

Fair shares

For those who indulge in the illegal sharing of copyrighted content over peer-to-peer networks, life has so far proved a breeze. But imminent changes to UK copyright law mean offenders could soon face a hefty fine or, even worse, prison. Guy Dixon investigates

When teenager Shawn Fanning developed the now-infamous online music sharing program Napster in 1999 he sent shockwaves throughout the music and film industry that are still being felt today. The Napster site was suspended in July 00 following a lawsuit led by the Riaa (Recording Industry of America) in which the world's leading record labels obtained an injunction for copyright infringement.

Napster was eventually battered into insolvency in September last year after a series of bruising trials. But no sooner had the shutters been slammed on Napster's 70 million users than new P2P (peer-to-peer) file-swapping networks such as Kazaa, Morpheus and Grokster emerged to take its place.

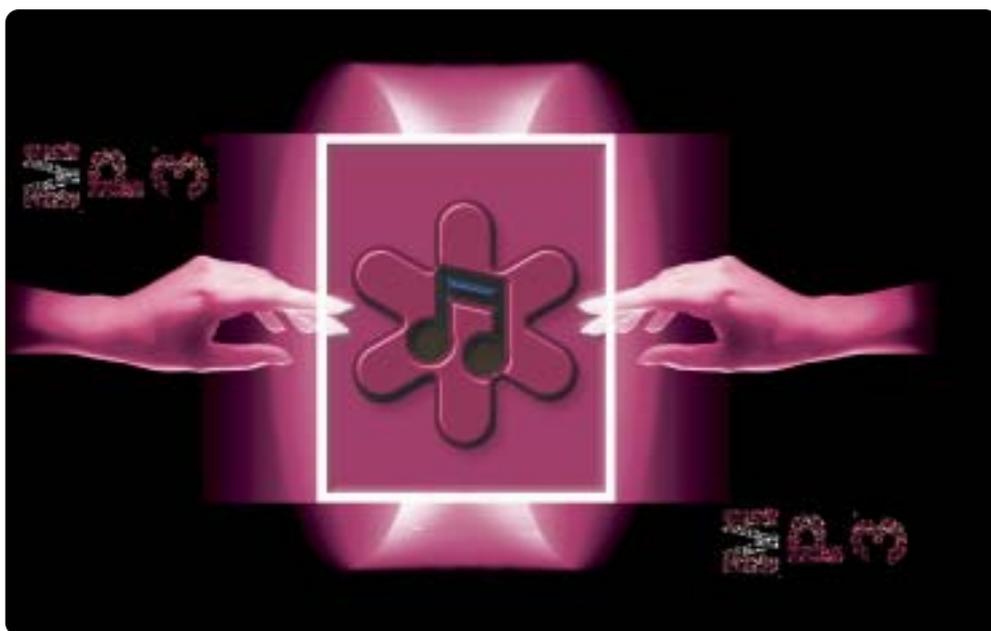
This second wave of networks offered more than music files. Any copyrighted content that could be digitised, including pictures, games, software and films, began to appear as regular items on their file-swapping menus. Not surprisingly, copyright owners in the worlds of music, software and film have spent the past four years desperately struggling to force Napster's genie back into its bottle.

Sharing the wealth

P2P networks such as Kazaa and Morpheus allow users to download a song, film or game from another user. The service lets you sniff out specific content on the hard drives of others using the service. The P2P software then allows you to exchange files directly over the internet.

Equally, once you've downloaded a P2P program, any content on your computer is offered up to the millions of other users across the globe who share the same file-sharing application.

The scale of the problem is massive. It is estimated that the number of music file downloads over P2P networks is approaching three billion per month.



Getting people to admit that they copy copyright material is as easy as extracting admissions of incompetence

CD sales, meanwhile, are on the wane, plummeting some 10 percent in the US last year. While it's quite possible that competition from other media and the ongoing economic downturn are just as likely causes for this fall, the record labels have understandably used the decline to add further grist to their mill. However, getting people to admit that they copy copyright material is as easy as extracting admissions of incompetence from most

MPs. Many P2P users claim they're looking for incredibly obscure tracks that couldn't possibly still be on the shelves.

Illegal estimations

Suffice it to say that the International Federation of the Phonographic Industry estimates that 99 percent of all music file exchanges on the web are illegal and that at any one time there are at least 500 million files available for copying.

