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CACHING: COPYRIGHT vs. CONVENIENCE

Use of the Internet is growing exponentially. More people are using the same networks to send more data. In order to avoid congestion, network engineers have automated processes to store information temporarily in computers close to the user so that the information can be served up quickly. Because one of a copyright owner's exclusive rights is to "copy" his or her work – and the process of storing information, or "caching," automatically creates a copy of a work – caching presents potential copyright infringement problems. Recently, the European Commission has taken an approach to this debate that could affect U.S. companies who have intranets operating in Europe. More broadly, companies need to pay attention to the workings of their caching software.

What is "caching"?

The term "cache" comes from the French word "cacher," meaning "to hide." In cyberspace, caching means that information accessed by users is stored so that future access can be accomplished locally. Rather than multiple networked computers requesting information from a single, distant source, a cache is automatically established in a location close to the requestors. Popular material can be served from the cache (rather than from the source), thus avoiding repeated delivery of the same information across the network and improving network performance. On the Internet, caching takes place at many places in the network hierarchy, including at the browser, web server, and regional level.

Who cares about caching?

For Internet Service Providers ("ISPs") coping with exponentially increasing demand, caching is a solution to traffic jams and a way to save money. According to Dataquest, as much as one-third of an ISP's operational costs are based on line usage. Eliminating redundant trips

to the same source can provide significant savings. Users can also benefit from caching that saves them from waiting for information pulled from remote sites – the information they request can be drawn from the cache faster than from its original source. Caching is a response to the limited bandwidth (the rate at which data can be transmitted) available worldwide.

What issues does caching raise?

An important issue raised by caching is "freshness." The cache may not reflect updates to the original material. Websites can, however, set an expiration date that allows caches to "expire" pages and go back for a fresh original at suitable intervals. Another issue is advertising: while users may get access to a cached site more quickly, the source website may not record these visits as a hit, and advertisers need to know how often the source has been contacted. (Two weeks ago, a coalition of online advertisers called FAST (Future of Advertising Stakeholders) proposed that the e-commerce industry uniformly adopt software that will keep track of individual viewers on cached sites.) A third issue raised by caching is copyright infringement.

What are the copyright implications of caching?

Under U.S. law, a sufficiently original work (that is, a work created by its author and not copied from someone else) is entitled to copyright protection if it is fixed in a tangible medium of expression. When a file is stored on the hard drive of a web server, it is sufficiently "fixed" to be copyrightable. The owner of this fixed work has several exclusive rights under U.S. law, including the right to reproduce the work in copies. Therefore, without permission from the owner, no one can legally copy the work. Because caching creates a copy of the work, the caching site may be said to have infringed the exclusive reproduction right of the owner of that work.

What affirmative defenses can a caching site raise?

The caching site has at least two affirmative defenses available to it: fair use under Section 107 of the Copyright Act (a four-factor, case-specific analysis of the justifiability of the copying); and an argument that the original author has given an implied license to the caching site to reproduce the work. The implied license argument has the greater appeal, particularly given that originators of material (1) have posted it to a publicly available site, knowing of the caching mechanisms of the net; and (2) could, if they chose, place technical restrictions on the caching of their works.

While there are no court decisions addressing the legality of caching, the Digital Millennium Copyright Act (signed by President Clinton on October 28, 1998) (see December 1998 E-Commerce News) provides limited copyright liability “safe harbors” for ISPs that cache material. The safe harbors are conditioned, however, on the ISP’s caching function occurring through an automatic technical process — an ISP cannot choose what it caches. Also, the ISP must comply with industry standards relating to caching, and with any reasonable restrictions on caching that the originator of the cached material requests (including the codes that force refreshing the cache at set intervals).

The European Commission is considering legislation that might outlaw caching.

Article 2 of the European Parliament’s “Directive on the harmonization of certain aspects of copyright and related rights in the Information Society” protects copyrights online. A recent proposed amendment to that Article reads:

Transient and incidental acts of reproduction . . . which are an integral and essential part of a technological process for the sole purpose of enabling use to be made of a work or other subject matter shall be exempted from [copyright protection]. **Such uses must be authorized by the right holders or permitted by law and must have no economic significance for the right holders.**

The problems with this amendment are (1) rights holders may not have expressly “authorized” caching, it would be

cumbersome to ask them to do so, and there has been no clear indication that implied authorization will suffice, and (2) it is very difficult to say whether any use of a copyrighted work has “no economic significance” for rights holders. The Internet Society has warned that this amendment would slow the performance of the Internet and “clog its arteries,” and ISPs have argued that it would render most net activity illegal. The record industry, which backed the amendment, has stated that “the proposed directive is just there to underline that pirated material cannot be downloaded because it does not observe copyright.”

What does this proposed legislation mean for U.S. companies?

Caching is not simply an Internet public policy issue and an ISP concern. Multinational corporations often use global intranets as company-wide communications vehicles. A company with a corporate intranet that has local access points in Europe will be tempted to use caching to avoid the redundant traffic caused by many employees accessing popular information at the home office. Let’s say you work for a corporation that has an office in France that is heavily dependent on the corporate intranet. It is at least conceivable, given the murky state of jurisdiction jurisprudence, that a French authority could invoke the copyright directive to challenge your corporation’s right to cache material.

Companies that have intranets should pay attention to how their caching software operates. Do you respect expiration flags? Do you pass hit data back to the originating site? Are you complying with industry technical standards? How do you respond to complaints about stale materials from originating sites? Keep in mind that good practice involves both preserving quick throughput on the net and respecting the rights of remote site owners.

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