

Intellectual Capital and Law in the Digital Environment¹

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Introduction: Information is a Core Resource

While the market questioned the superiority of “dot com” share portfolios during the year 2000, there is little doubt that we inhabit a world that is saturated with information. A world where information has become a core economic, cultural and social resource.³

The creation and distribution of this information (in the form of informational products) has been heightened by the emergence of a digital environment wherein information is digitised and sent at rapid speed throughout the world via a low cost computer based technology network known as the Internet. And if anyone needs an example to contextualise all of this they only need to contemplate the increasing range of online digital entertainment products (games, music, video etc) available.

In the year 2001, if anything is evident, it is the fact that information and wealth have an intimate connection. In an economy dominated by the creation and distribution of informational products, information is a core resource; it is capital that is used to create wealth. TA Stewart in the foreword to his book *Intellectual Capital: The New Wealth of Organisations*⁴, defines Intellectual Capital (IC) as “intellectual material - knowledge, information, intellectual property, experience - that can be put to use to create wealth”.⁵ Similarly, Bernadette Lynn defines IC in terms of knowledge that can be converted into something of value. She further defines IC in the corporate world in terms of its

¹ This is a revised version of paper presented to the Ivey School of Business at the University of Western Ontario in London Ontario, Canada in October 2000. An earlier version of this article was published in the Ivey Business Journal: see Fitzgerald, B, “Intellectual Capital and Law in the Digital Environment” (March/April 2001) *Ivey Business Journal* 22.

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³ Thurow, L, *Building Wealth: New Rules for Individuals Companies and Countries in the Knowledge-Based Economy*, Harper Collins, New York, 1999; Castells, M, *Information Age: Economy Culture and Society*, Volumes 1-3, Blackwell, Oxford, 1996.

⁴ Bantam Doubleday Dell, New York NY, 1997.

⁵ <<http://members.aol.com/thosstew/forward.htm>>, (23 August 2001).

human (skills of people), relational (relation to clients, customers and suppliers) and structural (firm organisation and culture) dimensions.⁶

IC is evident where information can be realised as wealth. Keep in mind that an IC audit and management plan might highlight how this process of turning information into capital can be more effectively achieved.⁷

1) How can I turn information into something of value? How do I create IC?

Obviously you need good informational “content”. Mel Gibson, the movie star, is reputed to secure fees in excess of \$US20 million dollars per movie simply because he can provide the content; he has good intellectual (human aspect) capital and knows how to sell it. Likewise any business wishing to succeed in the digital environment needs to possess human, relational or structural content that can be realised as wealth in the market place.

An integral part of transforming information into wealth (creating IC) is being able to use a regulatory mechanism to enforce and secure your capital. It is nonsense to say that I am wealthy merely on the basis of my holding millions of dollars of lottery winnings in a bag, if it can be stolen off me without recourse. But I do hold something of value in that bag, capital in fact, that can be transacted in the market place. And that capital is constructed not only by market demand for my product of wealth, in this case money, but also the regulatory mechanisms such as law, that prohibit theft.

2) How does law help construct IC in the digital world?

In the digital environment the quest for informational value (IC) is today fiercely pursued.⁸ Early on, when the Internet was seen as an

⁶ Lynn, B, “Intellectual Capital” (Jan/Feb 2000) *Ivey Business Journal*, 48. See also: Tapscott, D, Ticoll, D and Lowy, A, *Digital Capital: Harnessing the Power of Business Webs*, Harvard Business School Press, Boston, 2000; Birkinshaw, J, “Making Sense of Knowledge Management” (March/April 2001) *Ivey Business Journal* 32; Bernhut, S, “Measuring the Value of Intellectual Capital” (March/April 2001) *Ivey Business Journal* 16.

⁷ Aylen, D, “Knowledge Management: Harnessing the Power of Intellectual Property” (March/April 2001) *Ivey Business Journal* 58; Lesser, E and Everest, K, “Using Communities of Practice To Manage Intellectual Capital” (March/April 2001) *Ivey Business Journal* 37.

