashion — from personal digital assistants, to notebooks, to desktops.

Today on a Macintosh you can send and receive fax and voicemail, and plug your phone directly into it. Fur-

thermore, we already sell a Macintosh called MacTV which is exactly that — a cable ready TV integrated with a Macintosh.

Why would you use a computer to manage phone, voicemail or a television? It has to do with human interface and putting control back into our lives.

Apple has followed through on the commitments made at Hakone by developing a very strong New Media strategy which is threefold:

- continue to focus on seamless multimedia integration and "ease of use";
- provide a critical mass of an installed base of New Media machines; and,
- create the best New Media authoring platform.

Interactive Content

If the delivery method is one piece of the New Media puzzle, another important piece of the puzzle is content: interesting interactive content is the key to meeting consumer need and winning consumers over to New Media. Do consumers really want 500 channels of more of the same kind of programming on their TVs?

This next evolution in personal computers is *not* about putting more processing power into our hands (though that will happen anyway), rather it involves putting more simplicity into our lives.

In order to satisfy the desire for simplification and the desire for control, this next personal computer evolution should ideally deliver more control over less things.

So this brings us to the New Media frontier. What will define the way that New Media will affect our daily lives? What will we have control over and how simple will it be to exercise this control?

How does Apple view its role in New Media? New Media will affect every aspect of our lives: in education, home and business. As far as Apple is concerned, New Media is not so much a trend as it is a revolution. And Apple is committed to enabling this revolution.

But rather than telling you about this I would like to show with the following demos and videos.

CD-ROM

At Hakone, Apple showed one of the earliest CD-ROM titles, *From Alice to Ocean*, which was sponsored by Apple, and was the first CD-ROM to accompany a photo book.

This CD-ROM brings to life the story of a heroic young Australian woman, Robin Davidson, who crossed the Outback alone. I'd like to show you how productions like this CD-ROM are changing the whole economics and dimension of publishing.

In traditional publishing, the physical product costs of a coffee table book such as *From Alice to Ocean* is about \$15.00(U.S.) each, and the minimum (economic) run would be about 20,000. The lead time for this production is approximately three months.

By contrast, to produce the *From Alice to Ocean* CD-ROM, the physical cost is only \$1.00(U.S.) each, the minimum run is 200 copies and it can be produced overnight. Actually, you could produce just one copy of the CD-ROM in about 60 minutes for less than \$100.

In electronic publishing, not only the economics are improved. Look at the enrichment value of a CD-ROM, which can contain voice, music, video, animations and side-bar information related to the book.

While the coffee table book might contain 100 images (it would be prohibitively expensive to have much more than that), the CD-ROM can easily contain over 300 images.

In this photo in the book, the detail and imagery are just stunning. You can actually see the raindrops in this image. But on the CD-ROM, not only can you see the raindrops, but you can hear them and listen to Robin reliving the experience for you.

Also on the CD, if we click the flashing camera icon, we can see a video of the photographer explaining the setting for the shot, and the setting

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for his camera — how he made the photo. So you can see how rich and alive this New Media is. New Media is also making great strides in education in many parts of the world.

Dynamic Books

It is accepted among teachers and educators that active learners retain more than passive learners, and that giving a learner control over pace increases their confidence. Think about how much confidence this type of program can instill in a child just learning the alphabet.

In the *Word Tales* CD-ROM, kids have a fun way to learn the alphabet and spelling. They get gentle correction if the wrong choice is made and they get encouragement in the form of fun animations and sound effects each time they get a correct answer.

In addition to bolstering standard reading skills, New Media technology provides an exciting way to learn foreign languages. The famous Beatrix Potter story *Peter Rabbit* is now available on CD-ROM with multilingual support.

For kids just learning to read, the text of the story is read aloud, or they can click on individual words for pronunciation. Then if we switch to the French translation version, the same text is now read in English and then in French. Other languages available include Italian, Spanish and Japanese.

But let's face it, with video games as popular as they are, educators sometimes need tools that provide excitement and adventure as well as traditional educational drills.

Big Anthony's Mixed Up Magic is an example of an interactive adventure that combines the learning experience of reading a book with the entertainment value of video games.

You know, a few years ago people were amazed at the capability of the electronic book but now the electronic book has reached a whole new dimension. And now the book standard is called the Dynamic Book. *Big Anthony* is a good example to show this difference because it incorporates both. We

can read along with the text of the book and listen to the author read the book, or click on an individual word to hear it read — very important for early readers. Beyond that, we can start the adventure and the dynamic aspect of the CD-ROM.

This Italian story by the famous American author Tomie DePaola will be a different experience every time it is played. Here we are helping Big Anthony to look for a lost letter that this time may be hidden somewhere in the kitchen but next time we play it might be in the bedroom or shed.

With this dynamic aspect, children can enjoy the story again and again. In

"Don't tell me about the Superhighway, just tell me how to get out of the driveway."

addition to making the original story electronic, CD-ROMs can offer games and activities for entertainment and education.

A recent *MacWorld* magazine study showed that consumers want information and self-education content. The *Mayo Clinic Family Health* CD-ROM provides just this type of material. It enhances a basic family reference book with videos, animation and search features.

Using the *Family Health* CD, you can look up information regarding general anatomy and health and see not just the text but interactive images and diagrams. Or you can get specific information on procedure like sonograms which can also be supplied by video.

You can even learn about the way the heart functions, or learn a procedure such as mouth-to-mouth resuscitation.

A doctor in Australia with a Macintosh and CD player has access to

monthly updates to over 3,000 U.S. media journals, "It's like having your own medical library right next to you on your desktop."