What's more, the threat to copyright owners is much greater today than it was during Napster's glorious summer of 2000. Back then the scale of the problem – in the UK at least – was partially contained by the limitations of narrowband. The tedium of trying to download an entire album's worth of data was often sufficient to drive the downloader to their local HMV.

Today, however, we're approaching 1.5 million broadband users in the UK. With a standard 512Kbps (kilobits per second) residential ADSL connection running at around 50 percent of its maximum

capacity we've worked out that in any given 24-hour period you can download around 2MB of data per minute. That's getting on for 3,000MB every day. Because the connection's always on, simply set it up, select the tracks or movies you want, make your cup of cocoa, hit the hay and dream of the music you'll be listening to while eating breakfast in the morning.

The P2P revolution, meanwhile, has split the artists themselves. In the left corner we have the likes of Blur and 70s folk diva Janis Ian urging the music labels to wake up and embrace a new era. In fact, Ian credits the free distribution of her music via P2P networks as being a major reason for her recent renaissance. In the right corner we've got Britney Spears, who has spearheaded a RIAA campaign backed by Eminem, Madonna, Elton John and Luciano Pavarotti. "We want to hit fans with the message that downloading music illegally is, as Britney Spears explains, the same as going into a CD store and stealing the CD," says RIAA's Hilary Rosen.

Hollywood is the latest to voice its unease. The MPAA (Motion Picture Association of America), a body responsible for protecting film copyright, reckons that nearly £2bn worth of revenue is lost annually through piracy as a whole. "This is the first time we've faced this landscape, where a 12-year-old can copy a movie and send it around the world with a click of the mouse," explains MPAA president and CEO Jack Valenti.

Sabre rattling

Desperate times often prompt desperate measures. The success of P2P networks has led to some spectacular sabre rattling in the US, with senior figures calling for the right to take drastic action. The most vocal is Congressman Howard Berman who advocates taking direct action against file-sharing networks suspected of distributing pirated content. If his bill is passed it would allow copyright owners to swamp the networks with bogus files, as well as knocking them offline altogether using hack attacks.

The use of bogus files is known as spoofing. For example, if a 5MB file carrying the title *Can't get you out of my head* actually contains gobbledygook instead of the dulcet tones of Kylie

Reading your rights

- P2P networks, such as Kazaa, aren't in themselves illegal. However, the file sharing of copyrighted content is if you don't have the express consent of the copyright owner.
- According to the Consumers Association, if you follow UK copyright law to the letter it isn't even legal to make a backup copy of your audio CD on to tape or CD to play in the car.
- When UK copyright law is amended to bring it in line with the EU Copyright Directive, anyone demonstrating how to circumvent copy protection could face a prison sentence.

(assuming users can tell the difference), it's hoped this will frustrate the user sufficiently that he or she gives up.

Taken to its logical conclusion copyright owners might, for example, infect pirated MP3s with a virus that could crash your PC when you attempt to play the song. Or they could launch spyware, installed without the knowledge of the user, every time a movie trailer is viewed. Owners could even mount a DOS (denial of service) attack against a PC that trades pirated files on a P2P network.

To propose such corporate vigilantism is, of course, absurd. If copyright owners are allowed to deter P2P file sharing by employing the very tools and techniques that put hackers on the map, it would lead to an escalation in warfare that might never be contained.

For hackers with a serious grudge, taking on lumbering dinosaurs such as the RIAA would be like shooting fish in a barrel. In recent months the RIAA site has been defaced at least four times. On the last occasion the site mysteriously found itself recommending file-sharing tools such as Kazaa and eDonkey. Downloads from these sites were billed as 'sponsored by www.riaa.org'.

The fight back begins

However, beneath the extremist hubbub there are clear signs that copyright owners and corporate interests are fighting back. The might of the music and film industries is enormous. Their combined revenues exceed £45bn, added to which they're forging alliances with Microsoft and Intel which will provide further muscle.

In both the US and Europe copyright owners and the interests they represent have successfully lobbied governments, mustering every legal tool available to them. The first volley has been fired at the P2P networks themselves, claiming the scalp of Napster and the possible suspension of Kazaa. Then there's built-in copy protection which prevents CDs playing in PC CD-ROM drives. Most important for UK P2P users, however, are the changes to copyright law as a result of the EU Copyright Directive. This could leave offenders facing prison sentences.

The demise of Napster was an important psychological victory for copyright owners. Although, as we've already pointed out, other P2P networks sprang up to take its place, its closure seriously screwed the notion that file-swappers were invincible. It put

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paid to the 'anything goes' mood that predominated back in the first half of 2000, when file-swappers brought office networks to a standstill as employees helped themselves to the music collection they'd never got round to buying.

