A CIBER report for the Strategic Advisory Board for Intellectual Property Policy

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COPYCATS?

Digital Consumers in the Online Age

UCL

STRATEGIC ADVISORY BOARD FOR INTELLECTUAL PROPERTY POLICY

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EXECUTIVE SUMMARY

About this report

The CIBER report *Copycats? Digital Consumers in the Online Age* evaluates digital consumer behaviour and attitudes and their implications for intellectual property policy. Commissioned by the Strategic Advisory Board for Intellectual Property Policy (SABIP), it aims to provide a robust evidence base to help guide policy makers in this strategic area.

The report has two further objectives:

- To inform a SABIP workshop at which a selected group of attendees with a direct interest in the issue will consider the implications of consumer behaviour on IP and make recommendations for further areas of SABIP research;

- To highlight any further SABIP research that is required to ensure that all agencies of Government have the fullest understanding of the issues.

Copycats? Digital Consumers in the Online Age is thus a preliminary piece of research. It is unique in three respects:

- It represents an independent, systematic and evidence-based approach to the subject;

- It analyses a wide range of research across academic disciplines and content industries, and it includes some new case study material;

- It covers the most recent developments, up to April 2009, a fact that is critical in this fast-changing environment.

The research was conducted by means of:

- A comprehensive and systematic review of the internationally published research literature, which filtered and rated research by its validity and robustness;

- Selected interviews with major stakeholders, regulatory bodies and industry experts;

- An in-depth media analysis which provided the essential currency and identified future trends;

- An empirical exploration of the phenomenon of online downloading, sharing and the re-using of content: we went online and found out just how easy it is to file-share on the Internet – in a multitude of ways.

More than four hundred reports and papers were identified and evaluated from the thousands published for the quality of their data – full bibliographic references may be found at the end of this report. In addition, eight people were interviewed, and media analysis took place over the period January to April 2009.

The background

The backdrop to our research on online consumer behaviour – and the impacts and implications this has on legal practice, the content industries, and governmental policy – is one of vast economic losses brought about by widespread unauthorised downloading and a huge confusion about (or denial of) the definition of what is and what is not legal and copyright protected. Industry reports suggest that up to seven million British citizens have downloaded unauthorised content, many on a regular basis, and many also without ethical consideration (see, e.g. Forrester Research, 2008). Estimates as to the overall lost revenues if we include all creative industries whose products can be copied digitally or counterfeited, reach £10 billion (IP Rights, 2004) - conservatively, as our figure is from 2004 - and a loss of 4,000 jobs. This is in the context of the 'creative industries' providing around 8% of British GDP (Henry, 2008: p10). And the situation is not solely a British problem, but a global one. Downloading culture, say Altschuller and Benbunnan-Fich (2009: in press), "has forced society into a muddle of uncertainty with how to incorporate it into existing social and legal structures" and indeed "[…] music downloading has become part and parcel of the social fabric of our society despite its illegal status."

This is not simply an issue of music and film downloads alone. Software losses were, for example, $48 billion worldwide in 2007 (Business Software Alliance, 2007); and in the UK the figure was approximately £1.25 billion. Indeed an exploratory CIBER investigation found vast quantities of film, music, software, e-books, games and television content available to download and share without cost. On one peer-to-peer network we found that at midday on a weekday there were 1.3 million users sharing content. If each peer from this network (not the largest) downloaded one file per day the resulting number of downloads (music, film, television, e-books, software and games were all available) would be 0.47 billion items per year. If the figure for each individual is closer to five items per day, the lowest estimate of downloaded material (remembering that the entire season of the Fox television series '24', or the complete works of the rock group Led Zeppelin can be *one* file) is around 2.4 billion files. And if the average value of each file is £5 – that is a rough low average of the price of a DVD or CD, rather than the higher prices of software or e-books – we have the online members of one file-sharing network consuming approximately £12 billion in content annually – for free. These figures are staggering.

The new generation of broadband access at 50mbs can deliver 200 mp3 music files in five minutes, the unauthorised DVD of 'Star Wars' in three minutes, and the complete digitised works of Charles Dickens in less than ten. That is to say these items can be downloaded to consume, or uploaded for sharing. The problem is big but neither research nor industry reports as yet have helped us to understand quite how big, as the data above illustrate. One thing is sure: in the future consumer electronics technologies are only going to get faster, have larger storage capacities, and develop more ways to access vast amounts of content from any place with a connection, fixed or wireless, at home, work, or on the move. In each of these evolutions the ability to up and download and to share and copy unauthorised materials becomes increasingly easy. With cheap data storage now so prevalent we ask: are we witnessing the 'death of the back catalogue'? Will it soon be commonplace to own the 'canon' of music, literature and film on a few domestic hard drives, or indeed high-capacity portable devices? Or will nobody bother because the content is always 'out there' somewhere to be downloaded for free when required? In either case what does this mean for business, intellectual property, and all types of creative industry?

Much of the academic and industry literature covered, even the most recent, considers the issue of illegal downloading as a behavioural and attitudinal problem of young people, especially students. We have considered this evidence – often based on sample research groups comprising a few hundred students at a particular university – as helpful but narrow and historical. The downloading of unauthorised music and film files, to name but two types of digital content, has not decreased over the past five years, and indeed it has grown in many places. It is questionable whether all the activity of unauthorised downloading is undertaken by young people and students alone, because we have seen very little evidence about the broader base of digital consumers of all ages in relation to attitudes, behaviour and issues of intellectual property; and almost none about post-University

consumers of unauthorised materials. Did all of the students studied in research about illegal software downloading in the 1980s stop their illegal behaviour? More importantly: who are the almost seven million UK citizens (Forrester Research, 2008) that download unauthorised content? For the year 2007/08 there were approximately 2.3 million students in higher education, and 175,000 academic staff (HESA, 2009). Who are the others? Are they *all* school children?

After 'Digital Britain', a second major consideration was the frame of the research. Our initial remit did not cover it, but we quickly became aware of the importance of the behaviour and attitudes (and implications for IP) of digital consumers in non-Internet environments, most significantly when using mobile communications, digital television, portable consumption devices, and (sharing offline) data storage products with vast capacity – such as a terabyte hard drive that can hold 200,000 MP3 files, or approximately 200 DVD films. From the research to date we believe strongly that these myriad processes of digital convergence will also shape future behaviour and attitudes towards IP.

Key CIBER findings

The world of the digital consumer is an environment, indeed a series of 'eco-systems', subject to rapid change; change that means many predictions about the future of the Internet and digital convergence (and how these are 'consumed') made even two, and certainly five and ten years ago seem quaintly dated – a fact that should be held in mind as predictions are made for the future of not just 'Digital Britain', but also the 'Digital World'.

Within ten years we have seen the widespread domestic use of high-speed broadband and multi-channel (and often High Definition) digital television with the facility to time-shift, copy and view programmes on other devices, and to upload these files to websites such as YouTube; the arrival of wi-fi in the high-street, the library, the office, university and the home; the rapid expansion of open source and Creative Commons publishing; at least four iterations of file-sharing technologies; the birth of mainstream blogging as a broad social phenomenon; the arrival of social media as a significant medium of authorship, sharing, and communication; the shift by the younger digital consumer towards the mobile phone as not just an aural communication tool, but also a medium for text messaging, music and video consumption, and as a gateway to post messages, photographs and other types of content to social media websites. Most recently the large expansion in use of 'micro-blogging', to websites such as the text-based Twitter and the image-based Tumblr, has once again surprised many who suspected these services were a fad. Finally, the recent successful launch of the BBC's authorised programme-streaming service, iPlayer (41 million downloads in December 2008; eight million in Christmas week according to the Guardian, 2009), and the music streaming service, Spotify (– which makes available around 15 million songs, either without payment but with aural advertising or without advertising for £9.99 a month and had one million users signed-up within one month according to Media Week, 2009) has demonstrated that new forms of business models may be possible in the world of 'free things'. Unsurprisingly, the literature review we undertook does not grasp the enormity and the speed of these changes. Each impacts centrally on intellectual property.

The challenge for IP policy makers is to judge and, where possible, measure the changing social behaviours and attitudes brought about by the myriad rapidly evolving technologies and networks of the digital revolution, and map this against their economic, political and social objectives. We believe this cannot yet be achieved, as the conditions being established by the Internet, digital convergence and the imminent 'Digital Britain' final report are not fully understood.

Consider, for example, the economic arguments, as Picard and Toivonen state in *Issues in Assessment of the Economic Impact of Copyright* (2004: p29):

> *"From the economic standpoint, the objective of policy makers is to achieve the optimal point at which the maximum amount of wealth is created by copyright. The challenge is that optimal conditions are contingent on and a function of a number of changing social conditions, therefore no stable point of optimal copyright policies can be identified and maintained."*

We believe that this initial report will raise many questions about how new forms of research can be established to seek the optimal conditions for copyright, business, government, and the digital consumer – copycat or not – as the world becomes increasingly digital. The fundamental question is not how or why the downloading, copying and dissemination of unauthorised content takes place (our report seeks to answer those questions) but *who* does it (and therefore, who *doesn't)*, and can this behaviour be changed? And if it cannot be 'changed' what *does* need to change: the law, the business models, or the relationship between the creative industries and the public domain?

When we began our research many of these issues were important. In the subsequent three months many of them have become mainstream media and governmental concerns and priorities. Our research has attempted to synthesise relevant academic materials (though many of these describe a digital world that for many is fast receding) and pertinent media analysis. Ultimately, the best insights into this area came from empirical evidence: looking at what content is out there, discovering how easy it is to download and copy, and wondering just how widespread the practice of unauthorised downloading and sharing is.

Throughout this report we offer CIBER confidence ratings in our findings according to the weight of the evidence that we have assessed. Our ratings range from 1 (little evidence or unfounded speculation) to 5 (a very strong, almost incontrovertible, evidence base).

The scale of the 'problem' is huge and growing

CIBER confidence rating: HHHH

Strong, but not conclusive evidence: there are many unknowns about the figures

It is estimated that between 44 and 79 per cent of global Internet traffic is taken up with file-sharing (IPOQUE, 2006), the lower figure is for America, the higher for Eastern Europe – though we have found no way of measuring how much of this traffic is the up or downloading of unauthorised, unlicensed or illegal material. Sixteen percent of UK online consumers are said to regularly file share (Forrester Research, 2008), and whilst the figure is said to have remained flat in the recent past, various studies concede that the figures could be much higher. Academic research suggests that those who file share are at least 30% less likely to purchase music in addition (Zentner, 2006). The IFPI (2009) estimates that there were 890 million unauthorised music downloads in the UK in 2007 through file-sharing, in contrast to 140 million paid-for downloads: this is a ratio of 6:1, and does not take into account any subsequent off-line sharing using disk burning or hard-drive transfers (or 'file shifting').

There are strong signs that some of this Internet-based but non-Web traffic may be migrating to the World Wide Web, where online data warehouses hold huge amounts of copyrighted material that can be accessed for free via a URL link from a website, and indeed, as we discovered, from new search engines which explore only the contents of a data warehouse, e.g. www.RapidSearch.com. One data warehouse, Rapidshare, is the 15th most accessed website in the world (Alexa, 2009a); another, Megaupload is 87th (Alexa, 2009b). Although published figures put the size of the UK's unauthorised downloading community at 6.7 million (Forrester Research, 2008), none that we have seen break up these figures in terms of web-based and P2P-based file-sharing.

The UK film industry told us in interview that there were just under 100 million illegal downloads of DVDs in 2007, and globally the film industry is said to lose around $6 billion (or just over £4 billion) per year,and some research appears to demonstrate evidence that consumers' intention to pirate movies "causes them to forego theatre visits and legal DVD rentals and/or purchases" (Henning-Thurau et al., 2007).

> *"Technology has made the entire global music catalogue available for them [today's youth] to test, try out, and own. They can copy thousands of music tracks and share them with others, around the world, with virtually no loss of quality, almost instantly, without parting with any of their own music. And they can do all this [...] for free."* (University of Hertfordshire/BMR, 2008: unpaginated).

We would add here that evidentially the same is also increasingly true for film, television, photography, writing, software and computer games – indeed any 'core copyright' industry. A cursory exploration of the Internet will find all these things, and more.

There are myriad choices when consuming content and consumers are confused about what is legal and not legal

CIBER confidence rating: HHHHH
Very strong evidence

It is not simply that the Internet is a realm of information overload; it is also a medium of many consumption methods. This leads to high levels of consumer confusion, and also provides a convenient source for excuses. Consumers can buy online using legal e-commerce sites; they can also gain access and download many types of content without paying using a variety of sources. They can download digital files, stream them, share them, upload them to digital lockers, use P2P to up- and download, 'rent' them, copy them to external drives and share them, record them in real time, and – using free widgets and/or applications – they can do most of the above on their mobile phone, or their Facebook page.

The academic literature explores the consumer 'excuses' for many of these behaviours at length. We found the ideas of 'neutralisation theory' (e.g. Ingram and Hinduja, 2008) – one of several methodologies for rationalising unauthorised behaviour – a useful, but far from conclusive approach to creating a profile of the digital consumer. Neutralisation theory suggests four means by which people justify and rationalise their actions. These are:

> *Denial of responsibility:* where factors apparently beyond an individual's control come into play – such as an urgent need for a piece of software, for example.
>
> *Denial of injury or victim:* where no one suffers as a result of one's actions.
>
> *Condemning the condemners:* assuming that those who criticise a behaviour engage in their own kinds of unauthorised activities or somehow deserve any damage they sustain – such as loss of earnings.
>
> *Appeal to higher loyalties:* such as obtaining unauthorised material in order to help a family member.

There are also *de-individuation* theories (see e.g. Shang et al., 2008) that inform the issue of unauthorised downloading. These suggest that individuals avoid responsibility for their actions because they are no longer aware of their own identity or 'self', or that of others, when online. These kinds of behaviour include the ideas of being 'anonymous' online and of being totally immersed in a social network and thus excluded from the social 'norms' of the wider environment. There are parallels in the research on consumer behaviour inside large shopping malls.

None of these justifications explained the sheer volume of unauthorised materials that are being shared, leading us to consider the idea that unauthorised downloading has become a simple reflex for some digital consumers.

The complexity of methods by which digital consumers can access content is heightened by the likelihood that Internet Service Providers (ISPs) will shortly become part of what is called 'Network Led Services'. That is ISPs will link network access to some kind of broader consumer package that includes content. In this scenario, as with Sky Television, access to the medium comes with various levels of value added content such as free downloads, free telephony, or even subscription services. Such services will be or are also available on third and fourth generation mobile phones. In each case the downloading of one authorised file makes possible the sharing of an infinite number.

To the digital consumer the economic 'message' of 'Internet choice' is either confusing or a growingly accepted norm[1]. Users of Google can, for example, sign up for an email account that brings with it access to a variety of 'free' and legal services that historically would have had a cost attached: blogging software, Google Earth, Google Books, Google Maps, Google Scholar, word processing, and data storage have all at some time been products with a financial implication. Similarly, many hundreds of millions use 'free' social networking sites to communicate, share and create. Digital consumers can use Internet telephony without charge, where once phone calls – particularly international calls – had a high cost. They can also download software, often without cost. These are just a tiny example of the 'free things' that populate the Internet. The vast availability of 'free content' changes existing perceptions of ownership and utility.

One of the great concerns of industry from these perceptions is the ease with which digital content can be de-coupled by digital consumers from its original platform (and the advertising that supports it) and from its real-world revenue stream. Perhaps a Rights Agency will help in this area.

However, we would argue from the empirical evidence, that when the digital consumer also gains access to all types of unauthorised digital content through file-sharing mechanisms of various kinds to use in any number of ways, they are doing so within an environment where the idea of choosing 'free' is confusingly commonplace. This changes not only perceptions about ownership and sharing but – perhaps most crucially – value.

A recent survey (Human Capital, 2009) suggests that with digital consumers aged between 15-24 "70% do not feel guilt about downloading music for free from the Internet." Furthermore, "61% of the age group do not feel they should have to pay for the music they listen to. This is more marked amongst the 15-19 year olds, of whom 69% do not feel they should have to pay." Finally: "On average 43% of the music owned and enjoyed by the age group has not been paid for. This increases to 49% for 15-19 year-olds."

We have not seen research that considers older people and asks these same questions.

Attitudes and behaviours towards property in the online and physical worlds are very different

CIBER confidence rating: HHHHH
Very strong evidence

Technology has changed the way consumers access all kinds of information and content: how and where they buy it, how they use it, and what they do with it. In this new environment web-based search is central to the user experience of digital consumers, and Google has created a service in which 'two click culture' is the norm. Speed and efficiency are central to finding content. Broadband, wireless (wi-fi) and cellular networks make this possible at all times of day and night, and in all places.

In the physical world there are barriers to consumption: opening times, availability, the comparative difficulty in comparing prices and finding the best deal, and geography itself. In the online world no such barriers exist. Indeed for many types of authorised information, content, and resources there is not even a cost barrier. For many industries - and here we highlight newspapers and other forms of news media as an example of a business which has 'gone free' online for over a decade and is now experiencing severe economic difficulties in the physical world of print and paper (as is network television) - the consumer reality is that 'digital is free', and 'physical has a cost'. This mindset has inevitable consequences for the economic lifeblood of all content industries: music, film and software

[1] "One key, defining principle of things that are 'digital' is that they can be very easily copied, compressed and transmitted. In other words, 'digital' and 'free' (in every sense, not just the monetary sense) go together like Morecombe and Wise, fish and chips, or banks and bailout. This is something that the media, their ruling institutions, governments and regulators are all currently coming to terms with: once something is digitised, the ability over time to control it, charge for it, regulate it or contain it exponentially decreases." (Bell, 2009).

have in particular suffered greatly through a combination of technological possibility and opportunity, and much-changed consumer behaviour.

Social media, part of the digital mainstream for a relatively short period to date, is changing the nature of individual and group identity, and makes the sharing without cost of content, be it photographs, texts, music files, videos or applications, *part* of the way in which social prestige is established, often in real-time. And this prestige is not based on saving money by not paying, but through reciprocal access to content. LaRose and Kim (2007) suggest that one of the reasons why industry efforts to curtail piracy is failing is that "downloading appears to be as much a social phenomenon as an economic one."

We also note a recent piece of research – once again focused on a sample of students – that explores and questions the idea of the Internet as "a Safe Haven for Misbehaving". Selwyn (2008) asserts that the Internet "may certainly be providing our respondents with more opportunities for *misbehaviour and deviance* [emphasis added], but it appears to be primarily giving individuals the opportunity to misbehave in ways in which they already do offline" – as Grabosky (2001) puts it, "a case of old wine in new bottles". Later Selwyn states that whilst his data "confirm that the Internet is certainly a prominent context within which deviant behaviour takes place, they highlight the danger of individual users and authorities misreading the Internet as a cause of new misbehaviour, rather than a conduit for old misbehaviours."

We strongly disagree, indeed we would argue that there are now 'two cultures' – the digital and the physical world - which are evolving in different ways and require a far greater structural analysis from economic, information consumption, social and behavioural perspectives.

