Back in Phil's world, they can't quite cope with the idea of this ferocious brag-driven barter economy cloaked in courtesy. The SPA and the BSA just don't believe it. "Considering the amount of time they dedicate, they must be making a return to justify it," says Phil. Casual observers of the BSA's Web site may well be convinced, if only because they're stunned by the money that's involved - or seems to be. Fifteen point five billion dollars a year! But those figures are based on the assumption that if piracy were stopped, someone would be willing to pay for every pirated copy in circulation.

"Billions of dollars?" scoffs East London BBS operator Time Bandit. "I know guys who have thousands and thousands of pounds worth of software, but the values are meaningless. Win95 may cost, like, £75 in the shops, but in warez, it's worthless. It's just another file that you might swap for another program, which might cost four grand. How much it costs in real money is meaningless."

How do you ram home sales figures and quarterly losses to a bunch of teenagers who see warez trading as their passport to acceptance on the scurrilous side of a brave new world? How do you convince middle-aged men who see incandescently expensive software as monopoly money in a vast, global boardgame that what they're doing is "harmful"? In the software industry's latest campaign, you scare them - or try. The BSA's mandate used to be "not to capture pirates, but to eradicate piracy." Now exemplary punishment is the big thing.

To do that, the BSA and the SPA are willing to

push the law to its limits. Prosecuting clear offenders - warez-vending BBS operators and FTP-site pirates, for instance - is one thing; suing ISPs for carrying Web pages containing pirate links and cracks is another. A typical case was against C2Net, a Buffalo, New York-based ISP that the SPA sued for doing just that. In what smacked of a token prosecution - or, in the words of C2Net's president, Sameer Parekh, "legal terrorism" - the action by Adobe, Claris, and Traveling Software, under the aegis of the SPA, held the provider responsible as "publishers" for the contents of its server, and for the activities of individual account holders. The SPA eventually backed off but threatens to revive the suit if C2Net and other ISPs don't agree to monitor their users for copyright infringement. C2Net says it will not give in to litigious "bullying."

And then there are straightforward busts. On January 12, 1996, Microsoft and Novell jointly announced a settlement with Scott W. Morris, who was "doing business as the Assassin's Guild BBS ... billed ... as the worldwide headquarters for two large pirate groups, Pirates With Attitude (PWA) and Razor 1911." According to the statement, "marshals seized 13 computers, 11 modems, a satellite dish, 9 gigabytes of online data, and over 40 gigabytes of offline data storage dating back to 1992.... Mr. Morris agrees to assist Microsoft and Novell in their continuing BBS investigations."

Phil, our undercover Internet detective, wasn't responsible for that particular drama, but he's been integral to others. His latest victory was in Zürich - "a landmark case against individuals and organizations distributing unlicensed software on the Internet," he calls it. A

27-year-old computer technician who helpfully called himself "The Pirate" was running an FTP site filled to the brim with warez, including US$60,000 worth of unlicensed Novell software. Phil, impersonating a trader, infiltrated the site (admittedly no great feat), collected evidence, then handed it over to the Swiss police. He accompanied them on the raid to ensure no evidence was damaged. "He was one of a new breed who advertise on the Internet," says Phil. "He made his files available via email requests and telnet." Swiss police also raided the home of a BBS called M-E-M-O, run by "The Shadow," a friend of The Pirate. Unfortunately, The Shadow was on holiday with his parents. The family returned two weeks later to find their front door broken down; the son was arrested. If convicted, the young pirates face up to three years in jail and possible $80,000 fines.

The Pirate's mistake - aside from his suicidal choice of nickname - was to plant himself geographically. Phil, a former corporate network manager, was able to trace him through his FTP site's IP address. Phil knows his networks; this makes him the perfect undercover agent - and one of Novell UK's most envied employees. "I play on the Net all day," he says, "and get paid for it."

There's a bit more to it than that. Phil and his counterparts in Asia and the US are deployed to infiltrate pirate groups; to study IRC; to get under the skin of the lamers, the dabblers, and the professionals; to chat, seduce, charm, and interact with the denizens of this bizarre over-underworld. Phil talks to traders in their own language, understands the tricks and traps. After busting The Pirate, he says, "we were talking and he was moaning about the sluggishness of his network. I pointed out that,

aside from using LANtastic, he was using a 75-ohm terminator on the back of his file server, slowing the whole thing down."

