STANFORD
GRADUATE SCHOOL OF BUSINESS

CASE: SM-154A
DATE: 12/28/06

BLIZZARD V. BNETD.ORG:
MANAGING INTELLECTUAL PROPERTY (A)

Not only is it offensive that Blizzard is suing us, but the bnetd project has a right to emulate their Battle.net software program.
 —Jason Schultz, Co-counsel for the bnetd project[1]

Rob Crittenden had already been on his cell phone so long that the battery had died, forcing him frantically to find a landline. But the time he and other bnetd project developers were putting into their court-ordered mediation session in October 2003 might just be worth it. They hoped the session would result in a mutually acceptable out-of-court settlement of the lawsuit that personal computer game maker Blizzard had filed some 18 months earlier against them.

The bnetd project was a volunteer effort of game enthusiasts and programmers frustrated with difficulties encountered playing Blizzard's personal computer (PC) games on its free 24-hour Battle.net online gaming service. Via reverse engineering of Blizzard's software, the bnetd developers created and disseminated a free open source software program that mimicked the Battle.net playing experience while improving on some of its deficiencies. Blizzard, one of the world's most successful PC game publishers and a part of international media conglomerate Vivendi Universal, charged the bnetd developers with breach of contract and various counts of intellectual property infringement. The defendants maintained that U.S. law, in an effort to spur innovation in the United States, protected their activities. Neither Blizzard nor the bnetd developers had ever participated in a lawsuit of this magnitude before.

Given that Crittenden had expected the court-ordered mediation to be brief and unsuccessful, the 35-year-old developer took it as a good sign that the two sides had been hashing over a possible settlement for over 10 hours. While the team from Blizzard was considering its options, he took a moment with his co-defendants and lawyers to discuss their negotiating strategy.

RELEVANT INDUSTRY AND MARKET BACKGROUND

The games industry (sometimes referred to as the interactive entertainment industry) developed, marketed, and sold computer and video games played on a variety of platforms, including personal computers, consoles, mobile phones, and the Internet. Because the platforms were continuously evolving, successful firms had to be adept not only at creating compelling content, but also at anticipating and navigating a quickly changing technology landscape. The growth of the Internet in the 1990s created a dizzying array of possibilities. Consumers no longer had to buy video and computer games at retail outlets, but could also download them from the Web and subscribe to them. Besides Web-only games (played primarily on PCs), console and PC games started offering online features. While the PC was still the most important platform for playing online games at the end of 2003, competition from console system makers was heating up, with Microsoft planning to launch its Xbox Live Arcade download service for its Xbox console system in 2004.[2]

To complicate matters further, the types of games available to consumers also evolved in line with the advances in technology. Genres included role-playing games (RPG), first person shooter (FPS), real time strategy (RTS), action, adventure puzzle, sports, and combinations of the above (see **Exhibit 1**). There were also single-player games and multi-player games, in which players competed with each other and/or cooperated to obtain a common objective via networked computers or by physically surrounding a single game system. The Internet's birth encouraged companies in the 1990s to offer free online game services for personal computer users interested in easier and richer multi-player play of their games. These online services, some of which could run thousands of games at the same time of roughly eight players each, offered features such as chat. Cheating by players using third-party hacking programs and other methods created disgruntlement among some gamers. This disgruntlement prompted computer hackers to create emulators of these game services and induced game companies eventually to offer services with anti-cheating features.

The widespread introduction of high-speed broadband Internet at the turn of the twenty-first century drove the popularity of new game genres, such as Massively Multiplayer Online Games (MMOGs). MMOGs, unlike earlier games, offered a *persistent* world, adding and modifying plots and events around the clock. Operating on a different technology architecture than previous genres, these subscriber-based, online-only games allowed hundreds of thousands of people to play the same game against and with each other simultaneously.[3]

Just as new technology prompted new genres and methods of game playing, it also attracted new types of players. By the first years of the twenty-first century, interactive entertainment was no longer viewed as the purview of geeky teenage boys spending long hours glued to computer screens or locked onto joysticks. Industry experts estimated that some 43 percent of gamers in the United States in 2004 were female.[4]

Interactive entertainment spending in the United States reached $8.4 billion in 2003. Video games sales at $6.5 billion made up some 77 percent, growing 6.5 percent in 2003 over the previous year (see **Exhibits 2 and 3**).[5] PC games sales, which had been slumping since 2001, continued their downward trajectory, sliding 13.9 percent to $1.4 billion (see **Exhibits 4 and 5**). Analysts blamed the slump on the release of fewer major new computer games and the

popularity of a new generation of video game consoles,[6] such as Sony's PlayStation 2. They also attributed it to a shift in consumer behavior, as more people went online to buy or subscribe to games.[7] Indeed, some industry insiders were predicting that, while PC game retail sales would continue to stagnate worldwide, global online game revenues from MMOGs and the like would expand from $1.9 billion in 2003 to $5.2 billion by 2006, and $9.8 billion by 2009.[8]

Much of the global demand for online games was expected to come from South Korea and China. For instance, DFC Intelligence in 2003 estimated that 34 percent of the roughly $1 billion in worldwide revenues from MMOGs came from South Korea, more than the revenues from "North America, Europe, and Japan combined."[9] Moreover, the online game market was "exploding" in China, according to the same group. The game market in that part of the world had not traditionally been lucrative for game publishers due to piracy problems. But with the introduction of online games, DFC Intelligence reported that game companies (primarily from South Korea) were charging players "pennies per hour and [making] money on volume."[10] Major game publishers in the United States and elsewhere were gearing up for forays into China. Many analysts did not think companies selling Western-style games would do very well, however, contending that cultural differences precluded Chinese consumers from enjoying their products.[11] Despite the popularity of a few pirated versions of western games, Sony Online Entertainment's unsuccessful 2003 launch of its Everquest game in China, the most successful MMOG to date in Western markets, seemed to bear this out. Some analysts, however, wondered if flawed launch execution rather than cultural differences had caused Everquest's poor China results.[12]

BLIZZARD: RELEVANT HISTORY

Blizzard Entertainment founder Allen Adham knew in his sophomore year of high school that he would one day like to make computer games, eventually programming his first one as a computer science student at UCLA.[13] There, he met future Blizzard co-founder Mike Morhaime whom he befriended after learning that they had unwittingly chosen the same university computer password.[14] Adham eventually talked Morhaime into starting a computer gaming company.[15] They each invested $10,000[16] and, along with fellow UCLA graduate Frank Pearce, set up Silicon & Synapse in 1991, which would be renamed Blizzard three years later.[17] Reminiscing about Blizzard's early days in an interview with IGN.com in 2001, Adham fondly recalled how he and colleagues would regularly sit on the floor and talk gaming while eating lunch. He said:

> I still remember the specific discussions that led to The Lost Vikings and a few years later the one that led to Warcraft. Of course, in the early days we were so small and spent so much time together we became a really close group of friends. We did everything together: dinners, movies, bars, poker, etc. It is hard to maintain that culture as we've grown, but we still do a ton of things together.[18]

Warcraft, a real-time fantasy strategy computer game released in 1994, was the Irvine, California-based firm's first bestseller, helping Blizzard gain a reputation in the industry for timeless games.[19] Other successes followed. In late 1996, Blizzard released the action role-playing computer game Diablo, which introduced a number of new concepts that many

competitors in the industry subsequently imitated. One innovation, incorporated into the game itself, was a free 24-hour online gaming service named Battle.net. Accessed from the Diablo game software, the service allowed multiple games of up to eight players each to take place simultaneously over the Internet. Anyone with an authorized copy of the game could access the service, join a game, chat with other players, and store account information online. Despite user complaints of software glitches, sluggish response time, advertisements, and cheating by hackers during online play, Battle.net proved highly popular and helped spur sales of Diablo, sequel Diablo II, other Blizzard games, and their expansion packs (which offered extended story lines, new weapons, and other add-ons to an existing game).[20] By 2002, the service boasted more than 10 million active accounts, with thousands of players around the world using the service every day.[21] Blizzard enjoyed sales exceeding $480 million that year, making it one of the world's top PC game developers.