If all who undertake unauthorised downloading, uploading and sharing were taken to court, up to seven million Britons (Forrester Research, 2008) could be liable to civil and, in some cases, criminal proceedings. If all content online was instead 'free' and all downloading was legalised, could new business models such as sponsorship, advertising and the bundling of access with content pay for the variety, depth and quality of the content we currently enjoy? And, if the culture of online behaviour does require IP laws to change just for specific industries, could such laws also operate in the physical realm?

The challenge, wrote Emily Bell, Director of Digital Media for the Guardian News & Media, "for the courts, the regulators, the distributors and the publishers of all manner of content is not to try to bind the digital inside the analogue rulebook, but to look beyond it for something that is quintessentially digital and fits this freer world" (Bell, 2009).

It has never been easier to break the law

CIBER confidence rating: HHHHH
Very strong evidence

There are several assertions we have heard in interview that 'the media' are to blame for the vast numbers of digital consumers who download unauthorised materials - as it reports on the issue and gives examples of the types of unauthorised services, such as LimeWire or Pirate Bay, that are available and thus provides a guidebook of 'how to commit digital piracy'. We have been told in interview that Wikipedia's definition of Intellectual Property is the number one reason people download, and have heard criticisms of the Guardian and the BBC for detailing how unauthorised downloading takes place. We question this: simple search enquiries for items such as 'free music', 'illegal videos', 'get audio mp3 from YouTube videos' return many pages of results from thousands of information sources. Consumers can quickly find methods to get free content (both legal and illegal), and in the case of file-sharing and Peer-to-Peer (P2P) networking software quickly find out how to download the application that is required. There is also the central issue of 'practice' and 'peer pressure' when within online social networks, which posits the implicit question: *If everyone I know is doing it, how can it be wrong?* In the physical world a shoplifter requires skill, opportunity and nerve to steal one CD. Online 160 million CDs are available on the digital locker room Rapidshare alone

(Music Ally, 2008). All that is required to access them is a computer, a connection, and the ability to search. In fact, all that is required is that one person has the computer: he or she can copy, without cost, as many files as his or her friends request.

There are fewer cues to guide behaviour in the online world

CIBER confidence rating: HHH

The evidence base is somewhat inconclusive and contradictory here

Put simply, online there are no 'shoplifters will be prosecuted' signs, or government health warnings. In the broader landscape new ethical standards (or their absence) are being established through peer-groups such as the differing types of communities that evolve around social media (Facebook, Blogger, YouTube, Pirate Bay, etc.).

The cues that shape consumer behaviour, and in particular the consumer behaviour of those who are post-education, are not yet fully clear. Some research suggests that peer pressures may have more impact than traditional external factors, such as family, school or college (e.g. Levin et al, 2007). Others see disconnections between 'real world' ethical values and the online (e.g. Hinduja, 2008).

Some UK research indicates that up to 70% of those that do download unauthorised materials would 'cease pirating' if they received a letter from their Internet Service Provider warning them about their behaviour (Wiggin, 2009). We will be able to test these figures if the Government establishes a Digital Rights Agency with the power to work with ISPs in this manner. We note here part of the response of the ISP Talk Talk to the interim Digital Britain report on this idea. Broadly in agreement with the DBR proposal of an obligation "requiring ISPs to notify alleged infringers of rights (subject to reasonable levels of proof from rights holders) that their conduct is unlawful", Talk Talk (2009) add many provisos including that "Rights holders must actively, properly and effectively pursue their role in education, alternative services and prosecutions. Without this the effect of other initiatives (such as this) will be limited. More generally, it would be wholly unreasonable that an industry that has been the author of its own demise from illegal file-sharing does not 'self-help' and take the lead role in tackling the problem."

At the same time new communities of creators are producing content for the online environment which is purposefully free: published as freeware, open source, a free app, under limited licence such as a Creative Commons agreement, or given away such as Google 'books', online newspapers, and software on CNET's download.com.

Finally, many of the services available to the digital consumer that create the opportunity to access unauthorised digital content are developing brand identity that is as powerful as those of large and legal corporations. Garland and Page (2008) are clear. They describe websites such as Pirate Bay, or P2P networks such as Limewire as "*venues* because they are destinations, and like any retail outlet (iTunes, HMV), they are popular because of their brand reputation, convenient location, superior value proposition, and ease of use [...]. They are considerably more widely used than iTunes, HMV, and all other retailers [...] combined." Ambiguous brand authority removes yet another ethical cue.

Education isn't working, yet

CIBER confidence rating: HHHH

Strong empirical evidence, although some findings are contradictory

In terms of intention to engage in what is sometimes called 'digital piracy' - that is the consumption of illegal copies of digital services - we have repeatedly found that despite the potential severity of the legal threat and significant numbers of prosecutions of individuals who have undertaken such activities, the figures for unauthorised downloading remain extremely high. Effective models of persuasion have not yet worked in significant ways; and where they have changed behaviour (for example with the prosecution of the first generation of file-sharing products, such as the original Napster application), new methods have evolved rapidly that create a new set of behaviours (for example, BitTorrent). If neither education nor legal threat has apparently succeeded to date in

curbing the behavioural proliferation of unauthorised downloading, it would seem that using actions against a (relatively) small group of individuals to send a message to all digital consumers is not the (only) answer. Indeed it is argued by some that this failure to shift attitudes is because the underlying psychological model of the behaviour is not well understood. Research suggests that 'deterrence' strategies may work for some, but may "actually increase piracy tendencies in others" (Taylor et al., 2009). And it is these 'others' who actively argue that copying and sharing are not stealing; that downloading unauthorised materials is not illegal. IP laws suggest otherwise.

There is a powerful idea that there is 'no victim', and so 'no crime'[1]

CIBER confidence rating: HHHH
Strong empirical evidence, although some findings are contradictory

A main theme emerging from the literature is that the 'victims' of digital copyright infringement, or 'piracy', i.e. software developers, musicians etc. or companies, are perceived to be far removed from and impersonal to the copier. As such, the content creators and distributors are not thought to be harmed by the act of downloading or sharing. Logsdon (1994), for example, found in a questionnaire study that respondents believed that "only a few individuals or companies will suffer at all" and copiers believed that "the probability that the act of copying software will cause harm is low…". Ingram and Hinduja (2008) also studied this. Their findings indicate that the denial that anyone is harmed - and the denial there is a victim - significantly predicted at least moderate levels of piracy participation. Finally, many of Freestone and Mitchell's (2004) survey respondents felt that they were "doing no direct harm to sellers as they cannot see the direct economic consequences of their actions". The justification is made that they, consumers of content, are the victims of inflated software, music or movie prices, blaming 'industry' for keeping prices artificially high. This finding was echoed by Levin et al. (2007) who found that even when consumers were conscious of harm being done through the act of 'piracy', it had no impact on student respondents' intentions to download in the future.

Internet service providers and the consumer electronics industry: two elephants in the room

CIBER confidence rating: HHHHH
Strong evidence, but inconclusive predictions for the future

In recent months there has been much speculation that a Digital Rights Agency will force Internet Service Providers to reveal the extent of their knowledge about the behaviour of online consumers, in particular to make available data about the consumption habits, and especially unauthorised uses, of their users when they are believed to be infringing copyright. We could find no published data about ISPs' knowledge of their own users' consumption patterns, and thus cannot estimate how big the issue of unauthorised downloading is. Nor is it clear how access to this data would be used by industry – and Government[2]. This is a large lacuna. In interview a spokesman for the Internet Service Providers' Association (ISPA) stated that there was no available research on unauthorised downloading that we could see. "It's not really the ISPs' concern," he said.

There is another elephant in the room. The consumer electronics industry has facilitated the downloading revolution through its hardware and software. Without this industry there would be no widespread Internet, computers, digital televisions, cameras, and portable devices to name just a few examples. As part of this industry is, as defined by Picard and Toivonen, 'copyright dependent', that is to say

[1] Though in the UK illegal downloading is liable to civil rather than criminal proceedings, the expression "no victim, no crime" is here used to capture the perception of the victimless nature of infringement.
[2] Of the Home Secretary's proposal to build a database to store information currently held by internet service providers and telephone companies, Mr Thomas said: "A government-run database of the communications of all citizens, every phone call, every e-mail, every text, every internet use; a database of all those activities held by the Government would be a step too far for the British way of life" (The Times, February 29, 2009 cited in Mostrous and Ford, 2009).

> *"Industries whose operations essentially depend on copyrighted works. Industries that would be considerably smaller without copyrighted works and other subject matter"*,

it is clear that further research into new ideas (in terms of the hardware and software developments of these manufacturing industries) should be conducted as a matter or urgency. If the digital revolution has shown us anything it is that consumers have grown accustomed to increasing levels of personal control – over when, how, and where they consume types of content – and thus the products of the consumer electronics industries are a central, if sometimes forgotten part of the copyright eco-sphere. For Picard and Toivonen (2004) these include: "the manufacture and distribution of electronics (TV sets, radios, VCRs, CD players etc.), manufacture and distribution of computers, manufacture and distribution of musical instruments, photographic and cinematographic equipment."

Policy implications

The Digital is Different. It is changing very basic assumptions about the idea of ownership, sharing, and copying content. New business models are needed, and serious questions are raised about the quality and breadth of content material that will be created without new thinking. CIBER confidence rating: HHHHH

The potential legal marginalisation of up to seven million UK citizens (Forrester research, 2008) has tremendous economic costs, and even if unauthorised downloading behaviour is changed in this country it is not yet clear that this is possible on a global scale.
CIBER confidence rating: HHHHH

The technology of the digital is about consumer experience, wherever and whenever. Expectations have been established for the consumer that include fast access to free information, the ability to copy and share such data, and the ability to consume this on a variety of platforms and devices. CIBER confidence rating: HHHHH

There is a triangle of digital responsibility: between those that create and distribute content, those that consume, share and copy it, and those who manufacture the products that enable these exchanges. To date research and legal action has focused on the consumer – but not on the responsibilities of industry. Ethical reciprocity is not yet clearly defined. CIBER confidence rating: HHHHH

The Consumer Electronics industry is copyright-dependent, yet is predicated increasingly on technologies that allow the infringement of these copyrights. Hardware and software applications will only become more efficient at these and many other communication processes. CIBER confidence rating: HHHHH

Web access, like the products of the computer and software businesses, is also going to get better. As it does so more consumers will have the ability to download vast amounts of material, legally or not. Digital literacy education for all ages must include simple information on the complexities of downloading culture. Downloading and sharing *per se* is not wrong. CIBER confidence rating: HHHHH

"…downloading appears to be as much a social phenomenon as an economic one." LaRose and Kim, 2007). The Internet is built on a paradox of privacy. Surveillance is easy and, as well as posting and sharing their own and others' content, consumers are revealing their interests to third-parties such as advertisers all the time simply by being online. ISPs are the part of the Internet Triangle that knows what consumers do online, yet they – for obvious and understandable reasons – do not want to become the Internet Police. If they are forced to reveal consumers' consumption and downloading habits, will this impact on the actions that consumers take with the Internet in quite legal ways? And where does this process end? CIBER confidence rating: HHHHH

Digital consumers do not think they will get caught downloading from the Internet. Digital Convergence - the evolutions in digital television, wi-fi, mobile phones and other devices - will further complicate the evidence base for prosecutions and add to data protection issues. Will mobile phone networks be made to hand over consumer data as well as ISPs? CIBER confidence rating: HHHH

If it is the case that many digital consumers believe there to be no victim when undertaking unauthorised downloading, is it also the case that, as Soham (2008) states: "[…]consumers appear to employ a double ethical standard. Specifically, they expect high morals and spotless ethics from businesses and managers, but not from themselves." CIBER confidence rating: HHHH

By the time they reach further education, an active downloader may in the future have at least seven years of experience (and stored content to share).
CIBER confidence rating: HHHH

Many digital consumers take for granted – indeed expect – free content of all kinds from the Internet to copy. We have a nascent, or perhaps established, copycat culture.
CIBER confidence rating: HHH

It is quite possible that we are witnessing the 'death of the back catalogue'.
CIBER confidence rating: HH

Recommendations for further research

We have discovered large and worrying gaps in the knowledge base and we need to remedy this urgently if policies and procedures are to be informed by the evidence. And if they are not, there is a risk of industry and government decoupling from the digital consumer.

Questioning a wider population base

Our research has identified a serious limitation in the current evidence base: on issues of online 'copyright infringement', university students are the only population that has been studied in any depth. We urgently need to broaden the scope of consumer research and involve a much more representative sample of the population. One possibility would be to conduct an online survey (undertaken in partnership with e-Digital Research, a leading e-marketing company which works with CIBER). The survey would be hosted on a number of major e-retail sites (major high street brands), and would probe issues of downloading in general, file-sharing, and social uses of content.

Many of the questions that need to be asked are evident from the literature review we have undertaken. Others emerge from our analysis of the current state of activities as informed by industry and technology research and reports. We would also undertake a series of focus groups to explore issues raised at the survey stage. We might consider covering the four demographics suggested in the recent Olswang (2008) research into digital convergence: these are: 'kids' (teenagers), the 'tech vanguard' (those with high 'self efficacy' who are early to adopt new technologies), the 'mainstream' (adults) and 'laggards' (those who do not yet have internet access, or certainly do not engage with e-commerce).

It would also be possible to undertake a parallel (or alternative) study based on British Library users or site visitors, as this would help to inform policy in terms of the academy, the library and their relationship to intellectual property.

Understanding digital convergence

The terms of reference for our literature review did not include the digital world that exists beyond the Internet, in particular the nexus around digital convergence. Huge impacts on consumption are being enabled by mobile communications and digital television, and the evidence base is very weak in this important area. We recommend a short-term pilot project to examine the literature in the field, together with industry interviews and media analysis. This would follow the format of the first piece of research for SABIP, and take place within a similar time frame, possibly preparing the ground for a longer study. Without a full understanding of the 'digital consumer' online and offline we cannot comprehend the full implications for intellectual property.

Mapping the creative industry spectrum

Much of the research considered to date investigates specific industry sectors, most notably music, with the film industry following closely behind. But the issue of downloading has fundamental implications for all the creative industries, science and technology, as well as for government data. We are proposing a scoping exercise that maps our findings against the output of all these sectors to create a meaningful picture of online consumer behaviour in the context of the public domain and the cultural welfare of the country.

Anonymity and surveillance

We have uncovered some very interesting academic research regarding consumer perceptions around feeling 'anonymous' online. We have also found many examples of media speculations and consumer fears about the idea of a surveillance culture in which government, with the assistance of the ISPs, knows everything about our patterns of digital usage.

At the same time many of the nascent online business models rely centrally on the user giving away personal information in exchange for 'free things' (this is the model behind Google, Spotify, Facebook etc.). We suggest a pilot project to look at the literature around identity and identity construction, together with industry interviews and media analysis. This would give a more precise picture of digital consumers' attitudes towards privacy, surveillance, and the trade-off between these.

A longitudinal study of downloading behaviour

Whether or not a 'Digital Rights Agency' is created in the short term, it seems clear that new forms of property protection will be explored by government and industry in an attempt to stem the flow of unauthorised downloading. We believe that a longitudinal study is necessary to look at such mechanisms before and after, and in the medium term. This would entail following a group of digital consumers over a number of years - preferably over five, but possibly three, depending upon the funding available. Again, the sample must take into consideration the broadest range of online demographics and we would suggest a panel of up to 200 users who would take part in surveys and focus groups twice a year. This study would also be informed by a continuing literature review to explore similar regulatory and legal initiatives in other parts of the world.

THE EVIDENCE BASE

The academic literature we considered can be split into three main areas: studies that consider the phenomenon of downloading (both authorised and unauthorised) content from a technology, business, marketing, legal and political aspect; studies that explore online behaviour – downloading behaviours within psychological, ethical and situational contexts in particular; and studies that consider online behaviour – the growth of social media and issues of 'sharing' within that framework, the implications for user generated content, methods of online identity construction, 'problematic' internet use, and other factors such as 'self-efficacy'. The research covering the latter two areas was based often on small sample surveys; the first group of studies considered the issue from economic, network and case-history frameworks and perspectives. In several instances, as in the next section, the ideas discovered in the academic texts were tested against data sourced from non-academic materials.

The following sections describe some of the technological eco-spheres of the Internet that facilitate downloading of all kinds. These were those that we found in the first quarter of 2009. Without an understanding of what is possible through technology, and a snap shot of the economic realities and previous legal initiatives, it is hard to judge the behaviours and attitudes of digital consumers and to assess the academic research that has attempted this objective.

Finally, the research undertaken and the interviews we undertook were highly informative about the economic impact of unauthorised downloading on specific industries, such as music, film and publishing. We did not find much evidence of cross-industry research which considered unauthorised online downloading behaviour in its entirety, from the copying and pasting of online news stories to the file-sharing of entire television series or Office software packages, which we feel is a limitation as, unless IP laws are changed for specific industries, the general relationship digital consumers have to the Internet, where free things, from newspapers to cloud computing applications are available in a myriad of ways, will not be fully understood.

The technological, economic and regulatory context

Technology and economics are highly intertwined concepts

The technology scope of the online 'piracy' issue is well defined in the abstract to Nwogugu's (2008: p140) paper:

> *"Illegal online file-sharing has resulted in billions of dollars of losses for many companies and substantial lawsuits by trade groups and entertainment companies. Illegal downloads of digital content affect the economics, profitability and business models of companies in many industries such as entertainment, education, travel, media, investments/finance, and any business where knowledge or information has value."*

Nwogugu illustrates some of the economic and technological considerations that require a full understanding before a deeper analysis of online downloading behaviour can commence.

The following section begins with Nwogugu's areas of concern:

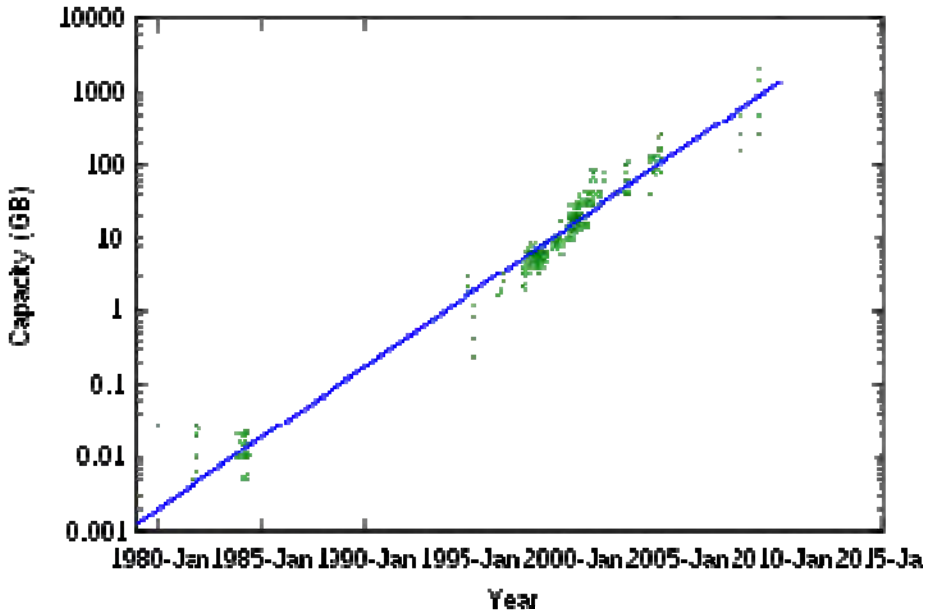
> *"The cost of bandwidth; the availability of bandwidth; the cost of storage capacity; the costs of security; network congestion costs; pricing difficulties - determining the exact number of players and the number of times each digital content file is played; the cost of hardware for playing content - introducing specialised hardware will only increase the final cost of downloading digital content, and also increase complexity; the form of content that will be transferred - different companies have different file formats; the control of content; the cost of enforcing intellectual property rights--lawsuits, investigations, staff, etc."* (ibid: p140)

To consider some of these points further:

Bandwidth: from our interviews with the music industry[3] we have established that the cost of bandwidth to the consumer is falling through increased market competition. Indeed it was suggested by some that Internet Services Providers (ISPs) will soon be forced for economic reasons to consider new kinds of business models which include value-added services, such as providing content, as part of their offering. As far as the consumer is concerned, high-speed access is increasingly available and getting cheaper. Next generation broadband based on fibre optic to the home will be expensive, and major investment is required. However, history suggests that it will arrive sooner than expected.

