THE INDIAN JOURNAL OF LAW AND TECHNOLOGY
Volume 1, 2005

TECHNOLOGY, LAW, FREEDOM AND DEVELOPMENT

*Yochai Benkler**

ABSTRACT

Technology interacts with social, economic and legal frameworks to set the basic 'affordances' and constraints of human action over time. While biotechnology and nanotechnology may portend significant upheavals in the future, the most significant present transformation revolves around computers and the emergence of the networked information economy. These new technological and economic conditions are creating new forms of production and new forms of social behaviour that are fundamentally altering the way we know the world, how we learn about how the world is and how we can make it become. It is important that we study this transformation and understand it in political as well as economic terms. How we manage the transition - in particular how we construct the basic institutions governing it, such as intellectual property and communications law - will go to the very structure of freedom and the possibility of human development in the coming decades.

TABLE OF CONTENTS

---

* Professor of Law, Yale Law School; LL.B. '91, Faculty of Law, Tel-Aviv University; J.D. '94, Harvard Law School.

I am honoured to have been asked to write a few words upon the inauguration of the Indian Journal of Law and Technology. We stand at a moment of transformation in the conditions of economic production and human freedom - a moment wrought by a cluster of technological shifts and, in large measure, managed through law. Law already is, and will continue to be, a major domain in which the conditions of tomorrow are negotiated, but it cannot be thought of without understanding the technological, economic and social context in which it operates and the historical moment at which it intersects with these other disciplines. A systematic dedication to understanding how technology is affecting life and how law interacts with technology is a precondition to understanding the stakes and implications of the institutional battles we observe today.

I. OF LAW, TECHNOLOGY AND BEHAVIOUR

We can think of law as one of a series of systems within which human action occurs. Coarsely, we can say that technology, law, economic conditions and practices, social relations and cultural conceptions are different systems or contexts within which human beings act, alone and with others. Each of these systems, and the interaction among them in any given society and time, has certain characteristics that, borrowing from the language of engineering we could call 'affordances and constraints'. By 'affordances' we refer to actions and behaviours that a context or system makes feasible or easy. By 'constraints' we refer to practices and behaviours that are made difficult by acting through this context. To render this abstract statement concrete, think of an automobile. It affords us the ability to travel at much greater speeds and carry much heavier loads than animal transport could, but is generally constrained to be used along a relatively narrow range of paths such as roads, highways and dirt paths, but not through terrains such as forests or over sands. It is the combination of these affordances and constraints that support some of the social patterns, particularly suburbanisation, that typify a heavily automobile-based society like the United States. A standard rule of law, say, "everyone should drive on the right side of the road", also provides affordances and constraints. It not

only constrains behaviour - "thou shalt not drive on the left" - it also enables those who live under it to plan effectively how to drive with some degree of safety - to wit, on the right. By using the terminology of 'affordances' and 'constraints', however, I mean to recognise that none of these contexts is usually deterministically related to outcome or actual behaviour. We can, and sometimes do, when we need to, drive on the left or off-road. The point is that on a large societal scale, contexts that have certain affordances and constraints will tend to support patterns of behaviour that the context makes easier to pursue, and to suppress patterns of behaviour that the context makes harder. This is not technological or legal determinism. It is merely an observation about the tendencies of various configurations of constraints and affordances to support or undermine certain actual behavioural practices at a societal level. These behavioural practices can then become the basis for normative assessment and, in turn, for a discussion about the design of law, of technology, or of economic and social systems of action that have contributed to the emergence of practices that our normative analysis tells us are desirable or undesirable.

The different contextual systems - law, economic structure and organisational strategy, social relations and norms, and technology - do not always cohere in their affordances and constraints. There are periods of dislocation where one or the other of these systems will change sufficiently so as to bring the practices it makes easier into conflict with those supported by the other systems. The dislocation brought about by industrialisation, a combination of technical and economic organisational changes, for village-centred social life is the staple example from the Industrial Revolution. Perhaps less obvious are the changes in law and socio-cultural practice required to move from a system of feudal relations in the country and artisanship and guilds in cities to a system of free labour, that is, towards a more fluid market in labour that industrialisation required. Over time, however, as the practices collide through more or less violent upheaval, the various systems fit together more closely, through changes in some and suppression of others. The result over time is a system of punctuated equilibria or path dependencies. Periods of relative stability and coherence among the different systems of context are punctuated by moments of change and transformation, during which dislocation occurs and conflict ensues to determine the characteristics of the next equilibrium.

From the vantage point of 2005, it seems as though we are going through at least one such period of transformation. The instigating event was, in this case, technological - the development of the chip and with it the launching of the personal computer, combined with the development of the Internet and the launching of a global communications network. It is likely that the discovery of DNA at more or less the same time and the subsequent emergence of biotechnology will bring about as profound a transformation. However, except in the very important area of agriculture, its contours are not yet clear, and we have not quite reached a point where biotechnological transformation exerts pressure on our existing social, economic, and political institutions. Further yet into the future is the likely effect of nanotechnology, which is at present beyond the point of science fiction, but it is too early to offer a good sense of how profound a change it will in fact bring. Monitoring and predicting the effects of those fields will necessarily play an important role in the study of law and technology. But much more immediate is the transformation caused by personal computing and global connectivity. It is already upon us, and its disruptive effects are very real and already the subject of much legal and political debate.

II. THE RISE OF THE NETWORKED INFORMATION ECONOMY

We have for several decades been talking about the rise of the information society or information economy. Emphasising the continuity of the present transformation with the rising importance of information in the past five decades is of course partly valid, but it tends to obscure more than it reveals. While it is obviously true that the relative weight of information production and symbolic manipulation have grown in the developed economies and the more developed sectors and regions of developing economies, much of information production throughout this period was organised in an industrial model and around the needs of industrial production. Beginning with the high-throughput electric presses of the second quarter of the nineteenth century, the capital cost of producing media increased vastly, later followed by high-cost radio transmitters, televisions, satellites, and mainframe computers. Throughout this period, participating in the production of information required a capacity to raise vast amounts of capital and the 'business models' for production of information, knowledge and culture tended to be either market-based or government-funded. The critical role traditionally played by social

processes - family, friends, neighbours, teachers - in producing the information environment within which most human beings grew up was eroded significantly, especially in more technologically developed and dependent societies.

The networked personal computer inverts the capital structure of information production and exchange that has been the stable fact of these sectors for over one hundred and fifty years. While the exact number is difficult to pin down, somewhere between six hundred million and one billion people around the globe now own the basic physical capital necessary to produce information, knowledge and culture, and to participate in the global economy centred on them. That means that almost one billion people on the planet now have the freedom to decide to produce information or culture simply because they want to - they already have access to the physical requirements and the human intuition, wisdom and creativity necessary to do so. They do not need a business plan to write software to serve a need they have. If they know how to do it, they can write it and find others who will work with them to improve it. This is the fundamental fact proven by the dramatic success of free and open-source software development. Over a million programmers participate in tens of thousands of projects, the best known of which are responsible for most of the basic functions of Internet communications, some having been adopted in the face of strong, but ultimately unsuccessful, competition from proprietary firms. Thirty thousand individuals can come together to construct a free online encyclopaedia such as Wikipedia[1], which may not displace the Encyclopædia Britannica quite yet, but is a very good substitute for most other online encyclopaedias. Examples are by now legion, and we have reasonably good economic models to explain why commons-based information production in general, and peer production in particular, occurs, and why both types of production are sustainable under the conditions that typify a networked information environment.

The critical transformational fact is that all these people can now come together with machines they already own or have ready access to. There is no need to buy a steam engine, a production line or a broadcast station as a

[1] *See Wikipedia: About*, *at* http://en.wikipedia.org/wiki/Wikipedia:About (last visited Oct. 12, 2005) (describing the collaborative nature of the Wikipedia project).

precondition to being able to cooperate productively. The same motivations that bring us to spend time with friends and to talk about politics with our neighbours and family now bring us to participate in various effective practices of information production. But, unlike in the industrial economy, in the networked information economy, these outputs of basic human connectedness become actual, effective substitutes for market-based or government-funded information goods. In the global information economy, what that means is that basic human social relations come to occupy a vastly more important role as an economic phenomenon. Moreover, civil society can come to play a substantially more important role than it could when larger amounts of money were required to act in the public sphere and in providing basic needs.

The rise in the potential and actual importance of non-market behaviour has significant and positive implications for both freedom and development. By non-market behaviour I mean to encompass both organised action in the traditional non-profit and non-governmental sectors and, more radically and importantly, effective individual action alone, in loose association with others and in larger-scale peer-production processes such as free and open-source software development. Together these newly emerging behaviours are beginning to offer new avenues for constructing the public sphere, for opening up new domains of individual autonomy, and, perhaps most immediately relevant to the challenges and opportunities faced by India today, for development.

III. THE CONSTRUCTION OF THE PUBLIC SPHERE

Mass media has been a part of all modern democracies. The early Dutch and American republics, France in the few brief years between the French Revolution and the Terror and, more ambiguously, the early British parliamentary democracy, had a press that was small-scale, artisanal, and largely independent of market forces or government subsidy. Beginning in the second quarter of the nineteenth century and gathering force over the following one hundred and fifty years, the public sphere was constructed on a mass media model - a very small number of professional speakers at the core controlled what millions of people read, listened to and saw. The critical change was brought about by the vastly higher cost of new technologies for printing papers for mass circulation and the great increase in the number and geographic dispersion of people who were part of the relevant political community, changes

that were themselves brought about by steam transportation, both rail and shipping, and the increased production capacity that required large markets. The increasing size and geographic dispersion of the relevant political communities meant in turn that the papers necessary for these ever-growing relevant political communities had larger distributions. The cost of meeting these new requirements squeezed out the artisan press and ushered in industrial production of the public sphere. When radio was introduced, there was a brief period when it was technically and legally possible for it to go a different way - small-scale, local and inexpensive. But in a series of policy moves during the 1920s, all major countries adopted policies that fell into one of three models: nationalisation, which typified Continental Europe and its colonies, the BBC hybrid model, with or without monopoly, which typified Great Britain and its colonies and former colonies, and the American system of advertiser-supported media, highly concentrated and co-dependent on government regulation. From that point on there were no more inflection points until the rise of the Internet.

The past few years have seen a radical inversion of the capital structure of the production of the public sphere. Since the early 1990s we have read many proclamations about how 'cyberspace' allows everyone to be a pamphleteer. To some extent, this has been an exaggeration. The power of the mass media continues to loom large even in societies where Internet penetration is very high. And yet, without embracing the millenarian view that democracy will be completely revitalised by the Internet, the past decade and, in particular, five years of research into actual authoring and linking practices on the Internet suggest that we are in fact seeing a quite basic change in the relative ease with which almost anyone who has access to an Internet connection can find a way of injecting their observations and concerns into the public sphere. We are beginning to see peer production of the type we have seen in software development being applied to the core functions of the media in democratic societies - from the watchdog function of the press to sustained commentary and a platform for discussion. For example, a combination of activists, academics and students were able to investigate, analyse, and publicise criticisms of voting machines introduced by one of the major manufacturers in the United States, causing many of the machines to be decertified in California.[2] Patterns of linking and archiving materials and

[2] *See* John Schwartz, *File Sharing Pits Copyright Against Free Speech*, N.Y. TIMES, Nov. 3, 2003, at C1; Melanie Warner, *Machine Politics in the Digital Age*, N.Y. TIMES, Nov. 9, 2003, at C1.

inviting readers to read the underlying documents for themselves and linking across ideological divides point to an emerging culture where groups that share intense interests cluster around a few hundred websites of varying but significant visibility, and these create a new public sphere. In this public sphere, intense interest to a dedicated group of users, rather than mild interest to large masses of audiences, becomes important to public debate. Money cannot dominate the discourse, as it does to a large extent in the commercial mass mediated environment, nor can the government control the agenda as completely where the mass media are state-owned. Independently, networked communications have become a new platform for social mobilisation, as the use of SMS in the Philippines during the demonstrations that led to the ouster of President Estrada has come to symbolise.[3] While the Internet has not, as some claimed it would in the mid-1990s, brought forth a completely new and utopian democracy, the emergence of a larger role for non-market, decentralised information production and exchange has provided some well-defined improvements over the reasonably well-known democratic failings of mass media. As the relevant market and, because of the ever-expanding role of the international trade regime as a source of substantive law, the relevant political community become global, the capacity of the networked information economy to increase the importance of intense engagement and moderate the dominance of money becomes particularly important.

IV. COMMONS-BASED PRODUCTION AND DEVELOPMENT

The relationship of the networked information economy to development is more instrumental than intrinsic. If one were to take, at the most simple level, the components of the Human Development Index as a starting point, it becomes obvious that the way we produce and manage information, knowledge and culture is germane to development. The basic requirements of living a long and healthy life, as measured by healthy life expectancy, that is informed and acculturated, as measured by literacy, and that is materially satisfying, as measured by GDP per capita and growth, are all closely linked to the use and application of information. First and foremost, information-embedded goods and tools are basic to all three aspects of development. Better

[3] Kevin Anderson, *Breaking Down the Great Firewall, at* http://news.bbc.co.uk/2/hi/asia-pacific/4496163.stm (last visited Oct. 25, 2005).

food crops and medicines, which depend on research and innovation, better information about health and nutrition practices and better information on the outcomes of different practices are central to living long and healthy lives. Better access to teaching materials, training opportunities for teachers academic centres of learning and connectivity to access materials and databases are central to education and allowing the population of teachers and learners, both children and adults, to learn over the course of their lives. Finally, it has been a central observation of the economics of growth since the 1950s that innovation and the application of information and knowledge are central to growth and represent a substantially greater component of wealth than efficiency.