Blizzard was also successful at developing sequels to its 1994 breakthrough hit Warcraft, building this game into one of the best selling computer game series ever published.[22] Sequels included Warcraft II in 1995 and the much anticipated Warcraft III in 2002, which sold 4.5 million units prior to release. The game had an especially large following in South Korea,[23] with pirated versions reportedly also popular in China.[24] Blizzard had plans to release in major markets some time in 2004 the next sequel in the series, World of Warcraft, as a massively multiplayer online role-playing game (MMORPG), which it would run on a different technology architecture than Battle.net.[25] The company hoped to launch World of Warcraft in China in 2005.[26]

Blizzard maintained a constant brand identity and retained the same top management team over the years despite repeated ownership changes. Just before releasing Warcraft in 1994, game distributor Davidson & Associates bought Blizzard for under $10 million, after which it changed hands four more times as part of either mergers or acquisitions of its parent company. In 1998, Blizzard Entertainment became part of French media conglomerate Vivendi Universal.[27]

Like all game developers and publishers whose products were easily duplicated and disseminated over the Web, Blizzard had to contend with rampant software piracy, particularly in some Asian countries. To stem the use of unauthorized copies of Blizzard games, the company required users installing a Blizzard game on their computer to input a unique sequence of numbers and letters known as a *CD key*.[28] The CD key, which was found on a sticker attached to the game's CD-ROM case, allowed the Battle.net server to deny access to players using a pirated copy, and served as an inducement to buy genuine copies of Blizzard's games. On the packaging of most of its games, Blizzard also told users they would have to agree to both an End User License Agreement (EULA) when installing the game, and a Terms of Use (TOU) when first logging on to the Battle.net service. Both agreements stated clearly that users could not copy, reproduce, reverse engineer, disassemble, emulate, or distribute Blizzard software. They also asked users either to click an *I Agree* button (known as a clickwrap or clickthrough agreement) to continue, or to seek a full refund within 30 days of purchase (see **Exhibits 6 and 7**).

When asked about his fondest memories of Blizzard's first 10 years, Blizzard co-founder Morhaime, in a 2001 interview with IGN.com, talked about the tremendous effort that the

company put into each game and the terrific feeling of accomplishment he felt whenever Blizzard released a new one.[29]

THE BNETD PROJECT: RELEVANT HISTORY

In 1999, some colleagues of Rob Crittenden, then a programmer working in technical support for a major Internet browser developer, asked him to play Blizzard's StarCraft with them after work. They could not connect to Battle.net to play the game's official multiplayer online version because their company's Internet firewall blocked them. They had instead installed on a company server free *bnetd* open source software. Originally created in 1998 by a college student in California, the bnetd software aimed to mimic the Battle.net playing experience enough for StarCraft devotees to play the game online on their own servers.[30] The student eventually stopped working on it, but since anyone could copy, modify, and distribute the program's computer code for free, other programmers spontaneously volunteered their time and expertise to improve the program.

When Crittenden, who was based in Maryland, logged onto his company's local bnetd server to play that day in 1999, he saw that it needed work. "I thought, guys, it would be pretty easy to fix some of these things," he recalled. After making some improvements, he visited a bnetd message board on the Web, where he saw that someone else was also making changes: Ross Combs, Crittenden's future co-defendant. Since Combs' changes looked like they would conflict with his, Crittenden started making his modifications off of them. Eventually Crittenden and Combs, a programmer from Texas, started e-mailing each other.

Like bnetd's original creator, bnetd volunteers came and went. Roughly 25 to 30 people provided significant help at various times in programming, debugging, and administration, while many more offered minor suggestions, all without any compensation.[31] Tim Jung, a systems administrator who ran a small Internet service provider named Internet Gateway out of his house in Missouri with his wife, volunteered to host bnetd's Website: www.bnetd.org. Jung also hosted a bnetd server available to anyone wanting to play Battle.net-enabled Blizzard games. Combs was the lead programmer and Crittenden was the second lead. The two never met face-to-face. All their communication was via e-mail.

A number of issues were motivating people to work on the bnetd project without compensation. Volunteers wanted to solve the problems that players encountered while playing Blizzard games on Battle.net. Some of them also believed that Blizzard should not subject Battle.net users to advertisements and that the company was morally at fault for forcing Battle.net users to adhere to the service's Terms of Use and other Blizzard restrictions. Crittenden explained his reasons for participating in the project: "At first it was just the challenge of figuring it out. And then there's definitely peer recognition. And then it just kind of got a life of its own. People we'd never met would download the source to try it out, and they'd send e-mails back: 'Oh, this is awesome! I can finally play it!'"

Besides having no advertisements, the bnetd server program had a number of advantages for users over Battle.net. Unlike Blizzard's online service, which Blizzard alone controlled, anyone who downloaded the highly configurable bnetd server program essentially became a server

administrator, rather than simply a player. So while Internet Gateway hosted a bnetd server, so did many other people, who could do things such as bar from play people who did not follow the rules. Crittenden commented:

> The other thing was that 13-year-old kids—any immature person that plays [on Battle.net]—it was just a nightmare. They are cursing all the time. They would drop out of games. So you'd spend an hour building up this big game and they would just drop. And there was nothing you could do. With bnetd, if someone was going through the trouble to run their own server, then they were probably going to monitor who's playing. So if some kid who was causing trouble came on their server, they could ban his IP, and he would not be allowed to join a game anymore.

The bnetd software also made it easier for users to play multiplayer games from behind a firewall on a local area network (LAN).[32]   (Only one person needed to have downloaded the bnetd software, but each player had to have a copy of the Blizzard game on his or her computer.) Blizzard had built a LAN-based gaming protocol into StarCraft, said Crittenden, but it used internetwork packet (IPX) technology, which was difficult to set up. Moreover, it could not be used across a router, so all players had to be on computers in the same room or very close. Players in other departments or at off-site locations could not take part. Blizzard later added a TCP/IP-based LAN gaming protocol that overcame this problem, which Crittenden suspected was in reaction to the bnetd project's solution. The bnetd software also included a limited in-game mail system and a Help system with a command line interface in the chat window. Users could type commands to accomplish tasks such as looking at their or another player's statistics. "Battle.net had no capability. You had to know what the command was from a Website or something," Crittenden said.

By the time Blizzard filed its lawsuit in 2002 (described in "The Lawsuit" below), bnetd's developers had expanded their computer code for use with Diablo, Warcraft, and Blizzard's other Battle.net-enabled multiplayer games. The bnetd program offered users all of Battle.net's visible features: Once a game began, players could not distinguish between the two services. To do this, the bnetd developers had to make their program interoperable with Blizzard's games, which they did by installing Blizzard's software on their computers, agreeing to the terms of Blizzard's EULAs and TOUs, and reverse engineering the software.[33]   Since Blizzard designed its games to connect solely to Battle.net servers, the bnetd developers then created a program that let Blizzard's games link to bnetd servers. But unlike Battle.net, the bnetd program did not check via a CD key, either the authenticity of the Blizzard game being used to play on the bnetd server or whether another player was simultaneously using the same CD key. This situation arose not because bnetd's developers wanted users to play unauthorized copies of Blizzard games on bnetd, said Crittenden, but because they did not know how Blizzard created CD keys or checked their authenticity.