Bandwidth availability: 56% of UK homes currently have broadband access (ONS, 2009), and the suggestion of Lord Carter's interim Digital Britain report is that all households will have access by 2012. Virgin Media is just one ISP that is looking to launch a 50Mbps broadband service that will allow consumers to download 1.1Gb in five minutes. The UK Office of Statistics reported in December 2008 that: "19 out of 20 connections to the Internet are via broadband" (ONS, 2009).

Storage capacity: should be considered within the framework of Moore's Law (Moore, 1965), a long-term trend[4] in the development of computing hardware. The law argues that most measures of the capabilities of digital electronic devices, such as their processing speeds and memory capacity, *double* every two years. This has certainly been the case since the arrival of the personal computer in the 1980s. Currently, the average memory capacity of a personal computer is between 100 and 250 Gbs, with – as the illustration below demonstrates – 1,000 Gb not far off. At the same time the capacity of external hard drives has risen so that a one terabyte hard drive now costs around the same price, £150, as a 250 Gb hard drive cost two years ago. One terabyte of storage can hold approximately 200,000 MP3 music files.



Network congestion costs: from several interviews we understand that some technology drivers – such as peer-to-peer file-sharing and streaming – have had huge financial impact on ISPs's costs, and although there are unsubstantiated rumours that some service providers are 'throttling down' access because of the massive growth of online gaming, streamed television (and in particular the BBC's iPlayer) and the simple number of consumers online, we found no concrete evidence.

Pricing difficulties: the removal of DRM from much of the music available to buy online, and in particular the market leader, i-Tunes, has taken place only recently[5] and thus the new freedom all consumers have to play

[3] UK Music, BPI

[4] Since the invention of the integrated circuit in 1958; though the trend was first documented by Gordon Moore in 1965 (Moore, 1965).

[5] "Apple has changed the pricing structure of its iTunes store, with tracks now available for 59p, 79p or 99p. The price of an individual track depends on how recently it was released and Apple's agreement with the music label that it comes from. Additionally, Apple has said that all its music catalogue now comes without the controversial anti-piracy DRM (digital rights management) technology in the iTunes Plus format" (Web User, 2009).

music on any device, and to share this music to any other device, has not yet been explored in meaningful research. However, University of Hertfordshire/British Music Rights research (into music downloading claims that 50% of its survey sample shared the content of their hard drives (2008). And the sheer volume of global file-sharing traffic indicates that the number of times a digital content file is played (by a different consumer who has not paid for the right) is obviously very high. Whilst this does not immediately constitute a 'lost sale' – as consumers may simply be sampling content prior to purchasing it – the figure quoted by the IFPI of 95% of all downloaded music being unauthorised (the figure is 85% in the UK) is striking. The UK music industry postulates a "value gap" over the next five years of £1.2 billion in genuine 'lost sales' (Music Ally, 2008) [2]

Currently it is illegal simply to file-shift from a computer to a disk, USB memory stick, or device (such as an i-Pod) if the user does not 'own' the 'original'. The ubiquity of CD and DVD burners suggests that even an authorised download is likely to be copied and shared many times: as presents, as part of a playlist, and for sampling . We have not found research that puts an average figure to the number of individuals that consume a single piece of content.

The cost of hardware for playing content: Introducing specialised hardware will only increase the final cost of downloading digital content, and also increase complexity. A good example of this is the early generation of E-Readers . Both the Amazon Kindle and the Sony E-book play only proprietary books. That is to say the E-books sold by Amazon for consumption on the Kindle cannot be played on every device, only the specific machine on which they are bought[3]. We can only speculate that, as with the earliest iterations of the Internet, where proprietary gated systems such as America OnLine and CompuServe followed a similar business model, closed, or 'non-generative', technologies that do not allow the consumer the flexibility to choose how they consume and use content they have purchased may ultimately be superceded by 'open' technologies (Zittrain, 2008). A very pertinent example of this is the recent decision by several music companies to remove DRM protection from the music tracks they sell.

Controlling content: As we will demonstrate in the next section, controlling where content goes, who accesses, downloads and shares it, is no easy matter. Sharing between social networks using CD burning, the exchange of USB sticks and hard drives, and embedding content into personal blogs are all simple activities, as is the posting of content to sites such as YouTube**.**

The technology to distribute the content is evolving faster than the ways that content is controlled.

Nwogugu (2009: p149), having undertaken a long analysis of anti-file-sharing devices, states that

> *"Most existing anti-file sharing systems and content-control systems remain deficient, and sometimes do not comply with case law and statutes. The existing legal framework in most jurisdictions is not completely adequate to regulate the new and evolving models/systems of online file sharing. Illegal file sharing and content-control problems can be solved by: (1) relating economic issues and legal requirements to technological solutions and capabilities, and (2) developing appropriate business models that create value and minimise economic losses for content distributors".*

We have not been tasked to explore new business models for the Creative Industries, but are aware that SABIP, according to its *Strategic Priorities for Copyright*[4], may potentially be looking at this central issue in the coming months.

UK households: some useful statistics

The Office of National Statistics (ONS, 2008a: unpaginated) provides much relevant data, and is worth quoting at length:

[2] Music Ally P3 Working Group "…imagining what might happen if music sales had continued a constant upwards trajectory" (Music Ally, 2008).

[3] In an interview with the Guardian Harper Collins Chief Executive, Victoria Barnsley was quoted on e—books and e-readers: "Publishers have not yet had their iPod moment, says Barnsley, a view echoed across an industry that seems somewhat frustrated by the digital avenues currently available. "The huge change will happen only when the hardware is there." The development of e-readers such as Amazon's Kindle (not yet available in the UK) or the Sony Reader (which is) suggests that the hardware is not far off. Sales of ebooks are already growing, and 200,000 copies of 100 Classic Book Collection - which allows Nintendo DS owners to read texts such as Sense and Sensibility and Treasure Island on the device - have been sold since December, Barnsley says" (cited in Frost, 2009).

[4] http://www.sabip.org.uk/copyright-100309.pdf

- "In 2008, 16 million households in Great Britain (65 per cent) had Internet access. This is an increase of just over 1 million households (7 per cent) over the last year and 5 million households (46 per cent) since 2002. Estimates for Great Britain are provided to give a time series, as UK estimates are not available prior to 2006.

- Almost 16.5 million (65 per cent) UK households including Northern Ireland had access to the Internet. This was an increase of 1.2 million households (8 per cent) since 2007. The region with the highest level of access was the South East with 74 per cent. The region with the lowest access level was the North East with 54 per cent.

- Fifty-six per cent of all UK households had a broadband connection in 2008, up from 51 per cent in 2007.

- Adults under 70 years of age who had a degree or equivalent qualification were most likely to have access to the Internet in their home, at 93 per cent. Those individuals who had no formal qualifications were least likely to have an Internet connection in their home at 56 per cent."

Downloading technologies that impact on IP

There are several types of downloading methodologies, such as:

E-commerce web-based downloads
File-sharing using Internet, non Web-based, Peer-to-Peer networks
Files Streaming using Internet, non Web-based, Peer-to-Peer networks
File Streaming via the web
Web-based access to data-warehouses of digital content
Blog sites with linked content
Social Networks, in which exchanges of content are facilitated through messaging, by posting links, by embedding content, allowing content simply to be dragged and dropped onto the desktop (e.g. text, photography etc)
Communication tools (mail, Instant Messaging, Drop Boxes)
Usenet, a decentralised bulletin board style medium of digital exchange

This section demonstrates the breadth and depth of the Internet-based technologies that facilitate the sharing, copying, uploading and downloading of digital materials. We add here, once again, that the scope of our research did not cover digital television or mobile phones, and many techniques for copying and disseminating materials using these technologies are not included here.

E-commerce

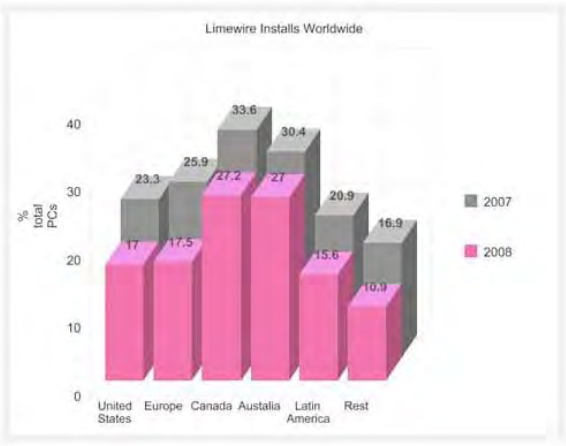
The legal dimension to downloading. This decade has seen a great rise in digital sales of music and other media, with pioneering sites such as iTunes leading the way. Until recently digital files contained some kind of rights management protocol which limited the number of copies that could be made. This practice is now less prevalent. The Office for National Statistics reported in November 2008 that Internet Sales by UK businesses using e-commerce rose by 30% in 2007 to £163 billion – which represented 7.7% of the total value of all sales by non-financial sector businesses (ONS, 2008c).

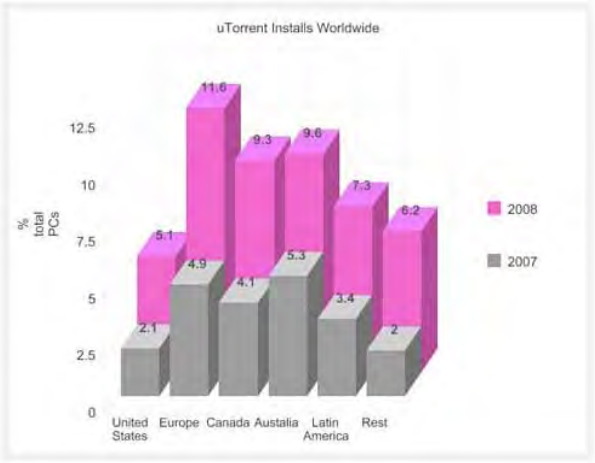
File sharing

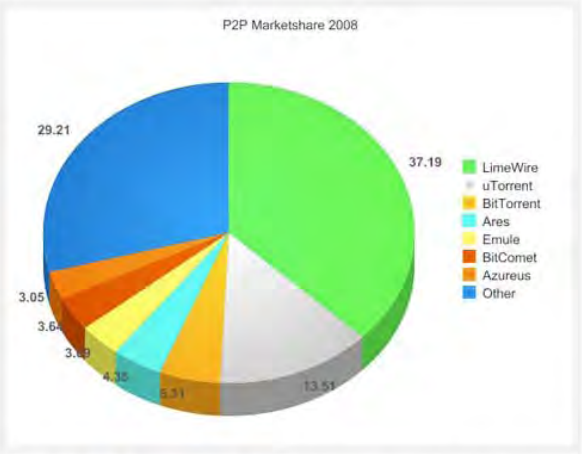
File-sharing as we define it for this document is seen to have become an issue for major concern to the creative industries with the launch in June 1999 of Napster, the first mass peer-to-peer file-sharing application.

File-sharing is believed to be undertaken by around 16% of the overall UK Internet population (Music Ally, 2008). As Clark (2007: p402) reminds us, "file sharing is not *per se* illegal".

The latest data (Torrentfreak, 2008, unpaginated) we found on the ever changing P2P landscape shows that the number of Torrent users worldwide has more than doubled compared with 2007. "The BitTorrent client is most popular in Europe - with an install rate of 11.6% of all PCs - and least popular in the United States, where 5.1% of all the PCs have installed uTorrent".







Finally, we want to make it clear though that install rates do not equal usage. The fact that someone installed a P2P client does not mean that they actually use it.

Based on the amount of traffic that is generated by each P2P application, uTorrent would be the absolute winner.

The data presented here (from Torrentfreak, 2008) are based on a sample of over a million PCs (Windows only).

Since 1999 there have been four generations of peer-to-peer sharing systems, through which vast amounts of unauthorised content has been shared. The rapid evolution in technological approaches has been put down to the legal actions against first and second-generation applications that closed them down. More recent technologies have, to date, remained in operation: the most noteworthy being BitTorrent, a completely legal

technology that does, however, allow huge amounts of content to be shared and accessed. The evolution also demonstrates the speed with which new forms of technology are able to subvert business and legal initiatives.

The first-generation P2P networks comprised a centralised server and resources list, and thus companies offering the service were liable to be prosecuted for distributing copyright material. Now, however, there are only peer-to-peer connections. There is no main (or central) server. Examples of this set-up include Limewire, Gnutella, Kazaa, eMule, Kademlia, FastTrack and Ares Galaxy.

The Third-generation P2P systems add a level of anonymity:

> *"Traffic is routed through other network members' clients which function as network nodes. For example, A sends a file to B, then B gives the file to C. A and C do not become acquainted and thus are protected under most copyright laws. In many instances, these systems use virtual IP addresses which obfuscate A's, B's and C's location in the network, and also hide the key elements of culpability--the justification for these systems is that virtual IP addresses makes it very difficult to determine whether C requested the file, and whether A sent the file or if A just forwarded the file"* (Nwogugu, 2008: p141).

Examples of such systems include ANts P2P, Rshare; Freenet, I2P, GNUnet, Entropy, I2P (I2Phex, iMule, Azureus) and Waste.

In the fourth generation systems the content is sent in the form of streams over P2P networks (instead of being sent as files). Once again there is no central server involved in this type of system. The files being consumed, but not downloaded, are not transferred between users but the information is shared over streams in P2P networks. Thus the content is not stored on the consumer's computer, but rather is confined to an Internet connection and a host page. Examples of these services include YouTube, Daily Motion and Spotify. We note here that from routine Google searches we found that there are many types of "recording" devices available as free software applications for PCs that enable this streamed content to be copied in real-time in the same manner as a digital television recorder (PVR) – or indeed, in a previous generation, a radio-cassette recorder. There are also many applications[8] that allow the consumer to download a YouTube video, rather than watch it as part of a streaming process.

Streaming

"Streaming media is video or audio content sent in compressed form over the Internet" that can begin playing as they are being downloaded to a computer. "Users can pause, rewind or fast-forward, just as they could with a downloaded file, unless the content is being streamed live." (Whatis.com, 2009: unpaginated)

Examples are BBC IPlayer, YouTube, Daily Motion andSpotify. Google Video Search provides a search facility across the range of video servers.

"Streaming media is transmitted by a server application and received and displayed in real-time by a client application called a media player. A media player can be either an integral part of a browser, a plug-in, a separate program, or a dedicated device such as an iPod. Frequently, video files come with embedded players. YouTube videos, for example, run in embedded Flash players.

Streaming media technologies have improved significantly since the 1990s, when delivery was typically uneven. However, the quality of streamed content is still dependent *upon the user's connection speed*[emphasis added]." (ibid: unpaginated) The stream is not meant to be downloaded by the digital consumer, thus while it is possible to view but not copy unauthorised materials, the ability to file share should not be possible.

However, streaming video and audio *can* be recorded. This is from a website[9] found by a simple search with Google using the tag: 'record streaming video', which provides the following information:

> *"Streaming Video doesn't work like other types of internet media - usually you can right click on a link or an image, and save it as a file to your PC. Streaming was invented as a way to deliver multimedia (audio and video) over the internet without overloading the web server. It also had the advantage of being hard to capture, making media pseudo-copy protected.*

[8] http://Vixy.net. The homepage reads: "Download online videos direct to PC / iPod / PSP. It's free!"

[9] http://www.how-to-capture-streaming-media.com/index.php (Accessed April 9, 2009)

> *Today, there are a few wonderful tools that can capture all kinds of streaming video. The articles on this site tell you how to use the best software for capturing streaming audio and video"* (how-to-record-streaming-media.com, undated).

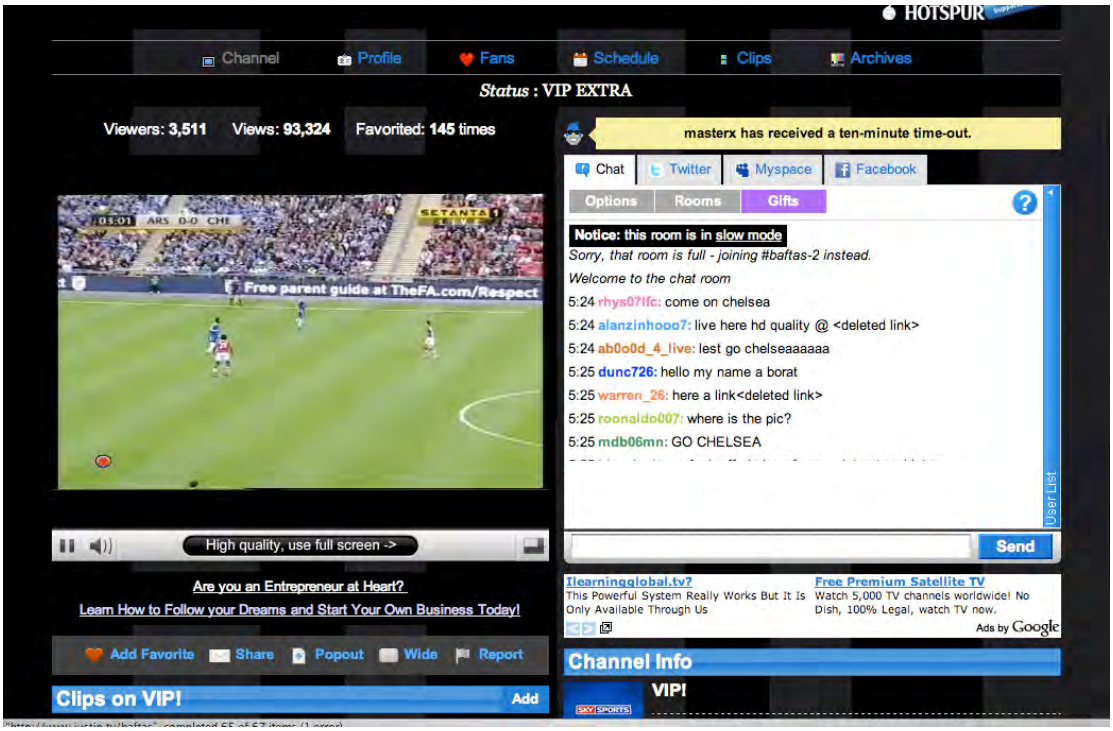
And once recorded, this content can be shared, re-uploaded, and played on a variety of off-line devices.