Now that he's back from Zürich, Phil will be getting some new toys: the spoils of war. In many jurisdictions, any hardware deemed to be part of an illegal setup can be taken by investigators and - if part of a civil prosecution - can be worked in as part of the settlement. Once sucked dry of evidence and incriminating data, the cannibalized machines are moved to Bracknell and hooked up to the network.

But despite the resources at his disposal and his status as a network ninja, Phil doesn't always get his man. "If there's a person out there who has a decent level of technological awareness of the ways he can be located, it's quite true to say he could successfully hide himself, or use a system where it would be impossible to track him. It's technically possible for them to bounce their messages all around the world and have us running around like blue-arsed flies." It's a reluctant admission, but then Phil is one person pitted against thousands.

Successful prosecutions aren't always that easy either. Take David LaMacchia, an MIT engineering student who turned two of the school's servers into drop sites and downloaded an estimated $1 million worth of pirated software. LaMacchia was arrested in 1995, only to have the case thrown out by a judge who ruled that no "commercial motive" was involved. Prosecutors tried charging him with wire fraud, but this was ruled an unacceptable stretching of the law. LaMacchia walked free. "Bringing Internet cases through the judicial system is a nightmare," says Novell's Martin Smith. "Try talking to a

judge about 'dynamically allocated IP addresses.' We don't have a chance."

Tell that to the former warez traders of America Online, which had a meteoric history as a pirate mecca. For years, instructions on how to crack AOL's security and obtain free accounts were a Usenet staple. Online, "freewarez" chat rooms were packed with traders, 24 hours a day. Megabytes of warez were kept in permanent circulation.

Then came the crackdown of 1996, a dark period in warez history. Goaded by software-industry watchdogs, AOL introduced countermeasures to disinfect its system; alt.binaries.warez was removed from the Internet newsfeed. CATwatch automated sentinels were placed on AOL's warez chat channels, logging off anyone who entered. "Free" accounts were traced and nuked. Michael, the weight-lifting trader and also an AOL veteran, says everyone thought that "the FBI had infiltrated the warez groups, and we were all going to get busted." On the cusp of the big time - a top pirate outfit named Hybrid had a position open - Michael had been hoping to prove himself by doing a CD rip of the soccer game Euro 96. "I was halfway through removing the FMV and CD audio. I reckon I could've got it down from 58 disks to 9. But then everything went haywire."

Profit-driven crackers are actually the easiest to catch: they have links to the real world, starting with the money trail from credit cards. And the easiest prey of all are BBSes, with their telltale telephone connections. In January, FBIagents led by the bureau's San Francisco-based International Computer Crime Squad raided homes and businesses in California and half a dozen other states. They seized

computers, hard drives, and modems, though no arrests were made. Along with Adobe, Autodesk, and other BSA stalwarts, the list of software companies involved included Sega and Sony - a hint that the targets included gold-disk dupers who counterfeit mass-market videogames.

Mad Hatter was not impressed. "Wow, I'm in hiding," he cracked the day after the raids. But "Cyber Strike" was, as BSAvice president Bob Kruger said later in a statement, "the most ambitious law enforcement action to date against Internet piracy" - specifically, the first UScase in which the FBI, rather than local police, took the lead. And that can't help but augment the BSA's number-one antipiracy tactic for 1997: creating the "perception of threat." And even warez gods don't necessarily want the FBI on their case.

But bluster aside, people like Mad Hatter are intrinsically - and deliberately - much harder to catch. The most prestigious pirate groups - Razor 1911, DOD, Pirates With Attitude, the Inner Circle - are tightly knit clubs whose members have known each other for years and call each other "good friends" - though they rarely, if ever, meet. Joining is no easy task. Positions become vacant only when members quit or are busted, or a vote is taken to expand operations. Kudos and reputation are everything. Unofficial homepages can be found here and there, constructed by acolytes who celebrate the groups' best releases and victories. These are often padded out with cryptic biographies and obituaries for those busted by the cops ("We feel for ya!"). Despite the boasting, and the draping of their releases with corporate motifs - logos, front ends, graphics, even signature tunes and Java applets - crackers' true identities typically

remain secret, even to one another.

The anonymity, however, works both ways. Cloaked in his own secret identity, Phil says he has managed to get deep within several major groups in the past 18 months and is skimming the surface of several others. He can convincingly portray himself as a caring, sharing warez god. "You make some good friends," he says with a smile. And, it seems, you can end up pretty impressed. "Some of these people are incredibly talented. The logic and programming behind their setups are just amazing." Or maybe he's just bluffing?