Crittenden estimated that hundreds of people had downloaded bnetd's software by the time of the 2002 lawsuit and many more players of Blizzard games had benefited from it. Hundreds, even thousands, of people might congregate at a warehouse or some other large venue in South Korea,

for example, for a *LAN party* where they would set up multiple bnetd servers and play Blizzard games all weekend long.[34]

Meanwhile, a couple of Battle.net emulators based on the bnetd program started offering users support for Blizzard's multiplayer Warcraft III while the much-anticipated game was still in the pre-release beta-testing phase.[35]   The bnetd developers had refused to provide similar support despite numerous user requests. Crittenden commented:

> Blizzard started having beta tests of the multiplayer game, but you could only play on the Blizzard server. We [bnetd] didn't add support. And there were little messages every day, asking, 'When are the bnetd guys going to add support?' And we said, 'When the game comes out. This is a closed beta. We're not going to add support until they're done.' Our thinking was that Blizzard was trying to scale its servers, and so if we allowed users to play Warcraft III on bnetd, then people were going to play there and not on the real server. And Blizzard was not going to be able to scale properly. So we were actually trying to do Blizzard a favor by not supporting it. But we're open source, so a couple of different groups pulled our software and did it themselves.

THE LAWSUIT

On February 19, 2002, Blizzard sent a cease-and-desist letter to Tim Jung (see **Exhibit 8**), accusing Internet Gateway's customer, bnetd.org, of infringing on Blizzard's copyrights. The letter threatened legal action unless the bnetd Web page was removed from view. Crittenden was shocked. (Busy with other projects, he had stopped working on the bnetd program nearly nine months earlier.) "It came out of the blue for me. And there was a little bit of outrage, like, you know, we're not doing anything wrong. It's these other guys who did the WarCraft III thing," he recalled.

According to Crittenden, he, Combs and Jung were "freaking out"—via e-mail. Crittenden had a lot at stake, including a good job, a house, one child, and another on the way. "I really did not want to declare bankruptcy," he commented. Although they did not believe they had broken the law, they disabled access to the bnetd Website as Blizzard had requested. They also contacted the Electronic Frontier Foundation (EFF), a non-profit group dedicated to protecting digital rights. Explaining that critical technology-related civil liberties were at stake in their case, the small San Francisco-based legal organization agreed to represent the bnetd developers for free. "Knowing that we had EFF behind us emboldened us to fight these guys. It was really cool that these really smart people stepped in to help us out," Crittenden said.

Cindy Cohn, EFF legal director, explained EFF's desire to defend bnetd:

> We thought that these guys had done something that ought to be legal. They had reverse-engineered this game to let people play with each other in ways that the game, as presented by the company, wouldn't let them.   We thought that was a good thing these guys had done, that they'd helped make the game better for some

people, and that the kind of reverse engineering they had done should be something that we celebrate and thank people for rather than sue them for.

The advocacy group had also been looking for a case that would, if they won, safeguard the exception to the anti-circumvention provision in the Digital Millennium Copyright Act (DMCA) (see **Exhibit 9**). Congress passed the Act in 1998 to extend the law making it illegal to develop or distribute technology that circumvents measures used by copyright holders to protect a copyrighted work. (One example of this was in DVDs, which included a software program called CSS that copyright holders said was aimed at protecting the copyrighted work—the movie—from potential infringers.) To support the goals of competition and innovation, however, the act made an exception for reverse engineering used to create a product that was interoperable with a copyrighted work (DMCA Section 1201 [f][1]). Cohn commented: "We thought this would be a very good opportunity to put some life into this reverse engineering exception so that people can rely on it and can continue to do the sort of legal reverse engineering that was expressly allowed in the new anti-circumvention law."

The lawyers for Blizzard and bnetd met for a couple of hours at EFF's San Francisco office to explore each other's positions. Blizzard filed its lawsuit a few weeks later on April 5, 2002 to an uproar among bnetd users and the open source software community.

Blizzard filed the lawsuit in the district court of St. Louis, Missouri, home of co-defendant Tim Jung and his company Internet Gateway. Under U.S. law, the plaintiff had to file the lawsuit in a jurisdiction with some connection to the activity being tried. Had Blizzard desired, it could have filed in Los Angeles, California, which was perceived as friendly to the entertainment industry. The company could have made a case that the EULAs to which the defendants agreed stated that legal proceedings involving those contracts would take place in Los Angeles. That said, if verdicts in Los Angeles were appealed, they would fall under the jurisdiction of the Ninth Circuit Court of Appeals, which was generally recognized as one of the most open to copyright protections for consumers, most friendly for reverse engineering, and most sophisticated in technology-related matters. Instead, Blizzard chose St. Louis, which fell under the jurisdiction of the Eighth Circuit Court of Appeals. This court was known to have one of the least developed bodies of law for copyrights and reverse engineering and to take a strong view towards the enforceability of contracts. On those grounds, EFF on behalf of the co-defendants could have filed a motion to change venues to Los Angeles. But trying the case in St. Louis conceivably gave the defendants a hometown advantage (i.e., the defendants could potentially benefit from the local population's negative feelings towards a large French/Hollywood conglomerate suing a small local businessman).[36]

Demanding a jury trial in its April 5 complaint, Blizzard charged the defendants with copyright infringement; federal trademark infringement; dilution and false designation of origin; and common law trademark infringement and unfair competition.[37] Besides requiring the defendants to shut down the bnetd server and stop all work on the project, Blizzard asked the defendants to pay a yet-to-be-determined amount in damages (later pegged at $9 million). "We didn't know what that number was going to be, but we knew it would be a big one," said Crittenden. Blizzard amended its complaint a week later to include: breach of end-user license agreement.[38] The

company then amended the complaint again in early December 2002 to include federal circumvention of copyright protection systems.

While bnetd's counsel had the legal expertise necessary to fight Blizzard's charges, it lacked the resources to shoulder a full-scale intellectual property lawsuit against a major multinational conglomerate. By the time Blizzard amended its complaint for a second time, EFF knew that it would have to bring in additional legal help to answer the new charges. EFF's Cohn commented:

> Blizzard started off by basically saying that our clients had done one thing wrong.
> So we kind of responded based upon the things that they said we'd done wrong.
> Then later they changed their argument and said, 'Well, actually we think you did
> this other thing wrong.' That makes it kind of hard to defend.

In January 2003, Paul Grewal, a lawyer at Silicon Valley firm Day Casebeer Madrid & Batchelder, agreed to work pro bono as co-counsel with EFF. The firm not only provided its time for free but also agreed to absorb all the defense's litigation costs, bringing enough resources to see the case through to an appeal court if necessary. Grewal explained:

> What was a huge factor for us to get involved, frankly, was the fact that there was
> no commercial activity here. It's not as if the bnetd developers were looking to
> monetize their development of their product on top of the Blizzard platform, or
> use this as a launching pad for building a commercial enterprise of any kind.
> They were doing it for free, and they were doing it for fun.   And most
> importantly, they were sharing the fruits of their labor in an open source format,
> so that literally anyone could log on to their Website and take the fruits of their
> thousands of hours of labor to build this product.

Grewal also took on the case for another important reason: to provide clarity on a topic he considered critical to innovation in the United States. Up to that point, no other cases had been published specifically on enforcing a party's obligations under an end-user license agreement that restricted reverse engineering. "We had no case law," he explained, "and therefore no idea what the court's verdict would be."

As the case's litigation dragged on, public furor over Blizzard's lawsuit against the bnetd project petered out. Meanwhile, Blizzard was legally bound not to use information gleaned from its legal interactions with bnetd to upgrade its Battle.net service, although it was free to improve the service in other ways during the case's litigation.

ARGUMENTS IN BRIEF

Prior to the long day of mediation between Blizzard and bnetd that took place in October 2003, the two sides prepared their arguments for court. Of all Blizzard's charges against bnetd, the two most important were: 1) that Crittenden, Combs, and Jung had violated the terms of Blizzard's EULAs and/or Battle.net's TOUs; and 2) that they had violated the anti-circumvention and anti-trafficking provisions of the DMCA.

