MAINPAGE
WORLD
U.S.
WEATHER
BUSINESS
SPORTS
TECHNOLOGY
SPACE
HEALTH
ENTERTAINMENT
POLITICS ☐
election 2000
TIME
analysis and 'toons
community
LAW
CAREER
TRAVEL
FOOD
ARTS & STYLE
BOOKS
NATURE
IN-DEPTH
ANALYSIS
LOCAL

Meet the Napster

Shawn Fanning was 18 when he wrote the code that changed the world. His fate, and ours, is now in the court's hands

By KARL TARO GREENFELD/REDWOOD CITY

September 25, 2000
Web posted at: 12:20 p.m. EDT (1620 GMT)

cover image

At dawn, Shawn Fanning lay on the brown carpet in the shadow of a converted bar counter, consumed by the idea. He had been awake 60 straight hours writing code on his notebook computer. In his daze, the idea appeared to him as something tangible--a hard, shiny piece of black metal--that he had to forge and form so that it became usable, so that the hard black metal was transformed into a friendly tool, so that the 0s and 1s, the Windows API protocols and Unix server commands, were all somehow buffed and polished and worked to a fine, wonderful, simple application. That was his idea. And it was big and frightening and full of implications, and it filled him up, this 18-year-old college dropout sprawled on

POLITICS
TOP STORIES

the floor in his uncle's office, in what used to be a restaurant, across the street from the breaking waves in Hull, Mass.

He didn't need friends, family, financing--he almost went without food. He was self-sufficient, gaining sustenance and strength from the work, as if by his hands he was creating his own manna. And if the idea could nourish him, he reasoned, then how many others could feed on it as well?

Fanning only dimly recalls that period in mid-1999, when he wrote the source code for the music file-sharing program called Napster. He can't remember specific months, weeks or days. He was just hunched over his Dell notebook, writing the software and crashing on his uncle's sofa or the floor. Then he'd shake off fatigue, scarf a bowl of cereal and sit back down. He worked feverishly because he was sure someone else had the same idea, that any day now some software company or media conglomerate would be unveiling a version of the same application, and then Fanning's big idea wouldn't be his anymore.

And he believed in it because his idea was so simple: a program that would allow computer users to swap music files with one another directly, without going through a centralized file server or middleman. He'd heard all the complaints about how frustrating it was to try to find good music on the Net, how so many of the pointers on websites offering current (which is to say copyrighted) music seem to lead only to dead ends. But Fanning figured out that if he combined a music-search function with a file-sharing system and, to facilitate communication, instant messaging, he could bypass the rats' nest of legal and technical problems that kept great music from busting out all over the World Wide Web.

All he had to do was combine the features of existing programs: the instant-messaging system of Internet Relay Chat, the file-sharing functions of Microsoft Windows and the advanced searching and filtering capabilities of

MARKETS		4:30pm ET, 4/16
DJIA	⬇ 144.70	8257.60
NAS	⬆ 3.71	1394.72
S&P	⬇ 10.90	879.91

Get Quote

various search engines. He reasoned that if he could write a program that included all those features, he'd have a pretty cool piece of software.

But there was a huge leap of faith involved. Nearly everyone he mentioned the idea to believed it wasn't workable. "It's a selfish world, and nobody wants to share," snorted his older, more experienced buddies from the IRC chat rooms. Fanning, an inarticulate teenager at the time, couldn't adequately explain himself. He insisted that people would do it, because, like... just because.

What he was thinking was that this is the application that finally unleashes the potential of the Web, the viral growth possibilities of the community, the transgressive power of the Internet to leap over barriers and transform our assumptions about business, content and culture. He just couldn't spit out the words to convince his fellow programmers that his idea could change the world.

Love it or hate it, that's what Napster has done: changed the world. It has forced record companies to rethink their business models and record-company lawyers and recording artists to defend their intellectual property. It has forced purveyors of "content," like Time Warner, parent company of TIME, to wonder what content will even be in the near future. Napster and Fanning have come to personify the bloody intersection where commerce, culture and the First Amendment are colliding. On behalf of five media companies, the Recording Industry Association of America (RIAA) has sued Napster, claiming the website and Fanning's program are facilitating the theft of intellectual property. Most likely the blueprint for the future of the entertainment industry will be drawn from this ruling.