⁸ Fitzgerald, A, and others, (eds), *Going Digital 2000: Legal Issues for E Commerce Software and the Internet*, Prospect Media, Sydney, 2000; Shapiro, C and Varian, H,

anarchic space for recreation of the mind, now famous digital libertarian John Perry Barlow proclaimed: "...almost everything we know about intellectual property is wrong ...".⁹ Barlow sang a chorus that resonated with net users and led many to believe that intellectual property rights (such as copyright) could not survive in the new digital environment, where the copying and dissemination of informational products was fast, effective and cheap. While some envisaged an informational utopia the market and the legal system had other ideas.

In the year 2000 litigation by the American recording industry concerning the distribution of mp3 format music files, involving companies such as mp3.com¹⁰ and Napster¹¹, has shown that copyright law is alive and well in the digital environment.¹² It is now clear that law along with other regulatory mechanisms will play a significant role in realising the value of IC in the digital environment. Let us consider more closely some of the regulatory mechanisms that promise to play a significant role in the creation, maintenance and management of IC.

3) Regulatory Mechanism One: Legislation

Legislation is law made by parliament and is a dominant form of legal regulation. Amongst a myriad of other types of legislation, intellectual property legislation has and private sector privacy legislation promises to have a substantial influence on the growing and harvesting of IC.

Information Rules: A Strategic Guide to the Network Economy, Harvard Business School Press, Boston, 1999.

⁹ Barlow, JP, *Selling Wine Without Bottles: The Economy of Mind on the Global* <http://www.eff.org/Publications/John_Perry_Barlow/HTML/idea_economy_article.html>, (22 August 2001).

¹⁰ UMG Recordings, Interscope Records, Sony Music Entertainment, Atlantic Recording Corporation, Capital Records, BMG Music, Elektra Entertainment Group, Arista Records, Sire Records Group, Warner Bros. v MP3.com, Inc (S.D.N.Y. 2000) <http://riaa.com/PDF/MP3_Court_Ruling.pdf>, (22 August 2001).

¹¹ *A&M Records et al v. Napster* (9th Cir. 2001) 2001 U.S. App. LEXIS 5446 <<http://www.ce9.uscourts.gov/web/newopinions.nsf/4bc2cbe0ce5be94e88256927007a37b9/c4f204f69c2538f6882569f100616b06?OpenDocument>>, (23 August 2001).

¹² See generally W. Fisher, *Digital Music: Problems and Possibilities*, <http://www.law.harvard.edu/Academic_Affairs/coursepages/tfisher/Music.htm >, (22 August 2001).

Intellectual Property Legislation

Intellectual property law in North America, Europe and Australia – such as copyright, patent and trademark – is nowadays predominantly found in legislation. That means, it is law made by parliament having applicability to all people and enforced at first through negotiation and if all else fails a court order or judgment.

Intellectual property laws (if effective) can act to facilitate the process of commodifying information so that it can be fully exploited in the market place. The commodification process acts to fence off and package the digital estate which otherwise has no physical boundary. Law plays an integral role in defining the structure of the informational commodity and in this sense law acts like *infrastructure* in the digital economy.

Intellectual property law creates enforceable rights to control informational value – for example copyright law gives the copyright owner power to control the reproduction and more recently communication of certain informational products for life of the author plus 50 years (Canada and Australia) or 70 years (USA and Europe), while patent law bestows the right to control the making, using and selling of the invention for 20 years.¹³ We say that the beneficiary of such rights holds a form of property (which is the embodiment of an aspect of IC) that can be bought and sold in the market place.

At base, such legislation is designed to provide an incentive for people to create intellectual property for the betterment of society as a whole.¹⁴ The idea being that as information, once disclosed, cannot be contained there is a need to reward the initial creator through legally enforceable rights to control the use of the information. This reward provides an incentive for creating a publicly useful informational

¹³ On the definition of intellectual property rights generally see: *Agreement on Trade-Related Aspects of Intellectual Property Rights* (TRIPS) which is an annexure to the World Trade Organisation Agreement of 1994: <<http://www.wto.org>> A large amount of intellectual property legislation is derived from international conventions/treaties, the TRIPs agreement being a current and concise summary of those international principles.