Violation of Blizzard Agreements

Blizzard could argue that Combs and Crittenden disassembled and reverse engineered Blizzard's software, despite agreeing to licenses (EULAs and/or TOUs) that clearly prohibited reverse engineering. The company could also argue that the bnetd developers then violated those agreements further by matching up users wanting to play Blizzard's games in multiplayer mode without the use of Battle.net. In Blizzard's view, the licenses were enforceable for a number of reasons, including that states were entitled to enforce contracts restricting reverse engineering, even though federal law provided that reverse engineering was acceptable in some cases. Blizzard could cite as a precedent the case of *Bowers v. Baystate Technologies,* which considered the 1988 U.S. Copyright Act's preemption of licensing agreements prohibiting reverse engineering. The company could argue that this case set a precedent upholding the legality of restricting reverse engineering through clickwrap software license agreements. [39]

Bnetd's lawyers could claim that, even if Blizzard's EULAs and TOU licenses had been violated, they were unenforceable for a number of reasons, including that they conflicted with the U.S. Copyright Act. Using *Vault v. Quaid* as a precedent to support their claim, bnetd could argue that, under federal copyright law, restrictions on licenses barring reverse engineering violated the *fair use* rights of their clients as owners of Blizzard's software.[40] "U.S. law recognizes that in very limited circumstances certain rights cannot be waived, even if you sign a piece of paper waiving those rights," Grewal explained.

Circumvention of the DMCA

The Digital Millennium Copyright Act (DMCA) made it illegal to produce or distribute technology that bypassed a technological measure aimed at controlling access to a copyrighted work, except under certain conditions. Those conditions included reverse engineering to achieve interoperability between the work and another product under the Act's section 1201 (see **Exhibit 9**). Blizzard's lawyers could maintain that the bnetd emulator was a circumventing technology, since it skirted the company's measures of controlling entry to its games' Battle.net mode via a CD key. Among other things, Blizzard could contend that the project's sole function was to bypass those entry control measures; that it had limited commercial purpose beyond bypassing those measures; and that the defendants marketed and distributed the emulator's circumvention capabilities, despite knowing that some of the people using bnetd were playing with pirated copies of Blizzard games, in each case breaching the Act's section 1201.

Blizzard's counsel might also argue that the defendants did not qualify for the DMCA's reverse engineering exemption. Citing *Bowers v Baystate Technologies* again, for instance, it could claim that the defendants did not meet the exemption's requirement that they had lawfully obtained the right to use a copy of the company's software for reverse engineering purposes, since they had agreed to Blizzard's EULAs and TOUs prohibiting reverse engineering.[41] Blizzard's counsel might further make the case that the bnetd project, in its effort to mimic Battle.net, illegally copied some of the company's copyrighted work, such as its computer code, making the defendants ineligible for the exemption. Blizzard could cite *Sega v. Accolade*, saying the ruling did not legitimize the extensive copying of a copyrighted program as fair use

(but rather it legalized unauthorized reverse engineering to understand the unprotected functional elements of a computer program to obtain interoperability).[42]

Lawyers for the bnetd project, however, could argue that the defendants did not infringe on Blizzard's copyrights. Rather, by reverse engineering their store-bought Blizzard games, the bnetd developers engaged in just the type of reverse engineering protected under *Sega v. Accolade* and the DMCA. The defendants could also claim that since the bnetd server interacted with Blizzard games—not the battle.net server—the defendants did not illegally circumvent access to it. They instead had a legal right to manipulate the Blizzard games they had purchased. Besides not bypassing Blizzard's anti-circumvention measures in breach of the DMCA's section 1201, they could also argue that the project was a volunteer effort without commercial purpose and that their clients did not disseminate it for illegal use.[43] Grewal explained: "The paradigm that we were operating under here was that we were supplying and distributing a tool that people could use and put to use in many lawful ways, and the fact that there was a unlawful use that was possible shouldn't be pinned on our guys, simply because they were trying to do the right thing."

NEGOTIATING POSITIONS

The two sides prepared themselves for court. Prior to trial, however, the court as part of its standard operating procedure required Blizzard and bnetd to meet with a court-appointed mediator one last time to try to reach a negotiated settlement. There, the parties would ideally enter into extended talks about how the case might be resolved. Possible issues to be discussed included: whether the defendants were entitled to work on the project going forward; whether they would agree to stop distributing the code they had developed; whether they would issue a statement accepting some sort of responsibility for what they had done; and whether they would agree they had violated the terms of their contract with Blizzard or had violated the DMCA, thereby committing illegal acts.

Court-ordered mediation sessions, however, were often short affairs during which plaintiffs and defendants simply stated their irreconcilable positions. Leading up to their mediation, Blizzard and the bnetd developers outwardly stuck to their stances. According to EFF staff lawyer Jason Schultz, the bnetd team understood Blizzard's main concern to be that the project was encouraging unauthorized copying of the company's programs, particularly in South Korea and China. Blizzard was under pressure from its Korean and Chinese vendors to shut down game parlors where pirated Blizzard games were often played on bnetd's server. The company believed it needed a U.S. court order stating that the bnetd emulator was illegal to show to Korean and Chinese courts. Those courts could then use the U.S. court order to give an ultimatum to the game parlors: Either use Battle.net software to play Blizzard games, paying royalties to Blizzard, or be shut down.[44]

The bnetd legal team, for its part, was adamant that the bnetd developers' reverse engineering was protected by U.S. law, enacted by Congress to safeguard technological innovation. Blizzard's piracy problems were not bnetd's fault since the bnetd developers had created the emulator for a different purpose. "They wanted us to say we had done something wrong, and we weren't willing to do that," Crittenden explained. The defendants also wanted to continue to

develop and release the bnetd program, but were open to working on ways to ensure the program did not encourage piracy.

The two parties' positions were not necessarily set in stone, however. Each side understood the risks of taking the case all the way to court, including the possibility of an adverse ruling. As the bnetd side prepared its negotiating strategy for the court-ordered mediation session, Crittenden, Combs, and Jung agreed they would give up future work on the bnetd project early in the mediation session in hopes that the concession would spur flexibility on Blizzard's part. With the help of their lawyers, they understood that large companies like Blizzard generally had something to gain by settling cases out of court. For Blizzard, this might mean a settlement that somehow allowed the company to shut down bnetd's distribution, thereby damping piracy and its consequent revenue loss.

The good will created by bnetd's concession helped propel the mediation session well beyond the usual duration of most court-ordered mediations. With the negotiations entering their eleventh hour, a bleary-eyed Crittenden wondered if an out-of-court settlement was at hand and, if so, on what terms.

Exhibit 1
Shares of Game Purchases, by Genre

Shares of Videogame Purchases, by Genre

Rank	Console Games			PC Games	
	Category	*% Share*		*Category*	*% Share*
1	Action	30.1%		Strategy	26.9%
2	Sports	17.8		Family & Children	20.3
3	Shooter	9.6		Shooter	16.3
4	Family & Children	9.5		Role-Playing	10.0
5	Racing	9.4		Adventure	5.9
6	Role-Playing	9.0		Sports	5.4
7	Fighting	5.4		Action	3.9
	Other	9.2		Other	11.3

Sources: Veronis Suhler Stevenson, PQ Media, NPDFunworld, Entertainment Software Association

Source: "Communications Industry Forecast 2005-2009," Veronis Suhler Stevenson, 2005, p.337. Reprinted by permission of Veronis Suhler Stevenson.