There are many unauthorised streaming services showing films still in cinemas, contemporary television shows, free pornography – and live sports[10]. Of the latter the BBC recently reported that:

> *"A new deal worth almost two billion pounds over three years has just been reached between the Premier League, and broadcasters Sky and Setanta, who will show live matches in the UK. But could it be the last big money deal that the game attracts? Millions of fans are circumventing subscription channels by watching illegally-streamed matches on the internet for free. Premier League lawyer Oliver Weingarten told the BBC that the most popular illegal sites attract up to a quarter of a million viewers for a single game. He confirmed that this could potentially have an effect on the price the league is able to demand for its product in future negotiations. "The long term consequences for the game are that it has the potential to devalue or dilute the rights value, and in turn that will dilute the product that we are able to turn out and the quality of player coming to the league."* (Dune, 2009: unpaginated)

Live unauthorised streaming of the FA Cup semi final between Arsenal and Chelsea, April 18, 2009. The match was being shown live by the pay-tv channel, Setanta Sports.

[10] http://www.free-football.tv . Ciber note: on the day we accessed this website there were 25 live matches on offer, in England, Scotland, Europe, Asia and South America.



Another service offering the same match. The chat room on the right hand side of the screen featured many links to further unauthorised sites offering the same service.

While considering film and television streaming, the New York Times recently reported that:

> *"People have swapped illegal copies of songs, television shows and movies on the Internet for years. The slow download process, often using a peer-to-peer technology called BitTorrent, required patience and a modicum of sophistication by users. Now, users do not even have to download. Using a search engine, anyone can find free copies of movies, still in theaters, in a matter of minutes. Classic TV, like every Seinfeld episode ever produced, is also free for the streaming. Some of these digital copies are derived from bootlegs, while others are replicas of the advance review videos that studios send out before a release"*

"TorrentFreak.com[11], a Web site based in Germany that tracks which shows are most downloaded, estimates that each episode of "Heroes," a series on NBC, is downloaded five million times, representing a substantial loss for the network. (On TV, "Heroes" averages 10 million American viewers each week"

"A wave of streaming sites, which allow people to start watching video immediately without transferring a full copy of the movie or show to their hard drive, are making it easier than ever to watch free Hollywood content online. Many of these sites are located in countries with lackluster piracy enforcement efforts, like China, and are hard to monitor, so media companies do not have a clear sense of how much content is being stolen."

"But many industry experts say the practice is becoming much more prevalent. "Streaming has gotten efficient and cheap enough and it gives users more control than downloads do. This is where piracy is headed," said James L. McQuivey, an analyst at Forrester Research. "Consumers are under the impression that everything they want to watch should be easily streamable." (Stelter and Stone, 2009: unpaginated).

Data warehousing

In the context of this report 'data warehousing' is used to describe the practice of uploading data to a remote server that can then be accessed by the uploader and others via a unique URL . This practice is also known as 'one-click hosting' and includes web services that allow digital consumers to, free of charge, easily upload one or more files from their hard drives (or from a remote location, a mobile phone etc) onto the one-click host's server.

As of 2005 these sites have drastically increased in popularity. Many music blogs, for example, have links to MP3 tracks or entire CDs, or collections of CDs, that have been uploaded to a data warehouse. From the data it appears that this type of file-sharing does augment, and may even be taking over from, P2P types of file-sharing. The sites, and we describe several below, make money through advertising or charging for premium services such as increased downloading capacity, removing any wait restrictions the site may have or prolonging how long uploaded files remain on the site.

Rapidshare is a "German-owned one-click hosting pay- and free-service website that operates from Switzerland and is financed by the subscriptions of paying users. It is one of the world's largest file-hosting sites with millions of files stored on its servers. According to Alexa, Rapidshare.com is currently the 15th most visited website globally. Rapidshare was reported to have stated in April 2008 that it has *5.4 petabytes* [emphasis added] of storage for users" (Wikipedia, 2009b: unpaginated).

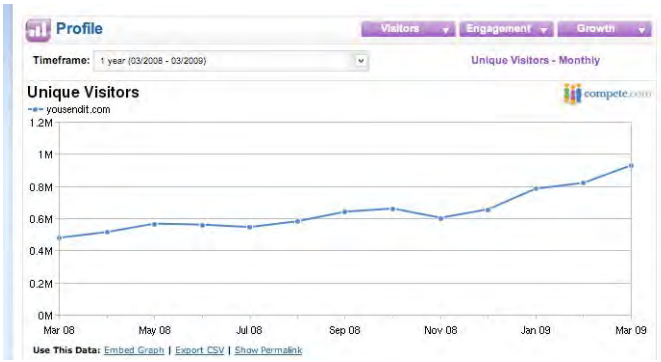
As of October 2008, the download limit was established for Premium (paying) Members at 2.66 Gb per day. The unused volume is automatically rolled over to the following day, up to a maximum limit of 12 Gb. If the complete download capacity is used up during one day, the premium-user is able to download another 2.66 gigabyte the following day (or after midnight CET).

[11] http://torrentfreak.com/

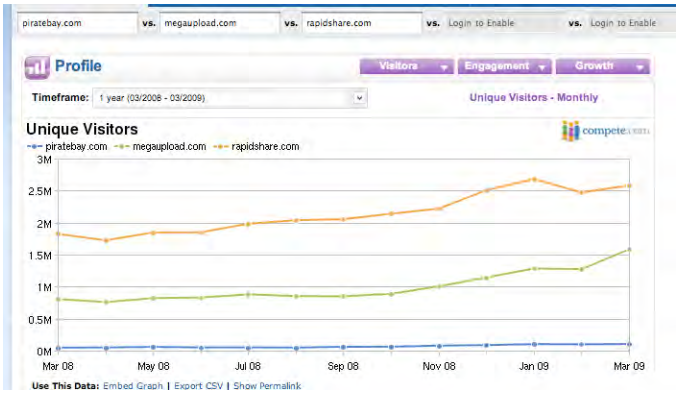
Megaupload is an "international one-click hosting website based in Hong Kong, and available in 18 languages. The domain *MegaUpload.com* attracted at least 10 million visitors annually by 2008 according to a Compete.com study" (Wikipedia, 2009a: unpaginated).

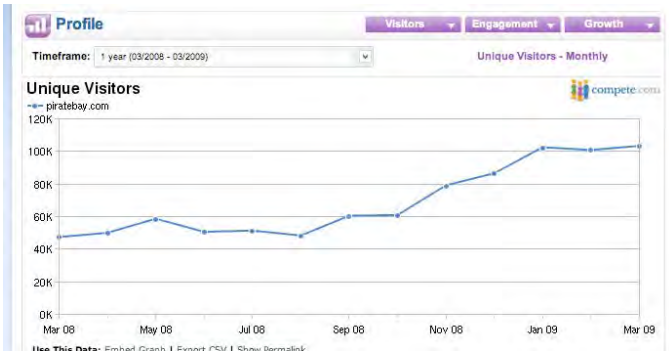
"The basic service is available for free and allows users to upload files of up to 1024 MB. Free users cannot download files larger than 1Gb, however. Free registered users are offered 50 Gb of total file storage. Premium users are offered 1 Tb total file storage. After a successful file upload, the user is given a unique URL which allows others to download the file." (Wikipedia, 2009a: unpaginated)

YouSendIt is a web-based digital content delivery service provided by YouSendIt, Inc. It lets users send, receive and track files on demand. It is an alternative to sending large e-mail attachments, using FTP, and sending CDs or DVDs or tape or USB flash drive via courier. The sender can enter the recipients' e-mail addresses, attach the file and send it; the recipients receive an e-mail notification with a URL that lets them download the file. With more than five million registered users from 220 countries, YouSendIt once transferred over 40,000 Gb per day and over 500 million files to date (Wikipedia, 2009d).



A comparison of web traffic on the Megaupload, Rapidshare & the Pirate Bay websites from www.compete.com.

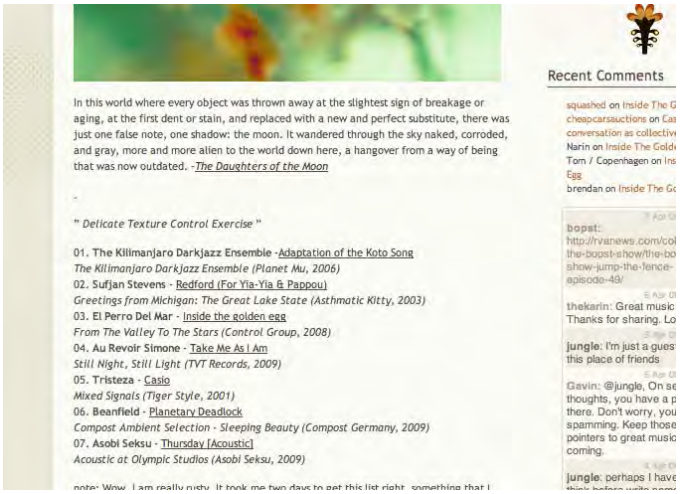




Sampling and blogs

There are thousands of music blogs on the web, and many offer the opportunity to not only listen to music of all kinds, but also to download the music – which is often hosted in a data warehouse or One-Click hosting. These blogs are often informed with authorative writings about their subject, and are thus enjoyable to read. Some are creating strong online brands. Hype Machine[12] is a search engine for these music blogs which adds links from the bloggers as they are posted, including links to available music files. Hype Machine can be thought of as a 'Google' for free music.

Sometimes the original music blog includes not just a link to access or stream the music for free, but also a link to an e-commerce site where digital consumers can purchase the piece of music. Below are two examples of music blogs. The third image shows the data warehouse link from where digital consumers can download the music. Note that on the data warehousing page linked to the music – a CD by Dave Brubeck and Paul Desmond – there is the facility to "embed" the music on a web page, to share it on websites such as Facebook, Digg and del.icio.us[5].

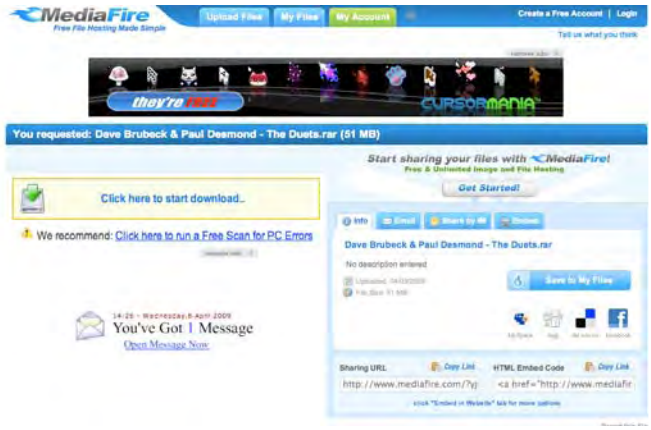


Above: a music blog with links: digital consumers can listen (i.e 'stream') or download the files.

[12] www.hypem.com

[5] http://www.facebook.com/ , http://digg.com/, http://delicious.com/

In this case the 'buick' link takes the digital consumer to the following page:



The link on the top left downloads the CD, the links on the right enable a variety of sharing techniques to be undertaken. Note that there is advertising sold by the data warehousing host, and that there is a complete absence of cues or signs that downloading or sharing is in any sense unauthorised.

Social media

Within the scope of this document, social media, and the social networking facilitated by these media, is defined as content created by people using accessible and scalable publishing technologies that allow the creator or publisher of content to reach wide audiences without any costs of distribution other than Internet access. We focus on the social networking that is possible via the Internet, though we are highly aware of similar networking and content creation opportunities made possible by mobile communications networks.

The technologies that enable these kinds of social media include blogging software, picture sharing software, social networking software, email and instant messaging systems, VOIP – or voice over internet protocol - and P2P file-sharing software. A few examples of social media include Wikipedia (reference), MySpace (social networking), Facebook (social networking), YouTube (social networking and video sharing), Spotify, Second Life, Flickr, Twitter, Tumblr and MSN.

In various iterations these social media integrate technology, telecommunications and social interaction, allowing digital consumers to construct and share words, pictures, videos and audio. These forms of creative content are sometimes called 'user generated content' (UCG). And this content is, of course, subject to IP laws..

The synthesis of technology and content, and the access to broadcast and receive content to and from a potentially global audience (the distribution method), allows for the creation of social identities and peer communities; the establishment of meaning among those that create, share and communicate; and this process may also be central in the formulation of both values and prestige to those who create, share and communicate.

We highlight the distribution possibilities of social media because unlike 'industrial media', industries such as publishing, television and film, photography and news media, these are achieved with technology that is either cheaply or freely available to digital consumers. The cost of admission to Facebook or MySpace; Twitter or Blogger is the provision of a user's email address, and a few other personal details. Later in this document we will explore the relationship between 'free things' and privacy.

A major distinction between social and Industrial media appears to concern the issue of accountability.

E-mail and other Internet-based communication tools

Email, Instant Messaging (IM), and other forms of messaging protocols – such as those found within social networks, or indeed comment pages that form an interactive component to other types of Internet content, have the facility to attach files; and whilst this is a far slower process than downloading a file from a website, or Peer-to-Peer network, it is possible – and does take place.

Usenet, "a portmanteau of 'user' and 'network', is a worldwide distributed Internet discussion system. It evolved from the general-purpose UUCP architecture of the same name. [The technology has] an absence of central server and dedicated administrator, [and is instead distributed] among a large, constantly changing conglomeration of servers which store and forward messages to one another." (Wikipedia, 2009c: unpaginated) This makes Usenet an ideal platform for the sharing of content.

The legal framework

We were tasked by SABIP to consider online behaviour and attitudes, but felt it was necessary to understand some of the legal framework within which these behaviours and attitudes take place. We include in this section some of the responses found in the academic literature. During the period of this research we followed closely the increasingly intense public focus on the topic of 'illegal downloading' and 'digital piracy' in the USA, Europe and the UK. Ultimately - as government reports or laws were followed by media analysis, and ideas such as 'three strikes and out', a tax on broadband access or the establishment of a Rights Agency were discussed, implemented or refined – we note only that it is imperative that longitudinal research be instigated soon which considers the broad impact of any new legal positions on the nature of 'copycat' digital culture in terms of who, how and why, so that some methods of measuring success or failure can be attempted.

Copyright industries and the law

We found very helpful the definitions of Picard and Toivonen (2004: pp27-28), who define the copyright industries in the following manner:

> *"**Core copyright industries:** industries that produce copyrighted works and other subject matter. Industry that would not exist without copyrighted works and other subject matter.*
>
> *Literature and press, music, theatre, film and video, photography, visual arts, radio and TV, software and databases, architecture, advertising, industrial design.*
>
> *The task of these industries is to create, produce or distribute copyrighted works and other subject matter. All activities in these industries are tied to copyrighted works and other subject matter. All the activities of these industries should be included in measures of the economic importance of copyright. [emphasis added]*
>
> ***Copyright-dependent industries:** Industries whose operations essentially depend on copyrighted works. Industries that would be considerably smaller without copyrighted works and other subject matter.*
>
> *The manufacture and distribution of electronics (TV sets, radios, VCRs, CD players etc.), manufacture and distribution of computers, manufacture and distribution of musical instruments, photographic and cinematographic equipment."*

Copyright-dependent industries are largely dependent on copyrighted works and other subject matter, producing either production or consumption goods for copyright protected material.

Here from our research we would add Internet service providers (ISPs), mobile phone manufacturers and network providers.

The distinction of copyright and copyright-dependent is central to an understanding of the technological framework to digital consumer's behaviours and attitudes: whilst it is the copyright-based companies and industries who are suffering great financial losses, it is the copyright-dependent industries who have and are creating the environment and the means by which these losses are being created.

Recording, saving, storing, sharing, networking, broadcasting and downloading are the legal activities made possible by products of the copyright-dependent industries, not the inventions of criminal digital consumers. Perhaps an analogy can be made with the car or gun industries: both create the possibility for illegal types of consumer behaviours such as speeding or shooting without a licence. The fact remains that the ecology of digital convergence that is defined by the technological possibilities of the hard- and software currently available to the digital consumer is about empowering the individual to access content wherever they are, on whatever tool for consumption they possess. It is about time- and file-shifting, storing, re-using, and sharing content. Many of these activities break the law. But as Clark (2007: p402) writes,

> *"Legal resolution of this conflict has been difficult to a achieve, partly on account of the real or perceived inability of existing copyright law terminology to address new forms of unauthorised use, and partly because so many individuals who practice file sharing and downloading are difficult to identify and are often not worth suing.*

While Picard & Toivonen (2004: p29) state:

> *"From the economic standpoint, the objective of policy makers is to achieve the optimal point at which the maximum amount of wealth is created by copyright. The challenge is that optimal conditions are contingent on and a function of a number of changing social conditions, therefore no stable point of optimal copyright policies can be identified and maintained."*

And these social conditions now include increasing numbers of confused or entitled consumers who take downloading and file-sharing to be acceptable, and normal. As Jordan and Bolton state: "Our data confirm, and casual observation also suggests, that individuals are unclear about the rights and wrongs of file-sharing and often unaware of the potential harm caused by copyright infringement. Individuals feel they have the right to time shift or space shift content they have legally acquired and that it is legitimate to make back-up copies and to use content in whatever format or on whatever platform they choose. We suggest that these 'rights' are deeply embedded and as such 'taken for granted' and that any attempts by copyright holders to change these rights are likely to be met with strong consumer resistance in many countries." (2004: p111)

Digital consumer behaviour and attitudes

Broad characteristics of the literature

Demographics

The academic literature about the behaviour of, and attitudes towards, unauthorised online downloading is often limited in terms of the demographics of the populations studied. Research is dominated by samples of university or school students[14] (see e.g. Calluzzo and Cante, 2004; Wood et al. 1999; Lysonski and Durvasula, 2008), with variations within this group (e.g. undergraduates, post-graduates, high school students etc.). Some of these studies (e.g. Taylor et al, 2009) include faculty in the population studied, although the results are often discussed in broader terms. There is one significant survey of 'the general public' (Suter et al, 2006) and one of executives/senior managers, though this is dated (Taylor and Shim, 1993).

A typical approach in the work we have considered can be seen in this abstract to 'Digital Piracy, a Latent Class Analysis' by Higgins et al. (2009: p24):

> *"Using data from undergraduate students (n=353), the present study explores actual digital piracy and the intention to perform piracy…"*

Industry research often also highlights the 'youth' element of this issue. Indeed many of the pieces of research we have seen are specific to the 12-24 year old demographic. A good example of this can be seen in the release from Business Software Alliance / Harris Interactive (2004):

> *"Understanding copyright law is not enough to stop children and teenagers from downloading copyrighted software, games, music and other digital media through illegal online file-sharing networks, according to a Harris Interactive poll…"*

We highlight that mainstream consumer research, such as the Olswang's 'Digital Convergence' (2008) study that considers a far broader demographic sample-base, is required urgently to understand the full scope of this issue.