More importantly, it is an example of how enterprises are finding ways to re-purpose existing information in new, more approachable ways.

New Methods of Delivery

I mentioned earlier that in Italy, Mondadori has recently introduced an electronic version of its popular magazine *EPOCA*. Distributed via ISDN, the full magazine is available online one day in advance of the newsstand version.

The online *EPOCA* interface allows the user to have an overview of the contents, choosing the type of view they would like and easily jump from one article to another. You can scan the article or jump forward to a specific page, just like you would a printed magazine. You can also zoom into an article to read it.

What's a really impressive feature is something you couldn't do in the print version: you can perform interactive text searches by name or by topic and then view all occurrences that search finds.

So it seems that New Media is taking the world by storm: product catalogues in Japan, online publishing in Japan and here we have an exciting application in Canada.

At the Canadian National Film Archive, users can interactively search and review the entire film archive via a system which incorporates robots, laserdisks and interactive viewing stations. The interface and conceptual design of this jukebox system is applicable to many other forms of new media such as commercial video.

A major trend in retailing is home shopping. Realizing the convenience this offered consumers, Apple launched a test product called *En Passant*. We shipped 30,000 CD-ROMs that contained 3,000 products from 21 catalogues.

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The response was so tremendous that Tom Brokaw and NBC News couldn't ignore it.

Television and Computers Converge

And there are respected leaders in technology that agree with us.

At the Hakone conference, Nicholas Negroponte, director of the prestigious MIT Multimedia Lab had a few words to say on this issue: "...the computer people are adding more video power to computers and the TV people who are adding more computer power to TVs...by the year 2000 there will be an Apple or IBM logo on your TV."

Well, Nicholas saw the future but maybe it wasn't so far into the future as he thought.

In 1993, only one year after Hakone, Apple introduced and market tested a new product called MacTV, a cable-ready television built into your computer. So now your TV can have an Apple logo on it but it is certainly more than just a TV. MacTV represents Apple's vision for future consumer products.

Products you can use to do traditional computing like spreadsheets and word processing; and to interact with CD-ROM programs and games; and to view television programs.

With MacTV, people can experience Apple technology from various viewpoints: the childrens' bedroom or playroom, the family or living room, the home office, and even from the kitchen. This is technology for anybody, anywhere, anytime.

Apple has developed a connection called Firewire which will greatly simplify the connection process: it provides one simple connection for all video, audio and computer devices, with no requirement for SCSI numbers or terminators.

Firewire is not only simpler, but is 10 times faster than SCSI and is significantly less expensive than traditional cables. And Apple is licensing this technology widely. Apple intends for Firewire to become the cabling standard.

Virtual Reality

Not only is Apple working to integrate TV functionality with computing functionality, but we're also enabling development of the next generation of entertainment — Virtual Reality.

You may have heard of Apple's QuickTime technology which has become the industry standard for integrating time-based data types such as audio and music, video and animations.

Now Apple is releasing a new technology called QuickTime VR. This is not the Virtual Reality of body gloves and helmets but Virtual Reality on the desktop. With QuickTime VR, the user can interact within a virtual space on a standard Macintosh or PC.

With QuickTime VR, the user has the ability to explore a space interactively with 360 degrees of view and from any perspective: zoom into or away from an object; look up or down within the space; and you can actually pick up objects and turn them by 360 degrees, something you could never do at a museum.

New Media Evolution

Since the advent of Macintosh, Apple has lead the way for the incorporation of traditionally non-computer technologies into personal computing.

In 1989, it was desktop publishing. Now in 1994, Apple has introduced the Desktop Studio for affordable professional video authoring.

Just as the desktop publishing revolution enabled a lot of new publishers to unleash their creativity, the desktop studio revolution has the same type of promise, to open the doors to creative videographers and give them freedom and power at a much lower price point than was ever before possible.

Apple intends to continue to make significant investments in the future of New Media. We like to think that our investments so far have acted as a catalyst in the convergence of the industries, and that this kind of progress has created momentum around New Media that is truly unstoppable.

To continue this progress, we think

it is essential that we have the power to develop entirely new classes of applications. The Power PC is the powerful engine that will drive Apple's future in this regard. Our commitment to this new RISC-based architecture will bring personal computer price-performance to a new level and will also enable a personal computer evolution.

This evolution will go beyond simply making computers easy to use, it will go on to capture the entire range of human communication and interaction.

The convergence of industries is going to make the next decade of personal computing at least as exciting as the last one has been — and Apple is excited to be at the forefront of the emerging New Media industry. □

Satjiv S. Chahil

Satjiv Chahil was appointed Vice-President and General Manager of the New Media Division in January 1993.

The mandate of the division is to increase Apple's market access for multimedia technologies, expand multimedia content and to develop new market opportunities for Macintosh technology through agreements with major original equipment manufacturers.

Apple describes New Media as the industry resulting from the convergence of the publishing, entertainment, telecommunications, computing and consumer electronics businesses and the content that will emerge because of it.

Chahil has been involved with multimedia for over five years and was the chief architect of the Hakone Forum held in the summer of 1992 in Hakone, Japan which enlisted the collective efforts of experts and leaders from the converging industries to define and develop a shared vision of New Media.

He joined Apple in 1988 as a founding member of the Apple Pacific team which encompasses the diverse regions of Canada, Central and South America, Australia, Japan and Asia.

Prior to joining Apple, Chahil worked for IBM and Xerox for more than 12 years in various marketing, sales and management positions.