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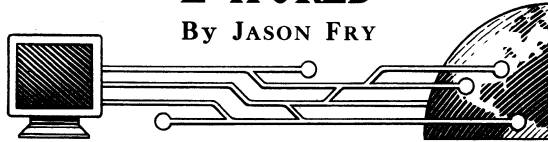
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E-WORLD

By JASON FRY



Three Veterans Advise The Next Tech Wave: It's All About Business

SHAWN FANNING turned the music world upside down with Napster. But without two other guys with a hobby, the online-music revolution might have stalled.

Ti Kan, 38, and Steve Scherf, 36, got personal computers to tell which CD they're playing. It sounds simple: Pop in a CD and the screen lights up with the name of the album and the songs on it. But teaching computers to do that proved a big technical challenge. The solution gave a boost to the craze for turning CDs into digital music files, and paved the way for those for-fee services the record labels are now unveiling.

The men credit the success of their project, called CDDDB for compact disc database, to their own technical legerdemain and to the contributions of thousands of Net users.

At the end of the odyssey, the hobbyists had become the last thing they expected to be: businessmen.

The story of how that happened is a reminder of how often big changes in the tech world begin with individuals working alone on an interesting problem. It's also a reminder that turning a hobby into a company requires a different sort of know-how, no less crucial than tech savvy.

IN 1993, Mr. Kan—then working with Stratus Computers—put together XMCD, a program that would play audio CDs on computers that use the technically oriented Unix operating system. He worked up a basic disc-recognition system that matched a CD with files kept on a user's computer. Mr. Scherf—his colleague and former schoolmate at the University of California, Santa Cruz, in the late 1980s—built that into an on-demand, Internet-based service. CDDDB automatically gave information on any CD it “knew,” plus added new information as it came in from users.

What your PC sees on a music CD is a bunch of digital ones and zeros, and a “table of contents” that tells where each song begins and ends. Put a CD in your Net-connected PC and the CDDDB sees that it has 19 songs, the first one is 3 minutes and 23 seconds long, the next one is 2 minutes and 10 seconds long, and so on. Your PC then hands that information to the CDDDB, which searches its database of more than a million CDs for a match. It tells your PC, “That’s ‘London Calling’ by the Clash—and here are the song titles and some other information a user might want.”

In most cases, your CD has no such data. It's only in the database thanks to thousands of users who took time to enter information on their music.

The service quickly earned a following. In 1997, CDDDB fan Graham Toal, who ran an Internet-service provider in Texas, offered to host a Web site. Music fans soon overloaded the servers. Mr. Toal then persuaded Messrs. Kan and Scherf to let him run banner ads on the site to defray costs. Soon, thousands of dollars rolled in each month from Web ads, including an affiliate deal under which online-music retailer CDNow paid CDDDB a few cents for each CD bought by customers who had “clicked through” its ad on the site.

Programmers started to badger the team to let them use CDDDB in commercial products—something the business-wary team had never allowed. It was time to find a buyer, to get out of the increasingly complicated management of the service.

FOR THE THREE, deciding among CDDDB's suitors was an unhappy experience. They found themselves in uncomfortable negotiations facing corporate representatives making offers the team didn't really understand. “These big companies came in with their blue suits and their lawyers and their legalese and we, frankly, didn't know what to do with it,” Mr. Kan recalls.

One of the CDDDB team's biggest fears was that a buyer would hobble the service by reserving the CDDDB database for its exclusive use.

One suitor reassured them: Escient, an Indiana maker of audiophile products. It used CDDDB in a 200-CD changer called Tunebase. The company understood that CDDDB's success depended on user contributions, and wanted to make that an easy process by having CDDDB work with as many CD-player programs as possible.

The following year, Escient acquired CDDDB for just under a million dollars in cash, plus stock. Today, CDDDB—now called Gracenote—licenses a more robust version of the original service to some 8,000, mostly noncommercial, users. The service is free for noncommercial developers, while commercial developers pay an upfront fee of \$495 and an annual charge of six cents per user.

While Mr. Toal is no longer connected with Gracenote, Mr. Kan remains an outside consultant and Mr. Scherf is a vice president.

The team learned three main lessons that might benefit other programmers working on a labor of love and dreaming about what to do next in an industry that still demands constant innovation:

1. Don't avoid the uncool business of commerce.
2. Don't even dream of not having a lawyer.
3. Get yourself a business-savvy partner.

Mr. Scherf laments the time CDDDB spent without someone “who would shield us early on from all the evilness and ugliness of business.”

When should you look for that person? In Mr. Scherf's view: “When people come to you wanting to give you money for something, that's the time.”

E-mail comments to jason.fry@wsj.com. For more about CD recognition and Gracenote, see the online Journal at <http://wsj.com>.