A critical point to be noted is that commons-based production has always played an important role in information production in all countries, developed and developing. No one would manufacture automobiles in the non-profit sector, yet universities have consistently played a critical role in our research system. Different industries have different mixes of the roles of non-market and market producers and, even among market producers, there are those that rely on a knowledge commons to become more efficient and those that rely on proprietary rights in information goods as their core business strategy.

All information- and innovation-based industries have a range of actors that follow distinct organisational strategies. Government-funded and government-conducted research always provides an important source, as do universities.[4] Among market actors, there are some who rely on asserting exclusive intellectual property rights, such as software publishers, mainstream pharmaceuticals and major seed vendors. But in these sectors there are also organisations that do not depend on asserting exclusive rights, but instead rely on different kinds of strategies to appropriate the benefits of their innovation. In repeated empirical studies of industrial research and development, almost all industries except for pharmaceuticals and medical equipment report first mover advantages, sales relationships, marketing advantages, and learning curve effects on cost as more important mechanisms

[4] *See also* Yochai Benkler, *Commons-Based Strategies and the Problems of Patents*, 305 SCIENCE 1110 (2004) (proposing two complementary avenues - 'publicly-minded licensing' and 'peer production' - open to scientists and universities to alleviate the costs of overly protective patent systems).

for appropriating the benefits of their research and development than patents. In the case of software, for example, the software services industry, which relies on customer-specific services and not on copyright or patents in the software, accounts for two-thirds of revenues in the United States from software development. Only one-third comes from software publishing, which is dependent on copyright. Significantly (although much less dramatically), the generic drug industry is an important player in pharmaceuticals and plays a critical role in introducing manufacturing and distribution efficiencies into the market for medicines once patents have expired. In addition to these organisational forms, individuals have often played important roles in information production, ranging from the proverbial inventor in the garage to the hundreds of thousands of free and open-source software developers. Moreover, the non-profit sector more generally, apart from universities whose main mission is the creation of information and knowledge, also plays an important role - from amateur choirs to philanthropically funded professional operas, from political parties to religious organisations.

As I have already mentioned, access to a stock of knowledge is critical to every single aspect of development. The advantage of the emerging practices of commons-based production is that they treat the stock of knowledge that exists at any given moment as a common good, free for anyone, regardless of access to financial capital, to use for both consumption and, perhaps more importantly, as a production input or tool. Take, for example, software services. In order to offer software services for any given software, one must be able to learn the software and legitimately work with it. If the software is proprietary, doing so requires a licence. If the software is free or open-source, anyone skilled can approach a project and begin to work and compete on their abilities alone, as opposed to their ability to acquire a licence. In a globally networked market, the ability of talented software developers to compete for systems design and customisation using free or open-source software from every corner of the world is much greater than when it can only be done with the permission of the incumbent owners of the software platform they wish to implement or service. Similarly, new scientific research can only be conducted with access to the current stock of scientific knowledge. Current journal prices have risen at alarming rates, squeezing the budgets of even the best-funded universities in the United States and Europe. In the past few years, a movement among scientists has begun to push for an open publication model, where the outputs

of scientific research, much of it government funded and conducted by scientists who are not profit-maximisers and who are not paid a penny for publishing their discoveries, will be made freely available on the Internet. This movement has seen the development of non-profit efforts such as the Public Library of Science[5] and some businesses, such as BioMed Central[6], which aim to facilitate it. In two recent decisions, both the US[7] and UK[8] primary government research funding agencies have begun to require that research results be made freely available within a certain period (no more than a year) after initial publication. Again, the emphasis on commons-based publication lowers the barriers of access to the existing stock of knowledge so as to allow talented people around the globe to compete on a more equal footing in creating knowledge that is useful for their own societies and for the global community as a whole.

In medicines and agriculture the efforts to apply commons-based approaches are still in their infancy. Perhaps the best example currently underway is the Australia-based project called Biological Innovation for an Open Society (BIOS)[9] that has been seeded by a number of enabling

[5] *See* Public Library of Science, *Open Access*, *at* http://www.plos.org/about/openaccess.html (last visited Oct. 28, 2005) (describing the 'open access' policy of the Public Library of Science and its various 'open access' efforts).

[6] *See* BioMed Central, *BioMed Central Open Access Charter*, *at* http://www.biomedcentral.com/info/about/charter (last visited Oct. 28, 2005) (setting out the 'open access' policy on which BioMed Central operates).

[7] *See* National Institute of Health, *Policy on Enhancing Public Access to Archived Publications Resulting from NIH-Funded Research*, Feb. 3, 2005, *available at* http://grants.nih.gov/grants/guide/notice-files/NOT-OD-05-022.html (last visited Nov. 5, 2005) (requiring National Institute of Health-funded investigators to submit an electronic version of the author's final manuscript upon acceptance for publication, resulting from research supported, in whole or in part, with direct costs from National Institute of Health, effective from May 2, 2005).

[8] *See* Research Councils UK, *RCUK Position Statement on Access to Research Outputs*, Jun. 28, 2005, *available at* http://www.rcuk.ac.uk/access/statement.pdf (last visited Nov. 5, 2005) (proposing a requirement for all grants awarded from October 1, 2005 that, subject to copyright and licensing arrangements, a copy of any resultant published journal articles or conference proceedings should be deposited in an appropriate e-print repository wherever such a repository is available to the award-holder).

[9] Biological Innovation for an Open Society, *The CAMBIA BIOS Initiative*, *at* http://www.bios.net/daisy/init/1061/1081.html (last visited Oct. 30, 2005) (explaining the CAMBIA BIOS initiative as a synergistic approach involving 'intellectual property analysis', 'innovation policy reform' and 'cooperative technology development activities' as a means of fostering democratic innovation in applications of biological technologies to sustainable development).

technologies in agricultural research. Its goal is to create a self-binding commons and collaboration platform for research tools and enabling technologies in biological innovation that would allow anyone anywhere to then develop their own technologies oriented towards food security and health. We also have seen in the more computation-based early stages of medical research the development of the open bioinformatics movement, where similar commons-based approaches have been adopted.

What ties all these disparate efforts together is a simple idea. Information, knowledge and culture are critical to human flourishing and development. The shift to a networked information economy, in which much more of the total information production sector is carried on through commons-based strategies, moderates the disadvantages of developing economies as they start to participate in the global information economy. In this, the shift will not radically change the equation of poverty, but it can make well-defined and meaningful improvements: for the more advanced of the emerging economies by levelling the playing field in terms of access to the existing stock of global knowledge; and, for the poorer countries, by offering new avenues to produce and deliver much cheaper information-embedded goods - from textbooks to agronomic innovation, from health information to, more ambitiously, early access to generic drugs.

V. THE BATTLE OVER THE INSTITUTIONAL ECOLOGY

The benefits of commons-based production, however, are being achieved at the expense of some of the incumbents of the industrial information economy of the twentieth century. Hollywood, the recording industry and the pharmaceutical industry have no interest in the development of the non-market sector or the emergence of their passive consumers into a new role of productive users. We are seeing today, within developed economies, internally and through international trade (both multilateral and bilateral), and the international intellectual property system, a systematic effort by governments lobbied by these industries to support ever-stronger intellectual property rights. These exclusive rights are valuable to the incumbents because they increase their rents from their production activities, but they are neither efficient nor just. They are not efficient because, for over forty years now, mainstream economics has shown that excessive protection of intellectual property increases the cost of production more than it increases appropriability of

outputs, and is therefore likely to hamper innovation more than help it. They are unjust because they squelch the development of free individual and group creativity that is not aimed at the market, while at the same time causing a loss of the opportunities for development that commons-based innovation makes possible. This battle, fought in national legislatures, the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Council, the World Trade Organisation (WTO) and the World Intellectual Property Organisation (WIPO), is a battle over the future of innovation, information production, cultural creation and knowledge. At stake is whether we will be able to develop a system of information production that is more free and equal than we had in the twentieth century.

It is important to understand that this is not a battle between those who support markets and those who oppose them. IBM, the largest patent holder in the IT industry in the United States, makes more than twice as much from Linux-related services as it does from all its patent licensing and IP royalties combined. There are flourishing markets in providing the tools and platforms for the newly enabled productive users of the commons-based system. There are flourishing markets in servicing its outputs. There are flourishing markets in devices and implementations of the outputs of the commons-based production system. The battle is between those few but powerful companies that have large rents from the old twentieth-century system and the still diffuse but slowly coalescing political force of users, non-governmental organisations and, slowly but surely, those market actors that have learned to adjust their business models to serve and benefit from the newly emerging forms of production in the commons of the networked information economy.

VI. CONCLUSION

The rise of the networked information economy and its contributions to both freedom and development seem to be an important and immediate conclusion of a systematic study of law and technological change in our age. We are in the midst, however, of a series of deep transformations in how we produce information, knowledge and culture and how these elements of human knowledge will be applied to improve the human condition. The next few decades will offer more opportunities to do the right thing, as well as to go wrong. Incumbents will generally try to optimise law to protect their rents and business models. But in order to diagnose the likely benefits or costs of

new practices, and, as a consequence, of the laws that will be proposed and opposed along the fault lines of these transformations, one must have a good analytical basis from which to evaluate both the old and the new and the stakes of the transition from one to the other. This is why the study of law and technology will be central to the understanding of human flourishing, welfare and freedom for many years to come.

THE INDIAN JOURNAL OF LAW AND TECHNOLOGY
Volume 1, 2005

INDIA'S TRYST WITH TRIPS: THE PATENTS (AMENDMENT) ACT, 2005

*Shamnad Basheer**

ABSTRACT

The Patents (Amendment) Act, 2005 introduces pharmaceutical product patents in India for the first time. This Act attempts to balance out competing interests of a variety of stakeholders, including domestic generic medicine producers, foreign multinational pharmaceutical companies and civil society groups concerned with access to medicines. Although this dexterous manoeuvring around competing interests deserves praise, the net result of such a compromise has been a lack of clarity in the law.

While highlighting the key aspects of the 2005 amendments and this lack of clarity, this article also focuses on the vexed issue of the likely impact of the new regime on access to medicines. It notes that the provisions as they stand now could be interpreted in a manner that would leave considerable scope for the continued production of some generics. Whether these provisions would be so interpreted remains to be seen.

TABLE OF CONTENTS

---

* Associate, Oxford Intellectual Property Research Centre (OIPRC); B.A., LL.B. (Hons.) '99, National Law School of India University; B.C.L. '03, M. Phil '05, D. Phil Candidate, St. Peter's College, University of Oxford. I would like to thank the following for sharing their thoughts on this topic and/or reviewing a draft of this article: Professor David Vaver of the OIPRC (Oxford); Judge Randall Rader of the CAFC (Washington); Mr. Raj Dave of Morrison and Forrester (Washington); Ms. Mrinalini Kochupillai (Franklin Pierce Law Center, Concord); Mr. Pravin Anand, Mr. Shanti Kumar, Ms. Archana Shanker and Mr. Apoorve Arya of Anand and Anand Advocates (New Delhi).

I. INTRODUCTION

The controversial Patents (Amendment) Act, 2005 (hereinafter "the 2005 Act") was India's last step towards achieving complete TRIPS compliance.[1] This Act has had a fairly long innings. It began as the Patents (Amendment Bill), 2003 (hereinafter "the Bill") under the BJP (Bharatiya Janata Party) government. The Bill lapsed owing to a change in government at the Centre and the consequent dissolution of the Lok Sabha (India's lower house of Parliament).

The new Congress-led coalition government endorsed the Bill - however, since they were unsure of whether it would go through Parliament in time to meet the TRIPS deadline of January 1, 2005, they had it passed as a Presidential Ordinance.[2] Owing to pressure from the Left

[1] In order to comply with TRIPS, the Patents Act, 1970 (India) had been amended twice earlier by the Patents (Amendment) Act, 1999 and the Patents (Amendment) Act, 2002.

[2] Patents (Amendment) Ordinance, 2004 [hereinafter "the Ordinance"].

parties,[3] changes were made to the Ordinance and cleared by the Parliament in the third week of March as the Patents (Amendment) Bill, 2005. After receiving Presidential assent and being published in the official gazette, it finally came into force with retrospective effect from January 1, 2005.[4]

The introduction of product patents for pharmaceutical inventions and the consequent threat to an internationally renowned generic industry that has thus far ensured the supply of affordable drugs spurred widespread protests, both nationally and internationally, to an extent never before witnessed in the annals of intellectual property law making in India. The result is an Act that attempts to balance the competing interests of a variety of stakeholders, including domestic generic medicine producers, the domestic research and development community, foreign multinational pharmaceutical companies, civil society groups concerned with access to medicines and intellectual property lawyers.[5] Although this delicate balancing deserves some applause, the unfortunate fall-out has been the hasty introduction of provisions that go against the grain of time tested patent law principles and are likely to provide excellent fodder for litigation.

II. HIGHLIGHTS OF THE 2005 AMENDMENTS

This note highlights some of the main changes brought about by the 2005 Act and reflects on some of their broader implications. In particular, the note focuses on the introduction of product patents for pharmaceutical inventions and the controversial issue of how this change is likely to impact access to medicines.

