

# Beware: Pirates and Bootleggers

Are your Internet networks and on-demand movies systems protected?

BY LEN VERMILLION

**T**he thing about Captain Jack Sparrow, the often humorous lead character in the *Pirates of the Caribbean* films, is that despite his entertaining mischief, filmgoers know that he is a pirate in search of treasure. But for hoteliers, identifying who's a different kind of pirate might be a little bit more difficult. They may be checking into hotels in business suits and armed with laptop computers instead of wearing big hats and carrying sabers. Or, they might not check in at all, but simply enter a hotel's domain via its Internet network.

The proliferation of high-speed Internet networks and high-definition television systems in the hotel industry has left guests who were

yearning for high-tech gadgets and the comforts of home increasingly more satisfied. These days, business travelers can take advantage of high-speed Internet access in guestrooms to keep up with the office. Families can continue to use file-sharing networks like they do at home. And at the end of the day, any guest can kick back and relax with an on-demand



movie, one that may have just opened in theaters.

But has the haste to upgrade high-tech in-room amenities left hotels vulnerable to becoming an unwitting pawn in the illegal practices of modern-day Internet pirates and video bootleggers? Are the newly installed high-speed networks, especially wireless ones, an invitation for spreading viruses or stealing guests' private information? Are a high-definition TV and

direct-from-the-studio movies an easier target for those who seek to copy newly released movies and sell them illegally on the black market? Is it a more inviting place for these types than a public theater?

The answer is yes, in theory. However, in reality, it's most likely happening on a limited or isolated basis, say experts on both hotel Internet networks and in-room entertainment. However, it begs the question for hoteliers: Should they be taking steps to prevent these scenarios?

"This is kind of an unseen problem," says Trevor Warner, president of Warner Consulting Group, an independent technology and telecommunications consulting firm

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PRO-IDIOM ENCRYPTION TECHNOLOGY FROM PHILIPS HELPS SECURE ON-DEMAND MOVIE CONTENT FROM THE CONTENT SOURCE. NEW WATERMARKING TECHNOLOGY HELPS TRACK BOOTLEGGERS WHO DO MANAGE TO COPY NEWLY RELEASED FILMS.

specializing in technology solutions for the hotel industry. "User isolation and having viruses and problems to that effect are not a problem until a guest comes to the front desk and complains."

Warner points out that it is an issue that isn't often discussed in the industry. Nonetheless, he says, the possibility of problems definitely exists, particularly when it comes to Internet security. "It's an open, public network, so [protecting against the] spreading of viruses or, more important, protecting the individual user, especially on a wireless space, [is important]," Warner says. "I think it's an issue of addressing the next step. First we had the gold rush to get the networks, now we have the rush to secure them."

#### INTERNET PIRACY

Part of the problem is that it's difficult to know when a network or an individual user has been compromised. Internet pirates may check into a hotel under an assumed name, pay in cash and proceed to access the network to conduct illegal activity, all while having it traced back to the hotel. Or, they may not check in at all. Instead, they may tap into the network and prey on unsuspecting guests.

"Identity theft, all of this stuff, is a valid, realistic issue, especially in the hotel industry," Warner says.

So, how much should hoteliers be concerned about potential responsibility if a virus is spread or a guest's identity is stolen? "The way we view it as a consulting company is as a 'slip and fall,'" Warner says, admitting that he

is not a legal expert. "It's no different than somebody slipping at the pool. You can tell me that it's never happened at your pool, but the first time it does happen and you didn't have any set protections in place, you're in big trouble."

Warner says protections exist, and whether they stop it from happening or not, they are at least, an attempt. Those protections are often offered by Internet network providers, but often require an added investment. Warner believes that some hoteliers forego these protections because of the added investment and the fact that the problem generally remains an unforeseen one.

One of those companies that supplies Internet networks to hotels is Telkonet. Matt Koch, vice president of hospitality operations at Telkonet, says that if networks are set up correctly they aren't as vulnerable. "Every hotel network should, and most do, have isolation between users," he says. "That's a real important thing. Most hotel networks, when everything's set up correctly, have technology to prevent the spread of viruses and, more important, to protect users."

Some of that technology can include virus scanning of all outgoing e-mail and scanning all of the incoming e-mail for spam. Koch says that properly installed equipment will also have settings to prevent peer-to-peer traffic from spreading viruses on a hotel network and then to make sure that the outbound e-mail doesn't let it outside of the network. He says hoteliers should make

sure that the network they install has client-isolation technology.

#### IN-ROOM MOVIES

While Internet networks are one aspect of new technology possibly allowing piracy, another is the increased amount of in-room movie offerings available. Hotels enjoy an early release window from movie studios, which allows them to offer guests box-office hits before they are available on DVD or at home on-demand networks. Now, with high-definition TVs being placed in guestrooms, the experience for guest has never been better. But it also has never been easier for bootleggers.

In the past, unlawful copying of films required the risky practice of pulling out a handheld video camera in a theater. Now, bootleggers can check into hotels and make high-definition copies of movies in private thanks to HDTV. There's much less chance of getting caught.

"I don't think it's necessarily been a concern for hotels, but the studios and the on-demand folks have made it a concern for us," says Jim Bailey, director of hotel guest services at Intercontinental Hotels Group (IHG). "There have been some isolated cases, even before this HDTV phenomenon, where there were people that may have brought devices into hotel rooms and plugged into the set-top box and taped a first-run movie to resell it because it was the easiest environment to do it."

"We are in the business of offering premium content, content that has not been made available to other

places," says Hooray Honary, CTO and acting president at NxTV, a provider of IP video-on-demand services. "The principal operating agreement with a studio dictates that its content, under no circumstances, should be compromised. So security is actually a very big deal in what we do."

Honary says the issue is an end-to-end one. The security of the content is not simply an issue of how the content gets to the hotel or how it is stored in the set-top box. "You have to make sure that at no point can the content be exposed to outside access," he says. "You have to protect when the content moves from wherever it's stored locally to the hotel, how it is stored in the hotel, when it's being streamed from

the server to the room, how is it being protected there. In the room, when it gets to the set-top box, how does it get from the box to the TV itself?"

Honary says that his company, which was the first to receive approval from all major studios to distribute content over an IPTV network, secures the process by which the content is delivered to hotels. IP networks have created an added benefit for users and an added need for security for hotels and content providers. The idea of an IP network is that everyone can access it. NxTV not only encrypts the content, but also adds additional layers of encryption on the networking technology used for distributing the content.

One new technology that

has emerged for hoteliers to help protect movie content on their end is in the TV itself. Philips, which has long used Pro:Idiom encryption technology to secure content data from the source to the television, has recently introduced a watermarking technology for high-definition television. According to the company, the watermarking technology, known as V-Track, is designed to eliminate the content-protection gap between box and the TV.

"When you talk about content protection, there are two things that have to be taken care of: one is protecting against piracy and the other is policing of piracy," says James Miller, director of product strategy and development at Philips. "The encryption is de-

signed to protect piracy by scrambling the data. Watermarking is designed to protect against what Hollywood calls the analog hold, which is someone holding a camera to film the screen and making a copy."

The watermark polices this sort of piracy, because the invisible mark identifies the time, place and location of the viewing. It doesn't interfere with the viewing, but shows up with a detector that scans the suspect video, thereby allowing authorities to track down who was in the room at the time of the taping.

The fact remains that these systems are a big draw for consumers. Hoteliers have to consider whether or not their Internet and TV networks are protected. ■

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