¹⁴ *Mazer v. Stein*, 347 U.S. 201 at 209 (1954); *Graham v John Deere Co* 383 US 1 at 5-6 (1966); D.Vaver, *Intellectual Property Law* (1997) Irwin Law Concord, Ontario, 6-13; Fewer, D, “Constitutionalizing Copyright: Freedom of Expression and the Limits of Copyright in Canada” (1997) 55 *U.T. Fac. L. Rev.* 175 at 187-193; Ricketson, S and Richardson, M, *Intellectual Property: Cases, Materials and Commentary*, Butterworths, Sydney, 1998, 8-18; *Welcome Real-Time SA v Catuity Inc* [2001] FCA 445 at para. 129.

product which otherwise would be hard to commodify, exploit or fence off for personal gain.¹⁵

However these intellectual property rights that serve to commodify and thereby create intellectual capital are not absolute. They are only awarded to the point of being necessary to create an incentive for people to produce intellectual goods.¹⁶ It would be difficult to argue that James Joyce's work *Ulysess* should be subject to copyright protection forever. The reason for giving the legal sanction or monopoly to exploit the product – the incentive to create (the reward) – has now long passed, as has Joyce himself.

If these legal rights did not exist the next person could appropriate your intellectual thought for themselves and your ability to exploit the full value of your thoughts would be significantly reduced. Capital would be devalued to the point (in many instances) of being worthless. Law acts to build a fence around the informational product and where there is market demand it allows the creator or inventor to fully realise their intellectual capital as wealth. Obviously if the law cannot be enforced or is otherwise ineffective informational value will dissipate.

Software is a good example of digital information being turned into wealth with the backing of intellectual property law. Software is at the heart of the digital environment; it is the customising agent for information technology. Everything you see, hear and experience in the digital environment is mediated through software. Software is a discourse, meaning it allows things to be understood. This discursive aspect of software promises to influence the depth of the intellectual property rights granted in software.¹⁷

¹⁵ On further theories of intellectual property see: Fisher, W, "Theories of Intellectual Property" in S. Munzer (ed.) *New Essays in the Legal and Political Theory of Property*, Cambridge University Press, Cambridge, 2000.

<http://www.law.harvard.edu/Academic_Affairs/coursepages/tfisher/iptheory.html>
For instance, arguments concerning moral rights promise to be more prominent in Australian law since the passing of the *Copyright Amendment (Moral Rights) Act 2000*, while social planning/culture based notions of intellectual property will continue to fuel more arguments for the freeing up of digitised information: Benkler, Y, "Free as the Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain" (1999) 74 *New York University LR* 354.

¹⁶ William Fisher III, "Reconstructing the Fair Use Doctrine" 101 *Harvard Law Review* 1659; Fitzgerald, B, "Underlying Rationales of Fair Use: Simplifying the Copyright Act", 2 *S Cross UL Rev* 153 (1998) <<http://www.scu.edu.au/schools/lawj>>; Litman, J, "The Public Domain" (1990) 30 *Emory LJ* 965; *Grain Pool of WA v The Commonwealth* [2000] HCA 14 per Kirby J. at f/n 218 <http://www.austlii.edu.au/au/cases/cth/high_ct/2000/14.html>, (22 August 2001).

¹⁷ Fitzgerald, B, "Software as Discourse: The Power of Intellectual Property in Digital Architecture" (2000) 18 *Cardozo Arts & Ent. L.J.* 337.

Software Patents

Software was initially protected in law by copyright in that computer (source or object) code is a literary text. More recently firms have sought to protect software through patent law. While copyright law gives control rights for life of the author plus 50 or 70 years over the expression of an idea but not the idea itself, patent law gives a deeper yet shorter protection over the invention itself. To circumvent copyright law all I need do is work out an original way of expressing the idea; with patent that option is not readily available. Therefore if I have a patent on a marketable informational product like software I have a very deep and powerful form of IC.