A. Product Patents for Pharmaceutical Inventions

The most prominent and controversial change has been the deletion of section 5 of the Patents Act, 1970, thereby paving the way for product patents

---

[3] The Communist Party of India, the Communist Party of India (Marxist), the Revolutionary Socialist Party and the Forward Bloc are leftist parties supporting the ruling coalition government.

[4] The Patents (Amendment) Act, 2005 was published as law in the Gazette of India on April 5, 2005.

[5] *See* F.M. Abbott, *Beginning of a New Policy Chapter: A Hopeful Way Forward in Addressing Public Health Needs*, FIN. EXPRESS, Apr. 6, 2005, http://www.financialexpress.com/fe_full_story.php?content_id=87112 (last visited Oct. 15, 2005).

in the area of pharmaceutical and other chemical inventions. Section 5 of the Patents Act, 1970 (as it stood after the 2002 amendments) had provided that, in the case of inventions being claimed relating to food, medicine, drugs or chemical substances, only patents relating to the *methods or processes of manufacture* of such substances could be obtained.

This deliberate strategy of denying product patent protection to pharmaceutical inventions is traceable to the Ayyangar Committee Report, a report that formed the very basis of the Patents Act, 1970.[6] The Committee found that foreigners held between eighty and ninety percent of Indian patents and that more than ninety percent of these patents were not even worked in India. The Committee concluded that the system was being exploited by multinationals to achieve monopolistic control over the market, especially in relation to vital industries such as food, chemicals and pharmaceuticals. Medicines were arguably unaffordable to the general public and the drug-price index was rising rapidly. The Committee therefore recommended that certain inventions such as pharmaceutical inventions, food and other chemical inventions be granted only process patent protection.[7] India's well-developed generic industry today is testimony to the farsightedness of this report.[8]

Quite naturally, it is feared that with the introduction of product patents for pharmaceuticals, there will be a steep rise in drug prices and an adverse impact on access to important drugs.[9] The multinational pharmaceutical

---

[6] N.R. AYYANGAR, REPORT ON THE REVISION OF THE PATENTS LAW (1959) [hereinafter AYYANGAR REPORT].

[7] Martin J. Adelman & Sonia Baldia, *Prospects and Limits of the Patent Provision in the TRIPS Agreement: The Case of India*, 29 VAND. J. TRANSNAT'L L. 507, 518 (1996).

[8] In 2003, the size of India's pharmaceutical market was estimated at US$4.9 billion. This constitutes about 1% of global pharmaceutical sales and about 10% of the global generic market. Today, India is among the top five bulk drug manufacturers of the world and has the largest number of US FDA-approved manufacturing facilities outside the USA. India is also the fourteenth largest exporter of drugs in the world and exported drugs worth $3.2 billion to more than 65 countries. *See* SUDIP CHOUDHURI, R & D FOR DEVELOPMENT OF NEW DRUGS FOR NEGLECTED DISEASES: HOW CAN INDIA CONTRIBUTE? 37-48 (2005) (discussing recent trends in spending on research and development of pharmaceutical products and noting the importance of public-private partnerships to address market failure in the development of drugs for neglected diseases).

[9] *See, e.g.*, SHUBHAM CHAUDHURI ET AL., ESTIMATING THE EFFECTS OF GLOBAL PATENT PROTECTION IN PHARMACEUTICALS: A CASE STUDY OF QUINOLONES IN INDIA 43 (2004). *See also* UNCTAD

industry, on the other hand, argues that such patents are essential to encourage innovation and help the transition of domestic pharmaceutical companies from copycat generics to innovative R&D companies.[10] They argue that this will serve India's interests better in the long run and that there are adequate safeguards in the patent regime and other laws to curb a sharp rise in drug prices.

B. Software Patentability

Section 3(k) of the Patents Act, 1970 excluded "a computer programme per se" from the scope of patentability. This exclusion met with conflicting interpretations at the patent office, with some examiners granting patents to software combined with hardware or software with a demonstrable technical application of some sort.[11] The 2004 Ordinance therefore qualified this exclusion by stating that software with a "technical application" to industry or when "combined with hardware" would be patentable.[12] Owing to vigorous opposition from the free software movement,[13] this provision was removed from the 2005 Act. The earlier position under the Patents Act, 1970 that a computer programme per se is not patentable now prevails.

India Programme, *Product Patents: Implications for Pharmaceutical Industry and Consumers*, *at* http://www.unctadindia.org/MeetingOnProductPatents-ImplicationsForPharmaceuticalIndustry-April04-2005_Presentation.pdf (last visited Oct. 24, 2005).

[10] Patent protection for pharmaceutical products will provide India's scientists with incentives to discover and develop new life-saving drugs. *See* PhRMA, *PhRMA Welcomes Passage of Patent Bill in India*, *at* http://www.phrma.org/mediaroom/press/releases/23.03.2005.1157.cfm (last visited Oct. 22, 2005).

[11] "According to sources, over 150 patents on 'technical effects of software' had been granted in the country even prior to the December Ordinance. These patents were granted despite the legal ambiguity that had prevailed prior to issuance of the Ordinance." *See Software Patents under Ordinance Face Reversal*, FIN. EXPRESS, Mar. 29, 2005, http://www.financialexpress.com/fe_full_story.php?content_id=86454 (last visited Oct. 16, 2005).

[12] Section 3(b) of the Ordinance excluded "a computer programme per se other than its technical application to industry or a combination with hardware".

[13] *See* Free Software Foundation, *Representation Made by the Free Software Foundation of India to the Government of India to Immediately Withdraw the Patents (Amendment) Ordinance, 2004*, *at* http://fsf.org.in/representation/representation.html (last visited Oct. 18, 2005).

Interestingly enough, a draft of a recent manual of the Patent Office that attempts to lay down guidelines to interpret the Act arrives at a conclusion that is similar to what the Ordinance provision sought to achieve. It notes:

> *The statute excludes from patentability the software per se. The inventions relating to the application of the computer program or software is* [sic] *held patentable under the Indian Patent Act, 1970 when claimed in combination of hardware and software components of a computer which provide a "technical advancement" over the prior art. It is necessary for the applicant to describe the "technical contribution" to the prior art when the invention involves software. The technical problem, which needs to be solved by the invention, should be sufficiently described as to how the hardware is controlled by the software to overcome the previously described problem.* [sic] *The "technical character" of the invention should be brought out clearly in the claims.*[14]

C. Problematic Definitions

An unfortunate fallout of a hasty legislative process has been the introduction of definitions that not only go against the grain of time-tested patent law concepts but also defy logic. The key ones are elucidated below:

1. 'New Invention'

The Patents Act, 1970 defines the term 'new invention' as

> *any invention or technology which has not been anticipated by publication in any document or used in the country or elsewhere in the world before the date of filing of a patent application with complete specification, i.e. the subject matter has not fallen in public domain or that it does not form part of the state of the art.*[15]

It appears that the intent behind this provision is to define a 'novelty' standard - which, along with 'non-obviousness' (or 'inventive step') and 'utility' ('industrial applicability'), are the three prerequisites for 'patentability'.[16]

---

[14] PATENT OFFICE, MANUAL OF PATENT PRACTICE AND PROCEDURE 156 (2005). The manual, however, cautions, "The contents of this manual including the guidelines are merely for the purpose of illustrations and not meant for legal purposes. In case of any conflict, legal provisions of the Patents Act will prevail."

[15] Patents Act, 1970, § 2(1)(l), *amended by* Patents (Amendment) Act, 2005.

[16] Most patent regimes provide that in order to be patentable, an invention has to be new, non-obvious (to a person skilled in the art) and industrially applicable.

However, a term such as 'new invention' raises the question of what an 'invention' is in the first place. Section 2(j) defines an invention as "a new product or process involving an inventive step and capable of industrial application".[17] Since 'new' is already a part of the term 'invention', introducing a term such as 'new invention' to define a novelty standard is circular and makes for shoddy drafting. A clearer way of doing this would have been to define the term 'new' as found in the term 'invention'.

The 'new invention' definition suffers from yet another infirmity. While it appears to endorse an 'absolute' novelty ground, the Act still retains a 'relative' novelty ground in section 25. Section 25 stipulates that a patent application can be opposed on the ground that the invention was "publicly known or publicly used in India before the priority date of that claim". To this extent, the ground for opposition is based on 'relative novelty', i.e. the invention should be known or used in India, whether or not it is so known or used in any other part of the world. The new definition under the 2005 Act however provides for 'absolute' novelty - in order to qualify as a 'new invention', the said invention should not have "been anticipated by publication in any document or *used in the country or elsewhere in the world*".[18] (emphasis supplied).

Consider an application for invention X in India, where the said invention had already been used in China at some earlier point in time. It would appear that such application could be refused by the patent office on the ground that the invention had been used in China and is not therefore a 'new invention'. However, at the stage of opposition, a third party cannot take up this ground under section 25, since the invention had never been publicly used in India before the priority date of the claim. This difference in standard seems odd, given that an interested third party is more likely to be aware of a foreign use of the invention in question than an Indian patent examiner.[19]

2. The 'Inventive Step' Test

The 2005 Act makes a critical change to the earlier 'non-obviousness' or 'inventive step' test. The definition now reads:

---

[17] Patents Act, 1970, § 2(j).

[18] Patents Act, 1970, § 25, *as amended by* Patents (Amendment) Act, 2005.

[19] More often than not, a third party who opposes a patent application is a competitor of the applicant.

> *'inventive step' means a feature of an invention that involves technical advance as compared to the existing knowledge or having economic significance or both and that makes the invention not obvious to the person skilled in the art*.[20]

As can be seen from this definition, while the fundamental yardstick for measuring an 'inventive step' remains that which is "not obvious to a person skilled in the art",[21] a requirement that the invention involve a 'technical advance' or have an 'economic significance' of some sort has been added.

This change in the standard seems odd, given that the very purpose of the 'inventive step' criterion is to determine whether an invention sufficiently advances the technical arts so as to warrant an exclusive right. This is no doubt achieved in an optimal manner by the simple test of whether the invention, though novel, is non-obvious to a person skilled in the art.[22] By itself, the non-obviousness test is a difficult one to apply - additional criteria such as 'technical advance' and 'economic significance' only further the complexity. Contrary to suggestions by some commentators, the addition of 'technical advance' or 'economic significance' to the 'non obviousness' test does not dilute the 'inventive step' requirement - on the contrary, it is susceptible to being interpreted in a manner that renders it more onerous to satisfy.[23]

Further, 'economic significance' seems to be more of a 'utility' or 'industrial applicability' standard. By including such a criterion within a 'non-obviousness' or 'inventive step' standard, the Act creates considerable uncertainty. As a commentator observes: "It interferes with the time-tested principles of patents

---

[20] Patents Act, 1970, § 2(1)(ja), *as amended by* Patents (Amendment) Act, 2005.

[21] The earlier section 2(ja) defined 'inventive step' as "a feature that makes the invention not obvious to a person skilled in the art."

[22] In so far as the term 'person skilled in the art' is concerned, it may be worth noting that Lord Hoffman was critical of what he termed "anthropomorphic conceptions of justice" and "the varied cult of imaginary and sometimes improbable people invented by the law to embody concepts like 'reasonableness', 'business efficacy' and 'lack of inventiveness'." Biogen Inc. v. Medeva plc, [1997] RPC 1.

[23] *See, e.g.*, K.M. Gopakumar & Tahir Amin, *Patents (Amendment) Bill 2005*: *A Critique*, 40(15) ECON. & POL. WKLY. 1503, 1504 (Apr. 9, 2005) ("Thus the definition dilutes the requirements of an inventive step and broadens the existing provision to the benefit of patent holders.")

law, and in that process has created a new definition that can lead to loose interpretations."[24]

3. 'Pharmaceutical Substances'

The term 'pharmaceutical substances' has been rather strangely defined in section 2(1)(ta) as "any new entity involving one or more inventive steps". Defined in such a broad way, one is forced to query: would a mobile phone that deploys advanced technology be a pharmaceutical substance if it is shown that such entity is new and involves one or more inventive steps?

What is even more perplexing about this definition is the fact that the term 'pharmaceutical substance' does not find mention anywhere else in the Patents Act.[25] In the absence of such a term in the Act, one wonders why the legislature, in all its wisdom, did not see fit to clarify this concept.

4. The 'New Use' Exclusion

Section 3(d) of the Patents Act, 1970 excluded a "new use for a known substance" from the ambit of 'invention'. The 2005 Act has expanded on this exception by providing that "the mere discovery of a new form of a known substance which does not result in the enhancement of the known efficacy of that substance" would not be patentable. It then states (via an explanation to the section) that salts, esters, ethers, polymorphs, metabolites, etc. shall be considered as the same substance unless they "differ significantly in properties with regard to efficacy".

The introduction of a new definition for the term 'substance' through the explanation above would make for some nuanced interpretative battles. If, for example, X1 is a polymorphic[26] form of X, then would a showing of

---

[24] M. Pillai, *India's Patents Bill*, 2005 - *Is It TRIPS Compliant*?, MONDAQ NEWSL. (Mar 31, 2005), *at* http://www.mondaq.com/i_article.asp_Q_articleid_E_31717 (last visited Oct. 26, 2005).

