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Intellectual property rights in today's digital economy

- The rapid growth of the digital economy, enabled by broadband penetration, and coupled with increases in computing power and storage, creates global markets for content and rights holders. But it also creates a threat that — without adequate controls — piracy will damage the creative industries. The discussion paper on which this article is based, “Intellectual property rights in today's digital economy”, therefore focuses in particular on the ways that the growing digital economy is impinging on copyright.

* The GSR discussion paper on “Intellectual Property Rights in today's digital economy”, on which this article is based, was written by A. Denton, Senior Telecommunications Expert.

Creativity versus piracy

Intellectual property rights provide the foundation upon which innovation is shared, creativity encouraged and consumer trust reinforced. But the digital world poses a new challenge — how to manage the balance when the consumer is the creator, when the marginal cost of copying is zero, when enforcement of existing law is extremely difficult, and when “free” access to information and content is considered by many to be a right.

Estimates by Frontier Economics for the International Chambers of Commerce suggest that digital piracy accounted for about USD 75 billion in 2008, and project that it will reach USD 215 billion by 2015. Music piracy is at the forefront of this activity, but peer-to-peer networks, coupled with higher broadband speeds, are

increasingly being used to share television programmes and films.

Lost Series 5 was the most pirated show in 2010, with over 2 million downloads in the first week and reports of over 100 000 people sharing a single "torrent" (metadata file for peer-to-peer sharing). Within 20 minutes of the broadcast of the final episode of Lost, a subtitled version in Portuguese reportedly appeared on a pirate website.

Endemic copyright infringement facilitated by broadband infrastructure is increasingly drawing the telecommunications and Internet communities into the debate on intellectual property rights. The film, music, publishing and television industries are putting pressure on Internet carriers and service providers to play a more active role in addressing both commercial copyright infringement and infringement by consumers.

Telecommunication regulators are increasingly being looked to as the authority to implement rules that protect copyright, while at the same time protecting consumer interests and encouraging investment and service innovation within the digital economy.

Patents

In the technology sector some companies have evolved business models that are entirely based on inventing new technologies, patenting the invention and then licensing the rights without ever manufacturing goods. Qualcomm, which has a market capitalization of USD 96 billion, has a business model successfully founded on creating and licensing intellectual property rights. The company's valuation is the result of an estimated USD 12 billion investment in research and development since its foundation in 1985. The value of patents was

also recently demonstrated when Google placed a USD 900 million bid for Nortel's portfolio of 6000 patents, only to lose to a USD 4.5 billion bid by a consortium including Apple, RIM, Ericsson, Sony and Microsoft.

The protective power of patents can be abused. In commenting on its bid for the Nortel patents, Google stated, "The patent system should reward those who create the most useful innovations for society, not those who stake bogus claims or file dubious lawsuits". This concern about patent "trolls" is widespread. Commenting on the United States 2009 Patent Reform Act, the Coalition for Patent Fairness (whose partners include Apple, Google, Cisco, Verizon, Dell, Intel and SAP) stated that reform is needed to protect "inventors and innovators from unjustified lawsuits and to allow them to continue to make products and services that will help the US economy grow". In May 2011, Microsoft became a member of a crowdsourcing service designed to challenge and invalidate specious software patents and to avoid litigation costs.

The rapid growth in the volume of patent applications is creating patent "thickets". These occur where interrelated and overlapping patents result in a lack of clarity of who owns the patent and, as a consequence, where to go for the licence. The technology sector has become increasingly litigious, which becomes a problem when it stifles innovation or acts as a barrier to new market entrants.

ITU's Telecommunication Standardization Sector (ITU-T), in conjunction with the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC), have been active in developing common patent policies. These policies have been designed to ensure that

patents used in technology standards encourage patent holders to share their intellectual property, in the knowledge that their interests are protected.

Copyright — A closer look

Illegal copying and distribution of copyright materials has had a hugely disruptive effect on a range of copyright industries, including music, film, television, publishing, games and software.