During the 1990s, the number of software patents granted in the US increased tremendously and is now estimated to exceed 20,000 patents per year. In recent times there have been more and more extensive claims to patent rights in software that acts as the basic architecture of electronic commerce. There have been a number of claims in the US that methods of transacting electronic commerce (including digital cash) are patented and cannot be replicated without a licence. In *Amazon.com Inc v. Barnesandnoble.com Inc.*¹⁸ a preliminary injunction was granted by a District Court judge in Seattle that prohibited Barnes&Noble from using one-click technology in the online shopping process. Paragraph One of the Amazon's complaint reads: "Amazon.com brings this suit to redress Defendants' willful infringement of Amazon.com's patent encompassing its 1-Click method for processing on-line shopping orders. Amazon.com's 1-Click system is a major innovation in e-commerce: it allows customers to order, pay for, and arrange for delivery of any item Amazon.com sells, all with a single click of the mouse. The 1-Click method is popular with customers because it gives them a faster, more convenient, more efficient, and more pleasant shopping experience. In May 1998, Defendants meticulously copied Amazon.com's 1-Click process, dubbed it "Express Lane", and introduced it on their barnesandnoble.com website. Defendant's Express Lane ordering system infringes Amazon.com's United States Patent No. 5,960,411 (the "411 patent")" In what may represent a changing landscape, the Federal Circuit on appeal¹⁹ has recently vacated the preliminary injunction in this case on the basis that the patent is potentially invalid.

Software based e commerce business method patents have become so wide spread in the US that many sections of the community are calling

¹⁸ (1999) WL 1095502.

¹⁹ *Amazon.com Inc v. Barnesandnoble.com Inc.*,
<<http://www.law.upenn.edu/polk/00-1109.pdf>>, (22 August 2001).

for a more principled approach to the granting of these patents.²⁰ When you consider that many of the business activities that we can do in real space commerce, like simple payment for a good, are free, the notion that such a transaction once wrapped in software and patented needs to be licensed and paid for, is worrying

However the point needs to be made that information on how to conduct electronic commerce successfully backed up by a patent and properly managed creates a powerful form of IC.

The Emerging Issue of Data Capital Legislation

From a legal perspective we need to distinguish between two types of intellectual capital. In essence lawyers make the distinction between intellectual capital and data capital. Intellectual capital is represented by an informational product that is expressive (copyright) or inventive (patent) and is protected under traditional intellectual property law. It is capital and has an intellectual aspect. Data capital on the other hand can be evidenced in raw data that has a value in its collection and convenience and efficiency of access.

The legal system has found problems in protecting collections of raw data. While copyright law will protect the expression of an idea (or data) it will not normally protect the idea or data itself. Let me explain further by way of example. Imagine that I run a business – Factory Inc - constructing databases. I invest fifty million dollars to construct a database in the form of a worldwide landline and mobile telephone directory. The directory is sold in stores on CD or via the Internet with a contractual user licence attached, that prohibits copying or further sale of the product without my permission. A consumer named Speculator purchases the CD, decrypts the anti-copy protection measure, reproduces the contents and loads it on to their website, giving it away for free and thereby developing a thriving business based on advertisement and accessory based revenue. A third party named Derivative, without any notice of wrongdoing, copies the content off the Speculator website and is developing a thriving business by selling the product in emerging economies.

Factory Inc would pursue Speculator for breach of contract, hoping the contract would hold up in court.²¹ However contract unlike

²⁰ For recent Australian judicial consideration of the validity of an e commerce business method patent see: *Welcome Real-Time SA v Catuity Inc* [2001] FCA 445.

²¹ On this point consider: *ProCD Inc. v. Zeidenberg* 86 F.3d 1447 (7th Cir. 1996); *Hotmail Corporation v Van Money Pie Inc* 47 U.S.P.Q. 2d. 1020 (N.D. Cal. 1998); *Register.com v Verio Inc.* 126 F. Supp. 2d 238 (S.D.N.Y. 2001); *Hill v Gateway 2000*

legislation only binds parties to the agreement and therefore it would not provide Factory with any action against Derivative. The selection and arrangement of the raw data/facts can be subject to copyright protection but let us presume in this case the layout is basic and lacks originality. Therefore the copying undertaken by Speculator and Derivative is arguably not a breach of copyright law because the copying concerns raw data/facts not expression of those facts.²² If it were not for the contract with Speculator, Factory Inc would have very limited legal options.