Kazaa succeeded Napster as the world's most popular file-swapping P2P network, claiming nearly 150 million downloads worldwide. Now it, too, is firmly in the RIAA's and MPAA's crosshairs. A Californian judge recently ruled that the Australian-based network is accountable under California copyright law. As a result, a lawsuit drawn up by the RIAA and MPAA claiming copyright infringement will go ahead. It's now highly likely the lawsuit will be rolled into a much larger one, including other leading P2P networks that use similar technology such as Grokster.

Copy protection

Last year saw the entertainment industry taking its first clumsy steps to physically guarding its content. It hopes to avoid further losses by copy protecting the CDs of their leading artists.

The idea was to prevent music CDs playing on PCs and notebooks altogether. Because consumers most commonly 'rip' CDs on their PCs, turning their soundtracks from CD Audio format into MP3 (so that they can then transfer those tracks on to an MP3 player for use down the gym), music labels employed a form of copy protection on selected CDs to stop them playing on PCs in the first place.

Most famously this led to Celine Dion fans returning copies of *A New Day Has Come* to the original vendors, incandescent with rage that they couldn't use the CD for the purpose for which it had been purchased: to play on a PC's CD-ROM drive. It wasn't long before techniques to circumvent such copy protection measures were circulating on the web.

In the US PC users were similarly stymied by CDs from Charley Pride, NSync and others. Copy protection on the discs sometimes prevented CD players or car stereos from playing them as well.

The bad news for PC users in the UK is that once the changes are made to UK copyright law to bring it in line with the EU Copyright Directive, attempts to circumvent copy protection could lead to

them being sued. Even worse, any attempt to show others how to circumvent such copy protection – for example, via a newsgroup or forum – could result in a prison sentence. PC users who rely on programs such as DeCSS to crack the protection used on DVDs so they play on Linux-based computers are sure to be in equally hot water.

Meanwhile, Intel and Microsoft are adding their £5-worth to the debate.

Intel has its own solution, codenamed

first emerged on to the consumer market. Indeed, it sued over VCR manufacturing and the sale of blank video tapes. The MPAA complained to Congress that the VCR was to the movie industry what the Boston Strangler was to a woman alone at night. Needless to say such dramatic predictions proved entirely bogus, with video sales now accounting for more profit to the industry than films themselves.

Few people actually advocate rampant piracy or dispute content owners' rights

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LaGrande, due in Pentium chips some time this year. Both LaGrande and Microsoft's Palladium security scheme, intended for future Windows versions, are meant to protect PCs against threats such as viruses and to make tasks like online banking more secure. But these technologies can also work with digital rights management software to restrict copying or playback.

In other words, the lines are being laid down for a battle over the very soul of the PC and what we use it for. Ultimately, examples will be made of users themselves. This has happened in Denmark, where the Danish Anti Piracy Group issued invoices totalling nearly £90,000 to around 150 users of Kazaa and eDonkey. The heaviest downloaders were forced to cough up £8,600.

This year the record labels have pledged to crack down even harder on illegal music sites. Highlighting bandwidth wastage and exposure to security problems, they're targeting the most popular places to download songs, particularly offices and universities.

History repeats itself

Ultimately, a balance between the rights of the copyright owner and the consumer needs to be established. We're following a historical pattern here. The film industry had a similar kneejerk reaction when VCR

to fair payment for their works. The industries that own content need to shift their perspectives from viewing consumers as potential pirates to dealing with consumers as potential customers.

Users will opt for legitimate digital content if services offer a wide, reasonably priced selection with sufficiently flexible distribution controls to make buying more convenient than illegal copying.

Finding a balance

The seeds for a balanced future have already been sown. The world's biggest record labels – BMG, EMI, Warner, Universal and Sony – have all unveiled online services in the past year and a half.

So far those services – Pressplay, MusicNet, FullAudio and Rhapsody – have not captured consumers' imaginations in the same way as unauthorised sites like Napster and Kazaa did. To date they have failed to take off, despite offering smaller selections than their unofficial P2P counterpart networks. By 2006, however, analyst company Yankee Group predicts paid music services will begin to take off.

Forrester quotes a similar time frame. Within three years the research firm reckons major labels will be able to fulfil the demands of internet users, with consumers honouring a standard contract that would support CD burning and playback on a range of different devices. ■