[25] Section 92A, which deals with compulsory licences in the context of exports to countries with minimal manufacturing capabilities, uses the term 'pharmaceutical products'. However this term is used in a different sense than 'pharmaceutical substances', as is made evident by the fact that it is defined in section 92A itself. The absurd definition in section 2(1)(ta) cannot therefore apply to 'pharmaceutical products' under section 92A.

[26] A polymorph is "a solid crystalline phase of a given compound resulting from the possibility of at least two crystalline arrangements of the molecules of that compound in the solid state."

increased efficacy for X1 change it to a new substance (as suggested by the explanation to the section)?[27] In short, at what point would a showing of increased efficacy change a 'new form' of an existing substance to a new substance altogether?

In order to answer this question, one has to first address the issue of what exactly the term 'efficacy' means. Would this term be construed in a manner similar to how a drug approval agency would construe it?

It is interesting to note in this connection that this provision in the 2005 Act, which finds no parallel in any other patent legislation in the world, has been copied from a European Directive dealing with drug safety regulation. Article 10(2)(b) of Directive 2004/27/EC defines a 'generic medicinal product' as

> *a medicinal product which has the same qualitative and quantitative composition in active substances and the same pharmaceutical form as the reference medicinal product, and whose bioequivalence with the reference medicinal product has been demonstrated by appropriate bioavailability studies. The different salts, esters, ethers, isomers, mixtures of isomers, complexes or derivatives of an active substance shall be considered to be the same active substance, unless they differ significantly in properties with regard to safety and/or efficacy. In such cases, additional information providing proof of the safety and/or efficacy of the various salts, esters or derivatives of an authorised active substance must be supplied by the applicant. The various immediate-release oral pharmaceutical forms shall be considered to be one and the same pharmaceutical form. Bioavailability studies need not be required of the applicant if he can demonstrate that the generic medicinal product meets the relevant criteria as defined in the appropriate detailed guidelines.*[28]

---

2 W.C. MCCRONE, PHYSICS AND CHEMISTRY OF THE ORGANIC SOLID STATE 725 (David Fox et al. eds., 1965).

[27] Whether such a determination would make any practical difference is debatable, as both the new 'form' as well as the new 'substance' would merit patent protection as a product.

[28] Directive 2004/27/EC of the European Parliament and of the Council of 31 March 2004 amending Directive 2001/83/EC on the Community Code Relating to Medicinal Products for Human Use, (2004) O.J. (L 136) 34.

As one can well appreciate, blindly transposing a provision that operates within the context of a drug regulatory regime to a patent regime can pose problems. For one, it makes it more likely that the term 'efficacy' would be construed in a drug-regulatory sense - consequently, the requirement would be a difficult one for most patent applicants to satisfy. Pharmaceutical companies generally file patent applications at the initial stage of discovery of a drug; it is only much later in the development process that clinical studies (phase III) are conducted to gather information pertaining to the therapeutic efficacy of the drug. The requirement of information on 'efficacy' at the stage of filing a patent application is therefore an onerous one.[29]

If, on the other hand, the term 'efficacy' were to be construed in a liberal manner to include even a general hint of an added advantage in using the new form, it is possible that a good number of formulations would qualify as new substances upon the showing of an increased efficacy.

The amended section 3(d) appears to be limited to only new forms that demonstrate an increase in known efficacy. It does not, therefore, apply to a case where the new form is found to have a completely different use (and not just an increased efficacy vis-à-vis the known use). If the intention behind this provision is to heighten the obviousness standard and weed out frivolous and fairly obvious patents, this seems a rather illogical result, as a new use for a new form is certainly more inventive than a mere showing of an increase in known efficacy.

As with the problematic definition of 'inventive step' discussed above, this provision is likely to provide an excellent platform for "meticulous verbal analysis in which lawyers are too often tempted by their training to indulge".[30]

---

[29] "The task of proving efficacy is much more difficult, expensive, and time-consuming than the task of proving safety." The Independent Institute, *History of FDA Regulation: 1902-Present, at* http://www.fdareview.org/history.shtml. Another commentator notes: "Thanks to a 1963 law, the FDA requires pharmaceutical and medical device manufacturers to prove that new drugs and devices are both safe and effective - but the agency has refused to give a clear definition of efficacy." James Bovard, *Bureaucratic Tyrants*, 25(23) CONN. L. TRIB. 15 (June 7, 1999).

[30] This widely quoted sentiment of Lord Diplock was expressed in the context of patent claim construction and the laying down of what commonly came to be referred to as the doctrine of 'purposive construction'. Catnic Components Ltd. v. Hill & Smith Ltd., [1982] RPC 183, 243.

D. Pre-Grant/Post-Grant Opposition

The Patents Act, 1970 is endowed with a fairly robust pre-grant opposition mechanism. It provides for several grounds on which a patent could be opposed including the lack of novelty, inventive step or utility (the traditional patentability criteria) or that the claimed invention does not fall within eligible subject matter or that the specification does not disclose the source or geographical origin of biological material used for the invention.[31]

The 2005 Act has introduced a post-grant opposition mechanism for the first time. Within a year of the patent being granted, a 'person interested' can challenge the issued patent on grounds that are identical to the grounds available at the pre-grant opposition stage.[32] The key difference between the pre-grant and the post-grant opposition mechanism appears to be that while 'any person' could challenge at the pre-grant stage, the challenger has to be a 'person interested' at the post-grant stage.

A competitor who fails to challenge a patent application at the pre-grant/post-grant stage has a further opportunity - he or she can seek revocation of the patent under section 64 of the Patents Act.[33] Here again, the grounds that could be cited for revocation (whether by a direct petition to the Controller or as a counter-claim during infringement proceedings) are broadly similar to that available at the pre-grant and post-grant stage. This combination of a pre-grant opposition mechanism, a post-grant opposition mechanism and a revocation mechanism makes the regime a very effective one for filtering out frivolous claims.[34]

E. Compulsory Licensing Regime

This is one area where there have been major changes, both substantive and procedural.

1. Automatic Compulsory Licences for Mailbox Applications

The biggest substantive change has been the addition of a new ground for compulsory licensing. As is well known, India amended the Patents Act

---

[31] Patents Act, 1970, ch. V (§ 25-28).

[32] Patents Act, 1970, § 25(2), *as amended by* Patents (Amendment) Act, 2005.

[33] In much the same way as the post-grant opposition mechanism, it has to be a 'person interested' who initiates the challenge and not just any person.

[34] Patents Act, 1970, § 64.

in 1999 to provide that applications claiming pharmaceutical inventions would be accepted and put away in a mailbox, to be examined in 2005. These applications are commonly referred to as 'mailbox applications'. This amendment was in pursuance of a TRIPS obligation aimed at preserving the novelty of pharmaceutical inventions in those developing and least developed country (LDC) members that did not grant product patents for pharmaceutical inventions in 1995.[35] By virtue of this 'mailbox facility', applications would be judged for 'novelty' on the basis of the filing date and not with reference to 2005, the year in which product patents were first incorporated into the patent regime.

The Act provides that in the case of those mailbox applications that result in the grant of a patent, an automatic compulsory licence would issue to those generic companies that made a 'significant investment' and were 'producing and marketing' a drug covered by the mailbox application prior to 2005.[36] Such licence is subject to a payment of a 'reasonable royalty'. However, no specific yardstick is provided to determine 'reasonableness' and this term is likely to lead to disputes in coming years.[37] Perhaps one will have to go by the broad criteria in section 90 of the Act - that while computing the royalty

---

[35] Agreement on Trade-Related Aspects of Intellectual Property Rights, Including Trade in Counterfeit Goods, Dec. 15, 1993, 33 I.L.M. 81 [hereinafter TRIPS Agreement]. In the WTO dispute filed by the United States against India for a failure to comply with this provision, the WTO appellate body held that India was obliged to provide a sound legal mechanism for an interim mailbox arrangement. *See* WTO Appellate Body, *India: Patent Protection for Pharmaceutical and Agricultural Chemical Products*, WT/DS50/AB/R (Dec. 19, 1997), *available at* http://docsonline.wto.org/GEN_highLightParent.asp?qu=&doc=D%3A%2FDDF DOCUMENTS%2FT%2FWT%2FDS%2F50ABR%2EWPF%2EHTM. The Patents (Amendment) Act, 1999 was introduced as a response to this ruling, and was in fact given retrospective effect from 1995, the date on which India was supposed to have instituted the mailbox facility under TRIPS.

[36] Patents Act, 1970, § 11A, proviso, amended by Patents (Amendment) Act, 2005.

[37] It is pertinent to note that during the Parliamentary debates, a number of members suggested that a specific royalty rate or a ceiling on the royalty rate be fixed (see specifically comments by Mrs. Maneka Gandhi and Mr. Suresh Kurup). However, at the time of voting, the clause was adopted with the words 'reasonable royalty' and no specific percentage was fixed. *See* Lok Sabha Debate, Mar. 22, 2005, *at* http://164.100.24.230/Webdata/datalshom001/dailydeb/22032005.htm.

payable, one shall have regard to "the nature of the invention, the expenditure incurred by the patentee in making the invention or in developing it and obtaining a patent and keeping it in force and other relevant factors".[38]

It will be interesting to see how this new provision pans out in the years to come. It is reminiscent of the 'licence of right' provisions under the earlier patent regime. Inventions pertaining to food and medicine were subjected to an automatic endorsement (i.e. they were deemed to be so endorsed) with a 'licence of right' after a period of three years from the date of sealing of the patent.[39] In other words, any person interested in working the patented invention, endorsed with a 'licence of right' could have a licence as of right, without needing to establish any specific grounds for it.[40]

2. Compulsory Licences for Exports

In order to incorporate what is commonly referred to as the *Paragraph 6 Decision*[41], the Ordinance introduced section 92A, which provides for compulsory licences to enable exports of pharmaceutical products to those countries with no manufacturing capacity of their own. Unfortunately, this suffered from a handicap - the provision required that the exporter obtain a compulsory licence from the importing country as well. In the process, the provision failed to cater to those situations where there was no patent in such importing country and no requirement for obtaining a compulsory licence there.[42] The 2005 Act therefore seeks to rectify this by adding that an exporter can resort to section 92A where the importing country "has by notification or

---

[38] Patents Act, 1970, § 90.

[39] Patents Act, 1970, § 87, *omitted by* Patents (Amendment) Act, 2002. Since the 1970 regime provided only 'process patents' in the case of pharmaceutical inventions, it was not too surprising that this compulsory licensing provision was hardly ever invoked by generic manufacturers.

[40] *See generally* SHANTI KUMAR, DIFFERENCE BETWEEN COMPULSORY LICENCE AND LICENCE OF RIGHT (1975).

[41] WTO General Council, *The Implementation of Paragraph 6 of the Doha Declaration the TRIPS Agreement and Public Health*, WT/L/540 (Aug. 30, 2003), *available at* http://docsonline.wto.org/DDFDocuments/t/WT/L/540.doc.

[42] In fact, most of the countries that have little or no manufacturing capacity are LDC (Least-Developed Country) members that have time till 2016 to introduce product patents for pharmaceuticals. It is therefore absurd to expect any existing patents on pharmaceutical inventions in these countries in the interim.

otherwise allowed importation of the patented pharmaceutical products from India".[43]

3. Procedural Changes

The general compulsory licensing procedure under Chapter XVI states that in most cases, a compulsory licensing application can be entertained only if negotiations towards a voluntary licence have not borne fruit within a reasonable time period. In order to prevent patentees from dragging on voluntary negotiations to the detriment of applicants, the Act caps a 'reasonable' period of negotiations at six months.

F. Government Use

Most patent regimes provide that, under certain circumstances, the government is entitled to use an existing patent (commonly referred to as 'government use' provisions). The 2005 Act expands the scope of 'government use' provisions in some respects and reduces it in others. Thus, sub-clause (iv) has been added to section 2(h) of the old act to include any 'institution wholly or substantially financed by the Government' within the ambit of a 'government undertaking' that can avail itself of a patent under the 'government use' provisions spelt out in Chapter XVII. However, the Council for Scientific and Industrial Research (CSIR), a premier science research institution, has now been excluded from the ambit of the term 'government undertaking'. This, perhaps, is in recognition of the fact that CSIR has been patenting extensively and is a private player in several respects.[44]

G. The Bolar Exception

The Indian patent regime encapsulates what is commonly referred to as the Bolar exception[45] - an exception that allows generic manufacturers to start

---

[43] Patents Act, 1970, § 92A.

[44] CSIR filed 184 patents with the Paris Convention Treaty (PCT) countries in 2002 alone, tying for the number one spot in this field with Samsung. *Samsung Finds its Match in CSIR*, HINDU BUS. LINE, Jul. 27, 2003, http://www.blonnet.com/2003/07/27/stories/2003072701380100.htm (last visited Oct. 11, 2005).

[45] This exception was named after a US case, *Roche Products Inc*. v. *Bolar Pharm*. *Co*. *Inc*., 733 F.2d 858 (Fed. Cir. 1984), in which it was held that the 'experimental use' exception under US law was not broad enough to permit Bolar to develop and submit a generic product for regulatory approval before the expiry of Roche's patent. The Hatch-Waxman Act in the US, which introduced such an exemption favouring generic companies, was a response to this ruling.

producing a patented drug in limited quantities during the period of the patent in order to collect data to be submitted to a drug approval authority. This exception therefore enables generics to enter the market soon after a patent expires.