Research methods used

Questionnaire surveys

The questionnaire surveys posed questions on one or more of the following topics:

- Computer usage patterns such as average daily hours using computers, commonly used pirated software products, and channels used to obtain pirated software products (e.g. Hsu, 2008);
- 'Ethical idealism', where agreement with a number of statements is measured on seven point Likert scales (strongly agree to strongly disagree) (Lysonski and Durvasula, 2008) ;
- Frequency of certain behaviours (e.g. on a 7-point scale: 'very rarely', to 'very frequently') (Shoham et al. 2008);
- Likelihood to commit an act of piracy attached to a hypothetical scenario (Higgins et al, 2008); and
- Attitudes to piracy, including questions on:
    - The social cost of piracy;
    - Anti-big business attitude, and the desire to "get back" at the recording companies for charging high prices;
    - The social benefit of dissemination;
    - The ethics of downloading music without paying for it;
    - Consequences / punishment; and
    - The willingness to pay for original material (Hsu, 2008).

[14] "Much research has used students as subjects. These subjects have been assumed to be suitable surrogates for business managers and decision makers and results should be generally applicable to actual business managers and most of digital pirates in today's world are young people. This is especially the case when researchers are interested in the ethical decision making process" Cronon & Al Rafee (2008: p539).

Scenarios dealing with the stealing of music, usually with regard to ethics and piracy, are often used in questionnaire surveys. Two examples serve to outline the method. In a study on people's ethical behaviours, Lysonski and Durvasula (2008) formulated scenarios that presented different situational factors, and respondents indicated their likelihood of committing piracy under those circumstances. The scenarios were:

- stealing a CD from a music store with 100 percent certainty of not getting caught;
- stealing a CD from a music store with some risk that an invisible security camera might observe them;
- not paying for downloading music from a new CD from a major successful artist who they believed is very rich;
- not paying for downloading a new CD from an independent artist who is very talented, but has not made much money on his/her previous CD.

The other example is that of Nunes et al. In this study, the scenarios were more detailed. The researchers wished to "explore how different cost structures lead consumers to make vastly different inferences about their ability to harm sellers by depriving them of their due [and] the relationship between the perceived harm to the seller and the consumer's intention to pay" (2004: p46).

An example of their scenarios and questions is:

> "Scenario A: The software vendor paid the original programmers of RussianStar an initial royalty of $600,000. That was a onetime lump-sum payment that would not change no matter how many copies of the program are downloaded. In addition, for every copy of the program downloaded, the software vendor has to pay the original Russian Star programmers an additional royalty of $1.
>
> Question: Suppose you have downloaded the program without paying the $75 in Scenario A. Which of the following is the more accurate description of the effect of your behavior on the vendor?
> - My behavior would cause the vendor to forgo the opportunity to gain $75.
> - My behavior would cause the vendor to lose $75. "

Some studies have used a questionnaire inviting open responses. Lau (2006: p409) posed two open-ended questions designed to elicit perceptions from Chinese respondents on the subject of software piracy. "Respondents were asked to share their experiences in using pirated software, such as what kinds of software they have pirated, and the reasons for them to use pirated software. They were then if they knew anyone who worked in the software industry, and if this affected their attitudes".

Logs of online activity

Only one study was found in which behaviour was actually measured. Bhattacharjee et al. (2006) used P2P network data-gathering and analysis to examine the effect of file-sharing on performance of music albums. Computer logs of music file downloads and commercially available music sales charts were compared. Logs were analysed of the number of files for songs on a specific album that were available for sharing. The congestion (queue lengths) at individual sites were also noted and used in the analysis.

Experimentation

Jih-Hsin Tang and Cheng-Kiang Farn (Tang and Fam, 2005) used an experimental design for their study on the effect of interpersonal influence on softlifting intention and behaviour. Fifty four subjects participated in what they thought was a 'software quality evaluation' exercise. However, as the authors explain, "a ploy was carried out to measure the subjects' intention in software piracy under different levels of group pressure and financial gains" (ibid: p149). The ploy was to plant four people (described as 'cohorts' in the paper) in each session, who were to vote on whether to copy software. As the authors explain: "Four levels of group pressure conditions were designed: (a) 4 cohorts unanimously chose to copy; (b) 3 cohorts chose to copy and one chose to purchase; (c) one intended to copy and 3 chose to purchase; (d) 4 cohorts unanimously chose to purchase" (ibid: p152).

Content analysis

Eric Kin-Wai Lau (Lau, 2006), discussed above, also conducted a content analysis on a population of 209 Chinese messages concerning software piracy that were posted to the USENET newsgroup comp.hacker. "All Chinese messages posted to comp.hacker were unobtrusively downloaded from a news server and screened for references to software piracy. [...] Messages were considered relevant to software piracy if they were indexed in the news group as 'software piracy'; and if they contained at least one statement either for or against pirated software" (ibid: p409).

Altschuller and Benbunan-Fich (2009) undertook a content analysis of the recommendations written to answer an ethical vignette. The vignette presented the case of a subject who faces the dilemma of whether or not to download music illegally.

Key findings from the academic literature

The landscape of the academic research into downloading culture is shaped largely by debates in ethics, law and psychology. There are also many papers that consider legal and economic factors, including the concepts of pricing for legal e-commerce products, and those of digital consumers' relationship to online 'trust' when making purchasing decisions. However, while we cite some of these in this part of the report, they are of secondary consideration: copycat culture finds its value in goods being 'free', and 'trust' levels concern the level of likelihood that downloading a digital file will bring with it a computer virus, or spyware.

As we have demonstrated in the introductory sections, the Internet has evolved into numerous sub-cultures and eco-spheres, technologies and created new social norms. The following sections describe some of the behavioural and attitudinal shifts that the Internet in its entirety has brought about (the web, file-sharing networks, e-mail, online telephony, Usenet etc.) and some of the behavioural and attitudinal shifts that particular web-based social networks - and the sharing they permit – may influence.

Downloading is an ethically confused activity

CIBER confidence rating: MMMMM

Much of the academic literature on consumer attitudes and behaviours towards unauthorised downloading of copyright protected materials ('piracy') concerns the ethical dimension. As the downloading and copying (and indeed, much simple 'file-shifting') of any unauthorised digital material is a contravention of intellectual property laws, such activity affects "consumers' ethical decision processes" (Chiou et al. 2005: p161). The question is: are these decision processes different in the online world?

As Glass and Wood (1996: p1189) point out, "a person who fails to recognise [that piracy is] a moral issue will fail to employ moral decision making schemata". However the nature of this failure in 'recognition' is very confused: is it conscious, unconscious, somewhere in between these positions, or a changing amalgam of all three which is influenced by the specific location in which the activity takes place, the type of peer-pressure experienced, or the age of the downloader – to take three seemingly important behavioural and attitudinal modifiers? At the most basic level Calluzzo and Cante (2004) state, in the introduction to their research into ethics, IT and software, that: "Qualitatively and anecdotally it appeared that many, if not most, students [in the sample] had misconceptions about what represented ethical and unethical behavior in these realms [the use of IT and software]". They are not alone.

Altschuller and Benbunnan-Fich (2009), citing Kallman and Grillo (1996), posits four ethical/legal positions that lead to some types of social confusions about IP. These positions are: ethical/legal, ethical/not legal, not

ethical/legal, and not ethical/not legal. And with file-sharing culture it is both in the muddled area of 'ethical/not legal' (such as file-shifting for a friend, giving a copied playlist on a burned CD as a present, sharing expensive software to accomplish a task, or downloading content that is not available commercially, e.g an old recording on vinyl, or film, or in print, that has been digitised and uploaded *for the public good*, or *domain* by another person, known or not) *and* in the area of 'legal/not ethical' (such as responses to the creating and distribution of content that can only be consumed on one proprietary player; or to the charging of higher prices for digital content than physical content) that causes confusions. As Altschuller and Benbunnan-Fich state, downloading culture "has forced society into a muddle of uncertainty with how to incorporate it into existing social and legal structures"(ibid: in-press)

This muddle has not yet found business, legal or academic solutions. As we have demonstrated in the empirical sections of this research, the breadth of technological possibility to file-shift, copy, down- and up-load on and off-line is such that it would be a surprise to find research that covers *all* these types of activities from either a technological or an ethical perspective. And we did not. Of course, in the eyes of the law, *all* types of unauthorised downloading acts are illegal, and thus there is always an ethical dimension. But very often, the academic literature we looked at considers file-sharing or illegal downloading as a singular *un*-ethical or 'problematic' act, with an economic and/or creative cost: this singularity *is* true legally; but it is not in practical terms. We emphasise this point as technological innovation to allow sharing, dissemination, copying and storage is happening at breakneck speed, and just as much digital consumer self-regulation of their behaviour is, as Altschuller and Benbunnan-Fich (2009) state, 'deficient'; and so we add that much downloading research appears 'out of date' when considering a world of mass broadband to the home.

Nevertheless, McMahon and Cohen (2008) emphasise that unlike the physical world where 'theft' is a tangible activity with clear punishments when 'caught', well-communicated ethical appeals are sometimes the only deterrence mechanism remaining to content providers. "In the online environment, where rules are not clearly established and methods of enforcement are weak, the recognition of the ethical implications of behaviour is particularly important". Given the amounts of unauthorised content available, and the numbers of citizens who consume it, we found the following description of Altschuller and Benbunnan-Fich (2009: in-press) - describing the result of the 'disconnect' between the law and (some) of its citizens over issues of copyright - to be helpful when they state that "a fierce struggle ensues between society and its conscience."

For where is the Internet's conscience? Is it in the minds of its online (or offline) consumers, the creators of its networks, the producers of the content that populates those networks, or the manufacturers of the machines that enable us to access, create and share the Internet? And, if the conscience is not found in any of these places, then can it be modulated in enforceable laws, or persuasive social arguments?

The dissemination of ethical perspectives to consumers lies primarily within the scope of education: either at home, in schools, or through communication campaigns created by industry, regulatory bodies, and government. In interviews with industry we were told about various initiatives, including the 'Knock off Nigel' campaign[6] undertaken by the UK IP Trust on behalf of the UK film industry.

These types of campaigns emphasise both the sleazy nature of, in particular, buying cheap counterfeit copies of DVDs and CDs, and the impact of the lost revenues on creativity. This latter point is illustrated by showing how lost revenues may impact on future investments in young talent, or cause established artists to be unable to continue with their work. We were told that such campaigns are highly successful, although we note that much of the message concerned the recording of films in cinemas using hand-held cameras and buying counterfeit disks: both areas in the physical world, where being 'caught' is far more likely than in the Online world (the current perception; and, largely, the current truth).

Another good example of this type of educational initiative is found in the RIAA document Young People, Music and the Internet' – which is available for download from the RIAA website[7]. Here parents are given a description of some of the technologies available to 'kids':

> *"Music files are also found on file-sharing or peer-to-peer (P2P) networks where huge amounts of songs are swapped. This raises copyright issues for music fans [...] There are legal ways to use P2P networks, and they are a revolutionary way of distributing your own personal files like photos or songs. But copying or distributing copyrighted material such as music, movies, games and software without permission or payment is illegal."*

[6] http://www.knockoffornot.com/
[7] http://www.riaa.com/

There are many excellent educational initiatives in existence.

Another fertile observation in the context of ethics is found in McMahon and Cohen's (2009: p15) conclusion: "As many behaviours are based on brand-new technologies, there may be little agreement as to what behaviours constitute unethical use of the technology [...] An important related issue is whether development and distribution of such [file-sharing] software, which has both legal and illegal uses, *imposes some ethical responsibility on the developer* [emphasis added] – even without knowing the specific nature of the use of the software by individuals." Here we would point to the same issue for all aspects of the matrix that creates the unauthorised downloading eco-sphere: these include not just deficient self-regulating consumers and P2P software developers, but the consumer electronics industry, the ISPs, and online data warehousing services.

We believe that for the purposes of this report the ethical issue of unauthorised downloading can be grouped into three main consumer positions: those who do not know about, or fully understand IP; those who do know about, and fully understand, IP but choose to ignore its implications; and those who do not believe that downloading unauthorised materials constitutes illegal behaviour. Historically, these three positions have been addressed by the deterrence triangle of 'education, enforcement, and legislation.' But in the online eco-sphere, the opportunity to download, the absence of cues suggesting a moral imperative, and fast-evolving peer norms about the idea of sharing appear to validate all three consumer positions. To consider this another way: technology makes many types of digital sharing and copying so easy, and it is evolving so fast, there is almost no time for ethics.

We note here, for instance, that the RIAA document cited above fails to note that *all* content on a P2P network is covered by IP laws: creators of user-generated content, described by RIAA as 'personal files', have just the same rights as the music or movie business. We also note that the web-based technologies of 'data warehousing' are completely ignored, as are those of sharing music videos on social networking sites, such as YouTube, and illegal streaming websites. The ease with which files can be emailed, posted to Usenet groups, or included on blogs is not covered. Finally there is no consideration of the 'darknet' sharing of content offline, using hard-drives, or Bluetooth enabled devices. Then again, many of these phenomena are relatively new, and any explanation of the downloading eco-sphere must be constantly updated, and explained in simple ways to those whose task is to educate the digital consumer. A good example of this type of technology development is the fast evolution of unauthorised websites that stream live sport directly from a feed that is based on a pay-TV service. Web addresses are posted in chat rooms just minutes before the sports event begin, to prevent legal intervention and the service being switched off.

So where do we start? Where do the moral imperatives and ethical boundaries lie? Jones (1991) suggests that the idea of 'moral imperative' is related to the seriousness of the ethical consequences that flow from a situation. In particular the moral 'intensity' of a situation is dependent, Jones states, on a variety of components that include: the magnitude of the consequences (the aggregated harm to the victims of the moral act), social consensus, the probability of effect – a joint function of the likelihood of an occurrence of an act and the expected consequences of the act, temporal immediacy - the length of time between the act and its ethical consequences' proximity of the 'moral agent' to the 'victim', and the concentration of effect, that is the degree to which costs or benefits of the act apply to only a few people.

Each of Jones' elements appears to be highly relevant to downloading culture in 2009. The current lack of 'intensity' of these elements conspires to promote further unauthorised behaviour: consequences are minimal, social consensus favours sharing, it's easy and rewarding to do (free stuff in two clicks), and the victims are 'virtual'.

In simple terms we were looking to find evidence to measure just how 'wrong' consumers judge these downloading activities to be against the backdrop of vast numbers of copyright infringements; or, indeed, if consumers consider 'wrongness' at all when pursuing downloading activities. As Suter et al. (2006: p194) state: "while the moral philosophy-ethical judgment relationship is understood in many domains, little is known about whether these relationships hold in computer-mediated environments."

Suter's research (with non-student adults, which makes it unusual and potentially significant) makes the case that "as the Internet continues to be a key resource for developing and enhancing exchange relationships, marketers and public policy makers should recognise that users' general ethical behaviour *translates directly to their behaviour in the digital domain* [emphasis added]" (ibid: p199). Suter argues (p199) that despite the 'unethical freedoms' that digital consumers might be allowed by the Internet, it is likely to be their central moral philosophy, and not what is possible online, that determines whether they download unauthorised materials; thus that there can be a relationship between 'general' moral actions, and those that are 'specific' to the Internet.

From our research, we believe that as Internet and other digital technologies become more widely available, and at faster speeds with higher data storage, there will be, without some significant shift in consumer attitudes towards legislation, regulation, and content 'online', a greater ethical variance between the general and the specific, and not, as Suter might suggest, a greater harmonisation. We see much empirical evidence, and some academic research findings that in issues of digital consumption the ethics are very different. As Altschuller and Benbunnan-Fich (2009: in press) states: "music downloading has become *part and parcel of the social fabric of our society despite its illegal status.*" (Emphasis added)

However, Selwyn (2008: p461) also refutes the two-culture idea by suggesting that whilst much of his research data illustrates "the notion of the Internet as a fertile environment for misbehavior, malpractice, and mild deviance", this notion must be balanced by the fact that "the levels of online misbehavior were broadly commensurate with the levels of non-Internet-based misbehavior self-reported by [his] respondents."

"Comparison of these two sets of data", Selwyn (2008: p462) adds, "revealed a striking congruence between online and offline misbehavior. Indeed, aside from purchasing pornographic material (which was more likely to take place in "real-life" contexts) and misrepresenting personal details on a form (more likely to take place on the Internet), respondents' self-reported levels of the misbehaviors covered in the survey followed notably similar patterns. This suggests that online misbehavior closely replicates and reinforces existing misbehavior rather than necessarily constituting a transformed or new set of actions. Thus, the Internet may certainly be providing our respondents with more opportunities for misbehavior and deviance, but it appears to be primarily giving individuals the opportunity to misbehave in ways in which they already do offline — as Grabosky (2001) puts it, "A case of old wine in new bottles.""

In this context Selwyn argues strongly that, as offline is where the problems begin, "…governments and other stakeholders should not feel compelled (or indeed justified) to implement further restriction of individuals' Internet use in an attempt to curb what is seen as peculiarly technology-driven forms of misbehavior. As we have seen, such behaviors are most likely to be grounded in offline issues, circumstances, and structures. As such, any attempt at 'cyber-policing' individuals' online behavior may primarily serve to restrict the continued development of the Internet as a free space rather than affect individuals' propensity to misbehave" (ibid: p463).

This position is in striking contrast to what Selwyn (2008: p449) describes as "the argument [that] has been forcibly made by some cyber-theorists that the emerging norms and values of the Internet are quantitatively and qualitatively different from those of the 'real world.'" This is the position we feel more accurately describes the current file-sharing environment.

Commenting on this position Selwyn (2008: p449) states that: "From this perspective, online behavior is inherently disinhibited, self-absorbed, and, on occasions, transgressive", with Internet users therefore feeling "entitled and more willing to challenge offline norms of acceptable behavior" (Denegri-Knott, 2006: p82). As Freestone and Mitchell (2004: p126) concluded, "The idea is that cyberspace exists as a separate realm to the physical world, and may have developed an ethical culture of its own, or 'Netiquette' and has a set of beliefs or standards, shared by a group of people, which help the individual decide what is, what can be, how to feel, what to do and how to go about doing unethical things on the net."

We highlight this wide variance as a key area requiring far broader research. If unauthorised downloading is being undertaken by a far wider section of society than simply 'young people' – which we do not yet know – does the online behaviour of the 40 or 60 year old digital consumer also take its moral bearings from a predilection, or not, for offline 'misbehaviour and deviance'?

Academic evidence does suggest, perhaps significantly, that a sense of moral obligation – or its absence – does have a large effect on the intention to pirate digital material. Cronan and Al-Rafi (2008) found in their study of factors which could determine an individual's intention to pirate digital material, that subjects who felt more guilt about, or moral obligation not to commit, digital piracy do have a lower intention to pirate. A review of the subject responses indicates that on average 50.7% of the subjects felt more guilt or moral obligation that pirating was not right, while 23.6% felt pirating was acceptable behaviour. When comparing genders, both men and women felt that pirating was not right (54% and 46.5%, respectively). Again, we ask: is the greater penetration of Internet Access changing ethical beliefs – for the digital world, but not the physical world? Secondly, is there a relationship between this 'sense of moral obligation' and age? This latter question can only be answered when broad consumer data about copycat culture has been captured in longitudinal research. Is it the case that those who now download will change their behaviours through an increased sense of moral obligation, created through changing offline behaviours and attitudes? Or, merely, as they get older?

