How the Earlier Media Achieved Critical Mass: World Wide Web;If Medium Is the Message, the Message Is the Web

By John Markoff

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The Associated Press was formed in the mid-19th century when a group of newspapers decided to invest jointly in a newfangled medium -- the telegraph -- to speed the collection and dissemination of information.

Last week, A.P. announced that it would adopt a newer-fangled medium -- the World Wide Web -- to begin distributing its articles and photographs over the global Internet. It was simply the latest, but perhaps most historically significant, move yet by an old-line media organization into the World Wide Web, the Internet multimedia information-retrieval system that appears on the verge of becoming a mass medium itself.

If the medium is the message, then the message these days is the World Wide Web.

In short order the Web, which three years ago was little more than a research tool for physicists and computer hobbyists, has flourished. It is being embraced by media concerns, consumer-product companies and businesses of various stripes that are creating thousands of so-called Web sites each month, with the number of computers playing host to one or more of these sites already exceeding 100,000.

Conservative estimates place the number of people who have used the Web in the millions, and it is not hard to find more breathless estimates in the tens of millions.

Capable of letting people use computers to send and receive text, sound, still images and video clips, the Web incorporates elements of the various print and electronic media that have preceded it. And yet, the Web is poised not to replace its predecessors but to take a place alongside them as a social, cultural and economic force in its own right.

Its complementary role is already evident: many radio stations and all the major television networks have Web sites promoting their programs and stars. Newspapers, including The New York Times, are devising cyberspace editions.

And few movies anymore are released without a promotional Web site, including "Goldeneye" the James Bond film that opened this weekend at theaters everywhere and on the Web at the address http:// www.mgmua.com/bond. The site offers the movie's theme song performed by Tina Turner, more than a dozen video clips from the film and illustrated biographies of the cast members.

Prime-time television commercials by Toyota and other advertisers now routinely include a Web address. And Procter & Gamble, whose advertising has long helped underwrite the mass media, has even staked out prime Web real estate by reserving addresses that include flu.com and toiletpaper.com.

"We are poised on the edge of a new medium," Clay Felker, director of the magazine program at the University of California at Berkeley's graduate journalism school, said. "And it's going to change the nature of how we acquire information."

As with each mass medium that has arrived before it, the Web has reached this threshold through a confluence of a key technology, a ready audience and a stream of corporate backers willing to bet that profitable businesses can be built on it. But few experts are willing to declare that the Web has taken its place in the mass media pantheon because the profitable business formulas have yet to be found.

Newspapers and magazines make money by selling individual copies, subscriptions and advertising space. Radio and television stations sell air time to those with money and a message. Movie theaters sell tickets. But on the Web so far, despite seed-money by adventurous advertisers and some tentative efforts to charge for access to sites or services, there is no certainty that this medium will achieve the critical mass that capitalism demands of its mass media.

"How do you make a business out of the World Wide Web?" asked Norman Pearlstine, editor in chief of Time Inc., which has an experimental Web site called Pathfinder that offers selected contents from the company's magazines (http:// www.pathfinder.com). But because ad revenue alone is not carrying the freight, Time Inc. will begin testing ways to charge visitors to its site.

And yet, the technological prerequisites are firmly in place. The Web is an outgrowth of the Internet, which began as an academic research experiment in the late 1960's. For more than two decades the Internet remained largely inaccessible, used mainly by computer scientists and Pentagon researchers, university scholars and students.

Then came the World Wide Web.

Like the Internet, the Web began as a tool to let scientists easily and quickly share information. Conceived in the late 1980's by Tim Berners-Lee, who was then a software designer at CERN, the Swiss physics research center, the basic Web technology was first put to use in 1990.

The big breakthrough came in 1992, when student researchers at the National Center for Supercomputing Applications in Illinois created Mosaic, a simple software tool called a Web browser. Mosaic permitted access to information anywhere on the World Wide Web by

letting the user point and click a computer mouse on highlighted words or images on the screen. The browser, which became available in commercial versions like Netscape Communications' Navigator, not only made Web sites easily accessible, it prompted businesses, organizations and even individuals to create new Web sites by the thousands.

Thus did the Web quickly become a standard and accepted way for the growing millions of the computer-literate to communicate and to entertain and inform themselves. And unlike each previous mass medium, the Web does not require its audience to be merely passive recipients of information.

For very little money, and with a modicum of computer skills, virtually anyone can create his or her own Web site. Anyone with a modem is potentially a global pamphleteer.

One consequence of this democratization is that the Web can be a remarkably anarchic forum compared with the old-style mass media. "Think of this as television colliding with the telephone party line," said Paul Saffo, a computer industry consultant at the Institute for the Future, a Menlo Park, Calif., research firm. "In terms of social consequences, the Web is a great experiment. It's going to deliver us community with a vengeance -- and we may find we don't want it."