Legal issues aside, Fanning's program already ranks among the greatest Internet applications ever, up there with e-mail and instant messaging. In terms of users, the Napster site is the fastest growing in history, recently

passing the 25 million mark in less than a year of operation. And, as Fanning predicted, his program does everything a Web application is supposed to do: it builds community, it breaks down barriers, it is viral, it is scalable, it disintermediates--and, oh, yeah, it may be illegal.

For its users, Napster has become another appliance, like a toaster or washing machine. Call it the music appliance: log on, download, play songs. The simplicity of the program is part of its genius. Since he took only three months to write the source code, Fanning says he didn't have time to make it more complicated. He had to learn Windows programming in addition to Unix server code, which he had taught himself. It is exceedingly rare for one programmer to excel at client and server applications, but Fanning had no choice. "I had to focus on functionality, to keep it real simple," he says in his gravelly monotone. "With a few more months, I might have added a lot of stuff that would have screwed it up. But in the end, I just wanted to get the thing out."

The pressure he felt came from a pent-up demand for digital music in the late '90s that was going largely unfilled. Before Napster, downloading music was so cumbersome it was mostly relegated to college students with access to fast pipes and techno geeks sufficiently driven to search the Net for the latest Phish bootlegs. The digital-music standard MP3, short for ISO-MPEG Audio Layer-3, was developed by German engineering firm Fraunhofer IIS back in 1987 as a way of compressing CD-quality sound files. The technology made it possible to take songs from a CD and "rip," or convert them into MP3 files, usually in violation of copyright. But even in the mid-'90s, when faster computers and high-bandwidth connections to the Internet made it possible to seek and find MP3 files, ripping CDs was a tedious process.

Then, as if everyone had just been waiting for it, Napster--some kid's Big Idea--appeared. And suddenly all these pieces of the puzzle fit together. We could all become music pirates because it was just so damn easy to do--easier even than ordering a CD online. And once that happened, would we ever be

able to go back to getting into our car, driving to the mall and buying a shrink-wrapped piece of plastic with a little silver disc inside? "I don't know how to stop it," says Atlantic Records Group co-chairman Val Azzoli, of the problems created by Napster. "It's not just music I'm worried about. It's all intellectual properties. If you can take music, you can take everything else too."

Fanning never intended to hijack the music industry. The idea for Napster just came to him as he was sitting in his dorm room at Northeastern University in Boston, hanging out with his bros, drinking a brew and listening to his roommate whine about dead MP3 links. Fanning, whose high school nickname was the Napster (a reference to his perpetually nappy hair), just shrugged. But he began thinking there might be a way to access files without going through a website. He had taught himself Unix programming between his junior and senior years at Harwich High in Cape Cod. And he knew enough to think such a program would have to be possible. "I had this idea that there was a lot of material out there sitting on people's hard drives," he says. "I mean, even if you were at [search-engine websites like] Lycos or Scour, you were still looking at people's hard drives. So that's the idea, that there's all this stuff sitting on people's PCs--and I had to figure out a way to go and get it."

The concept had lodged itself in his head, and he couldn't shake it. He began taking his notebook computer everywhere--to basketball games and the pizzeria--and tapping away on it, working out some basic programming kernels and wondering if this were even possible.

One January evening, as he rode back to campus with his cousin Brian Fanning, he was, as usual, totally absorbed with his idea. "I'm like that. Once I begin focusing on something, I'll just keep going until it's done. I cut off the outside world." When the BMW pulled up to his red-brick dorm, Fanning absentmindedly got out of the car and began walking up the path. After two steps, he stopped. Brian, who was about to pull away, waited as Fanning turned around, strolled back to the car, opened the door and climbed back in.

"I'm not going back to school," he told his cousin. Brian shrugged and drove off. It was Shawn's problem.

