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Patent War Pending Over 'Applets'

By Paul Noglows

The price of winding through the Internet may be going up, if a small Chicago company succeeds in its attempt to extract licensing fees for inserting small computer programs into the software used to browse the World Wide Web.

Eolas Technologies Inc. announced last week that it has completed a licensing agreement with the University of California for the exclusive rights to a pending patent covering the use of embedded program objects, or "applets," within Web documents. Applets are poised to be the next big thing in Web browsers by making them truly interactive. Applets are tiny programs that will be downloaded automatically to a computer when a user wants to do something interactively with a browser, such as update a portfolio of stocks or hear a sound clip.

If the patent is granted -- an application from the University of California is under review by the U.S. Patent Office -- Eolas stands to become a big company quickly by deriving a licensing fee from any outfit that supplies or uses applets.

Most affected will be browser companies, such as Netscape Communications Corp., Spyglass Inc. and Sun Microsystems Inc. Sun engineers, for instance, have been among the pioneers of the incorporation of applets into browsers, through Sun's Java programming language. Java is the basis for Hot Java, Sun's interactive browser, introduced earlier this year. Netscape also has said it will incorporate Java and its applet technology into the popular Navigator browser, which accounts for about three-fourths of all requests from Web servers.

Michael Doyle, chairman, chief executive and co-founder of Eolas and the former director of the UCSF Academic Computing Center in San Francisco, contends that his team of researchers invented the applets technology in 1993.

"Individuals involved at Netscape, Spyglass and Sun Microsystems saw our demonstrations in 1993," Doyle says. "Our technology has been widely discussed over the last year and we are not new players in this arena. There's a perception that Java was there first, but that's simply not the case."

Doyle says Eolas has been in discussions for months with user companies regarding both the licensing of the underlying technology (which his company has trademarked as Weblets) and associated products. While Eolas plans to provide royalty-free licenses to individual and academic users of applets, commercial users would be charged for each piece of software that uses the embedded applications. That charge could range from 50 cents per piece of software for heavy users (on the order of 1 million units) all the way up to \$5 per unit for more limited usage.

Users of applets were reticent to discuss the University of California's patent application or Eolas' licensing plans. Spyglass spokesman Randy Pitzer says his company will wait to see if the patent is granted before commenting.

A Sun representative said the company is reviewing the patent application, and any comment now would be premature.

Netscape spokeswoman Kristina Lessing says her company would like to review the patent but has not been in negotiations with Eolas.

Despite these companies' current public caution, some experts expect them to vehemently oppose any development that takes money out of their pockets.

Whether a patent will be granted is anyone's guess. While Doyle says the University of California spent months researching the issue of whether the technology could be patented, the U.S. Patent Office has had a particularly difficult time in administering software patents. For instance, the Patent Office at one point issued Compton's New Media a patent for the concept of combining digital graphics, video, sound and text into "multimedia" presentations, only to rescind it later; Compton's is appealing that decision.

Eolas has not yet determined whether it will make its patent application public.

Doyle says applets could transform the Web into the preferred means for achieving interactive computing. That's because applets can run either on individuals' desktops or portable computers, or on more powerful computers in networks, known as servers. The user never knows whether the applet runs locally or remotely.

For that reason, Doyle says, the concept of an operating system can now be expanded beyond a program that runs on an individual machine to encompass large numbers of cooperative programs running on a web of computers all over the world.

"The World Wide Web becomes the operating system and the Internet becomes the computer," Doyle says.

Accordingly he adds, this Web operating system will eventually make irrelevant the issue of whether users are running Windows, Macintosh or Unix operating systems for their workstations.

David Bennahum, author of the upcoming book *Coming Of Age In Cyberspace*, says existing operating system vendors could be hurt. "Who's left out in the cold in this new era? Folks who invested heavily in the personal computer paradigm. No one invested more than Microsoft," says Bennahum.

The acronym Eolas stands for Embedded Objects Linked Across Systems and is also the Gaelic word for Knowledge.

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