Exhibit 2
Interactive Entertainment Spending, by Category (1999-2009)

Interactive Entertainment Spending ($ MILLIONS)

Year	Videogame Software*	PC Entertainment Software†	Videogame Advertising‡	Total Console/ Computer Videogames	Online Games§	Total Videogames Including Online
1999	$ 4,647	$1,890	$ 3	$ 6,540	$ 71	$ 6,611
2000	4,633	1,913	9	6,555	127	6,682
2001	5,183	1,748	22	6,953	196	7,149
2002	6,118	1,657	44	7,819	274	8,093
2003	6,516	1,427	79	8,022	343	8,365
2004	6,906	1,201	120	8,227	656	8,883
2005	7,272	1,055	178	8,505	1,072	9,577
2006	8,138	941	267	9,346	1,563	10,909
2007	9,004	858	402	10,264	2,055	12,319
2008	10,141	775	594	11,510	2,532	14,042
2009	10,737	709	800	12,246	2,886	15,132

Sources: Veronis Suhler Stevenson, PQ Media, NPDFunworld, Rentrak, Yankee Group, Entertainment Software Association
*Includes portable games.
†Includes educational software.
‡Includes in-game advertising and advergaming.
§To avoid double counting in overall spending, online game spending is included in the Consumer Internet chapter.

Source: "Communications Industry Forecast 2005-2009," Veronis Suhler Stevenson, 2005, p.338. Reprinted by permission of Veronis Suhler Stevenson.

Exhibit 3
Growth of Interactive Entertainment Spending, by Category (1999-2009)

Growth of Interactive Entertainment Spending

Year	Videogame Software*	PC Entertainment Software†	Videogame Advertising‡	Total Console/ Computer Videogames	Online Games§	Total Videogames Including Online
2000	−0.3%	1.2%	200.0%	0.2%	78.9%	1.1%
2001	11.9	−8.6	144.4	6.1	54.3	7.0
2002	18.0	−5.2	100.0	12.5	39.8	13.2
2003	6.5	−13.9	79.5	2.6	25.2	3.4
2004	6.0	−15.9	51.9	2.5	91.3	6.2
2005	5.3	−12.1	48.3	3.4	63.4	7.8
2006	11.9	−10.8	50.0	9.9	45.8	13.9
2007	10.6	−8.9	50.6	9.8	31.5	12.9
2008	12.6	−9.7	47.8	12.1	23.2	14.0
2009	5.9	-8.5	34.7	6.4	14.0	7.8
Compound Annual Growth						
1999-2004	8.2	−8.7	109.1	4.7	56.0	6.1
2004-2009	9.2	−10.0	46.1	8.3	34.5	11.2

Sources: Veronis Suhler Stevenson, PQ Media, NPDFunworld, Rentrak, Yankee Group, Entertainment Software Association
*Includes portable games.
†Includes educational software.
‡Includes in-game advertising and advergaming.
§To avoid double counting in overall spending, online game spending is included in the Consumer Internet chapter.

Source: "Communications Industry Forecast 2005-2009," Veronis Suhler Stevenson, 2005, p.338. Reprinted by permission of Veronis Suhler Stevenson.

Exhibit 4
The PC Entertainment Software Market (1999-2009)

The PC Entertainment Software Market*

Year	Computer Households (Millions)	Unit Sales Per Computer Household	Aggregate Units Sold (Millions)	Average Price	Aggregate Software Spending ($ Millions)
1999	43.7	1.91	83.4	$22.66	$1,890
2000	53.4	1.66	88.6	21.59	1,913
2001	61.1	1.33	81.3	21.50	1,748
2002	65.7	1.10	72.4	22.89	1,657
2003	70.6	0.92	64.8	22.03	1,427
2004	74.8	0.74	55.1	21.79	1,201
2005	78.0	0.63	48.8	21.62	1,055
2006	80.9	0.54	44.1	21.35	941
2007	83.2	0.48	40.3	21.27	858
2008	85.0	0.44	37.2	20.84	775
2009	86.4	0.40	34.5	20.55	709

Sources: Veronis Suhler Stevenson, PQ Media, NPDFunworld, Entertainment Software Association, U.S. Bureau of the Census
*Includes educational software.

Source: "Communications Industry Forecast 2005-2009," Veronis Suhler Stevenson, 2005, p.336. Reprinted by permission of Veronis Suhler Stevenson.

Exhibit 5
Growth of the PC Entertainment Software Market (1999-2009)

Growth of the PC Entertainment Software Market*

Year	Computer Households	Unit Sales Per Computer Household	Aggregate Units Sold	Average Price	Aggregate Software Spending
2000	22.2%	−13.1%	6.2%	−4.7%	1.2%
2001	14.4	−19.8	−8.2	−0.4	−8.6
2002	7.5	−17.2	−10.9	6.5	−5.2
2003	7.5	−16.7	−10.5	−3.8	−13.9
2004	5.9	−19.7	−15.0	−1.1	−15.9
2005	4.3	−15.1	−11.4	−0.8	−12.1
2006	3.7	−12.9	−9.7	−1.2	−10.8
2007	2.8	−11.0	−8.5	−0.4	−8.9
2008	2.2	−9.8	−7.8	−2.0	−9.7
2009	1.7	−8.8	−7.2	−1.4	−8.5
Compound Annual Growth					
1999-2004	11.3	−17.3	−8.0	−0.8	−8.7
2004-2009	2.9	−11.5	−8.9	−1.2	−10.0

Sources: Veronis Suhler Stevenson, PQ Media, NPDFunworld, Entertainment Software Association, U.S. Bureau of the Census
*Includes educational software.

Source: "Communications Industry Forecast 2005-2009," Veronis Suhler Stevenson, 2005, p.336. Reprinted by permission of Veronis Suhler Stevenson.

Exhibit 6
Excerpts from Blizzard's StarCraft EULA (January 15, 2003)

YOU SHOULD CAREFULLY READ THE FOLLOWING END USER LICENSE AGREEMENT BEFORE INSTALLING THIS SOFTWARE PROGRAM. BY INSTALLING, COPYING, OR OTHERWISE USING THE SOFTWARE PROGRAM, YOU AGREE TO BE BOUND BY THE TERMS OF THIS AGREEMENT. IF YOU DO NOT AGREE TO THE TERMS OF THIS AGREEMENT, PROMPTLY RETUEN THE UNUSED SOFTWARE PROGRAM TO THE PLACE OF PURCHASE OR CONTACT BLIZZARD ENTERTAINMENT CUSTOMER SERVICE AT (949) 955-1382 FOR A FULL REFUND OF THE PURCHASE PRICE WITHING 30 DAYS OF THE ORIGINAL PURCHASE.

This software program (the "Program"), any printed materials, any on-line or electronic documentation, and any and all copies and derivative works of such software program and materials are the copyrighted work of Blizzard Entertainment, a division of Davidson & Associates, Inc. or its suppliers. All use of the Program is governed by the terms of the End User License Agreement, which is provided below ("License Agreement"). The Program is solely for use by end users according to the terms of the License Agreement. Any use, reproduction or redistribution of the Program not in accordance with the terms of the License Agreement is expressively prohibited.

END USER LICENSE AGREEMENT

1. Limited Use of License. Blizzard Entertainment ("Blizzard") hereby grants, and by installing the Program you thereby accept, a limited, non-exclusive license and right to install and use one (1) copy of the Program for your use on either a home or portable computer. In addition, the Program has a multiplayer capability that allows up to eight players per registered version of the Program to play concurrently. [] The Program is licensed, not sold. Your license confers no title or ownership in the Program.

2. Ownership. All title, ownership and intellectual property rights in and to the Program and any and all copies thereof (including but not limited to any titles, computer code, themes, objects, characters, character names, stories, dialog, catch phrases, locations, concepts, artwork, animations, sounds, musical composition, audio-visual effects, methods of operations, moral rights, any related documentation, and "applets" incorporated into the Program) are owned by Blizzard Entertainment or its licensors. The Program is protected by the copyright laws of the United States, international copyright treaties and conventions and other laws. All rights are reserved. The program contains certain licensed materials and Blizzard's licensors may protect their rights in the event of any violation of this Agreement.