His mom and stepdad, of course, gave him hell, delivering the usual platitudes about how he'd regret it and wouldn't amount to anything without a degree. "When he didn't go back to school, it crushed me," recalls Coleen Verrier, Fanning's mom. "But he explained he had these things he said were urgent." Fanning was unfazed. He felt he had no choice. The idea had become too big. It possessed him. He never went back to his dorm room, leaving behind his clothes, books and bedding. He took his computer with him, of course.

Fellow programmers marvel at what Fanning was able to accomplish when he moved into his uncle's office, a computer gaming company in seaside Hull, and set to work on Napster. It was the first major program Fanning had ever written. "One thing that sets Shawn or any really great programmer apart from mediocre ones is their focus," says Ali Aydar, a friend from Massachusetts who now works as a Unix programmer in Napster's Redwood City, Calif., offices. "Shawn is able to concentrate, and collaborate and appropriate if necessary. He's also able to handle criticism. Most alpha-geeks can't take criticism. They'll get into arguments. Shawn actually listens and takes the best part of what you say."

Fanning, to put it another way, is coachable. That's a trait picked up from his jock years, when he excelled at basketball and baseball, hitting .750 as a shortstop on a state championship-winning team. It may be that his success as an athlete gave Fanning the confidence to quit school to pursue his idea. And it may be through playing team sports--running endless baseball fungo drills and basketball layup lines--that he picked up the discipline that allows him to focus on whatever is in front of him, to complete whatever task is at hand, whether it is taking a pitch to the opposite field or writing a computer program. You learn, believes Fanning, how to take criticism when you're part of a team.

In creating Napster, Fanning not only transformed the music business, but he also helped launch a new programming movement--and a whole wave of start-ups dedicated to what has become known as P2P, or peer-to-peer, client-based Internet software. Among Napster's revolutionary qualities is that it allows computer users to exchange files directly, avoiding server bottlenecks and, Fanning once hoped, legal problems. Only Napster's index and directory reside on a central server; the files are actually transferred via various Windows protocols directly from user to user. That means that no copyrighted material is ever in Napster's possession.

There are myriad--and totally legal--possibilities for P2P applications, from swapping dense technical files through a local-area network (something scientists at the Centers for Disease Control are looking into) to replacing corporate servers with P2P systems for business applications. "The old days [i.e., the current Internet] were all about centralization and control, almost Soviet-style," says Miko Matsumura, CEO and co-founder of Kalepa Networks, a six-month-old start-up that plans to link P2P networks into a sort of alternative Internet. "In this new topology, everyone brings their own resources. The new network will be built on top of the old network. Like Rome was built in different layers."

The new network, in other words, may not completely supplant the old, but it offers a new space for creating ideas and transferring them faster, more freely, more widely than ever before. Teams of designers, Web developers and business-school graduates are working up P2P programs and business plans and trotting them over to venture capitalists, who, in the wake of all the buzz about Napster, have been funding P2Ps the way they funded their alphabetical brethren B2Bs--business-to-business companies--last winter.

Napster, insists Aydar, could not have been written by a team, nor could it have been written by anyone 21 or older. "Shawn could focus on problem solving--and there was no one to tell him he couldn't do these things. There

was no one who ever really understood what he was doing. He didn't even understand the legal issues involved. It was such a cool idea that he never once stopped, never really came up for air."

Those issues--what Fanning knew and when he knew it--are now integral to the legal proceedings that will determine the future of digital music and perhaps the future of all industries that trade in intellectual property (see following story). Attorneys for the record industry have subpoenaed Fanning's e-mails and taken depositions from him, his uncle and other early Napster employees. Their contention is that Napster is guilty of something called tributary copyright infringement, which means Napster is being accused not of violating copyright itself but of contributing to and facilitating other people's infringement.

