Cover Story 7/14/03

Hollywood fears a heist

Matter of definition

Digital piracy may make the latest pop song easy to come by. But it is making Hollywood play hard to get with the ultimate in home entertainment--high-definition video, which offers eye-popping image detail that's closer to a movie-house experience than anything else in the home. Only about three dozen prerecorded films have been released in high-def resolution, as studio execs watch warily to see if new security technology can protect their crown jewels from illegal copying.

They're skittish because the copy protection measures on standard, lower-resolution DVDs--including encryption, or scrambling, and various software locks--proved an easy mark for hackers after DVD drives were installed in personal computers. In 1999, a European group cracked the code for descrambling the video files and posted its program on the Internet. Programmers at a U.S. college later reduced the descrambling program to only six lines of code, which have been reprinted on T-shirts, ties, and even business cards. "It's hardly a trade secret anymore," says Carnegie Mellon computer scientist Dave Touretzky, whose Web site has links to many versions of the program.

Now JVC has developed what it calls a highly secure format for high-definition video, and--partly for protection against hackers--it is keeping its code out of computers. Called D-VHS, the system uses high-def tapes that look much like the standard VHS cassettes that JVC developed in the mid-1970s. The company is secretive about its technology, but four studios trust it enough to have released movies in D-VHS format. Because the code for reading the format is locked in specialized players, "we think tape is more secure," says JVC's Jake Onodera. Still, the new cassettes have all the drawbacks of good ol' VHS--the tapes have to be rewound and fast-forwarded and are more easily damaged than a disk. Even JVC acknowledges its tape format is a temporary answer until somebody figures out how to protect high-def content on disks.

Chipping in. Microsoft is trying. Artisan Home Entertainment last month released a high-def version of *Terminator 2* on DVDs that play only on personal computers running Microsoft's Windows Media Player software. Microsoft says it is confident about its encryption scheme. But it recognizes that the personal computer itself must be made more secure before it will win over the rest of Hollywood. So the software giant is asking hardware makers to include special chips that would work with Windows to tighten security for copyrighted material--movies, songs, and software.

Locking up any part of PCs worries many computer scientists, who have joined a campaign led by Ross Anderson of Cambridge University. He argues that the secret chips could be programmed to open back doors for government or corporate spying, or give Microsoft and other computing heavyweights an unfair advantage over their competition.

And in the end, says Bruce Schneier of Counterpane Internet Security Inc., any
efforts to stop computer files from being copied are just stopgaps: "They're all temporary fixes." Digital bits can and will be copied; some expert somewhere will eventually crack any security system, and the hack will spread over the Internet. Maybe the entertainment industry should bank on events, appearances, or advertising, not on digital files, Schneier says. "Sell the experience," he urges, "not the bits." -David LaGesse

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