Section 107A of the Patents Act (as amended up to 2002) excluded from infringement "the act of making, using or selling a patented invention" for the purpose of obtaining information to be submitted to a regulatory authority. The 2005 Act expands this provision to bring even the act of 'importing' within its ambit. This will no doubt aid the efforts of generic manufacturers, who are exploring all possible means to help mitigate the adverse consequences of a pharmaceutical patent regime.

H. Parallel Imports

The earlier section 107A(b) provided that it was not an infringement to import a patented product provided such import was from an exporter who was "duly authorised by the patentee to sell or distribute the product". The 2005 Act now makes such import easier by dispensing with the authorisation required from the patentee - it only requires that the exporter of such patented product be "duly authorised under the law to produce and sell or distribute the product".

Under this amended provision, it would appear that an Indian pharmaceutical company could set up base in Bangladesh to manufacture and export medicines to India.[46] In the absence of a patent in Bangladesh and/or any other law barring manufacture/exports, such company would presumably be 'duly authorised' under the laws of Bangladesh to 'sell or distribute the product'.

The provision therefore is extremely broad in scope and may contravene TRIPS. Article 6 of TRIPS states, in pertinent part, that "…nothing in this Agreement shall be used to address the issue of the exhaustion of intellectual property rights".

---

[46] As per paragraph 7 of the Doha Declaration, a least developed country (LDC) member such as Bangladesh has time till January 1, 2016 to introduce product patents for pharmaceutical inventions. *See* WTO Ministerial Conference, Declaration on the TRIPS Agreement and Public Health, WT/MIN(01)/DEC/2 (Nov. 20, 2001), *available at* http://docsonline.wto.org/DDFDocuments/t/WT/min01/DEC2.doc [hereinafter Doha Declaration].

The meaning of Article 6 is made clear by Article 5(d) of the Doha Declaration which states: "The effect of the provisions in the TRIPS Agreement that are relevant to the exhaustion of intellectual property rights is to leave each member free to establish its own regime for such exhaustion without challenge ..."

However, the above hypothetical example of an Indian company setting up base in Bangladesh does not involve an 'exhaustion'.[47] There is no first sale of the patented drug by the patentee - rather the drug is manufactured and then exported by a third party. In short, the very essence of an exclusive right to import mandated under Article 28 of TRIPS is affected.

III. SOME BROAD IMPLICATIONS OF THE 2005 ACT

A. Access to Medicines

Although the 2005 Act has made wide-ranging changes to India's patent regime, the most controversial provision is the one introducing product patents for pharmaceutical inventions. Civil society proponents are concerned that this would cause a steep rise in drug prices and adversely impact access to important drugs. They argue that the available TRIPS flexibilities have not been exploited appropriately and that adequate safeguards have not been built in to ensure an affordable supply of medicines.[48]

The 2005 Act has a number of important safeguards built in to ensure that the production of existing generic versions of drugs is not jeopardised. It also has provisions to ensure affordable access to new drugs. Whether such provisions would in fact be interpreted in a manner conducive to public health needs remains to be seen. Some of the key provisions in the 2005 Act and other related laws are discussed below.

---

[47] "Exhaustion means that once a patent holder has sold a patented invention, the patent holder has no further right to exclude others from subsequent use, including offering to sell or distribute the patented invention. In essence, exhaustion presupposes that the patent owner, unless there is an agreement to the contrary, implicitly licenses the subsequent use and resale of a patented product upon first sale." James Thuo Gathii, *The Doha Declaration on TRIPS and Public Health under the Vienna Convention of the Law of Treaties*, 15 HARV. J. L. & TECH. 292, 308 (2002).

[48] According to Health GAP (Global Access Project), a US-based NGO that advocates the cause of AIDS patients, human rights and fair trade, the 2005 Act fails "to utilise fully the

1. Compulsory Licensing

As mentioned earlier, the provision of two new grounds for compulsory licensing (one in respect of exports to countries that lack manufacturing capabilities and the other in respect of the manufacture of drugs that are the subject matter of mailbox applications[49]) would go a long way towards ensuring that local industry can continue to manufacture at a cost lower than the innovative drug company.

However, despite these new grounds, the new regime has done little to ease the administrative and procedural bottlenecks that constrained the invocation of compulsory licensing provisions under the old regime.[50] Indeed, a rather stark example of the procedural delays inherent in compulsory applications is provided by a case under the old regime, where the compulsory licensing application was dragged on all the way to the Calcutta High Court, by which time the patent had almost expired.[51]

The 2005 Act has streamlined one such procedural hurdle by providing that 'voluntary negotiations' with a patentee should be concluded within six months.[52] It could therefore well be the case that extensive provisions on paper may not translate easily into practice. Further, contentious terms such as 'reasonable royalty rates' (used in the context of the newly added compulsory licensing ground to permit generic companies to continue manufacturing drugs that are the subject matter of mailbox applications) could significantly slow down the compulsory licensing process.

---

public health safeguards available to WTO member states under TRIPS, which were reaffirmed by the Doha Declaration on the TRIPS Agreement and Public Health." Health Global Access Project, *The Impact of India's Amended Patents Act to Access to Affordable HIV Treatment*, *at* http://www.healthgap.org/press_releases/05/020105_hgap_fs_india_ipr.pdf (last visited Nov. 1, 2005).

[49] There are reportedly 8,926 applications in the mailbox. K.G. Narendranath, *Patent Mailbox Opens: Pfizer is Top Applicant*, FIN. EXPRESS, Mar. 21, 2005, http://www.financialexpress.com/fe_full_story.php?content_id=85782 (last visited Nov. 1, 2005).

[50] For an analysis of some of these procedural drawbacks, *see* Sudip Chaudhuri, *TRIPS Agreement and the Amendment of Patents Act in India*, 37(32) ECON. & POL. WKLY 8 (Aug. 10, 2002).

[51] Imperial Chemical Industries Ltd. v. Controller General of Patents, Designs and Trade Marks, A.I.R. 1978 Cal. 77.

[52] A new explanation has been added to section 84(6) in this regard.

It is nevertheless important to appreciate that possibly another reason for the non-optimal use of the compulsory licensing regime under the old regime was the absence of a well-developed local industry. Needless to say, in the context of pharmaceutical inventions, this is not an issue, as India has a well-developed local industry with extensive expertise and a readiness to exploit compulsory licensing provisions.[53] In the years to come, India is likely to provide a fertile ground for the emergence of sophisticated compulsory licensing jurisprudence, at least with respect to pharmaceutical inventions.

2. Retrospective Damages

The newly added proviso to section 11A of the Patents Act considerably dilutes the monopoly granted to pharmaceutical patents that flow from mailbox applications.

Section 11A(7) provides that patentees are entitled to claim damages retrospectively from the date of publication of their patent applications, which means that the moment a patent application is published (as opposed to a patent being granted), a third party runs the risk of damages in case of infringement. The Act, however, provides that such retrospective rights under section 11A do not apply to pharmaceutical mailbox applications. This result, coupled with the fact that the twenty-year patent monopoly term runs from the date of the mailbox application and not from the date of grant, will reduce the strength of drug patents that fructify from mailbox applications, a consequence likely to benefit the continued production of generics at low prices.[54]

Therefore, the failure to grant retrospective remedies to mailbox applications, coupled with making them automatically susceptible to

[53] It has to be borne in mind that prior to the 2005 Act, only process patents were available for pharmaceutical inventions. Generic companies were able to work around such processes with ease, without resorting to any form of licensing, whether compulsory or voluntary. Also, very few processes were actually patented, since the term of protection was a mere seven years and such processes could anyway be designed around with ease. *See* Shondeep Banerji, Who Controls Domestic Law-Making? The TRIPS Agreement and the Indian Intellectual Property Regime, Address at the Political Studies Association UK 50th Annual Conference, London, UK (Apr. 10-13, 2000), *available at* http://www.psa.ac.uk/cps/2000/Banerji%20Shondeep.pdf (last visited Oct. 28, 2005).

[54] For a more detailed treatment of this issue, see Shamnad Basheer, *Of Generics, Pharmaceutical Patents and the Countdown to 2005: A Note To Policy Makers*, ECON. TIMES, Sep. 26, 2004, http://www.patentmatics.org/pub2004/pub11a.doc (last visited Oct. 11, 2005).

compulsory licensing provisions, will ensure that the supply of existing generic drugs at affordable prices is not unduly hampered. To a limited extent, generic manufacturers could also avail of the research exemption[55] and the wide Bolar provision in section 107A.[56]

3. The Patentability Threshold

The question of whether the new regime will have an impact on access to new drugs is more vexed. This will depend significantly upon the scope of patentability of pharmaceutical inventions. Notwithstanding calls by civil society to restrict the patentability of pharmaceutical inventions to only new chemical entities (NCEs),[57] no such express limitations were introduced.[58] However, this does not automatically mean that all such substances (including new chemical entities, formulations, new drug delivery systems etc) will merit patent protection. Rather, the more rigorous requirements for 'inventive step' introduced by the 2005 Act and the expansive 'new use' exclusion could help in curbing new grants.[59] Indeed, as argued earlier, a very strict reading of the term 'efficacy' could result in very few patents for incremental pharmaceutical innovations that rely on new forms of existing substances.[60]

---

[55] Section 47(3) encapsulates the 'experimental use' exception in the Indian context and provides that a patent may be used by any person 'for the purpose merely of experiment or research including the imparting of instructions to pupils'. This exception appears to be fairly wide, but its ambit is yet to be tested in a court of law.

[56] *See* discussion *supra* Part IIG.

[57] *See* B.K. KEAYLA, NATIONAL WORKING GROUP ON PATENT LAWS, PATENTS AMENDMENT ORDINANCE 2004: A CRITIQUE 1 (2005) ("Pharmaceutical patentability should be restricted only to new chemical and medical molecules/entities. This will help exclusion of frivolous claims").

[58] However, the government has constituted a technical committee to determine whether restricting the grant of patents for pharmaceutical substance to only new chemical entities (NCEs) would be in compliance with TRIPS. *Technical Panel to Look into IPR Issues*, FIN. EXPRESS, Apr. 5, 2005, http://www.financialexpress.com/fe_full_story.php?content_id=87046 (last visited Oct. 23, 2005).

[59] *See* discussion *supra* Part IIC.

[60] It is pertinent to note that a member of Parliament, Mr. Kharabela Swain, had, during the Parliamentary debates, opined that patents should be given for 'incremental innovations' as Indian scientists do not have the know-how or capital to come up with new chemical entities but do have the know-how to make improvements. Lok Sabha Debate, *supra* note 37. The term 'pharmaceutical substances' may also have been defined with the intent of curbing the

Apart from the 'new use' exclusion, the Patents Act has several patent eligibility or subject matter exclusions[61] such as the 'method of medical treatment' exception[62] and the 'product of nature' exclusion.[63] These could be effectively used to limit the scope of protection to pharmaceutical inventions.

In this regard, it bears noting that the Patent Office has a well-entrenched history of adopting a conservative approach towards patentability.[64] Relying on the Ayyangar Report and the mantra that fewer patents are conducive to a more robust indigenous industry, the Patent Office has, in the past, demonstrated a 'policy style' approach to the issue of patentability and denied protection to several inventions that merited patents in other parts of the world. Indeed this trend was discernible in as late as 2001, when the patent office refused an application by Dimminaco AG (a Swiss biotechnology company) claiming a method of producing a live vaccine on the ground that the term 'manufacture' did not include a process that had a living substance as its end product.[65]

Therefore, it is likely that patentability criteria and subject matter exclusions will be interpreted by the patent office in a rigorous manner so as to filter out inventions that do not represent a genuine therapeutic advance. The patent office could draw from the experience of developed countries that

scope of patents granted to pharmaceutical substances. However, in the absence of a mention of the term in the text of the legislation, the purpose of such a definition remains obscure.

[61] The principle of 'patent eligibility' broadly refers to the requirement that a subject matter for which a patent is sought be inherently suitable for patent protection, in the sense of falling within the scope of subject matter that patent law prima facie exists to protect. The term 'patentability', on the other hand, refer to those set of principles that inform the requirements that must be satisfied for a patent eligible subject matter (i.e., an invention) to be granted a valid patent. Principally they are the requirements of novelty, inventiveness (non-obviousness), utility (industrial applicability) and sufficient description. *See* Justine Pila, *Bound Futures: Patent Law and Modern Biotechnology*, 9 B.U. J. SCI. & TECH. L. 326, 341-356 (2003).

[62] Section 3(i) excludes "any process for the medicinal, surgical, curative, prophylactic, diagnostic, therapeutic or other treatment of human beings" from patentability.

[63] Section 3(c) excludes the "discovery of any living thing or non-living substances occurring in nature" from patentability.

[64] *See generally* Shamnad Basheer, *'Policy Style' Reasoning at the Indian Patent Office*, 3 INTELL. PROP. Q. 309 (2005).