Concern over the legal protection of the investment made in creating databases was heightened by US Supreme Court decision in *Feist Publications Inc. v Rural Telephone Service Co*²³ where the court held that telephone directories were not protected under copyright as they did not satisfy the (very low) level of creativity required under the US Copyright Act 1976.²⁴ Accordingly, the plaintiff's, who had invested significant resources in developing the directories were denied a remedy in copyright law. This led to arguments for the creation of *sui generis* legal protection for databases.

In 1996, the European Union adopted a *Directive on the Legal Protection of Databases*²⁵ that proposed a *sui generis* regime, and then later in 1996 the World Intellectual Property Organisation (WIPO) produced proposals for a similar international scheme for the protection of databases. The EU Directive creates an exclusive *sui generis* right for the makers of databases.²⁶ The general objective of this right is to protect the investment of time, money and effort by the maker of a database, irrespective of whether the database is in itself innovative. According to the Directive, a database is protected if there

Inc 105 F. 3d 1147 (7th Cir. 1997) *NBA v. Motorola, Inc.*, 105 F.3d 841 41 U.S.P.Q.2d (BNA) 1585 (2d Cir. N.Y. 1997); cf. *Wrench LLC v. Taco Bell Corp.*, 51 F. Supp. 2d 840 (W.D. Mich. 1999), *Klocek v. Gateway, Inc.*, 104 F. Supp. 2d 1332 (D. Kan. 2000); *Specht v Netscape Communications Corp.* (S.D.N.Y., 2001); Lemley, Menell, Merges and Samuelson, *Software and Internet Law*, Aspen Law and Business Publishers, New York, 2000, pp 490-5.

²² Note that a recent Australian decision (discussed below) suggests copyright will have a role to play in this scenario: *Telstra Corporation Limited v Desktop Marketing Systems Pty Ltd* [2001] FCA 612.

²³ 499 US 340 (1991).

²⁴ The Canadian Federal Court of Appeal took a similar approach in *Tele-Direct (Publications) Inc v American Business Information Inc* (1997) 154 DLR 4th 328 leave to appeal refused (1998) 228 NR 200.

²⁵ Directive 96/9/EC, 1996 O.J. (L 77) 20.

²⁶ A reciprocity principle embodied in art 11(3) means that database makers from countries outside the EU will not be given the benefits of these database rights unless their countries offer comparable protection to EU database makers.

has been a substantial investment, in qualitative or quantitative terms, in obtaining, verifying or presenting the contents of the database. The duration of the protection provided by the Directive is fifteen years.

At present, the WIPO proposal has stalled, however the EU directive is slowly being introduced.²⁷ The US Congress has considered a number of proposals for database protection but is yet to enact a definitive *sui generis* regime. One proposal from 1999 was the *Collections of Information Antipiracy Bill 1999* (U.S.A.) which read in part:

1402. Prohibition against misappropriation

“Any person who extracts, or uses in commerce, all or a substantial part, measured either quantitatively or qualitatively, of a collection of information gathered, organized, or maintained by another person through the investment of substantial monetary or other resources, so as to cause harm to the actual or potential market of that other person, or a successor in interest of that other person, for a product or service that incorporates that collection of information and is offered or intended to be offered for sale or otherwise in commerce by that other person, or a successor in interest of that person, shall be liable to that person or successor in interest for the remedies set forth in section 1406.”

This Act proposed to protect databases for up to fifteen years. A more “user friendly” proposal was the *Consumer and Investor Access to Information Bill 1999* (U.S.A.). Variations of both proposals are still being considered. Canada and Australia do not have a *sui generis* regime for database protection although both countries have been examining the issue for some time.