3. Responsibilities of End User
   A. Subject to the Grant of License herein above, you may not, in whole or in part, copy, photocopy, reproduce, translate, reverse engineer, derive source code, modify, disassemble, decompile, create derivative works based on the Program, or
   B. remove any proprietary notices or labels on the Program without prior consent, in writing, of Blizzard.
   C. The program is licensed to you as a single product. Its component parts may not be separated for use on more than one computer.
   D. You are entitled to use the program for your own use, but you are not entitled to:
      i. Sell, grant a security interest in or transfer reproductions of the Program to other parties in any way, nor to rent, lease, or license the Program to others without the prior written consent of Blizzard.
      ii. Exploit the Program or any of its parts for any commercial purpose including, but not limited to, use at a cyber café, computer gaming center, or any other location-based site. Blizzard may offer a separate Site License Agreement to permit you to make the Program available for commercial use; contact Blizzard for details;

Exhibit 6 (continued)
Excerpts from Blizzard's StarCraft EULA (January 15, 2003)

    iii.   Use or allow third parties to use the Editor and the New Materials created thereby for commercial purposes including, but not limited to, distribution of the New Materials on a stand alone basis or packaged with other software or hardware through any and all distribution channels, including, but not limited to, retail sales and online electronic distribution without the express consent of Blizzard; and

    iv.   Host or provide matchmaking services for the Program or emulate or redirect the communication protocols used by Blizzard in the network feature of the Program, through the protocol emulation, tunneling, modifying or adding components to the Program, use of a utility program, or any other techniques now known or hereafter developed, for any purpose including, but not limited to network play over the Internet, network play utilizing commercial or non-commercial gaming networks or as part of content aggregation networks without the prior consent of Blizzard.

4. Program Transfer []
5. Termination []
6. Export Controls []
7. Limited Warranty []
8. Limitation of Liability []
9. Equitable Remedies. You hereby agree that Blizzard would be irreparably damaged if the terms of this License Agreement were not specifically enforced, and therefore you agree that Blizzard shall be entitled, without bond, other security, or proof of damages, to appropriate equitable remedies as Blizzard may otherwise have available to it under this License Agreement, the prevailing party in such litigation shall be entitled to recover from the other party all the costs, attorney's fees and other expenses incurred by such prevailing party in the litigation.
10. Miscellaneous. This License Agreement shall be deemed to have been made and executed in the State of California and any dispute arising hereunder shall be resolved in accordance with the law of California, County of Los Angeles, having subject matter jurisdiction with respect to the dispute between the parties. This License Agreement may be amended, altered or modified only by an instrument in writing, specifying such amendment, alteration or modification, executed by both parties. In the event that any provision of this License Agreement shall be held by a court or other tribunal of competent jurisdiction to be unenforceable, such provision will be enforced to the maximum extent permissible and the remaining portions of this License Agreement shall remain in full force and effect. The License Agreement constitutes and contains the entire agreement between the parties with respect to the subject matter hereof and supersedes any prior oral or written agreements.

I hereby acknowledge that I have read and understand the foregoing License Agreement and agree that the action of installing the Program is an acknowledgment of my agreement to be bound by the terms and conditions of the License Agreement is the complete and exclusive statement of the agreement between Blizzard and I and that the License Agreement supersedes any prior or contemporaneous agreement, either oral or written, and any other communication between Blizzard and myself.

Source: "Exhibits for Second Amended Complaint [PDF 2.81M]," December 3, 2002, Blizzard v. BNETD *Electronic Frontier Foundation*, http://www.eff.org/IP/Emulation/Blizzard_v_bnetd/20021203_SAC_exhibits.pdf (June 21, 2006), pp. 57-60.

Exhibit 7
Excerpts from Blizzard's Battle.net Terms ® of Use (January 15, 2003)

Battle.net ® (Battle.net) is the copyrighted work of Blizzard Entertainment ® ("Blizzard") or its suppliers. All use of Battle.net is governed by the terms of use provided below (Battle.net Terms of Use). Battle.net is provided "as is" solely for the use by end users of Blizzard software products according to the terms and conditions contained herein. Any use of Battle.net not in accordance with the terms of the Battle.net Terms of Use is expressly prohibited.

1. Grant of License. Blizzard hereby grants, and by using Battle.net, you therefore accept, a limited, personal, nonexclusive license and right to use Battle.net using either home, work or portable computer. []

2. Registration Information. To register your account. On Battle.net, you will be required to provide your name and the "CD-Key" from the Blizzard Entertainment Software Product you have purchased that includes the Battle.net technology. This information is used to identify you as a "unique user" of Battle.net. In the event that Blizzard learns you have provided Blizzard with false or misleading registration information, Blizzard reserves the right to terminate your Battle.net account.

3. Ownership. All title, ownership, and intellectual property rights in and to Battle.net (including, but not limited to, any titles, computer code, themes, objects, characters, character names, stories, dialog, catch phrases, locations, concepts, artwork, animations, sounds, musical compositions, audio-visual effects, methods of operation, moral rights, any related documentation, "applets" incorporated into Battle.net, transcripts of the chat rooms, member profile info, recordings of games played on Battle.net and software) are owned by Blizzard Entertainment or its licensors. All rights are reserved. []

4. Your Use of Battle.net
   A. You are entitled to use Battle.net for your own personal use, but you shall not be entitled to
      i. Sell or grant a security interest in or transfer reproductions of Battle.net to other parties in any way, nor to rent, lease or license Battle.net to others without the prior written consent of Blizzard;
      ii. Copy, photocopy, reproduce, translate, reverse engineer, modify, disassemble, or decompile in whole or in part any Battle.net software;
      iii. Create derivative works based on Battle.net; Host or provide matchmaking services for any Blizzard software programs or emulate or redirect the communication protocols used by Blizzard as part of Battle.net, through protocol emulation, tunneling, modifying or adding components to the Program, use of a utility program, or any other technique known or hereafter developed, for any purpose, including, but not limited to, network play over the internet, network play utilizing commercial and non-commercial gaming networks, or as part of content aggregation networks without the prior written consent of Blizzard or exploit Battle.net or any of its parts for commercial purpose, including, but not limited to, use at a location such as cyber café, arcade, or other location where users are charged a fee, whether hourly or otherwise, to use Blattle.net
      iv. Use of any third-party software to modify Battle.net to change game play, including but not limited to cheats and/or hacks;
      v. Use Blizzard's intellectual property rights contained in Battle.net to create or provide any other means through which Blizzard Entertainment software products, including, but not limited to, StarCraft, StarCraft: Brood War, Diablo, Diablo II, Warcraft: Orcs & Humans, Warcraft II: Tides of Darkness, Warcraft II: Beyond the Dark Portal. Warcraft II: Battle.net Edition, and Warcraft III may be played by others, including, but not limited to, server emulators;
      vi. []
      vii. []
      viii. []

Exhibit 7 (continued)
Excerpts from Blizzard's Battle.net Terms ® of Use (January 15, 2003)

    ix. []
    x. []
    xi. []
    xii. []
    xiii. []
    xiv. modify any file that Blizzard does not specifically authorize you to modify;
    xv. []
    xvi. []
    xvii. create or maintain, under any circumstances, more than one simultaneous connection to Battle.net. All such connections to Battle.net, whether created by Blizzard software products or by other tools and utilities, may only be made through methods and means expressly approved by Blizzard Entertainment. Under no circumstances may you connect or create tools that allow you to connect to Battle.net's private binary interface or interfaces other than those explicitly provided by Blizzard Entertainment for public use;
    xviii. []
  B. []
  C. []
5. Content uploads to Battle.net. []
6. Use of Your Content. []
7. Information found on Battle.net. []
8. Termination []
9. Acknowledgements []
10. Indemnification []
11. DISCLAIMER OF WARRANTY. []
12. Limitation of Liability. []
13. Miscellaneous. []

Source: "Exhibits for Second Amended Complaint [PDF 2.81M]," December 3, 2002, Blizzard v. BNETD *Electronic Frontier Foundation*, http://www.eff.org/IP/Emulation/Blizzard_v_bnetd/20021203_SAC_exhibits.pdf (June 21, 2006), pp. 74-79.