[65] Dimminaco AG v. Controller of Patents and Designs, (2002) I.P.L.R. 255 (Cal). *See also id*.

have strictly applied patentability criteria in some cases to prevent 'evergreening'. For example, SmithKline's secondary patent on a polymorph of cimetidine, granted approximately five years after the original patent, was invalidated in the UK and other countries on the grounds that such a polymorph could not be considered 'novel' - i.e. it was inevitably obtained by applying the process already claimed in the original patent.[66]

It is pertinent to note in this context that Article 27 of TRIPS stipulates that "patents shall be available for any inventions… provided that they are new, involve an inventive step and are capable of industrial application."[67] This leaves some flexibility in the hands of member states to define these patentability criteria in a manner that suits their specific national interests.[68] Member states have, in fact, refined patentability criteria in the context of specific fields of technology, taking into account the unique concerns posed by such technologies.[69] For example, in 2001, the revised utility guidelines formulated by the United States Patent and Trademark Office (USPTO) were

---

[66] SmithKline and French Laboratories Ltd v. Evans Medical Ltd [1989] FSR 561. *But see* TREVOR COOK ET AL., PHARMACEUTICALS, BIOTECHNOLOGY AND THE LAW 86, 89 (1991). *See also* Dow Chemicals Application (unreported - SRIS O/179/83) and Shell International's Application (unreported - SRIS O/187/83) (rejecting claims to optically active isomers as obvious because the improved properties were not unexpected and there was either an expectation or it was predictable that this would be so).

[67] A footnote states: "[F]or the purposes of this Article, the terms 'inventive step' and 'capable of industrial application' may be deemed by a Member to be synonymous with the terms 'non-obvious' and 'useful' respectively."

[68] In the opinion of the Commission on Intellectual Property Rights (CIPR), "[T]here is ample scope for developing countries to determine for themselves how strictly the common standards under TRIPS should be applied and how the evidential burden should be allocated." The CIPR recommends the application of strict standards of novelty, inventive step and industrial application or utility and asks developing countries to consider higher standards than those currently applied in developed countries. COMMISSION ON INTELLECTUAL PROPERTY RIGHTS, INTEGRATING INTELLECTUAL PROPERTY RIGHTS AND DEVELOPMENT POLICY 114, 123 (2002), *available at* http://www.iprcommission.org/papers/pdfs/final_report/CIPRfullfinal.pdf (last visited Nov. 1, 2005) [hereinafter *CIPR Report*].

[69] This is normally done through 'examination guidelines' to be followed by the patent offices of member states. In the context of pharmaceutical inventions, *see* Patent Office, *Examination Guidelines for Patent Applications relating to Medical Inventions in the UK Patent Office' (March 2004), available at* http://www.patent.gov.uk/patent/reference/mediguidlines/claims.htm (last visited Nov. 1, 2005).

targeted towards biotechnology inventions.[70] It is also pertinent to note that a provision has been enacted in Germany to ensure that the patent monopoly on a gene sequence is limited to the specific function disclosed and not to all functions.[71]

4. Opposition Mechanism

Apart from this, the robust opposition mechanism (pre-grant and post-grant) could be leveraged to filter out frivolous patents. Some mailbox applications have already been challenged under the pre-grant opposition procedure. Thus, for example, Natco Pharma Ltd, an Indian pharmaceutical company, has opposed an application by Novartis India Ltd pertaining to the anti-cancer drug imatinib mesylate on the ground that it lacks novelty. According to Natco, the Indian patent application merely claims a crystal form (beta) version of a drug that was already known in 1993.[72] This challenge

---

[70] *See* Utility Examination Guidelines, 66(4) Fed. Reg. 1092 (Jan. 5, 2001), *available at* http://www.uspto.gov/web/offices/com/sol/notices/utilexmguide.pdf. These guidelines require that an applicant assert a specific, substantial and credible utility for the claimed invention. These guidelines owe themselves to the difficulty in determining whether certain biotechnology-related inventions, such as those covering genes or proteins, really have any industrial application. Often any such application is not evident from the invention itself. Such a requirement is now to some extent also being applied by the EPO. *See*, *e.g.*, EPO Opposition Decision revoking EP0630405 (*ICOS Corporation*) (Jun. 20, 2001) (unreported), *cited from* CIPR Report, *supra* note 68, at 117. In relation to these guidelines, the CIPR Report notes:

> *It is to be hoped that this new standard will prevent patents being granted on inventions for which only a speculative application is disclosed, but it may be that it does not go far enough and the impact of the new Guidelines will therefore need to be closely monitored. Developing countries providing patent protection for biotechnological inventions should assess whether they are effectively susceptible to industrial application, taking account of the USPTO guidelines as appropriate.*

CIPR Report, *supra* note 68, at 117.

[71] An amendment approved by the German Parliament in 2004 limits patent protection on human gene sequences to 'disclosed functions' at the time of the patent application, i.e. a patent on a human DNA sequence used for a specific function would not cover a second function discovered later by another researcher using the same DNA sequence. Ned Stafford, *German Biopatent Law Passed*, SCIENTIST, Dec. 10, 2004, *available at* http://www.the-scientist.com/news/20041209/01/ (last visited Oct. 28, 2005).

[72] Other grounds for opposition include the fact that the application falls within the subject matter exclusion under section 3(d), as it claims a new form that does not show increased efficacy and also that the claimed invention does not involve an 'inventive step'. Press Trust of India, *Natco Opposes Novartis' Patent Claim*, *at* http://inhome.rediff.com/money/2005/jun/20natco.htm (last visited Oct. 28, 2005).

is bound to create considerable interest, as Novartis already owns an exclusive marketing right[73] over this drug (which it sells under the name Glivec) and has injuncted several generics on the basis of this exclusive marketing right.[74]

5. Price Control/Competition Regime

Fears that the price of patented pharmaceutical inventions may spiral also fail to take into account price control mechanisms and the newly instituted competition regime in India.

When India passed its Patent Act in 1970, it also instituted a Drug Price Control Order (DPCO) under the Essential Commodities Act of 1955 to control the price of drugs and ensure access to the general pubic.[75] Under this order, prices of bulk drugs and their formulations were fixed by the government as per a specified formula that allowed a 100% margin on ex factory cost. Price changes of the remaining drugs were also to be monitored.

However, over a period of time, as a result of sustained lobbying by the Indian pharmaceutical industry, the number of drugs listed in the DPCO fell from 347 in 1979 to 76 in 1995.[76] A new pharmaceutical policy in 2002 that sought to relax controls even further was challenged on the ground that, under the policy, certain life-saving drugs had the potential of being excluded from

---

[73] In accordance with Article 70.9 of TRIPS, Chapter IVA of India's Patent Act (which has now been deleted by the 2005 Act) provided that till such time as a product patent regime for pharmaceutical inventions was established, limited rights known as 'exclusive marketing rights' would be granted to inventions that met certain criteria - the applicant had to have a patent issued in a foreign country and have procured marketing approval from the relevant authority in that country as well as from the relevant authority in India. As the name itself suggests, the crux of this concept is a limited right to exclusively market the drug or medicine in question. The exclusive marketing right lasts five years or until the issuance or rejection of a patent (§ 24B, Patents Act, 1970). Out of 17 applications filed for the grant of an EMR during the period in which the mailbox system was functional, only four were granted. *See* Archa Saran, *A Changing Regime: India's Tryst with January* 1, 2005, 38 I.P.B.A. J. 17, 21 (2005).

[74] *See* SUDIP CHAUDHURI, TRIPS AND CHANGES IN PHARMACEUTICAL PATENT REGIME IN INDIA 7 (Indian Institute of Management, Calcutta, Working Paper No. 535, Jan. 2005).

[75] *See* R. Gupta, *TRIPS Compliance: Dealing with the Consequences of Drug Patents in India*, 26 HOUSTON J. INT'L L. 599, 608 (2004).

[76] Siddarth Narrain, *A Life Saving Order*, FRONTLINE, Jul. 17-30, 2004, http://www.frontlineonnet.com/fl2115/stories/20040730004110300.htm (last visited Oct. 21, 2005).

the DPCO. The challenge made its way to the Supreme Court and is yet to be resolved.[77]

Going by this history, one is prone to be a little sceptical of the role of price control in India. However, there are indications that, in view of the 2005 Act and its expected impact on prices, the government is considering strengthening the price control regime to increase competition and ensure affordable medicines to the general public. To this end, a new Drug Pricing (Regulation & Management) Act is being considered.[78] The proposed Act would, while retaining the DPCO within its ambit, have additional provisions such as end-to-end price monitoring and negotiated settlement of prices of new/patented drugs. It would also lay emphasis on cutting promotional expenses that contribute substantially to the price of the drug.

The Competition Act, 2002 was brought in to replace the earlier Monopolies and Restrictive trade Practices (MRTP) Act, 1969.[79] Modelled on the lines of the EC competition regime,[80] it is possible that case law under the EC regime that places a check on abusive practices by intellectual property owners could be transposed to India as well. In particular, section 4 of the Act, which prohibits an enterprise from abusing its dominant position, mirrors the prohibition in Article 82 (ex Article 86) of the EC Treaty.[81] It provides

---

[77] Union of India v. K.S. Gopinath, S.L.P.(C) No. 3668 of 2003. This is an appeal from a lower court ruling that had stayed the operation of the new policy. Although the Supreme Court granted leave in the matter, it is still to render any decision or pass any orders. The net result is that the stay on the policy granted by the lower courts continues to be operational. *See SC Concern Over Non-Inclusion of Essential Drugs*, HINDU, Aug. 2, 2003, http://www.hinduonnet.com/thehindu/2003/08/02/stories/2003080204201300.htm (last visited Oct. 28, 2005).

[78] K.G. Narendranath, *DPCO May be Retained in New Drug Pricing Act*, FIN. EXPRESS, Aug, 1, 2005, http://www.financialexpress.com/fe_full_story.php?content_id=98022 (last visited Oct. 29, 2005).

[79] Only some of the provisions of this Act have been brought into force (sections 1, 2, 7-17, 22, 23, 36 and 49-65 have come into force by virtue of Notifications Nos. S.O. 340(E) and S.O. 715(E) dated March 31, 2003 and June 19, 2003 respectively).

[80] *See generally* A. Viswanathan, *From Commanding Heights to Competition: A Comparative Analysis of India's Competition Act 2002 with UK/EC Law*, 14(7) INT'L. COMPANY & COM. L. REV. 229 (2003) (comparing the Indian and EU regimes).

[81] Treaty Establishing the European Economic Community, 25 Mar. 1957, 298 U.N.T.S. 3 (Treaty of Rome).

examples of conduct that amount to an abuse of a dominant position and includes "[t]he imposition of an unfair or discriminatory condition or price in the purchase or sale of goods or services, including predatory prices except where adopted to meet competition". A similar provision in the EC has been interpreted as proscribing high monopolistic prices.[82]

B. Spurring an Innovation Culture in India

The multinational pharmaceutical industry argues that a product patent regime is essential for encouraging R&D in new drugs and catapulting the domestic industry into the innovative drug sphere. It needs to be noted however that basic reverse engineering skills (organic chemistry skills) are different from the skills required to arrive at new drugs (medicinal chemistry skills).[83] Besides, the costs of researching upon and introducing a new drug into the market are colossal.[84] It therefore remains to be seen whether incentives through a patent regime will achieve the desired results and whether Indian companies will be able to compete with global multinational companies on this turf. A commentator rightly notes that till recently, the emphasis has been "mainly on building a system of production and not on a system of innovation".[85]

---

[82] This possibility was first acknowledged by the European Court of Justice (ECJ) in *Sirena* v. *Eda*, [1971] C.M.L.R. 260. Later cases include *United Brands Co*. v. *Commission*, [1978] E.C.R. 207, and *British Leyland plc* v. *Commission*, [1986] E.C.R. 3263.

[83] *See* S. Subramaniam, Pharmaceutical R&D in India: Addressing the Emerging Model of Drug Innovation, Address at Chatham House Conference, London, UK (Feb. 1, 2005), *available at* http://www.chathamhouse.org.uk/pdf/conferences/proceedings/subr0105.ppt (last visited Oct. 29, 2005).

[84] The current average capitalised cost of developing a new drug is estimated to be US$ 870 million. *See generally* J.A. DiMasi et al., *The Price of Innovation: New Estimates of Drug Development Costs*, 22 J. HEALTH ECON. 151 (2003). This estimate has been criticised as not representing "…what companies actually spend to discover and develop new molecular entities. It includes the expense of using money for drug research rather than other investments (known as the 'opportunity cost of capital')." Public Citizen, *Critique of the DiMasi/Tufts Methodology and Other Key Prescription Drug R&D Issues*, *at* http://www.citizen.org/congress/reform/drug_industry/articles.cfm?ID=6532 (last visited Nov. 1, 2005).

[85] PADMASHREE GEHL SAMPATH, ECONOMIC ASPECTS OF ACCESS TO MEDICINES AFTER 2005: PRODUCT PATENT PROTECTION AND EMERGING FIRM STRATEGIES IN THE INDIAN PHARMACEUTICAL INDUSTRY 30, *available at* http://www.who.int/intellectualproperty/studies/PadmashreeGehlSampath Final.pdf (last visited Nov. 1, 2005).

However, over the last couple of years, Indian firms have been engaging in incremental modifications of pharmaceutical products developed in foreign (mainly Western) countries.[86] Such modifications or incremental innovations that cater specifically to the public health needs of India (such as new drug delivery systems and formulations that are created to withstand tropical temperatures) are of immense value.[87] An excellent example of such incremental innovation is that of Wockhardt Ltd., which developed humidity-resistant salt forms and isomers of known anti-microbial substances. The original compounds had been patented by the Otsuka Pharmaceutical Company as potential antimicrobial agents against bacteria that were resistant to conventional antibiotics such as penicillin, ampicillin and streptomycin. The patented salts have better solubility characteristics and greater stability in the presence of high humidity climates than the original patented active substance.[88] It is likely that the new regime will, at the very least, incentivise these kinds of incremental innovations - the extent to which it will do so will, of course, depend on how the patent eligibility and patentability requirements are interpreted by the Patent Office and courts.

