

SECURITY

PUTTING CONTENT ONLINE IS a risky game. You could win an audience measured in the millions and lose control of your work to pirates. Slapping a digital padlock on content could protect you. But it could also turn off consumers altogether.

Talal Shamoan, chief executive of Intertrust Technologies in Sunnyvale, Calif., believes he has an answer. Intertrust holds a treasure trove of patents that help content owners manage digital rights; it has spent five years and tens of millions of dollars developing a standard called Marlin, which aims to keep content secure in a way that legitimate consumers won't find offensive. Now all he has to do is convince telecom providers, gadgetmakers and consumers that his plan will help them—and that it keeps content under their control, not his.

Marlin is already hitting its stride in Asia. In Japan it's a national requirement that Marlin be included in Internet-enabled televisions. Sony scrapped a homegrown digital rights management standard in favor of using Marlin to deliver and protect downloadable movies and television shows through its PlayStation Network.

But DRM has been a hard sell in the U.S. Devicemakers resent forking over licensing fees for digital locks and keys. Consumers chafe at being told where to use a song or movie and how to operate their gadgets. Pundits argue that by managing how online content gets used, DRM thwarts innovation and market forces. The result has been a patchwork quilt of DRM schemes, each with its own set of rules and privileges.

Intertrust, which was taken private in 2003 by a joint venture that includes Sony and Philips, already wields much power, by dint of its of 80 U.S. patents around "trusted computing," a way of getting computer systems to work together securely. (DRM is a subset of trusted computing.) It has another 144 U.S. patents pending. Outside of the U.S. the company holds 57 patents (and 150 pending).

It has a mere dozen or so customers, including Nokia and Samsung, but it harvests an estimated \$100 million a year in licensing revenues. With a staff of 44, Intertrust enjoys a pretax profit margin that Microsoft would envy, in the neighborhood of 90%.

"They're an interesting case," says analyst Michael McGuire, who specializes in digital rights management for Gartner, a technology research firm. "A lot of people in the industry don't like them because

they have so much intellectual property."

Shamoan, who has run the company since 2003, is unapologetic about using Intertrust's market and technological leadership to drive Marlin as an open standard. He has no patience for those who call Intertrust a patent troll: "I think it's un-American to think that patents are bad," he says. Intertrust has two lawyers on staff, he notes, and has sued for patent infringement only once.

That sole patent suit, however, was

The Gatekeeper

Talal Shamoan of Intertrust believes he has the key to securing digital content—if consumers and technology companies don't lock him out. *By Taylor Buley*

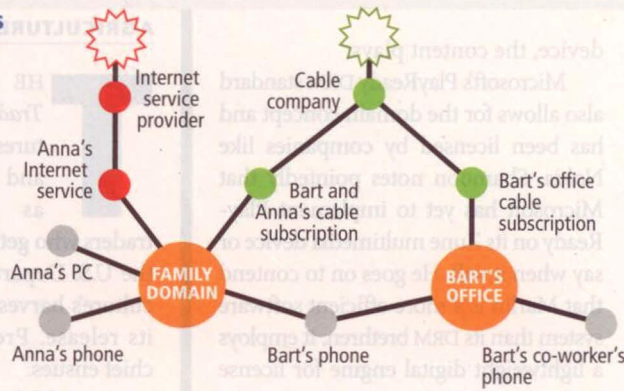
Intertrust's Talal Shamoan: Trust me.

enough to put Intertrust's intellectual portfolio on public display and compel other companies to play nice. In 2001 Intertrust was a publicly traded company built around 20 patents for protecting digital commerce, many of which had been filed by its founder, Victor Shear. Intertrust eventually sued Microsoft for infringing on 11 of those patents, covering both e-commerce and consumer DRM, and targeting roughly 80% of Microsoft's product line. In 2004 Microsoft settled out of court and paid Intertrust \$440 million.

The licensing deal with Microsoft does not, however, fully cover Marlin, which Shamoon sees as an important next step for

INTERTRUST'S MARLIN TIES

content to individuals or groups they belong to, rather than to machines. Bart pays for a cable subscription. His office pays for one, too. That way Bart and his colleagues can share videos. Bart and his wife, Anna, can share videos along with, say, music that she gets as part of her online service subscription. Bart's co-workers cannot share the music.



Intertrust. Marlin's competitors include both Microsoft's PlayReady standard (which Microsoft licenses to other hardware and software vendors) and Apple's

FairPlay standard (which Apple keeps to itself).

Traditional DRM schemes generally authorize a specific device or group of devices to play a piece of content. Buy a music video from iTunes, for example, and your family will be able to copy it onto, say, an Apple TV only if that device shares your account and credit card.

Such DRM implementations frustrate consumers who think that, having paid for something, they should be able to play it wherever they want. "They've come up with these bizarre, almost esoteric kinds of ways of [tying] the consumer to the device," he says. "It drives the consumer into the hands of the pirate."

Marlin, by contrast, can link content to individuals or to groups called "domains," such as a family. That makes sharing easier: Content can follow the owners wherever they go and play on any Marlin-enabled devices to which they are connected—assuming, of course, that the content owner has blessed the arrangement.

For example, Spain's Telefónica licenses Marlin. When it gets commercially deployed, a mom in Madrid could download a music video, play it on her phone and then share copies so that her son could play it on his PlayStation and her daughter on a personal computer.

Marlin makes this possible by expressing digital rights in a data structure that looks like a map. Rather than cities and roads, the map represents entities and the rights that connect them. To figure out if a person is authorized to play a piece of content, the software takes a virtual walk through the service that activated the content toward the user's cluster of authorized devices. If the device finds a path through the map from content to



device, the content plays.

Microsoft's PlayReady DRM standard also allows for the domain concept and has been licensed by companies like Nokia. Shmoon notes pointedly that Microsoft has yet to implement PlayReady on its Zune multimedia device or say when it will. He goes on to contend that Marlin is a more efficient software system than its DRM brethren. It employs a lightweight digital engine for license evaluation that does not need to be changed even as new usage rules evolve. That means Marlin doesn't add much to the cost of the DVD player, PC or whatever is playing the movie or song.

Wendy Seltzer, a fellow at Harvard Law's Berkman Center for Internet & Society, feels that all DRM protection schemes ultimately fall short—as will Marlin. “A maze with lots of gates looks more open than a maze with just one path through it,” she says. “But in both cases, once you run in you're confined within the predefined path.”

For Marlin to make good on its promise of interoperability, the devices all need to be running Marlin code and work according to the rules set forth by Marlin's governing standards body. The same is true of standards like PlayReady. Seltzer says such power consolidation puts an unnerving amount of control in the hands of a single company.

“It's the risk that the members of that consortium will have the incentive to veto things that don't match their business plan,” she says. “Once you've given that control, there's no way for you to guarantee that it won't be used anticompetitively.”

Shmoon says surrendering some control to patent holders is a risk with almost any technology standard. He argues that there will always be companies like Intertrust that own underlying intellectual property and that a one-stop licensing shop is better than a jumble of licensing pools.

Internet services and mobile devices seem likely to continue to converge. Instead of trying to stop copying, Marlin could be a way to encourage sharing—while helping content developers get paid. **F**