Which really means that if consumers are not guilty of breaking the law, then Napster cannot be found guilty. The issue may come down to what Napster lead attorney David Boies, who successfully prosecuted the Department of Justice's case against Microsoft, describes as "the definition of commercial or noncommercial uses." It is perfectly legal for consumers to copy music for their own enjoyment--i.e., noncommercial use. Congress has even declared, in the Audio Home Recording Act of 1992, that it is legal to make recordings and lend them out to people, provided it is not done for commercial purposes. It is unlawful, of course, if it's done to make a profit. "The law does not distinguish between large-scale and small-scale sharing or lending," insists Boies, who puts Napster's chance of winning the suit at fifty-fifty.

The record labels certainly disagree, and they have sought an injunction to shut down Napster, which U.S. District Judge Marilyn Patel granted in July. Although it was immediately stayed by federal appeals judges, the same injunction will be ruled on by a federal court as early as next week. That ruling is likely to determine the future of Napster.

The criterion for an injunction is, among other things, that the plaintiff should be able to prove that irreparable harm is going to occur between now and the completion of the case. That may not be so easy. Although Napster might seem to be taking sales away from the record companies, CD sales have actually increased in the Napster era--by $500 million this year alone.

If the injunction is upheld, Napster may be forced to fold. By the time the case reaches the Supreme Court, as it is likely to do, the company may be only a hazy memory in most computer users' minds. On the other hand, if Napster staves off the injunction, then the likelihood of a settlement with the record industry increases considerably. "Remember, as a lawyer I may be interested in this case because it raises policy issues," says Boies, "But from the client standpoint, what they want to do is get on with their business."

One of the great ironies of the Napster affair is that there really isn't a business, not yet. And if Fanning loses this case, there never will be a business, at least not for this P2P company. By the time the case reaches a final verdict, in six months or a year, some other hotshot P2P site--Gnutella, perhaps, or Freenet--might have become flavor of the month. Napster, for all the storm and fury it has engendered, could be remembered as a peculiar millennial trend--like those little chrome scooters--rather than an epochal event.

As the creator of Napster, Fanning has reached a level of fame unprecedented for a 19-year-old who is neither a sports hero nor a pop star. He's been on the cover of FORTUNE, BusinessWeek, Forbes and the Industry Standard and has been profiled just about everywhere else. His name and his face--those piercing blue eyes, wide cheeks and stolid expression under the ever present University of Michigan baseball cap--have become synonymous with the promise of the Internet to empower computer users and the possibility that some kiddie-punk programmer will destroy entire industries. Strangers pick him out at the mall buying a burrito or watching a San

Francisco Giants game or just driving around in his newly customized Mazda RX-7. He introduced Britney Spears at the MTV Video Music Awards. Nike has offered him a shoe deal.

For all that, Fanning has been unable to capitalize fully on his fame and notoriety. While he is pulling down a high five-figure salary as lead programmer of client applications for Napster and owns 9% of the company, so far that 9% has proved essentially worthless, since the company is still privately held.

He lives frugally--as do more than a few billionaires in Silicon Valley--sharing a two-bedroom San Mateo apartment and a 6-ft.-wide-screen Mitsubishi television with co-Napsterite Sean Parker. The tables are strewn with old pizza boxes, empty Coke cans and, Napster notwithstanding, actual digital discs, both video and audio. The furniture is rented, the brown sofa often serving as a crash site for Fanning's 13-year-old brother Raymond, who is teaching himself to code while he stays with Fanning. They have never bothered to get a phone line installed; the cell phone works just fine.

There is still the air of the jock about Fanning, an easy-going, wide-stepping stride and upper-body muscularity that seem out of place on a programmer. He eschews carbohydrates and hits the gym most evenings, as if bulking up for his showdown with the record industry. And a few afternoons a week he plays basketball in the Oracle gymnasium up the road from Napster's Redwood City offices. He doesn't like to admit it, but at least one co-worker confirms that he is usually the best player on the court.

Shawn Fanning has become surprisingly thoughtful and well spoken--perhaps because, being at the center of an epochal lawsuit, he has had to. Although his guard is up these days, as you talk to him, plucking a Led Zeppelin song on his Les Paul guitar, his answers roll out in complete, concise sentences. He has a slightly raspy Californian accent--he has already lost Massachusetts' stretched

a's and long r's--about what it's like to be at the center of everyone's attention, and not necessarily ever to have wanted to be there.