Shoham (2008: p204) suggests two approaches to explaining ethical behaviour: that of the 'slippery slope' and that of 'balancing the books.' The former posits the idea that ethical deviations lead to "ever-increasing transgressions." The latter accepts the 'slippery slope' argument, but that in addition, and following the committing of an unethical act, some people will "tend to become more aware of their moral balance, which leads to avoidance of future transgressions in order to 'balance the book.'" This framework allows the author to suggest that educational initiatives are required to explain to the public the damage done when downloading and copying – and hence to reinforce the idea of 'balancing the books'. We have seen much evidence of those initiatives, but no significant ethical shifts in consumer behaviours. Online appears, instead, to be a slippery diving board. As Shang et al. (2008: p360) write: "unethical behaviour…like other behaviours, is learned in social interaction." And online social interaction is largely free of 'education' about copyright status: from the sharing of a newspaper article, the embedding of a video in a personal blog, and the downloading of an entire television series from a P2P network.

Cronan and Al-Rafi (2008: p539) in the study mentioned above, found that many respondents (23.6%) "didn't feel a great deal of guilt about pirating digital media; that it was acceptable behaviour. There was a low level of guilt (moral obligation) about digital piracy. Significant others encouraged the pirating act, and didn't believe it was wrong to do so. However, 50% of the subjects did feel a greater sense of guilt or moral obligation about 'pirating' and these subjects did have a lower intention to pirate."

A further dimension is explored by Cho et al. (2008: p22) who consider the ethics of legal e-commerce providers; in particular the ideas of "behaviour consistency" and "ethical reciprocity". Whilst claiming that "scholars agree that ethical principles in e-commerce and bricks-and-mortar business are fundamentally the same," Cho et al. add that there are differences – which include: "problems of digital privacy"; "copyright"; and "unethical marketing practices in e-commerce."

The issues here can be described as major questions. They are:

i) *What personal privacy am I ceding when accepting free things?* (e.g. Google's services, a Facebook account, a 'free' Radiohead music release)
ii) *What is the copyright status of the content I consume online, and how do I find this out?*
iii) *How do I know what data and access I am providing to third parties online?*

Each of these ethical considerations has a dual focus: towards the consumer and towards the provider, and thus shapes the idea of 'ethical reciprocity' – the balanced response of one or a consensus of people towards the actions of others in social exchanges. Put another way, the question online is: *does the ethical behaviour of the supplier of content warrant comparable consumption behaviour?*

We see little evidence of this. As Shoham (2008: p205) states: "consumers appear to employ a double ethical standard. Specifically, they expect high morals and spotless ethics from businesses and managers, but not from themselves. *Such a double standard should be made explicit and its behavioural consequences emphasised* [emphasis added]".

There is also substantial evidence that many individuals do not perceive software piracy to be an ethical problem at all. Several papers support this view. Specifically, Cohen and Cornwell (1989a) found in a survey of 309 students that software piracy is viewed as acceptable and normative behavior. Solomon and O'Brien (1990) found that seventy-one percent of a sample of 266 students consider illegal copying of software to be "socially and ethically acceptable behavior" (quoted in Glass and Wood (1996: p1190) and Shim and Taylor (1989) found that "ninety percent of a sample of 218 faculty members believe that their colleagues illegally copy software" (ibid: p1190).

A Harris Interactive Poll in 2004 (Leitman, 2004), found that 75% of respondents agreed that "downloading music for personal use is an innocent act and should not be punished". (Another 70% in the same poll felt that cheaper CDs would reduce downloading: an opinion which does not appear to be the case; indeed five years on from this research the price of CDs and legal online downloads has fallen significantly, but unauthorised downloading is still on the increase).

Freestone and Mitchell's analysis of Generation Y attitudes and ethics found that: "Gen Y consumers seem more permissive of software piracy". They add that within this group there is a "strong suggestion that crime within IT is looked upon in a less serious manner, both from an ethical and legal perspective, than other crimes" (2004: p126).

In an earlier study, Longsdon et al. (1994) surveyed 363 students at a large US university. These included

undergraduates (60%) and graduate-level students (37.5%), with the rest being non-degree students. Results support the idea that piracy is not perceived to be of ethical concern. The paper concludes that "the social consensus about whether an act is good or evil does seem to regard software piracy as not necessarily good, but certainly not evil" (ibid: p855). The authors also found that "the length of time between the act of copying and the onset of [possible] consequences […] is quite long", and this temporal aspect "made downloaders/copiers less aware of the harm their activity might do to content creators".

Lysonski and Durvasula (2008: p167) examined the present state of downloading and how ethical orientation and attitudes towards mp3 piracy impact on such activities. The researchers were interested in the issue of whether fear of punishment has a negative impact on the intention to commit downloading. Findings showed that the intention of downloading was not highly associated with [the statement] 'not paying recording artists their rightful profits is unethical'. This result shows the gap between declared ethics and likely actions, and is further evidence that downloading is not, therefore, seen as an activity with an ethical component. Results also suggested that even those who consider themselves to have a strong ethical ideal and would not steal a music CD from a shop, are not similarly reticent about downloading music. In addition, as Shang et al. (2008: p351) write: "consumers […] may justify this behaviour as sampling and may still be willing to buy…"

Put another way, Lysonski and Durvursula, (2009) suggest that – as 'ethical idealists' believe that there is a social cost to downloading activities, it is not ethical and has negative consequences – if ethical idealism can be increased there is likely to be heightened consciousness about downloading.

Another useful ethical perspective was offered by Brey (2007: p21) who argues that 'information ethics' are 'culture relative'. Given the global nature of both the Internet and the phenomenon of downloading, Brey's conclusion that differing traditions of 'rights-centered' moralities and 'virtue-centered' moralities require an "intercultural information ethics that engages in interpretive, comparative and normative studies of moral problems and issues in information ethics" is helpful if mind-boggling.

Many people believe that illegal downloading is a 'victimless crime'

CIBER confidence rating: MMMM

So, if the ethical position of many who download is either confused or non-existent, caused by offline propensity to 'misbehaviour' or 'virtue-centred moralities' what other reasons found online can be explored to explain this behaviour?

Higgins et al. (2009) set the scene, citing Wall (2005) who "noted four characteristics of the Internet that have enabled individuals to easily commit criminal activity: it allows anonymous communication, it is transnational, it has created a shift in thinking from the ownership of physical property to the ownership of ideas, and it is relatively easy. In addition, Wall contended that the Internet facilitates piracy because it allows the offense to take place detached from the copyright holder, which provides the offender with the perception that the *act is victimless* [emphasis added]."

There is much research which shows digital consumers find 'softlifting' to be harmless (Shang, 2008: p351) because "the victims [largely the content distributors, rather than the original creators] are seen as far removed and impersonal". The conclusion being that unauthorised copying is seen as "socially acceptable and not at all unethical."

The denial that there is a 'victim' also forms a part of 'neutralisation theory' – one of many explanations for rationalising the behaviour of unauthorised downloading. Neutralisation theory suggests four means by which people justify and rationalise their actions.

These are: *Denial of responsibility:* where factors apparently beyond an individual's control come into play – such as an urgent need for a piece of software, for example; *Denial of injury or victim:* where no one suffers as a result of one's actions; *Condemning the condemners:* assuming that those who criticise engage in their own unauthorised activities or somehow deserve any injury – such as loss of earnings; and *Appeal to higher loyalties:* such as obtaining unauthorised material in order to help a family member.

There are also 'de-individuation theories' which inform the issue of unauthorised downloading. These suggest that individuals avoid responsibility for their actions because they are no longer aware of their own identity or 'self', or that of others. These kinds of behaviour include the idea of being anonymous online and that of being totally immersed in a social network. We will consider these ideas in their entirety later in the document. For now we consider '*Condemning the Condemners*'.

As Shoham (2008: p206) writes, "The belief is growing that since corporate ethics are suspect (Enron, WorldCom), consumers can also engage in such practices". He suggests that such behaviour is "a reminder that many who illegally copy software [...] consider their acts as taking from the rich (software and music companies) and giving to the poor (themselves)."

Shang (2008: p351) appears in agreement, when writing about music counterfeiting: "some consumers even claim that the entertainers (in this case musicians) are not hurt by the counterfeits as they still enjoy a high income and live a lavish lifestyle".

One of Logsdon's (1994) main findings was that the 'victims' of the act of software piracy, i.e. individual software developers or companies, are perceived to be far removed from and impersonal to the copier. Respondents felt that "if there are negative consequences to the victims [...] the suffering will not be widespread, as only a few individuals or companies will suffer at all" and copiers believed that "the probability that the act of copying software will cause harm is low..." (ibid: p855).

Ingram and Hinduja (2008: p346) also examined this aspect of piracy. The researchers surveyed 2,032 undergraduates from a large U.S. midwestern university. Respondents were asked (amongst other things) "whether they would be more likely to download MP3s if: (1) it were known that the recording industry 'could afford it' and would never miss the tiny amount of proceeds lost; (2) it were known that law enforcement agencies, universities, and authorities could not care less about MP3 file exchanges; and (3) it were held that no one is really getting hurt from Internet distribution". Findings indicated that denial of injury and denial of victim significantly predicted moderate levels of piracy participation.

Complementary to these findings was a study by Chiou (2005). The author surveyed 361 Taiwanese High School students to test various hypotheses regarding digital piracy, including whether 'perceived magnitude of consequences' had a (negative) impact on their attitude toward music piracy. Survey questions tested respondents' responses to questions such as:

- Unauthorised downloading/duplication or purchasing pirated music products will have a big and negative impact on the singer(s)/band(s).
- Unauthorised downloading/duplication or purchasing pirated music products will have a big and negative impact on the record companies
- Unauthorised downloading/duplication or purchasing pirated music products will have a big and negative impact on the whole Taiwanese society

Those whose responses suggested a higher magnitude of consequences (in other words, were aware of possible negative consequences and therefore that there may be 'victims') tended towards a negative attitude towards music piracy.

Finally, Freestone and Mitchell (2004: p126) found, in their study of Generation Y attitudes towards e-ethics and internet-related misbehaviours that "Generation Y consumers [those aged between 8 and 24, in 2004, although only 'undergraduate students' were surveyed] seem more permissive of software piracy and many commented they feel that they are doing no direct harm to sellers as they cannot see the direct economic consequences of their actions, and said that they are the victim of inflated software, music or movie prices, blaming the industry for keeping prices artificially high". This result was echoed by Levin et al (2007: p121) who found that attribution of harm had no impact on students' intentions to download in the future. It is quite possible that college students, who are typically not yet financially independent, have a hard time believing that music artists and/or companies truly need the money that is lost due to downloading music.

And if not 'no victim', there is certainly the sense that with peer-to-peer networks there is, as Chiou (2005: p171) describes, 'ethical ambiguity' which means that, at the very least, consumers have 'no idea' they are infringing, and who they are 'hurting'.

Personal and situational factors affect propensities to commit illegal content activity

CIBER confidence rating: MMMM

Considering the question of why those consumers who believe the ethical issues related to illegal downloading to be important nevertheless fail to act in ethical ways in certain cases, Eckhardt (2006) suggests that situational and personal factors are important. This section considers the social norms that exist in the physical world, and online, and how they may influence ethical decision making processes.

Situational factors

Goles et al. (2008), in a questionnaire survey to 455 university business school students, found that the more an individual is aware of laws regarding software copying, the less favourable his or her attitude will be toward softlifting. However, this correlation applied *only in a school setting* where, it seems, "there is the perception of real consequences to violated software laws. It is very unlikely that softlifting in one's home will be discovered and prosecuted" (ibid: p493).

We feel this is significant. Taylor's (2009: p255) conclusions revolve around educative initiatives. As it may be "difficult to protect the integrity of [new] distribution practices associated with digital service products like music and movies", Taylor suggests that "it appears judicious to begin trying to identify successful means of persuading stakeholders to not engage in DP [digital piracy]." He adds that part of this process should take place well before places of further education. "[…] it is important to recognise the need to [simultaneously with utilitarian appeals to college students] target elementary and middle school students as part of the overall communication strategy." Taylor makes the valid point that the first encounters that digital consumers can have with easy digital piracy opportunities take place by 'middle school' (in the US from eleven years onwards). Thus, by college, an active downloader may in the future have seven years of experience (and stored content) – or as Taylor states, college aged students have "established strong attitudes supporting participation in DP." And even if school sanctions on online behaviour are strict and ethically-based, and *do* emphasise the consequences of unauthorised downloading amongst a range of online misdemeanors, there still remains home access, access via mobile devices, and public wi-fi points which do not necessarily do so.

Glass and Wood's (1996) study concerned people who legally buy software in order to copy it for others. Evidence was found for all of the authors' propositions, suggesting that illegal copying is strongly related to situational factors and not ethical considerations. Copying was found to be negatively related to the price of the software – the more the software costs, the less likely it is that the purchaser will distribute it to others; the perceived negative outcomes directly related to the exchange (ibid: p1192). However, they were positively related to: favorable social outcomes; "the debt perceived to be owed to the second person from a prior exchange" (ibid: p1192); the promise of repayment – in the form of a reciprocal benefit - by the receiver; and the perceived financial difficulty of the receiver.

In terms of two of these positive relations, Altschuller and Benbunnan-Fich (2009: in press) write: "Along with [this] increased connectivity, there is a sharing environment where people are willing to offer music files to unknown others (supply side) and to download music from others (demand side)." That is: 'sharing' brings favourable social outcomes (more content), and 'reciprocal benefit' (other people's content). A third 'positive', the "debt owed from a prior exchange" can be seen in the description of those who download but do not upload – they are known as 'free riders.'

Rahim et al. (1999) also found that situational (and demographic) factors dictated people's propensity to use pirated software. In an admittedly small sample (91 students) they found that male respondents, computer ownership, and more computer experience were positively correlated with the use of pirated software.

Other research looks at peer pressure and social norms. The strength of fitting in with social norms is a theme running through the literature – and whilst there is little that is robust we could find about sharing and the social norms of the social media, it is evident that social networks create their own norms – which is often based on the principle of sharing both user-created content and content sourced in other places.

Indeed LaRose and Kim (2007: p268) suggest that one of the reasons why industry efforts to curtail piracy is failing is that "downloading appears to be as much a social phenomenon as an economic one." The authors claim that the downloaders of "so-called pirate music seem to be more motivated by the social aspect of trading and sharing music with other enthusiasts rather than the proposition of saving money on music purchases." They add that downloading "appears to have a habitual, almost addictive, quality for many users."

Levin et al. (2007: p120) surveyed 388 undergraduate business studies students at a medium sized south-eastern University in the USA to examine the effectiveness of various strategies used to dissuade consumers from downloading music illegally. Results suggested that those who believe their peers to be supportive of [this practice] undertake higher levels of "downloading behavior compared with those who believe that their peers are *not* supportive of [it]".

Ingram, and Hinduja (2008), in a study mentioned earlier in this report, found similar results. In their study, the effect of appeals to higher loyalty on issues of piracy was found to be conditioned by the respondent's

approval of the behaviour. Overall, results suggested that university settings may unwittingly facilitate a climate for online piracy whereby students place a higher value on group norms rather than legal norms and do not consider the harms associated with the behaviour. Lau's (2006) analysis of USENET messages also showed that peer attitudes had an effect on 'leniency' towards pirated software. Indeed, the few people who admitted legal buying original software were admonished by others. Once again the absence of a longitudinal study, taking those students into a different environment – or climate – such as post-college life, is marked. If universities create a climate for online piracy, does the post college world create the climate for ethical responsibility?

A particularly salient and interesting study in this area was carried out by Tang and Fam (2005), who examined the effect of interpersonal influence on 'softlifting' intention and behaviour. The authors used the unusual method of a laboratory experiment, which they claimed was superior to survey techniques in being able to address causality rather than simple association. The 54 subjects who participated were students of an introductory database course at a Taiwan university. There were 43 male and 11 females, with an average age of 20. Group pressure and the desire to conform to norms came out strongly in the experiment, but were moderated by the level of financial gains available. It should be noted that in this case the 'financial gain' was the saving of the price of the software, rather than an actual monetary gain.

> "*However, 'the price of software is a less dominant factor for software piracy compared with group pressure when the price is lower; the importance of price is higher when the software is more expensive. But group pressure and price of software consistently influence people's intention of copying.*" (ibid: p154)

A further survey by the same authors (Tang and Fam, 2005) with 216 college students from two public universities in Taiwan investigated the relationship between consumer susceptibility to interpersonal influence and softlifting intention/behaviour. Again, "normative influence was related to the intention to softlift" (ibid: p149) more than 'informational influence'. In other words, information about a product from associates was less influential than perceived norms of a social group, confirming the importance of peer pressure in this matter.

Freestone and Mitchell (2004) gathered attitudinal information from the Yahoo 'Hackers' Chat' online chatroom. The authors report that there was "sometimes a strong sense of peer group support with hacker's chat rooms having an almost 'gang-like' atmosphere with their own language and codes of communication. This creates a deviant social influence without immediate fear of the embarrassment of being caught or reprimanded and being subjected to social exclusion" (Freestone and Mitchell, 2004: p123).

However, the effect of social norms cuts both ways. Thus, where peers and other influential members of a social group (family, school staff etc.) are perceived to be anti-piracy, inhibitions are created. Higgins et al. (2008) use the expression 'social-bonding' and claimed, from the results of their study into delinquent behaviour, that the threat of losing close 'attachments and commitments' by performing piracy acts was strong. Hsu and Shiue, (2008: p715) "analysed consumers' willingness to pay (WTP) for non-pirated computer software and examined how attitudes toward intellectual property rights and perceived risk affect WTPs". Microsoft Windows and Microsoft Office were used, as two commonly used commercial software products. The study "surveyed high school students, college students, graduate students, and general consumers who were not currently enrolled as full-time students in order to include respondents of various age and educational levels" to examine consumers' usage patterns of unauthorised software in addition to evaluating the dollar amount of willingness-to-pay for these two software products. Social norms had strong positive influences on WTP for software (ibid: p729). As the writers say, "individuals' behavior seemed to be affected by thoughts and deeds of other people in the environment". Specifically, "when friends and family members believed using pirated software was not appropriate, respondents tended to have relatively high WTPs."

Another personal and situational factor is found specifically in the activity of file-sharing – as distinct from simply downloading materials (a crucial distinction). In a file-sharing network, as we have explored in our empirical observations, there is more than one "role" which the consumer can play, more than one personal and situational influence. Specifically, the digital consumer can be the uploader/provider of an original file: a CD, DVD, software package, e-book etc. They can also be a file provider, in that the data they make available to the network, via their computer, includes content they have already obtained from others in the network. Finally, they can be simply a downloader - who does not make their content available but does access others' (a 'free-rider').