---

[86] *See* CARSTEN FINK, HOW STRONGER PATENT PROTECTION IN INDIA MIGHT AFFECT THE BEHAVIOR OR TRANSNATIONAL PHARMACEUTICAL INDUSTRIES 9 (The World Bank, Washington DC , USA, Working Paper No. 2352, 2000) 9. A recent news item points out that "[d]omestic pharma majors fear that the new negative list on patenting substances will discourage indigenous research and development (R&D). Since they are far from launching a new chemical entity of their own, some of India's largest pharmaceutical companies are focusing on novel drug delivery systems (NDDS) for the time being." K.G. Narendranath & Ravi Krishnan, *Long Negative List of Patentability Discouraging Research and Development*, FIN. EXPRESS, Sept. 12 2005, http://www.financialexpress.com/fe_full_story.php?content_id=98948 (last visited Nov. 1, 2005). On the basis of all these reasons, it is often claimed that the Indian industry is not invention-based, aiming at the production of new chemical entities, but rather innovation-based, aiming at producing incremental modifications of existing drugs.

[87] The example of Ranbaxy is noteworthy in this regard - it came up with an innovative drug delivery system for ciprofloxacin. The invention, sold as Cipro-OD, enabled a patient to take the medicine just once a day (OD) and was successfully licensed to Bayer AG. *See* SAMPATH, *supra* note 85, at 43.

[88] The new salt innovations have been patented: arginine salt forms (6,514, 986; 6,753,333); specific isomers of arginine salts referred to as L-arninine salts (6,664,276) and optically pure carboxylic acid salt forms (6,750,224; 6,608,078). World Intellectual Property Organization Secretariat, *Follow-on Innovation and Intellectual Property* 13-14 (20 May 2005) (Submission to the WHO's CIPIH), *at* http://www.who.int/entity/intellectualproperty/sub missions/Innovation%20&%20Intellectual%20Property%20WIPO.pdf (last visited Oct. 29, 2005).

It is also likely that a product patent regime will encourage global multinationals to outsource some of their drug manufacturing and clinical trials to India and enter into appropriate partnerships with Indian companies.[89]

C. TRIPS Implications

Despite the fact that the 2005 Act is purportedly India's final step towards TRIPS compliance, the TRIPS compatibility of some of its provisions may be in dispute.

Article 27 of TRIPS states, in the pertinent part, that "… patents shall be available and patent rights enjoyable without discrimination as to the place of invention, the field of technology and whether products are imported or locally produced." The non-grant of retrospective rights to mailbox applications, coupled with making them automatically susceptible to compulsory licensing provisions, may violate Article 27 - mailbox applicants could argue that, when compared with other fields of technology, they have been discriminated against.

The WTO panel in the *Canada - Patent Protection of Pharmaceutical Products* case[90] ruled that the term 'discrimination' was a "normative term, pejorative in connotation, referring to results of the unjustified imposition of differentially disadvantageous treatment". Whether the above disadvantageous treatment of mailbox applicants is an 'unjustified imposition' will depend upon an assessment of public health concerns and affordable access to medicines in India and the causal link between such concerns and the provisions that are allegedly in contravention of TRIPS. It must be borne in mind that Article 27.1 is to be interpreted in the context of the Doha Declaration, paragraph 4 of which reads as follows:

> *We agree that the TRIPS Agreement does not and should not prevent Members from taking measures to protect public health. Accordingly, while reiterating our commitment to the TRIPS Agreement, we affirm that the*

---

[89] Manojit Saha, *Drug Patent: A Viagra for Indian Pharmaceutical Industry*, DECCAN HERALD, Apr. 4, 2005, *available at* http://www.deccanherald.com/deccanherald/apr42005/93626200543.asp (last visited Oct. 29, 2005).

[90] WTO Panel on Canada - Patent Protection of Pharmaceutical Products, Report of the Panel on Canada-Patent Protection of Pharmaceutical Products, WT/DS114/R at ¶ 7.94 (Mar. 17, 2000), *available at* http://docsonline.wto.org/DDFDocuments/t/WT/DS/114R.DOC.

Agreement can and should be interpreted and implemented in a manner supportive of WTO Members' right to protect public health and, in particular, to promote access to medicines for all.

Secondly, section 84(1)(c) of the Act, which provides for a compulsory licence if the invention is not worked in India ('local working' provision), could also arguably fall foul of Article 27 which, as mentioned above, prohibits any discriminatory treatment based on whether products are imported or locally produced. This issue is yet to be resolved by a WTO panel - an opportunity was lost when the US voluntarily withdrew its complaint against Brazil, which had a provision similar to the Indian one.[91]

While the TRIPS compatibility of the above provisions are not entirely clear, the argument that the amended section 107A(b) dealing with parallel imports contravenes Article 28 of TRIPS is a strong one.[92] Since this section is not limited to pharmaceutical inventions, any potential justification for differential treatment in the context of pharmaceutical inventions will not apply here.

D. A Stitch in Haste Leads to Provisions in Bad Taste

As is evident from the above discussion, some of the provisions introduced by the 2005 Act could have done with more careful deliberation. Defining a term ('pharmaceutical substance') that is not mentioned thereafter in the Act cannot, even with an ample dose of charity, be attributed to anything other than shoddy drafting. Definitions of 'new invention' and 'inventive step' introduced by the Act not only go against the grain of time-tested principles, but lead to inconsistencies with other provisions in the Act.

These mistakes are not too surprising, given that most of the problematic provisions were deliberated upon and introduced in less than three months - between December 2004 (when the Ordinance was passed) and March 2005 (when a Bill was placed before Parliament). To a large extent, changes to the Ordinance were made to appease the Left Parties. A case in point is the

---

[91] *See* WTO Panel on Brazil - Measures Affecting Patent Protection, Report of the Panel on Brazil - Measures Affecting Patent Protection, Request for the Establishment of a Panel by the United States, WT/DS199/3 (Jan. 9, 2001), *available at* http://docsonline.wto.org/DDFDocuments/t/WT/DS/199-3.doc (last visited Oct. 29, 2005).

[92] *See* discussion *supra* Part IIH.

'inventive step' clause, which was copied verbatim from the list of recommendations by the Communist Party of India (Marxist) (CPI(M)),[93] which in turn appears to be based on a report by a prominent peoples' commission.[94]

A slower and more elaborate deliberation would have yielded better provisions. At a time when the word 'patent' meant patent leather shoes to most in India, the legislative effort was informed by a brilliant report from a Committee that circumnavigated the laws of the world and took a call on what they thought would best suit the needs of India.[95] The success of the generic industry today is testimony, albeit in some small way, to the brilliance of their foresight. This report has in fact acquired an almost canonical status in the patent office, which still relies heavily on it whilst determining patentability.[96]

Contrast this with the present Act: legislative efforts began towards the end of 2002 and did not even so much as merit a Parliamentary Committee Report.[97] Rather, while debating provisions pertaining to the 2005 amendments, the government took repeated refuge in the fact that the issues had already been discussed by a JPC (Joint Parliamentary Committee) constituted for the purposes of the 2002 Amendments.[98] As the CPI(M) rightly puts it:

---

[93] Communist Party of India (Marxist), *Left Parties on Amendments to the Indian Patent* Act, *at* http://www.cpim.org/upa/2004_patents.pdf (last visited Nov. 1, 2005).

[94] Peoples' Commission on Patent Laws for India, *Report of the Fourth People's Commission on Review of Legislations Amending Patents Act 1970, at* http://www.who.int/entity/intellectualproperty/documents/Report4thCommission.pdf (last visited Nov. 2, 2005).

[95] AYYANGAR REPORT, *supra* note 6.

[96] *See generally* Basheer, *supra* note 64.

[97] Contentious legislations (or issues therein) in India are, more often than not, referred to select Parliamentary Committees.

[98] As stated in n.1 above, India's Patents Act, 1970 had been amended twice earlier to comply with TRIPS: first in 1999 and then in 2002. Most of the changes in the 2002 amendments were based on recommendations made by a Joint Parliamentary Committee constituted for this purpose by the then government. RAJYA SABHA SECRETARIAT, REPORT OF THE JOINT COMMITTEE ON PATENTS (SECOND) AMENDMENT BILL 1999 (2001).

> *We fail to understand how the deliberations of the JPC constituted to consider the Second Amendment can now be cited as if it had the last word on all matters relating to the Patent Amendments under consideration at present. That JPC is now functus officio.*[99]

The stakes being higher in 2005, one would have expected detailed deliberation on the patent regime and a far more elaborate legislative exercise. Indeed, as a *New York Times* editorial profoundly noted: "Seldom has India's Parliament considered anything of such global import."[100]

The debates around the Bill were also characterised by a rather one-sided focus on pharmaceuticals. It was largely forgotten that the removal of section 5 not only introduced product patents for pharmaceutical substances, but also for other chemical substances including agrochemicals.

IV. CONCLUSION: WHITHER NATIONAL INTEREST?

The Patents Act in its final form is the result of extensive politicking, lobbying and of course, compromise. With competing pressures from multinationals, civil society, a communist coalition partner and an opposition party that performed the most stunning volte face (objecting to a bill that it had drawn up itself), the government performed the finest tightrope walk ever witnessed in the annals of Indian intellectual property law making. To top it all, it had to perform this delicate stunt within the contours of the TRIPS/WTO framework.

This dexterous manoeuvring around competing interests certainly deserves praise. However the net result of such a compromise and a hasty legislative process is a lack of clarity in the law. The price for these deficiencies will, no doubt, manifest itself in the years to come - in sharp contrast to the way that a carefully deliberated policy in 1970 resulted years later in a generic industry that became the pride of the nation.

As for the vexed question of the likely impact of the new regime on access to medicines, it bears noting that the provisions, as they stand now, leave sufficient scope for the continued production of some generics. Insofar

---

[99] *See* Communist Party of India (Marxist), *supra* note 93, at 1.

[100] *AIDS Drugs Threatened*, N.Y. TIMES, Mar. 5, 2005, http://www.nytimescom/2005/03/05/opinion/05sat3.html (last visited Nov. 2, 2005).

as new drugs are concerned, the costs are likely to increase and in the absence of a nationwide healthcare insurance system, the common man may have to bear the brunt of the new regime. However, there are provisions in the patent regime and other related regimes that could be interpreted in a manner as to help keep the costs down. Whether these provisions would be so interpreted to further public health concerns remains to be seen.

THE INDIAN JOURNAL OF LAW AND TECHNOLOGY
Volume 1, 2005

VoIP: THE FUTURE OF TELEPHONY IS NOW… IF REGULATION DOESN'T GET IN THE WAY

*Burt A. Braverman**

ABSTRACT

VoIP is an innovative new form of telephony that can dramatically enhance both the efficiency and functionality of telephone service to businesses and individuals around the globe. Regulators worldwide are now faced with the choice of whether to impose inapt, antiquated monopoly-based telecom regulations on VoIP or to exercise regulatory restraint and allow this dynamic communications medium to flourish. This article examines some of the technical aspects of VoIP, and considers why this new technology is rapidly gaining popularity in both industrialised and developing nations alike. The article also analyses the changes in the regulatory environment in the United States, including major rulings by the Federal Communications Commission and federal courts that have occurred in the wake of VoIP's rise in popularity and cross-platform acceptance. Finally, the article looks at some of the issues that regulators in other countries, including India, must address as the legal framework relevant to VoIP continues to evolve.

TABLE OF CONTENTS

---

* Member of the Bars of the District of Columbia and the Commonwealth of Virginia; Partner, Cole, Raywid & Braverman LLP, Washington D.C.; B.A. '66, Miami University; J.D. '69, George Washington University. Many thanks to my colleague, Jennifer Toland, for all of her assistance in preparing this article, which is an adaptation of the paper that I presented to the Computer Law Association in Bangalore, India on February 2, 2005.

I. INTRODUCTION

New technologies that use the Internet and Internet Protocol to deliver voice communications are changing the ways people communicate with one another.[1] Some have described Voice over Internet Protocol (VoIP) - the emerging combination of high-speed Internet and new voice applications - as a way to "deliver old services in fundamentally new ways."[2] VoIP is more revolutionary than evolutionary, marking by far the most dramatic change in the technological and conceptual framework of telephony since the development of the hard switch. Its emergence is forcing re-evaluation of the heavily regulated treatment historically accorded to telephone services, and harmonisation with contemporary thought on the deregulated nature of the Internet. Our ability to mesh these communications media and their regulatory constructs will determine whether and when the true potential of VoIP to enhance communications and hasten economic development will be realised to its fullest extent.

II. WHAT IS VOIP?

A. VoIP Defined

Voice over Internet Protocol also is referred to as Internet Protocol (IP) telephony, Internet telephony and Voice-over-the-Internet (VoN).[3] Although there are no universally accepted definitions for any of these terms, a good description is:

> *The technology used to transmit voice conversations over a data network using the Internet Protocol. Such data network may be the Internet or a*

---

[1] David Jolly, *Free VoIP: Ears Perk Up*, INT'L HERALD TRIB., Feb. 26, 2005, http://www.iht.com/articles/2005/02/25/business/ptend26.php (last visited Oct. 8, 2005) (predicting that increased use of voice over Internet protocol could result in enhanced family communication and more cost-efficient telecommuting, and characterising VoIP as "technology that could change your life").