Exhibit 8
Copy of Blizzard's Cease-and-Desist Letter to Internet Gateway, February 19, 2002

February 19, 2002

Sender Information:
Blizzard Entertainment (a division of Vivendi Universal
Games, Inc.)
Sent by: [Private]
[Private]

Recipient Information:
[Private]
Internet Gateway, Inc.

Sent via: e-mail
Re: Bnetd Project

Internet Gateway Inc.

Dear Sir or Madam:
This letter is to notify you, pursuant to the provisions of the Digital Millennium Copyright Act, that we believe one of your customers is infringing Blizzard Entertainment's, a division of Vivendi Universal Games, Inc. ("VUG"), copyrighted materials. Specifically, Blizzard Entertainment is the owner of the copyright for the computer games Diablo(r) II and StarCraft(r) and the multi-player server software run by Blizzard Entertainment on its Battle.net(r) site. The following site hosts and/or distributes software that violates Blizzard Entertainment's copyright: http://www.bnetd.org/

The aforementioned site either hosts or distributes software which illegally modifies and/or alters Blizzard Entertainment copyrighted software or bypasses anti-circumvention technology, thereby infringing upon Blizzard Entertainment copyrights. Accordingly, Blizzard Entertainment demands that you act expeditiously to remove, or disable access to, the web page listed above in order for you to claim a safe harbor under the DMCA from liability for contributory and vicarious copyright infringement. Please immediately delete or disable access to this web page and remove its contents from view. Should you have any questions, please contact the undersigned at piracy@blizzard.corn or [blank].

I have a good faith belief that use of the material in the manner complained of is not authorized by Blizzard Entertainment, VUG, its agents or the law, and that the information in this notice is accurate. I declare under penalty of perjury under the laws of the United States of America that I am authorized to act on behalf of all of the aforementioned entities.

Sincerely,

[blank]
Corporate Counsel

Source: "Cease-and-desist and legal threat letter from Vivendi/Blizzard to bnetd project and their ISP," February 19, 2002, Blizzard v. BNETD, Electronic Frontier Foundation, http://www.eff.org/IP/Emulation/Blizzard_v_bnetd/20020219_blizzard_bnetd_letter.html (June 21, 2006).

Exhibit 9
Excerpts from the Digital Millennium Copyright Act Section 1201 (1998)

(a) VIOLATIONS REGARDING CIRCUMVENTION OF TECHNOLOGICAL MEASURES.

    (1) (A) No person shall circumvent a technological measure that effectively controls access to a work protected under this title. The prohibition contained in the preceding sentence shall take effect at the end of the 2-year period beginning on the date of the enactment of this chapter.

        (B) The prohibition contained in subparagraph (A) shall not apply to persons who are users of a copyrighted work which is in a particular class of works, if such persons are, or are likely to be in the succeeding 3-year period, adversely affected by virtue of such prohibition in their ability to make noninfringing uses of that particular class of works under this title, as determined under subparagraph (C).[]

    (2) No person shall manufacture, import, offer to the public, provide, or otherwise traffic in any technology, product, service, device, component, or part thereof, that -

        (A) is primarily designed or produced for the purpose of circumventing a technological measure that effectively controls access to a work protected under this title;

        (B) has only limited commercially significant purpose or use other than to circumvent a technological measure that effectively controls access to a work protected under this title; or

        (C) is marketed by that person or another acting in concert with that person with that person's knowledge for use in circumventing a technological measure that effectively controls access to a work protected under this title.

    (3) As used in this subsection -

        (A) to "circumvent a technological measure" means to descramble a scrambled work, to decrypt an encrypted work, or otherwise to avoid, bypass, remove, deactivate, or impair a technological measure, without the authority of the copyright owner; and

        (B) a technological measure "effectively controls access to a work" if the measure, in the ordinary course of its operation, requires the application of information, or a process or a treatment, with the authority of the copyright owner, to gain access to the work.

(b) ADDITIONAL VIOLATIONS. - (1) No person shall manufacture, import, offer to the public, provide, or otherwise traffic in any technology, product, service, device, component, or part thereof, that -

        (A) is primarily designed or produced for the purpose of circumventing protection afforded by a technological measure that effectively protects a right of a copyright owner under this title in a work or a portion thereof;

        (B) has only limited commercially significant purpose or use other than to circumvent protection afforded by a technological measure that effectively protects a right of a copyright owner under this title in a work or a portion thereof; or

        (C) is marketed by that person or another acting in concert with that person with that person's knowledge for use in circumventing protection afforded by a technological measure that effectively protects a right of a copyright owner under this title in a work or a portion thereof.

    (2) As used in this subsection –

        (A) to "circumvent protection afforded by a technological measure" means avoiding, bypassing, removing, deactivating, or otherwise impairing a technological measure: and

        (B) a technological measure "effectively protects a right of a copyright owner under this title" if the measure, in the ordinary course of its operation, prevents, restricts, or otherwise limits the exercise of a right of a copyright owner under this title.

(c) OTHER RIGHTS, ETC., NOT AFFECTED. - (1) Nothing in this section shall affect rights, remedies, limitations, or defenses to copyright infringement, including fair use, under this title.[]

(d) []

(e) []

(f) REVERSE ENGINEERING. - (1) Notwithstanding the provisions of subsection (a)(1)(A), a person who has lawfully obtained the right to use a copy of a computer program may circumvent a technological

Exhibit 9 (continued)
Excerpts from the Digital Millennium Copyright Act Section 1201 (1998)

measure that effectively controls access to a particular portion of that program for the sole purpose of identifying and analyzing those elements of the program that are necessary to achieve interoperability of an independently created computer program with other programs, and that have not previously been readily available to the person engaging in the circumvention, to the extent any such acts of identification and analysis do not constitute infringement under this title.

   (2) Notwithstanding the provisions of subsections (a)(2) and (b), a person may develop and employ technological means to circumvent a technological measure, or to circumvent protection afforded by a technological measure, in order to enable the identification and analysis under paragraph (1), or for the purpose of enabling interoperability of an independently created computer program with other programs, if such means are necessary to achieve such interoperability, to the extent that doing so does not constitute infringement under this title.

   (3) The information acquired through the acts permitted under paragraph (1), and the means permitted under paragraph (2), may be made available to others if the person referred to in paragraph (1) or (2), as the case may be, provides such information or means solely for the purpose of enabling interoperability of an independently created computer program with other programs, and to the extent that doing so does not constitute infringement under this title or violate applicable law other than this section.

   (4) For purposes of this subsection, the term "interoperability" means the ability of computer programs to exchange information, and of such programs mutually to use the information which has been exchanged.

(g) []
(h) []
(i) []
(j) []
(k) []

Source: "Copyright Law of the United States of America and Related Laws Contained in Title 17 of the *United States Code, Circular* 92," U.S. Copyright Office, http://www.copyright.gov/title17/92chap12.html#1201 (June 21, 2006).

ENDNOTES

1 Jason Schultz, Staff Attorney, Electronic Frontier Foundation, author's interview (January 30, 2006), p. 11. Subsequent quotations are from the author's interviews, unless otherwise noted.