The point to be made is that the legal system in North America gives very limited protection to data capital in the form of a database. A number of people would argue that such rights should never be given on the basis that facts as the building blocks of knowledge must be free to the public and not owned by any one person.²⁸ For one

²⁷ See by way of example the implementation of the EU Directive in the UK through the *Copyright and Rights in Databases Regulations 1997* (SI 1997/3032) and a recent case based on these new database rights: *The British Horseracing Board Limited v William Hill Organisation Limited* (Chancery Division, Patents Court, 9 February 2001).

²⁸ Reichman, J, and Samuelson, P, “Intellectual Property Rights in Data?” (1997) 50 *Vand. L. Rev.* 51.

wanting to create data capital in this area the non-existence of legislation on this issue will make it very difficult. The further point to note is that other types of data not protected by intellectual property law will also face similar problems having to rely on contract or trade secret law.

A recent decision by a single judge of the Federal Court of Australia in *Telstra Corporation Limited v Desktop Marketing Systems Pty Ltd*²⁹ concerning telephone directories goes the other way, suggesting that copyright law will protect the compilation of facts even in the absence of intellectual input (creativity). The judge felt compelled to follow a line of English cases, which he said, held that a non-creative compilation of facts was protected by copyright law. The *Telstra* decision could be narrowed in effect if it could be read so as to allow a second database maker to avoid liability for copying by rearranging and adding to the compilation of facts. However the decision in the case – where rearrangement and additional facts did not prevent a finding of copying - along with the judge’s apparent willingness to protect the value of collecting the raw data suggests this decision will see the effort put into compiling raw data given significant protection by copyright law in Australia. With the emergence of *sui generis* database regimes in Europe and inevitably the USA, it will be interesting to see how this case is decided if it goes to a higher court on appeal. If this decision remains as “good law” then the ability to create data capital in Australia is very much enhanced.

Private Sector Privacy Legislation

Think about this scenario. One evening I go to the local supermarket, video shop and liquor store and make my purchases on my credit card and also swipe my loyalty card to gain flyer points. I also enter a competition to win a holiday in Bali and of course provide a host of intimate details. And so the story goes on. Each day of the information age private firms collect an enormous amount of information about me. Most of this information can be bought and sold in the market place to assist data profiling and marketing.³⁰ Things are about to change and business practice will need to be reviewed as this form of IC goes through legislative restructuring.

²⁹ [2001] FCA 612.

³⁰ Samuelson, P, "Privacy as Intellectual Property" (2000) 52 *Stan. L. Rev.* 1125. <<http://www.sims.berkeley.edu/~pam/papers.html>>; Rothstein, L, "Privacy or Dignity?: Electronic Monitoring in the Workplace" (2000) *New York Law School Journal of International and Comparative Law* 379.

While use of private information by government and public bodies has been regulated in the US, Canada and Australia during the last twenty years, the flow of data in the private sector has been subject to very little legal constraint. In 1995 the European Union responding to concerns over the invasive nature of the Internet and its tremendous capacity to trace and profile individual identity promulgated the European Directive on Data Protection.³¹ In short the directive requires member states to enact legislation covering the processing of data collection in the private sector requiring, the purpose for which the information was gathered be disclosed at the point of receipt, the information only be used for that purpose, the individual have the right to request to see data on themselves, yet providing that full and informed consent of the data subject could be used to override many of the obligations imposed by the Directive. Most importantly Art 25 of the EU Directive stipulates that EU businesses cannot disclose data to members of third party states unless it is shown that effective data protection regimes are in place in those states. Canada has responded by enacting similar obligations in the *Privacy and Electronic Documents Act* passed in April 2000 and likewise Australia has enacted the *Privacy Amendment (Private Sector) Act* passed in December 2000. In the US federal legislation has been avoided and in its place the US Department of Commerce has promulgated Safe Harbour rules, which act as an optional self-regulatory structure.³² The efficacy of such a regime is still in question.

Increasingly, privacy regimes for the private sector will regulate the way in which private data can be exploited in the market place. It will control the way in which that information can be turned into wealth. An up to date IC audit must take into account the ways in which private sector privacy laws will impact upon the exploitation of personal data.