In legal file-sharing networks the success of the network is determined by the numbers willing to share, and not to merely 'free ride.' Shang (2008: p353) thus argues that "people with a stronger belief in the norm of reciprocity may further recognise the value of P2P systems."

This triangulation leads to a series of behavioural and attitudinal norms: as some users may be 'concerned' about the legal issues around providing content to others they may simply download. But those who are under the 'norm of reciprocity' may act differently and "perceive it as their duty to provide files to others." (Shang, 2008:p352). The large numbers – millions – using the networks may also "create a deindiviudation effect and reduce the impact of the anti-piracy norm" (Ibid: p358.

A second consideration comes when digital consumers *pay* for premium services in a file-sharing network (or, indeed, a data warehouse). Here there is a sense that such digital consumers "may convince themselves that since they have paid for the benefits they get, piracy should be the problem of the P2P system provider. Besides, people may believe they are doing a good thing for both musicians and consumers by distributing good music, instead of hurting copyright holders." (ibid: p360).

Lyonski and Durvasula (2008: p175) suggest that "those who believe they are ethical are unlikely to steal CDs from a store, but this ethical self-concept has no relationship with downloading activities. So, people may not identify ethics as an issue when it comes to non-physical/tangible goods like digital files, as research on copying software seems to suggest."

However, if the definition of digital piracy is shifted (Taylor et al., 2009: p246) to be "the consumption of illegal copies of digital *services* [emphasis added]" a new form of issue – a combination of issues about victims and personal and situational influences – emerges. Henning-Thurau etc, for example, show evidence that consumers' intention to pirate "cause them to forego theatre visits and legal DVD rentals and/or purchases."

Personal factors

In addition to situational factors that act as determinants regarding digital piracy behaviour, personal factors are also important. For example, Gottfredson and Hirschi's (1990) self-control theory has been used to understand digital piracy. Gottfredson and Hirschi argued that individuals who are subjected to poor or ineffective parenting practices (i.e. no emotional attachment, lack of monitoring, no recognition of deviant behaviour, and the use of corporal punishment) are likely to have low self-control (i.e. the inability to foresee the long-term consequences of a behaviour). Those with low self-control are likely to perform criminal behavior when an opportunity presents itself. Higgins et al (2008) looked at self-control with respect to digital piracy. They used a questionnaire which they administered to 358 university majors. Results suggested that "an individual is likely to perform digital piracy because they are impulsive and unable to wait to purchase a copy of the digital media. These individuals are not likely to be empathetic to the potential copyright holder and perform the behavior. Further, these individuals are likely to be attracted to ease and simplicity of performing digital piracy" (ibid: p456).

We looked, in vain, for robust research into the emergent social networks, in particular for work that demonstrated the peer-norms and subsequent pressures that are evolving within social media. Our search was predicated on previous research, such as that of Hinduja and Ingram (2008: p358) who found that those who placed a strong emphasis on 'immediate group norms' which they describe as "peer/family or work/school norms" were likely to participate "in higher levels of piracy." Their implication was that "it may become necessary to shift prevention efforts from the individual to the group setting in order to modify this climate." As this work, like so many others, was focused on a university population the authors' recommendation was similarly directed: "[…] formally engendering a greater respect for intellectual creations and property among students […] should increasingly become a function of higher learning."

Another, less hopeful analysis came from business. "For this generation," stated Human Capital in its 'Youth and Music Survey' of 1,000+ 15-24 year olds (Human Capital, 2009: p2), "free music is prevalent, easily reached and largely guilt-free. As a result, the economic value of recorded music is being eroded and the struggle against downloads lost."

In terms of demographics there is little data, due to the limited nature of surveys (most of which are either confined to students or do not mention demographic differences in their results). Results are conflicting. There appears to be some evidence that younger males commit more software piracy (Peace, 1997; Gopal and Sanders 1997; Hinduja 2001, 2003). However, Sims et al. (1996: p844), in an older study, found that there was "overwhelming support in the *other* direction (i.e. older students tend to pirate more than younger students) on the 'number of time in the past year students copied software without purchasing it'. There was also a significant difference […] between younger and older students when measured by the extent of piracy across software types".

With regard to music, there is an equally mixed picture. One of the few studies to explicitly examine differences between generations with regard to music piracy is that by Freestone and Mitchell, (2004), which found that there was a generational difference in the direction one might expect – that younger people ('Generation Y', born 1976 to 1991) tended to download unauthorised music more than 'Baby Boomers' (born 1946 to 1960).

Lee and Low (2004) investigated attitudinal differences towards intellectual property concepts. As the authors admit, however, there were many limitations in their methodology, to the extent that they advised against generalising their results to a wider population. Their study used an "interviewer-administered survey instrument" (ibid: p3). Two hundred respondents, equally split between the two generations noted above, were interviewed face to face in a shopping mall. Significant differences were reported between the two groups. Only 10% of Baby Boomers indicating they visited music sites to download music, in contrast to 54% of Generation Y respondents. Baby Boomers reported a preference for owning the original CD compared to Generation Y at 88% and 62% respectively.

Thirty eight percent of respondents admitted having *illegally* downloaded music; a difference was reported between Baby Boomers and Generation Y at 12% and 63% respectively. Finally, "while both generational samples were aware that most of the music files shared online are in fact illegitimate copies", Baby Boomers identified more closely with the concept that "downloading these files is like stealing" when compared to Generation Y respondents (ibid: p5) .

If Lee and Low's (2004) study tends to support a traditional view that young people are the major culprits with regard to unauthorised music downloading, other studies, by contrast, have failed to find evidence to suggest young people are more likely to engage in digital piracy. Indeed, some of the evidence is contrary to this. d'Astous et al. (2005: p307), for example, found that, "the effect of age on the intention to swap music over the Internet was negative and marginally significant [...] as people get older they are less concerned with morally inappropriate behaviours". Bhattacharjee et al. (2003: p108) surveyed over 200 respondents during 2000–2001 as part of an ongoing study of consumer attitudes toward online music sharing and piracy. Respondents were primarily enrolled as full-time (15%) or part-time (54%) students in colleges; ages ranged from 19 to 54 years, with 61% males. The researchers found no significant age-related difference in behaviour, again strongly suggesting that younger people are no more likely to pirate than older people.

Many people feel anonymous online and act as through no one is watching them when they misbehave

CIBER confidence rating: MMMMM

One of the most compelling pieces of research we considered is Barnes (2006: unpaginated), who states that "In America, we live in a paradoxical world of privacy. On one hand, teenagers reveal their intimate thoughts and behaviors online and, on the other hand, government agencies and marketers are collecting personal data about us. For instance, the government uses driver license databases to find 'dead–beat dads' or fathers who are behind on their child support payments. Many government records have been turned into digital archives that can be searched through the Internet. Every time we use a shopping card, a retail store collects data about our consumer spending habits. Credit card companies can create even larger profiles of our shopping behaviors. Locked away on hundreds of servers is every minute detail of our daily lives from our individual buying preferences to personal thoughts."

This is a central and under-researched part of the online universe, though the apparent anonymity of the digital consumer when online is an aspect of digital piracy that is well covered in the literature. As Sameer Hinduja (2008: p392) explains, "anonymity or pseudonymity on the Internet releases participants from traditional constraints on their behavior by deindividuating them—by reducing self-awareness and self-regulation". Thus it may be speculated that the anonymity afforded by the Internet might facilitate individual digital piracy behaviour. Similarly, according to Shang et al. (2008: p360), "the large number of people sharing copyrighted music files on a P2P (Peer-to-peer) network and the anonymity of a computer-mediated may also create ethical ambiguity and lead to deindividuation". This, in turn is said to be a predictor of 'deviant' behaviour.

'Deindividuation' appears frequently in the literature. Hinduja (2008) hypothesised that deindividuation, as generated by the anonymity inherent with online communications, was positively related to pirating activities. He surveyed 433 undergraduates at an unidentified US Midwestern University, who were asked to state their agreement with the statements "The anonymous nature of the Internet is something I value" and "Individuals should be able to assume different identities, personas, and roles while using the Internet if they so choose,"

answers to which were correlated with respondents' self-reported illegal download activity. Findings suggested that there was only a weak agreement with the hypothesis – in other words "no significant increase in software piracy participation could be explained by knowledge of whether the respondent values anonymity or favors the use of different identities online" (ibid: p396). The paper concludes that "it may be that simply being anonymous online or favoring the use of different personas in an attempt to conceal one's true identity does not facilitate or encourage deviance and that other aspects of cyberspace are more salient predictors" (ibid: p396). One other aspect mentioned is that of isolation, which "lends itself to feelings of liberation from formal and informal norms that typically would constrain any tendencies or inclination to deviate."

Finally, the concept of self-disclosure informs the debate on anonymity. As its name implies, self-disclosure is the propensity of people to disclose information about themselves to others. Much research has been undertaken with regard to self-disclosure online. As Adam Joinson and colleagues (Joinson et al., 2007: p276) point out, (citing Frick, Bachtiger and Reips, 2001) "when data collection is conducted via computer-aided self-interviews (where participants type their answers on to a laptop) people report more health related problems […] more drug use [….]", fewer (men) or more (women) sexual partners, and generally higher levels of reporting of sensitive information of various kinds. The anonymity afforded online has also been shown to reduce incidence of socially desirable responding in questionnaire surveys".

Consumers' perceptions of being 'anonymous' online are at odds with this most monitored of technologies, yet there is a broad academic literature which considers online behaviour as an action that is undertaken as if nobody is watching. But they are.

There is, in fact, a paradox of online privacy. The economic reality is that digital consumers receive free things in exchange for giving up some or all of their online privacy - even if they don't know it. Personalised advertising, e.g. web pages that combine content with advertising optimised for the individual consumer through the continuous monitoring of their online consumption patterns, which is central to the business models of Google, Facebook, and many other websites.

This ability to monitor consumer behaviour online – in search of unauthorised and illegal activity – appears central to the demands of industry that those with access to this information, that is the ISPs, should be required, as the Interim Digital Britain report (BERR, 2009a: p11) states:

> *"…to collect anonymised information on serious repeat infringers (derived from their notification activities) to be made available to rights-holders together with personal details on receipt of a court order."*

In their response (2009) to the Interim Digital Britain report Talk Talk (2009) states that:

> *"…on the basis of what we have understood we have a number of concerns:*
>
> - *the approach relies on unreliable evidence…and there remains a risk of false allegations we think that rights-holders can get reasonably accurate views of serious infringers without this evidence*
> - *it raises a number of data protection and privacy concerns particularly in respect of collecting and storing information in relation to individual accounts*
> - *it places the ISP in the invidious position of monitoring its customers' behaviour"*

Later Talk Talk (2009: p5) adds: "…all ISPs must adopt these measures else a) ISPs who do not adopt them will be at a competitive disadvantage and b) the measures will be less effective/ineffective since individuals could move ISPs to avoid being identified."

Peer pressure and the 'sharing culture' are major determinants of illicit online activity

CIBER confidence rating: MMMM

Ninety–three percent of American teens use the Internet, and 64 percent have taken part in social media activities. Boyd and Jenkins (2006: unpaginated) explain this to be because they are "looking for ways to leave their mark on the world and they are seeking places where they can socially interact with minimal adult interference".

Much of this interaction revolves around the sharing of thoughts and expressions, and thus the creation of an online identity. But whilst it is empirically clear that young people value the freedom of self–expression, it is far from clear as to whether or not they weigh the consequences of self-revelation online.

A further area of this interaction – and identity creation – is the sharing of content through web links, by embedding content into a blog (i.e. a YouTube video, a song from LastFM, a block of text from a newspaper, or an image taken from another site). Again, there appear to be no consequences to this kind of behaviour; and the prevalence of numerous music blogs, written by fans, which embed music, or have links to data warehouses full of unauthorised content, only heightens the sense that online identity can be constructed around the content of others. We have seen, for example, when a new song is released, that a simple Google or Hype Machine search will discover the whereabouts (on a personal blog or some other social media site) of an mp3 copy of the song, or a YouTube video of the artist singing the song – and often a series of re-mixes or mashes of the song. On P2P networks the same is true, but there is less context to the content, though sometimes an uploader has described the file in some way.

As Barnes (2006: unpaginated) argues: "Commercial social networking sites thrive on a sense of immediacy and community. The spirit is independent, even rebellious. Teenagers are learning how to use social networks by *interacting with their friends, rather than learning these behaviors from their parents or teachers* [emphasis added]….Often parents have no clue about the information teens are publicly revealing. Currently, a new type of communication behavior is emerging amongst teenagers as they explore their identities, experiment with behavioral norms, date, and build friendships."

Tufekci (2008: p21) is in broad agreement:

> "For many people, the Internet is increasingly 'a social ecology involving other people, values, norms and social contexts' (quoting Petric, 2006). Through networked computers, people communicate with their social contacts through multiple mechanisms, some synchronous (instant messaging and chat) and some asynchronous (e-mail). Furthermore, people often create self-presentations, such as personal home pages and profile pages on social network sites. Questions of privacy arising from social representations and interactions, which I refer to as technologically mediated sociality, should be analysed in a framework that takes into account the dynamic boundary between the public and the private in social interactions, with careful cognisance of the disparities and dissimilarities between the social Internet, on one hand, and the commercial and the informational, on the other hand. I refer to the latter as the instrumental Internet and the former as the expressive Internet."

In the context of Tufekci's 'expressive internet' there are many very new consumer behaviours: we would argue that the sharing of (other people's) content is one of them. And this is put into an interesting light by a piece of unusual research that nevertheless had resonance for us. Giles et al. (2008: p431) consider the psychological meanings of record collections and the impact of changing technologies. Like other kinds of material goods, Giles et al. argue, record collections (in the physical world: i.e. CDs and vinyl recordings) "serve as a kind of cultural autobiography for their owners by attaching to specific moments, events and relationships across the lifespan."

In contrast, the digital music collection appears to play a very different role. Giles et al. (2008: p440) continue: "The disposability of MP3s means that there is less investment in their ownership. Several iPod users talked of their digital collections as being compiled haphazardly, frequently housing material liked by friends and partners but not themselves."

In the study Giles interviewed a small group of music lovers about their relationship to the music and the format by which it is consumed. Those that downloaded free music provided some interesting ideas:

> *"…there's no real ownership with a digital file, which is why I like to own them [CDs] too. iPod has just made getting hold of music more immediate really" (ibid: p435).*

Which supports the material idea of 'cultural autobiography' suggested above. However Giles continues that in the digital realm:

> *"…consumer identities are less bound up with the music in the collection. This means that owners are able to be more adventurous, to sample a wide variety of different music without restricting their consumption to a relatively small set of artists or genres."* (ibid: p440)

And they do this because evidently there is an adventurous wide variety of music out there to sample. We might add here that the same is true for film, television and – increasingly – electronic and audio books (see our first Empirical Case Study).

This leads Giles (Giles et al., 2008: p441) to speculate:

> "digital ownership of music is more about the listening experience itself than about the painstaking compilation of material collections. The physical nature of digital music players, where the emphasis

> is on portability and private consumption, with the individual listener plugged into his or her player, would seem to emphasise the sensual nature of listening to music."
>
> "Ironically, however, this aspect of music collecting has a *social element* [emphasis added] to it not found in the other two aspects, which are more about the relationship between the individual and his or her collection (and, by association, the artists). File sharing and the storage of friends' and partners' favourite music was a frequently mentioned feature of digital players, and it seems that *one of the great attractions of downloading music is that favourite tracks can be easily passed around among iPod owners in a much easier way than the traditional lending and borrowing of CDs or vinyl.* [emphasis added]"
>
> "In this respect, *digital music ownership makes music consumption a highly social act"* (the younger age of the digital collectors could also be a factor here). As one participant pointed out, the storage capacity of her iPod allows her to maintain musical relations with several friends, whereas in earlier times she may have felt compelled to side with one specific genre."

Finally, and to re-iterate our view that there are two cultures with different behaviours evolving, that is the physical/material and the digital, Giles (2007: p441) states:

> "Traditional record collections of CDs and vinyl seem to be associated with the relationship between the consumer and the artist, and carry powerful meanings for the presentation of the self and the construction of identity: digital music collections make music consumption a more social activity and encourage a pluralistic musical outlook, particularly in younger owners."

This is an unusual piece of research. However, if its findings prove sound with more research, it does have tremendous implications firstly for the ideas about 'no victim, no crime' which we describe above. If the new relationship being developed online and through sharing is about that with the content, not the creator (or distributor), then education and marketing to re-emphasise that relationship are essential. Secondly, if as Giles et al. (2008: p440) state: "The disposability of MP3s means that there is less investment in their ownership", it leads on the idea that the investment is in the social network – where the file will be held *somewhere.* Or that in an ecosphere in which one data warehouse can hold 160 million files it will *always be possible to find a file that has been lost or deleted.*

The norm of reciprocity and the ideology of freeware also appear to be a motivator for piracy. In one recent study, Rong-An Shang, Yu-Chen Chen and Pin-Cheng Chen (Shang et al., 2008) used a scenario-based questionnaire to test various hypotheses related to norms of anti-piracy behaviour, the ideology of free software, the norm of reciprocity, and the ideology of consumer rights. The surveys were conducted in classes with a sample of high school and college students. Four hundred and fifty one questionnaires were returned, comprising of 162 from junior high school students, 100 from senior high school students, and 189 from university students. Results suggested that the ideology of consumer rights played a significant part in decisions to share music and software. In fact, "the impact of the belief in the ideology of consumer rights was greater than most of the beliefs in other norms. The innovation of digital technology has increased consumers' expectations" (ibid: p359).

In addition to claiming what they feel are their rights, there is evidence that people may believe they are doing a good thing for both musicians and consumers by distributing good music (Shang et al., 2008: p360). Similarly, people feel that pirated software is acceptable because it is for the benefit of society as a whole (Lau 2006: p414).

Economic factors

We did not research online pricing mechanisms and business models, although there is an abundant literature that considers price elasticity and demand in the digital world. This document has considered instead 'free things', for which there is always demand – and currently in the online ecosphere, always a fruitful supply.

In particular we highlight the paper by Page and Garland (2008: p1) which considers the experiment by the rock band Radiohead, in which its latest recording 'In Rainbows' was made available electronically and consumers were left to decide what to pay. Page and Garland suggest that beyond the media attention considering the average price paid was a more structural point: "InRainbows.com set out to redirect the inevitable torrent traffic that would (have) taken place with any high profile album release (back) towards the bands official website [...] this could be paraphrased as *if you're not going to pay for the record at least give us your email address – as this provides a 'currency' of its own when planning tours, and other promotional activities.*" (Original emphasis).

In fact, Page and Garland quote that 2.3 million torrent files were downloaded on the recording in less than a month, a figure they believe far exceeds the estimated download from the Radiohead website. It leads the authors to posit a 'venue hypothesis' which suggests that "many core music fans are making regular habitual use of file sharing technologies [...] We call these 'venues' because *they are destinations, and like any retail outlet (iTunes, HMV), they are popular because of their brand reputation, convenient location, superior value proposition, and ease of use*[emphasis added] [...] They are considerably more widely used than iTunes, HMV, and all other retailers [...] combined" (ibid: p3).