2 "Separating the Winners from the Losers in 2004," *DFC Intelligence*, January 18, 2005, http://www.dfcint.com/game_article/jan05article.html (March 13, 2006).

3 Wikipedia, "Massively Multiplayer Online Game," http://en.wikipedia.org/wiki/Massively_multiplayer_online_game; "Internet Gaming," http://en.wikipedia.org/wiki/Internet_gaming; "Computer Game," http://en.wikipedia.org/wiki/Computer_game; "Battle.net," http://en.wikipedia.org/wiki/Battle.net; and "Diablo," http://en.wikipedia.org/wiki/Diablo_%28computer_game%29 (March 13, 2006).

4 Entertainment Software Association, "Essential Facts about the Computer and Video Game Industry: 2005, Sales, Demographics, and Usage Data," 2005, http://www.theesa.com (March 12, 2006), p.3.

5 "Communications Industry Forecast 2005-2009," Veronis Suhler Stevenson, 2005, p.338.

6 Games Investor Consulting, Ltd, "The Games Industry Past, Present, & Future," *gamesinvestor*, 2006, http://www.gamesinvestor.com/History/history.htm (March 13, 2006).

7 Dave 'Fargo' Kosak, "Microsoft: Don't Count PC Games Out," *GameSpy*, February 10, 2006, http://www.gamespy.com/articles/687/687828p1.html (March 14, 2006).

8 "The Online Game Market Heats Up," *DFC Intelligence*, June 30, 2004, http://www.dfcint.com/game_article/june04article.html (March 14, 2006).

9 "Still Substantial Growth Potential for MMOG Games," *DFC Intelligence*, August 5, 2004, http://www.dfcint.com/game_article/aug04article.html, (March 14, 2006).

10 "Separating the Winners from the Losers in 2004," op. cit.

11 Ibid., and "The Game Business Comes to China," *DFC Intelligence*, August 15, 2005 http://www.dfcint.com/game_article/aug05article.html (March 15, 2006).

12 "The Game Business Comes to China," op. cit.

13 Michael Eilers, "Blizzard's Tenth Celebration Begins," *Inside Mac Games*, February 6, 2001, http://www.insidemacgames.com/news/story.php?ArticleID=2062 (March 16, 2006).

14 Geoffrey Keighley, "Eye of the Storm: Behind Closed Doors at Blizzard," *GameSpot*, http://www.gamespot.com/gamespot/features/pc/blizzard/p2_02.html, (March 16, 2006).

15 Ibid.

16 Eilers, op. cit.

17 Keighley, op. cit.

18 IGN Staff, "A Decade of Blizzard," *ign.com*, February 1, 2001, http://pc.ign.com/articles/090/090953p1.html (March 16, 2006).

19 Wikipedia, "Blizzard Entertainment," http://en.wikipedia.org/wiki/Blizzard_Entertainment (March 16, 2006).

20 Wikipedia, "Diablo," (http://en.wikipedia.org/wiki/Diablo_%28computer_game%29. and "Battle.net," http://en.wikipedia.org/wiki/Battle.net (March 16, 2006).

21 "Second Amended Complaint," [PDF 1.1M] December 3, 2002, updated January 15, 2003, Blizzard v. BNETD, *Electronic Frontier Foundation*, http://www.eff.org/IP/Emulation/Blizzard_v_bnetd/20021203_SAC.pdf (March 20, 2006), p.4.

22 "Warcraft," op. cit. (March 23, 2006).

23 Wikipedia, "Warcraft III," http://en.wikipedia.org/wiki/Warcraft_III (March 23, 2006).

24 "The Game Business Comes to China," op. cit. (April 3, 2006).

25 "Battle.net," op. cit. (April 3, 2006).

26 "The Game Business Comes to China," op. cit. (April 5, 2006).

27 "Blizzard Entertainment," op. cit. (April 1, 2006).

28 Blizzard games were sold on CD-ROM disks that carried a sticker printed with a CD key, i.e., a unique sequence of alphanumeric characters that users had to input into their computer when installing the game. Stored on the computer, the alphanumeric sequence was sent to the Battle.net server whenever the user logged on to the server.

29 IGN Staff, op. cit. (April 6, 2006).

30 Howard Wen, "Developing the Battle.net Emulator Bnetd," *OnLamp.com*, May 9, 2002. http://www.onlamp.com/pub/a/onlamp/2002/05/09/bnetd.html (April 12, 2006).

31 Ibid.

[32] A local area network or LAN connects a limited number of computers over a small area such as a home, college, or office.

[33] According to Black's Law Dictionary, "reverse engineering is the process of discovering how an invention works by inspecting and studying it, especially by taking it apart in order to learn how it works and how to copy and improve it." Black's Law Dictionary 1429, 8th ed., 2004. See **"Court's Memorandum and Order"** [PDF 147k], September 30, 2004**,** Blizzard v. BNETD, *Electronic Frontier Foundation*, http://www.eff.org/IP/Emulation/Blizzard_v_bnetd/20021203_SAC.pdf (March 15, 2006), p.7.

[34] Rob Crittenden, Co-developer, bnetd project, author's interview, February 20, 2006, p.10.

[35] Prior to releasing software to the general public, companies often released it first to a small outside group so as to eliminate remaining bugs and elicit feedback.

[36] Paul Grewal, Partner, Day Casebeer Madrid & Batchelder, author's interview, January 19, 2006, p.39.

[37] "Complaint [PDF 200k] filed by Blizzard Entertainment/Vivendi Universal/Davidson & Associates against the bnetd project's Internet service provider, in Davidson et al. v. Internet Gateway et al," April 5, 2002, Blizzard v. BNETD, *Electronic Frontier Foundation*, http://www.eff.org/IP/Emulation/Blizzard_v_bnetd/20021203_SAC.pdfhttp://www.eff.org/IP/Emulation/Blizzard_v_bnetd/20020405_blizzard_complaint.pdf, (April 17, 2006), p.1.

[38] First Amended Complaint filed by Blizzard Entertainment/Vivendi Universal/Davidson & Associates in Davidson et al. v. Internet Gateway et al., April 14, 2002, Blizzard v. BNETD, *Electronic Frontier Foundation*, http://www.eff.org/IP/Emulation/Blizzard_v_bnetd/20020416_blizzard_1am_complaint.pdf (April 17, 2006), p.1.

[39] "Blizzard's Motion for Partial Summary Judgment [PDF 57k] on its DMCA and EULA claims," December 22, 2003, Blizzard v. BNETD, *Electronic Frontier Foundation*, http://www.eff.org/IP/Emulation/Blizzard_v_bnetd/show_case_doc.pdf (April 15, 2006), p.13.

[40] "Defendants' Opposition to Plaintiffs' Motion [PDF 261k] for Partial Summary Judgment," January 26, 2004, Blizzard v. BNETD, *Electronic Frontier Foundation*, http://www.eff.org/IP/Emulation/Blizzard_v_bnetd/20040126_bnetd_opposition.pdf (May 9, 2006), p.11.

[41] "Plaintiffs' Reply in Support of Their Motion" [PDF 52k] for Partial Summary Judgment February 17, 2004, Blizzard v. BNETD, Electronic Frontier Foundation, http://www.eff.org/IP/Emulation/Blizzard_v_bnetd/20040217_Blizzard_Reply.pdf (May 10, 2006) p.18.

[42] Ibid., p. 19.

[43] "Defendants' Motion [PDF 1.5M] for Summary Judgment on all claims," December 22, 2003, Blizzard v. BNETD, *Electronic Frontier Foundation*, http://www.eff.org/IP/Emulation/Blizzard_v_bnetd/redacted_brief.pdf (May 11, 2006), pp. 13-16, 20-21.

[44] Schultz, op. cit.