4) Regulatory Mechanism Two: Contractual Private Ordering

The contract, an agreement between two or more parties, is the foundation of many privately ordered relationships and is increasingly

³¹ European Community Directive on the Protection of Individuals with Regard to the Processing of Personal Data and on the Free Movement of Such Data 24 October 1995, <http://www.privacy.org/pi/intl_orgs/ec/final_EU_Data_Protection.html>, (22 August 2001).

³² *Safe Harbor Privacy Principles* Issued by the U.S. Department of Commerce on July 21, 2000 <<http://www.export.gov/safeharbor/SHPRINCIPLESFINAL.htm>>, (23 August 2001).

being used to regulate informational property entitlements in the digital environment. It is therefore intimately connected with IC.

Contractual rights can be used to extend public or legislative rights to informational value, especially in the area of data capital. Remember the example given above concerning Factory and Speculator. While there may be no recognised legislative intellectual property right in data (especially in North America) a contract can be used to regulate the way in which people use information you have collected; to create contractual or privately ordered informational property rights. The limit of contract (besides some complex constitutional issues concerning pre-emption³³) is that it is only enforceable against the parties to the contract and not the world at large. For instance if I bought a licence to use data that contained restrictions on my further copying, selling or exploiting the data, that licence would not bind a stranger who copied the data – as explained in the example above concerning Derivative.

Contract is also vitally important to the broader issue of information licensing. In the information economy informational products are licensed not sold – it is said the license is the product.³⁴ In most instances you do not receive an ownership right to anything but rather a right to use information. In real space when I buy a book I do not obtain ownership of the copyright owners right to reproduce the book but I do gain ownership of the physical thing called the book. With informational products, games and digital images in many instances you are only given a licence to use the information for specific purposes and to this end you must read the licence closely to determine your user rights. Recently when helping design a conference brochure I perused a multi CD set of images that my University had “purchased”. While an assistant assured me (in good faith) that we owned the images because we had purchased them, on closer reading of the contractual license I found a clause restricting use of the images in certain circumstances. My University’s user rights were defined by the license. This confirms my view that the contractual licence - defining how you can use the informational product - is an integral part of leveraging your IC.

³³ On this issue see: *ProCD Inc. v. Zeidenberg*, 86 F.3d 1447 at 1453-55 (7th Cir. 1996); Lemley, M, “Beyond Pre-emption: The Law and Policy of Intellectual Property Licensing” (1999) 87 *Calif. L. Rev.* 111; Reichman, J, and Franklin, J, “Privately Legislated Intellectual Property Rights: Reconciling Freedom of Contract with Public Good Uses of Information” (1999) 147 *U. Pa. L. Rev.* 875.

³⁴ Fitzgerald, B, “Commodifying and Transacting Informational Products Through Contractual Licences: The Challenge for Informational Constitutionalism” in CEF Rickett and GW Austin (eds), *Intellectual Property and the Common Law World*, Oxford, Hart Publishing, 2000, p 35.

Domain Names

Contract has been even more prominent in the area of domain name allocation. Allocation of the premium Internet commercial trading domain “.com” is now performed through a contractual regime created under the auspices of the Internet Corporation for Assigned Names and Numbers (ICANN)³⁵ that enlivens compulsory arbitration should a dispute arise.³⁶

The recent string of personality cases concerning JuliaRoberst.com, Sting.com and Madonna.com are interesting examples.³⁷ Enterprising business people moved in early and registered these domains. The famous stars behind the names now wanted them and sought to invoke the ICANN dispute resolution policy, which involves compulsory arbitration. The domain name registrant at the time of registration contractually binds himself or herself to enter arbitration and abide by the decision. If the registrant is found to have registered and used the domain name in bad faith *vis a vis* a trade mark they stand to lose that registration. Julia Roberts and Madonna were successful as they could show the necessary elements including that they possessed a trademark while Sting due to generic nature of the word and other difficulties was held not to have possessed the requisite trademark.

This system is in line for an overhaul as the legitimacy, consistency and accountability of the process is in question.³⁸ Nevertheless, let me make some observations. The ICANN system of resolving domain name disputes, with in excess of 3000 cases since the beginning of the year 2000, has through contractually agreed principles sought to protect informational value, yet to this point the majority of the decisions have favoured the traditional trademark holder and not the domain name speculator. Domain name speculation has been treated like a case of the theft of the investment value of the trademark.³⁹ The

³⁵ <<http://www.icann.org>>, (22.8.2001).