On a more basic level, Hsu and Shiue's (2008: p729) study of consumers' willingness to pay (WTP) for non-pirated computer software mentioned earlier showed that that "average WTPs for software products were much lower than suggested retail prices, indicating that users did not value authorised software products as high as market price". Unsurprisingly, other studies (e.g. Lau 2006) also suggest that perceived excessive pricing is a factor in the decision to act illegally. Lau (ibid: p410) found that "market demand (economic factors) was found to be a dominant factor driving people to use pirated software. [...] since people can choose either originals or copies, they probably choose the cheaper option of pirated software. Some attitudinal associations were identified as important reasons for people choosing pirated software – e.g. a feeling of being exploited by software companies".

Shang et al. (2008: p360) examined peer-to-peer (P2P) file-sharing, and suggested that "people who have paid the P2P provider may feel less guilty and not concern about piracy while downloading files from the network. They may convince themselves that since they have paid for the benefits they get, piracy should be the problem of the P2P system provider".

Factors inhibiting piracy

This is, of course, an extremely important area. Several factors have been discussed in the literature, including fear of punishment, social pressures/norms, and performance (e.g. of software).

Fear of punishment

The literature is very contradictory with regard to the effect of the fear of punishment. Lysonski and Durvasula (2008: p170) surveyed 364 university students (a "cross section of undergrad class levels, majors, and grade point averages") using a scenario-based questionnaire. Results suggested that fear of punishment did have an impact on the propensity to download illegally. "Results clearly show that there is a significant negative correlation between downloading intentions and consequences of being caught downloading" (ibid: p175). As the writers point out, Kwong and Lee (2002) also found that laws can be a strong deterrence, with regard to at least the pirating of CDs. This study was based in Hong Kong, and so the results might not apply totally to a UK setting. Levin et al.'s (2007) study of undergraduate business studies students also suggested that "the use of *severe* threats [emphasis added] seems to be an effective way to diminish downloading" (ibid: p121). Lower levels of (scenario-based) threats did not result in a lower reported likelihood of illegally downloading music.

Research suggesting there is no link between penalties incurred and illegal downloading include that by Hsu and Shiue (2008: p730) whose work found that the risk of prosecution "did not significantly increase willingness to pay for software products [as] individuals who used pirated software were not at a high risk of being prosecuted". In research not based on scenarios, but on download statistics, Lysonski and Durvasula (2008: p175) echo this finding, pointing out that "lawsuits have not succeeded in stopping or even slowing illegal file sharing". The authors cite Knopper (2007), who, by reference to BigChampagne.com (the research group that follows downloading activity) "maintains that P2P sharing has gone up significantly from 5.5 million users a month in 2003 to over 9.3 million in 2006, despite the 20,000 lawsuits by the RIAA." (Ibid: p175)

Somewhat ambiguously, Goles et al. (2008), in a questionnaire survey to 455 university business school students, found that the more an individual is aware of laws regarding software copying, the less favorable his or her attitude will be toward softlifting. However, this correlation applied only in a school setting where, it seems, "there is the perception of real consequences to violated software laws. It is very unlikely that softlifting in one's home will be discovered and prosecuted" (ibid: p493).

Performance (of software)

As Jyh-Shen Chiou and colleagues point out (Chiou et al., 2005: p164), "the performance of a pirated CD or files on the Internet normally can have quality as good as the original one. Therefore, the performance risk is not very strong". In other words, there is a very low risk that a pirated copy of a digital object (music, software etc.) will perform poorly. Performance risk has been examined in the literature. It was positively correlated to willingness to pay for software products (Hsu and Shiue, 2008: p730).

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GLOSSARY

BitTorrent
An Internet protocol that enables the sharing of very large files such as music or films.

Blogging / blogs
Writing a diary or commentary on a website to share with others. Blogs (the entries) can be used for collaborative working or debating issues.

Central server
A main computer connected to a number of personal (or 'client') computers, and stores data for them, and provides access to users of each of the connected computers.

Cloud computing applications
Where the applications someone uses are based on a web server rather than on one's own computer.

Creative Commons
"A nonprofit corporation dedicated to making it easier for people to share and build upon the work of others, consistent with the rules of copyright" (see http://creativecommons.org/about/).

Data warehouses
Websites housing a large number of files for unauthorised sharing.

Digital convergence
The combining or convergence of information technologies, offering, for example, Internet access via a mobile telephone or TV reception through a computer.

Digital lockers
Systems that allow users to upload their music or other media files to the Internet and then access them from any computer or device. File sharing is undertaken by users allowing others to access their 'lockers'.

DRM (Digital Rights Management) technologies
Technologies that allow rights owners (e.g. the content creators) to set and enforce terms by which people use their digital creations – music, films etc. The enforcement is usually by encrypting content so that authorisation is needed to access it.

DVD burners
A device for transferring files (normally video) to a DVD.

Embed (e.g. a video clip)
To put an application inside a web page. Thus, one can embed a video clip in a page of text.

E-Readers
Handheld devices that enable you to read books in electronic or digital format.

File-sharing
Exchanging files via the Internet, using any of various methods.

File shifting
Exchanging files off-line, such as via storage media such as a flash-drive or hard-drive.

GDP (Gross Domestic Product)
The total value of all final goods and services produced in a particular economy.

IFPI (International Federation of the Phonographic Industry)
The organization that represents the interests of the recording industry worldwide, and is greatly concerned with copyright laws and digital piracy.

Internet telephony
The application that allows voice to be transmitted over the Internet, facilitating the equivalent of telephone calls.

IPRED: Intellectual Property Rights Enforcement Directive
An EU directive dealing with Intellectual Property Rights infringement or its aiding or inciting.

LimeWire
An application facilitating and promoting file-sharing.

Megaupload
A major file-hosting sites (see also 'Rapidshare'). Users can upload their media files to Megaupload and then share them with people to whom they give a personal URL.

Micro-blogging
Writing short blogs receivable on a variety of devices, including mobile phones.

mp3
A high quality file format for sound files, used extensively for listening to, downloading and sharing music on the Internet.

Non-generative
Technologies that require users to consume and use content they have purchased in only a prescribed way, such as radios and traditional telephones. This is in contrast to 'generative' technologies like the personal computer or mobile devices that can be programmed.

Off-line sharing
Exchanging or giving digital files without sending them over a network or via the Internet. Examples include copying onto CD or DVD for sharing.

Open source / Open technologies
A program, the 'source code' (the programming language) for which is available to the public.

Pirate Bay
A website that indexes, stores and tracks BitTorrent (.torrent) files.

Playlist
A list of songs – compiled by a professional to be, for example, a radio programme's content, or for domestic use by people to enjoy, share with friends or burn to CD.

Proprietary gated systems
Systems in which content on the Internet is controlled by a provider, and paid for by the user, such as the original versions of AOL.

Protocol
The set of rules by which information is exchanged - the standard Web protocol is http (HyperText Transfer Protocol).

Rapidshare
One of the world's largest file-hosting sites (see also 'Megaupload'). As with Megaupload, users can upload their media files to Rapidshare and then share them with people to whom they give a personal URL.

RIAA
Recording Industry Association of America (RIAA) - the trade group that represents the U.S. recording industry. It tries to "foster a business and legal climate that supports and promotes members' creative and financial interests" (riaa.com).

Sampling
Downloading or streaming a song or other media resource to assess it for possible future purchase.

Self-efficacy
"…the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura,1995: p2).

Social media
The technology that enables people to create their own media (text, photos, video etc.) and share with others.

Social networks
Networks of people, connected through 'social networking' sites such as MySpace or Bebo, who share text, photos, video etc. and generally enjoy remote friendships.

Softlifting
Small-scale individual software copying.

Spyware
Computer software that is installed surreptitiously on a personal computer to collect information about a user, their computer or browsing habits without the user's informed consent.

Streaming (e.g. video)
Content sent over the Internet and displayed by the viewer in real time. With streaming media (video or audio), a Web user does not have to wait to download a file to play it. Instead, the media is sent as a continuous data stream, and played as it arrives.

Throttling down access
Where the Internet Service Provider restricts download capacity to minimise illegal file-sharing.

Time-shift
Being able to pause or stop live TV, and restart whenever convenient.

Torrent
A (large) file downloaded using BitTorrent.

Uniform Resource Locator (URL)
Specifies where an identified resource is available.

User generated content (UGC)
Content generated by Internet users, such as personal photos etc.

Value-added content
Extra content beyond what might be expected – such as a feedback page on a commercial website.

Widgets
A program added to a web page which generally invites the user to it in a number of ways. They include dialogue boxes and pop up windows.

APPENDICES

Appendix 1: Research methods

The systematic literature review

The academic literature review ranged across many disciplines - computing, information science, psychology, business studies, economics, marketing, management, sociology, law, communication theory, and Internet studies. The earliest papers considered software "piracy" in the late 1980s; the most recent (February 2009) looked at perceived growth in file-sharing activities. We found no longitudinal studies of unauthorised downloading behaviours.

A large number of academic databases were searched using various combinations of the following search terms: 'digital piracy', filesharing, copyright, 'intellectual property', softlifting (a term discovered during initial searching, which refers to small-scale individual software copying), downloading, social networks, privacy, surveillance, 'online behaviour', search, etc.

The databases used had functions for truncating and combining search terms and it was also possible to search authors' most recent works that cited relevant articles. Citations to previous works by the same or other authors were noted and sought – either through citation records (e.g. the Social Science Citation Index) or by referring to references at the end of journal articles and tracking back.

The academic and research literature identified as having value was categorized as follows:

- *Class A documents*: studies with high validity, a robust methodology and highly cited. They were central to our initial scope (in terms of theme and timeframe). These documents formed the initial basis of the report.
- *Class B documents:* credible studies in which could not be placed quite such a high degree of confidence. This was either because of a scope issue (i.e. the subject was not central, it was from another region or culture, or lacked currency) or a methodological issue - small-scale surveys, convenience sampling, limited case study interviews, etc. Nevertheless, these were documents that added weight to or contributed to the refutation of various arguments raised in the literature.
- *Class C documents:* research-based documents, which were marginal in terms of scope or not very sound in terms of methodology, rigour and validity. These studies were rejected unless they added further weight to the evidence base.
- *Class D documents:* those that had lesser research content (e.g. opinion pieces, commercial research, consumer surveys) that nevertheless scored highly on scope. They were not initially relied on in the sense of making new claims but were useful in identifying other literature or important issues that needed to be further examined. Later in the review process some of these documents – such as reports illustrating that between 44-79% of all Internet data traffic was taken up with file-sharing (IPOQUE, 2006) – were deemed important enough to have influence on our thinking.

After three months of assessment, and looking at the confused IP arguments that fill the policy arena about the role of the ISPs, search engines, P2P networks and websites that allow access to them, we can state categorically that no academic research we have seen gets close to even an accurate description of what the digital consumer is doing, why they are doing it, and – centrally – *who* they are.

Interviews

Interviews of between 45 and 120 minutes were undertaken with representatives from the Industry Trust on IP, UK Film, UK Music, the BPI, Ofcom, the Publishers Association, the Country Music Songwriters Association (of Nashville) and the Internet Service Providers Association. We also received a submission of policy documents from the Newspaper Society. Questions in each of these interviews were open-ended, and were explicitly an opportunity for these industries, regulators and individuals to demonstrate the "problem" as they found it. Many of the interviewees provided us with research, and these form part of our bibliography.

Interview transcripts were 'framework' analysed (Richie and Spencer, 1994). This approach has been previously used successfully in studies undertaken by the present writers (Nicholas et al, 2003, 2005; Williams, 2005, Williams et al, 2009) in a variety of settings, and involves a systematic process of "sifting, charting and sorting

material according to key issues and themes" (Richie and Spencer, 1994: p177). Once such key themes were established, including a-priori topics informed by the research aims, together with issues raised by the interviewees, the original notes were thematically indexed and 'charted'. This operation requires data to be lifted from their original context and collated according to their thematic indexing. These 'charted' data were further examined to complete the research, by eliciting concepts, finding associations, assessing the strength and extent of elicited views and behaviour.

Non-academic research

The rapidly changing nature of the research topic necessitated the coverage of non- academic research as it was far more timely and central to the issues, and offered an additional snapshot of industry and media perceptions about the issue of digital consumers and intellectual property which we believed to be useful to the consultation process established by David Lammy, Minister for Higher Education and Intellectual Property in the Department for Innovation, Universities and Skills, and the areas of interest to SABIP (2009) outlined in its briefing document, *Strategic Priorities for Copyright.* These articles and reports were sourced from a variety of news outlets in the UK, Europe and North America, together with a host of websites which include CNET, Wired, the New York Times, the Guardian, the BBC website and Techcrunch. We searched using terms such as "digital piracy", "illegal downloading", and "social networking" etc.

Inevitably these pieces of research, and other data collated from news media, cannot be judged by the same criteria as the academic literature. However, they did inform our overall perspective, and made us aware of the vast gaps in the standard literature. In short whilst the academic literature review shaped some of our thinking (about the legal positions taken and suggested to combat unauthorised downloading; digital consumers' ethical, situational and deterrence concerns; and more general ideas about the digital consumers' patterns of online search and consumption, and their views on privacy and surveillance) we found little to shape our view of the overall problems implicit in the relationship of digital consumer and IP: neither in terms of copyright infringements, or "user generated content" and the underling trends in these relationships. For this we turned to industry reports, news items, governmental publications and data found on the Internet itself. We make several recommendations for research to fill these gaps later in this document.

The Internet

Ultimately we also looked at the medium itself. We spent considerable time searching the Internet – the web, P2P networks, social media and communications applications – for evidence of the phenomenon of unauthorised downloading. We describe some of the myriad of processes available to the digital consumer in this report. We started by using the approaches laid out in the Music Ally (2009) Working Report, taking each technology in turn and using web-based search to seek out unauthorised content. We began by exploring the available technologies, such as computers, service providers, storage disks and software browsers. We followed this by downloading various P2P file-sharing technologies, streaming applications, and plug-ins which enabled us to view, listen to, or consume digital content within a web-browser. We followed this by searching for music blogs with "free music", and search engines which aggregated these blogs, and once we had discovered a range of such websites we followed the embedded links found in these sites to data warehouses, or to pages which facilitated either a download, or a streamed feed of the content. Then we began to systematically explore search engines, including those that specialize in data warehousing content. Next we used a range of search criteria to investigate the types of content available on a P2P network. We also experimented with websites that "streamed" live sport, movies, and television content – both legal and unauthorised. Then, using only online search we discovered a range of free software applications that enabled the recording of audio, video and other forms of digital content. We experimented by sending our (legal) digital files by email, through a "drop box" and via Bluetooth technologies. We practiced the embedding of video and sound in blog pages, and on social network sites; and investigated how such files could be downloaded to be re-mixed or edited using free software sourced from the web. We researched the capacity of the latest generation of hard drive storage, and the amounts of storage available to premium and normal users of data warehouses. And finally we undertook a series of searches using various search engines using criteria such as "free music", "free DVDs" etc. and "illegal downloads."

Appendix 2: Database sources consulted

Academic Search Premier

Covers popular and scholarly journal articles with many full-text articles. Academic Search Premier provides information from a wide range of academic areas including information science, business, social sciences, humanities, general academic, general science, and education. This multi-disciplinary database features full-text for over 4,000 journals and indexing for over 8,200 scholarly journals.

PsycINFO

The American Psychological Association's PsycINFO database, with over 2,000,000 articles, covers the academic research and practice literature in psychology from over 45 countries. It includes materials from related disciplines such as education, law, criminology, social science, and organizational behaviour. It provides indexes to journals, dissertations, book chapters, books, technical reports, and other documents.

Business Source Premier

This database includes indexing, abstracting, and full text for more than 8,800 serials. It provides full text for more than 350 journals and searchable cited references back as far as 1998.

Communication and Mass Media Complete

CMMC is the major indexing and abstracting tool for Communication Studies and Journalism & Mass Communication. It indexes over 400 journals and includes the full text of over 200 journals in these fields.

Social Sciences Citation Index

(accessed via *Web of Science)* provides bibliographic data from over 1,950 of the world's leading social sciences journals across 50 disciplines, as well as 3,500 of the world's leading scientific and technical journals.

Appendix 3: Analytical proforma used for the literature review

Article
[filename:]

Discipline

Paper type
Research, literature review, commentary etc.

Aim

What methodology was used?
Very brief notes, e.g. survey, interviews, case study, secondary data, longitudinal method, multi-method, opinion piece, theoretical contribution

Sample (Where appropriate)
Number and characteristics (students, academics, 'public' etc.)

How robust is the research?
Score as follows: 1=major study with a high degree of representativeness, rigour and validity 2=useful contribution, with reasonable validity, but with some limitations 3=a limited study (scope or methodology) but adds weight to existing arguments 4= of marginal interest, but worth covering for one or two interesting facts or ideas 5=reject

What are the key findings?
Up to six bullet points summarising the main findings relevant to the project.

Any comparative information or insights into earlier studies?
Including any pre-digital studies

Any obvious implications for SABIP?

Appendix 4: Twenty-nine ways to acquire content

- Buy content in a material format from a physical shop, rent it from a video store or library then copy to a computer.
- Buy it in a counterfeit copy from a market, pub, or a 'friend', then copy to a computer.
- Buy it in an electronic format from a shop.
- Buy it in a material format online, either new (e.g. from Amazon), or second hand (e.g. from eBay).
- Buy it in an electronic format online - download legal free content.
- Buy it in an electronic format on a phone.
- Buy it in an on demand electronic format via the television, and record with DVR or hard drive.
- Stream it to a computer from a music service, such as Last.fm or Spotify (recording it digitally), stream it from a film service, watch it on i-Player, etc. (record it).
- Stream it to mobile phone (other device) from a music service, such as Last.fm or Spotify (recording it digitally), stream it from a film service, watch it on i-Player, etc. (record it).
- Listen via streamed Internet radio (record it).
- Consume it on the web via a 'subscription' service (such as Napster): essentially 'rent' the content.
- Consume on mobile via a 'subscription' service (such as Nokia's 'Comes With Music'): essentially 'rent' the content.
- Google search and download whatever is found.
- Consume via a licenced 'Podcast'.
- Consume via an unlicensed 'Podcast'.
- Find it via a 'content' blog which has posted it for 'sampling'.
- Find it via an aggregating website (e.g. Hype Machine) that links to either a web site, or a data warehousing site (such as Rapidshare or Megaupload).
- Discover it via a friend's recommendation on a social networking site such as Facebook or MySpace (and record it).
- Consume it via YouTube, Daily Motion (video sharing). Rip music file using free software.
- Find, copy, consume from a Peer-to-Peer file-sharing network (BitTorrent, etc.).
- Find the torrent via a listing site on the web (e.g. Pirate Bay).
- Copy the content (freely) from a mobile phone using 'Bluetooth'.
- Copy the content (freely) from a digital television using a DVD recorder or hard drive.
- Copy the content from a friend's 'data warehouse'.
- Copy the content from a friend's computer, USB stick or hard drive.
- Receive 'unlicensed' content via a digital 'drop box'.
- Receive 'unlicensed' content via USENET.
- Receive via e-mail or instant messaging service.