Digital technologies, the companies that exploit them, and the business models they facilitate are all potentially affected by copyright. So too is the vast amount of user-generated content.

Social networking sites and user-generated content

Social networking sites are widely used for publishing and sharing user-generated content. The opportunity for users to post copyrighted material — whether inadvertently or intentionally — is significant. For example, there are now 750 million Facebook users, one billion tweets are sent per week via Twitter, more than 48 hours of video are uploaded every minute on YouTube, Flickr hosts more than 5 billion images, and in July 2011 the Apple App store announced that 15 billion applications had been downloaded since the opening of the store in 2008.

Under pressure from the creative industries, Google implemented a number of policies in December 2010 to help dissuade people from searching for illegal copyright material. MySpace has introduced a “take down stay down” service that not only removes improperly posted video or audio content, but also marks it with a digital “fingerprint”. This prevents the user from simply reposting the content under a different user name. YouTube operates a similar content identification system, which not only filters content, but also offers rights holders the opportunity to monetize their content.

Music

Commercial music piracy (generating income from unlicensed sales) and private copying of music are responsible for much of the copyright infringement. The International Federation of the Phonographic Industry estimated the number of files illegally shared at more than 40 billion in 2008, a piracy rate of about 95 per cent. Drawing on industry figures for retail pricing and the volume of illegal downloads, Frontier Economics has estimated the commercial value of all recorded music digital piracy at between USD 17 and 40 billion in 2008, representing a commercial loss to the industry of between USD 3.5 and 8 billion annually.

Film

The commercial success of legal online film services such as Netflix, LOVEFILM, the Internet Movie Database, iTunes and Blinkbox reflects the technological viability of delivering film over the Internet. It also tempts pirates. In July 2010, the United States government shut down nine websites offering free access to films. The sites, some providing access to films just hours after their official cinema release, had nearly 7 million subscribers each month and — like many illegal music sites — made money from advertising revenue and donations. In May 2011, it was reported that Voltage Pictures was suing 24 583 BitTorrent users, mainly in the United States, for illegally downloading “The Hurt Locker”. The Korean Film Council estimates that 50 per cent of households in the Republic of Korea have illegally downloaded films, representing a loss to the industry, particularly the DVD market, of perhaps USD 1 billion.

Television and broadcast industries

A study by Screen Digest for the World Intellectual Property Organization highlighted four forms of “unauthorized access to broadcast signals”: physical piracy; hardware-based unauthorized access; unauthorized



Nokia

re-broadcasting; and extra-territorial television access. In Asia and the Arab States, unauthorized rebroadcasting is a big problem.

Commercial streaming of “live” sports events by pirated sites is an area of increasing concern for the industry, as it technically becomes more feasible for the pirates. They can now effectively transmit in real time, using unicast (one-to-one) or peer-to-peer transmission — they have the ability to compete directly with the rights holder. For consumers, it can be difficult to differentiate between legitimate and illegal services.

Publishing

The development of e-readers offers a new distribution channel for books and other published materials but opens up the possibility of widespread sharing of copyright material. The impact of piracy seems to be less severe than in other media. Nigel Newton, founder and chief executive of publisher Bloomsbury, recently said “We should reflect on how lucky we are that we are winning this war and that the public accept they should pay something for e-books.” However, from January to June 2011, the Publishers Association noted

copyright infringement online of 31 000 titles on more than 80 000 web pages.

Software

The software industry suffers from both physical and digital piracy. The Business Software Alliance issued 7.5 million take down notices to peer-to-peer and BitTorrent sites in 2009 in regard to the distribution of illegal software online, and suggests that piracy accounts for approximately 40 per cent of the global market. In some countries, most of the software used is sourced illegally. Under-licensing (where companies buy a limited user licence and then install the product on many personal computers or servers), counterfeiting and digital piracy are all challenges for the industry.

Games

Games and entertainment software have been reasonably resilient to piracy, mainly because of the technical difficulty of “hacking” games consoles. The games industry has developed business models that are resistant to piracy, for example through monthly subscriptions and value-added services for games.