³⁶ Art 4, ICANN Uniform Domain Names Dispute Resolution Policy (UDRP) at <<http://www.icann.org>>, (22 August 2001).

³⁷ These decisions are available at <<http://arbiter.wipo.int/domains/decisions/index.html>>, (22 August 2001).

³⁸ Froomkin, M, “Wrong Turn in Cyberspace: Using ICANN to Route Around the APA and the Constitution” (2000) 50 *Duke L. J.* 17 <<http://personal.law.miami.edu/~froomkin/articles/icann-main.htm>>, (22 August 2001).

³⁹ On this notion see: Fitzgerald, B, and Sheehan, E, "Trademark Dilution and the Commodification of Information: Understanding the "Cultural Command"" (1999) 3 *Mac LR* 61.

speculator has rarely been regarded as deserving of reward. Perhaps there should be arguments for value on both sides but this is difficult to apportion. For good or bad what this system shows very clearly is a contractual regime being used to ensure IC is realised as wealth.

Overall let me make this simple point. Contract is a vital strategy in creating and harvesting IC.

5) Regulatory Mechanism Three: Technological Constraints

More and more technology is being used as means of regulating our behaviour in relation to informational products. Stanford law professor Larry Lessig in his seminal book *Code and Other Laws of Cyberspace*⁴⁰, highlights how the digital environment is not a given but rather a construction of code writers. The “nature” we inhabit in the digital world is that constructed through technology and technologists. In Lessig’s theory there are four modalities of regulation: customary norms, the market, law and architecture. If I want to stop someone speeding I can employ the four modalities of regulation by encouraging a customary norm that speeding is bad through means such as advertising; raise the price of petrol (market); enact a law to say speeding is an offence; and build a restraining architecture such as a mechanical limit in the car or speed bumps. It is as simple as speed bumps. Just as architecture in real space can constrain our action Lessig explains architecture in the digital world (code) can regulate what we do.

Therefore, instead of relying solely on law (e.g. copyright law) to protect my IC (information that I can turn into wealth (e.g. software)) I should consider what technological mechanisms are available to regulate access and use of my informational product. The big players have already begun this process and we will hear more and more about the role encryption will serve in the distribution of digital entertainment informational products. And while many advocate that technological restraints need to be principled and give balanced access to the public – in the way copyright legislation does – the legislatures have enacted laws like the *Digital Millennium Copyright Act (DMCA)* in the USA and the *Copyright Amendment (Digital Agenda) Act 2000* in Australia which serve to buttress technological constraints by making it a crime to deal in or provide devices that circumvent technological protection measures. These types of laws combined with code will make technological protection measures crucial in the new environment.

⁴⁰ Lessig, L, *Code and Other Laws of Cyberspace*, Basic Books, New York, 1999.

For example, the latest version of a popular software product contains technological or coded restraints that make it very difficult to copy and load the software on to a second machine. This technological constraint is designed to enforce copyright in the software. Likewise, Digital Versatile Discs (DVDs) are distributed with anti-copying CSS encryption, which will only allow them to be accessed through an authorised player. The fear of some people is that coded restraints could become a law unto themselves and slant protection too far in favour of the property holder.

In short, technological regulatory measures are an important part of the realising the value of IC in the digital environment.

Conclusion: The Strategy of Choice and Complementarity

To realise wealth in the digital economy one needs to fully understand the ambit of the regulatory measures that can be used to secure IC.⁴¹ Law (legislation and contract) along with technology will play a major role in determining the value of IC in the digital world. Of course, an ability to manage and fully realise your IC will also be needed.

⁴¹ However one must also appreciate the ethical limits of their claims. Just as environmental considerations inform the exploitation of the natural environment, access and user considerations will inform the exploitation of the digital environment. As I have noted above there are various points where law will not and should not allow information to be removed from the public through private ownership or control.