"I don't think a day goes by when people don't recognize me. I mean, it's been good for getting girls. It's a great way to break the ice--'Hey, I'm the Napster guy'--but it's hard to move past that."

He has a girlfriend now, a fellow 19-year-old who he is sure likes him for him and not for Napster. He won't give her name, and most of his co-workers don't even know about her. "When I'm around her," Fanning says, "I don't have to think about the press or about Napster."

Since the lawsuit began, Napster has become enveloped in something of a siege mentality, an us-vs.-them attitude toward the record labels and the press that has forced Fanning to retreat even farther into his shell. He has to monitor carefully what he says to whom and even what clothes he wears. "The cdc [the Cult of the Dead Cow, a hacker collective] guys sent me a shirt, and the lawyers told me I shouldn't wear it," he says. "It's just so tightly controlled."

Meanwhile, there is another big idea he is dying to work out, another program he has been thinking about and tinkering with that, he says, could be bigger than Napster. What he is seeking to recapture, he will tell you, are those days back in Hull, when it was just Fanning and Napster. When there were no lawsuits and no one to answer to and he was left alone to work on this little program of his, this idea that he would launch into the world.

Back then, he thought he would just write the application and set it free--his name would be embedded deep in the source code and known only to the other hackers and programmers who care about such things. He misses that simple time, before magazine covers and TV interviews and Britney Spears and having to put on a goofy black suit and necktie to appear in court.

"I'm going to get back there, to that office, to where I'm just alone and able to

work something out," Fanning vows. And then he picks up his guitar again and starts strumming. He shrugs. He has another idea, he keeps saying; he has this idea that he needs to work out. --With reporting by Chris Taylor/ San Francisco and David E. Thigpen/Chicago

A Peer-to-Peer Primer

Napster and Gnutella let users swap data from one PC--or "peer"-- to another, without going through a central server. Here's how they work:

NAPSTER

1. Napster is downloaded and installed on a personal computer.
2. The software enables the PC to log on to Napster's server. When a search is made, the server checks its database for any other Napster users who are online and have that file.
3. If the server finds a match, Napster puts the computer that has the file directly in touch with the computer that wants it, and the file is downloaded from one to the other.

GNUTELLA

1. Gnutella is downloaded and installed on a personal computer.
2. A "hello" message is sent to a computer that's already on the network, which forwards it to seven others, letting them know that the first computer is onboard. They, in turn, forward it to six more, which forward it to five more and so on.
3. A request for a particular file percolates through the Gnutella network. When it reaches a computer that has the file, Gnutella connects the two computers directly, and the file is downloaded.

Reported by Lev Grossman.

NAPSTER PEERS

PRO

- User friendly, even for relative Luddites
- Popular, which means more chance you'll find the songs you're looking for
- Napster is run as a business, so customer support matters

CON

- Its directory is stored on a central server. If the server is slow, so is the service
- It works only for MP3s, not other files
- Too successful for its own good. Banned at 40% of U.S. colleges

GNUTELLA PEERS

PRO

- Tough to ban because Gnutella files look like ordinary Web traffic
- Truly decentralized; Gnutella doesn't rely on any central server
- Works for all kinds of files; Gnutella isn't restricted to MP3s

CON

- You need another user to get onto the network
- It's a grass-roots effort, which means no tech-support hot line
- Gnutella is a work-in-progress, so there are still bugs in the code

Are you a developer? Try out the HTML to PDF API

MORE TIME STORIES:

Cover Date: October 2, 2000

- [Chasing the Undecided](#)
- [Controlling Oil Prices](#)
- [Debate Mind Games](#)
- [Kids And Politics](#)
- [Meet the Napster](#)
- [Who's Right About Oil?](#)
- [The Oprah Primary](#)
- [Napster the Revolution](#)
- [Campaign 2000: Tapegate](#)
- [Who's Tops On Tuition?](#)

[ARCHIVES](#)

Search   CNN.com   Find