[2] VOICE ON THE NET COALITION, UNLEASHING THE PROMISE OF INTERNET VOICE COMMUNICATION 1 (2004), *available at* http://www.von.org/usr_files/Whitepaper%20Final.pdf (last visited Nov. 5, 2005) [hereinafter VON WHITE PAPER].

[3] GERALD J. WALDRON & RACHEL WELCH, GLOBAL INTERNET POLICY INITIATIVE, VOICE-OVER-IP: THE FUTURE OF COMMUNICATIONS 1 (2002), *available at* http://www.internetpolicy.net/practices/voip.pdf (last visited Nov. 5, 2005) [hereinafter GIPI White Paper].

corporate Intranet, or managed networks typically used by long and local service traditional providers and ISPs that use VoIP.[4]

B. Technology Basics

The core feature of VoIP calling is the conversion of analogue voice signals into individual IP digital packets through special hardware or a computer.[5] The IP packets then are transmitted over data networks, such as a managed IP network or the Internet, via routers. Finally, the IP packets are converted back into analogue voice upon arrival at their destination or, in cases where VoIP service is interconnected with the Public Switched Telephone Network (PSTN), packets sometimes may be converted into analogue on that network.[6]

In a traditional circuit-switched telephone call, each conversation - including numerous moments of bandwidth-consuming silence - utilises a constant, dedicated portion of bandwidth over a unitary path on the telephone network.[7] As more calls are made on the network, the amount of bandwidth available decreases. In the more efficient world of packet networks, packet-switching technology enables multiple conversations that have been converted into IP packets to be transmitted over a shared network.[8] Another benefit of packet-switching is that packets may be re-routed through different channels to circumvent problems such as malfunctioning routers and damaged lines.[9] Also, unlike a traditional telephone call, bandwidth is not monopolised by a single conversation; instead, the conversation, divided into multiple IP packets, is spread over the shared network with greater efficiency. However, because the conversation is transmitted as multiple IP packets, VoIP calls can

---

[4] NEWTON'S TELECOM DICTIONARY 870 (19th ed. 2003).

[5] VON WHITE PAPER, *supra* note 2, at 2.

[6] For example, one way of converting voice signals into IP packets relies on integration of softswitch interfaces at the PSTN. These interfaces digitise and compress the voice signal, attach an IP header, and send the packets over the IP network. A receiving media gateway assembles the packets and converts them back to a voice signal. *See* VERISIGN, IP TELEPHONY WHITE PAPER 2 (2002), *at* http://www.verisign.com/static/001936.pdf (last visited Nov. 5, 2005).

[7] VON WHITE PAPER, *supra* note 2, at 2.

[8] *Id.*

[9] *Id.* at 4.

experience problems such as end-to-end delay in receiving packets over the network and packet loss across the channel, although technology is rapidly overcoming these drawbacks.[10]

C. The Flavours of VoIP Communications

There are three principal types of VoIP communications: 1) PC-to-PC, 2) Phone-to-Phone-over-IP, and 3) PC-to-Phone or Phone-to-PC.[11] With *PC-to-PC* (or end-to-end IP) communications (e.g. pulver.com), both the calling and the called parties must have computers or other devices capable of executing VoIP application software commands, such as PDAs, and both must be connected to the Internet at the same time via their respective Internet Service Providers over dial-up, DSL or high-bandwidth Internet connections or via a private network.[12] Moreover, the calling party must know the IP address of the party he or she is calling.[13] In this scenario, the ISP is a passive participant, merely enabling the user to access the Internet; there is no third-party voice service, in the sense of traditional telephony, but rather the parties connect to each other directly through their PCs using a voice-based Internet application.

In a *Phone-to-Phone-over-IP* call (e.g. Net2Phone), the communicating parties, both of whom subscribe to PSTN services (fixed or wireline), do not use PCs but instead utilise their own traditional telephone sets in the normal manner.[14] There are two ways that a Phone-to-Phone-over-IP call can occur. One method is through the use of a gateway.[15] Here, the calling party initiates a call in a traditional manner, but the call is then routed through a gateway

---

[10] For a discussion of these and other packet-related problems, see NORTEL NETWORKS, VOICE OVER PACKET: AN ASSESSMENT OF VOICE PERFORMANCE ON PACKET NETWORKS (2001), *at* http://www.nortel.com/solutions/providers/enabling_tech/voip/voip101.html (last visited Nov. 5, 2005).

[11] GROUP OF EXPERTS ON IP TELEPHONY & INTERNATIONAL TELE-COMMUNICATIONS UNION, THE ESSENTIAL REPORT ON IP TELEPHONY 4 (2003), *at* http://www.itu.int/ITU-D/e-strategy/publications-articles/pdf/IP-tel_report.pdf (last visited Nov. 5, 2005).

[12] *Id*. at 4-5.

[13] *Id*. In some applications, the parties may use an online directory server where users register prior to initiating calls.

[14] *Id*. at 6.

[15] *Id*.

that enables the call to be transmitted over a managed IP network (as opposed to the public Internet). The call is converted again by the destination gateway and is relayed via a fixed or wireless network to the called party's telephone set. The gateways and the managed IP network may be owned by the same party, or by different parties. The VoIP aspect of the call is effectively invisible to the communicating parties.[16]

The second method is through the use of adaptors, which resemble modems. In this situation, the calling party initiates the call using a traditional telephone set connected to the adaptor. The adaptor sends the call to the PSTN, but the call is then routed via the parties' respective ISPs to and from the Internet. The called party's local exchange carrier receives the call from the Internet and relays it to the called party's adaptor, which sends the call to the called party's telephone set connected to this adaptor. Unlike a gateway, the adaptor method is similar to a PC-to-PC call in that both parties must subscribe to ISPs whose access software has been installed in the subscribers' respective adaptors. In addition, both parties must use the same type of adaptor.[17]

A *Phone-to-PC or PC-to-Phone* communication (e.g. Vonage and Ping-Phone) is like a combination of a PC-to-PC call and a Phone-to-Phone-over-IP call.[18] If the calling party initiates a call from a computerised device, the call is connected via an ISP to the Internet, just like the initiation of a PC-to-PC call. However, an Internet telephony service provider (ITSP) receives the call and, using a gateway, directs the call (either over a managed network or other Internet connection) to the point of the PSTN closest to the called party's telephone exchange and interconnects the call with the called party's telephone carrier, which then connects the call to the called party's traditional telephone set. When the calling party uses a traditional telephone set, the process works essentially in reverse.

---

[16] A 'managed IP network', unlike the public Internet, is a privately owned network constructed in such a way as to provide voice over IP with an acceptable and predictable quality of service. *Id*.

[17] *Id*.

[18] *Id.* at 7-8.

III. WHY DO WE CARE ABOUT VOIP?

A. VoIP is Much Less Expensive for Routing of Traffic

VoIP is an extraordinarily efficient means of transmitting voice communications. Depending on the technology used, VoIP may use a mere one-tenth of the bandwidth required for traditional telephone voice conversations.[19] This efficiency significantly reduces the infrastructure investment necessary to carry a particular quantum of voice traffic.[20] Moreover, when interconnecting with the traditional telephone network, VoIP providers generally do not pay the high fees that telephone companies pay to transport one another's traffic ('access charges'), although that has been a source of controversy.[21] These fees amount to many billions of US dollars worldwide.[22]

Because fees paid on international traffic are much higher than domestic fees, VoIP for international calling leads to even greater savings for consumers. VoIP began in the mid-'90s, as general public awareness and usage of the Internet increased, principally as computer-to-computer international calling over the Internet in order to avoid the high fees that traditional telephone companies had to pay one another and passed on to consumers. The US Federal Communications Commission (FCC) continues to encourage (or at least not interfere with) VoIP usage as a moderating force against the very high international settlement rates (the international equivalent of access charges) charged by foreign governments for completing international long-distance calls over the PSTN, compared to termination rates in the United States.

---

[19] Applied Research Technologies, *Packet Voice Technology: Cheap Talk?*, May 13, 1999, *at* http://www.applied-research.com/applied-research/articles/99/article10Sanford.htm (last visited Oct. 5, 2005); Silicon Press, *Technology Brief: VoIP - Voice Over IP, at* http://www.silicon-press.com/briefs/brief.voip/index.html (last visited Oct. 22, 2005).

[20] *See* VoN White Paper, *supra* note 2, at 5. VoIP networks are based primarily on software, in contrast to traditional circuit-switched networks, which are hardware-dependent. Software-based networks are less costly to build and easier to modify and maintain. Some estimate that packet-switched networks can save 50 to 60 percent in operating costs. *Id*.

[21] *See* discussion *infra* Parts IV(C), V(A)(2), V(A)(3).

[22] According to a study prepared in 1999 by the ITU and TeleGeography, more than US$50 billion was transferred during the 1990s from developed countries to developing countries pursuant to the international accounting rate system. *See To Regulate or Not to Regulate?*, ITU News (International Telecommunications Union, Geneva), Jan. 2005, at 8, *available at* http://www.itu.int/ITU-D/treg/VoIP.pdf (last visited Nov. 2, 2005) [hereinafter ITU News].

B. VoIP has Greater Efficiency and Increased Functionality

VoIP can generally be run over existing data networks with some modifications.[23] Only one network is needed to provide voice and data services and both voice and data functions can be integrated. Maintenance is also easier. For example, moving, adding or changing employee telephone numbers was found in one survey to be reduced from one to two hours of work to fifteen minutes even if traditional telephone handsets were used and, if special IP phones were used, the time was reduced to near zero because users could plug in anywhere and no reconfiguration was needed.[24]

The first PC-to-phone service was commercially launched by Net2Phone in 1996. Although initially VoIP suffered from poor voice quality and complex set-up requirements, those problems have now largely been eliminated.[25] Today, VoIP enjoys improved voice quality that rivals the PSTN (particularly when provided over private networks as opposed to the public Internet), interconnection with the traditional telephone network for many providers, increased penetration of broadband Internet connections (most VoIP services require high-speed connections), and greatly enhanced functionality that can far exceed that which is available on the PSTN.

VoIP is not just another flavour of telephone service but is rather a way to provide new, innovative and more affordable services.[26] Although its main

---

[23] *See* VoN White Paper, *supra* note 2, at 4 (distinguishing VoIP from the PSTN, which requires new service providers either to build their own infrastructure or to lease the infrastructure from an incumbent provider).

[24] Robin Gareiss, *VoIP by the Numbers*, Network World, Nov. 3, 2003, *at* http://www.networkworld.com/research/2003/1103voip.html (last visited Oct. 15, 2005).

[25] New technologies that improve the quality of VoIP continue to emerge. For example, at a recent conference in Washington, D.C., satellite broadband solutions provider Tachyon Networks, Inc. announced that it had developed a new service that prioritises voice packets over data during transmission. The company claims that its service results in a reduction in packet loss and thereby provides higher-quality, more efficient VoIP connections. *See* Matthew Friedman, *Tachyon Rolls out Expanded Satellite VoIP Service*, Networking Pipeline, Mar. 23, 2005, *at* http://www.networkingpipeline.com/news/159904770 (last visited Nov. 2, 2005).

[26] VoN White Paper, *supra* note 2, at 3 (noting that the traditional PSTN "operates as a closed system on which it is impossible for innovative developers to build new applications," unlike VoIP, which is deployed on the Internet and offers new capabilities such as access to voicemail from e-mail, low-cost conference calling and the capacity to use a phone extension anywhere an Internet connection is found).

application initially was in long-distance calls, especially international calls, it is increasingly being used to deliver local or intrastate services, to avoid high access and termination charges and to make available enhanced functionality and efficiency not feasible over traditional telephone networks.

C. VoIP Matters to Incumbents, Competitors and Consumers

Voice communications in the United States, as elsewhere, is a gigantic business, worth approximately $200 billion annually.[27] As in other parts of the world, telephone communications in the United States have traditionally been monopolised. Long-distance competition emerged in the 1960s and took off in the '80s. Local competition, which first appeared in the 1980s and was supposed to have been jump-started with the enactment of the 1996 Telecom Act, is still anaemic, except for that provided by wireless services.

The distinction between *toll* (long-distance) and *local* calling has virtually disappeared. Historically, there were valid technical and economic differences between toll and local calling, but they have been reduced, if not eliminated, by fibre optics, substantially less expensive switches and a glut of capacity. Today, the toll-versus-local distinction is essentially a retail-pricing artefact.

Incumbents have fought to preserve the toll-versus-local distinction in order to continue to exploit their monopoly over access to their end users by imposing high access charges on toll carriers. But that exploitation has invited competition from wireless (which largely disregards the toll-versus-local distinction) and VoIP long-distance (which can connect stealthily, behind a competitive local exchange carrier (CLEC) or plain old telephone service (POTS) line) providers.

As wireless telephone service rapidly erodes the incumbent wireline POTS base, VoIP services are making substantial inroads into both long-distance and local carriers' markets. 'VoIP over WiFi' is already being rolled out, and IP 'smart phones' have been designed to work over wireless LANs (i.e. WiFi systems). The 'next-generation network' will integrate VoIP with the PSTN, Internet and wireless to create the 'killer application'.[28]

---

[27] Steve Taylor & Larry Hettick, *Convergence Coming from Cable Companies*, NETWORK WORLD, Jul. 7, 2004, *at* http://www.networkworld.com/newsletters/converg/2004/0705converge2.html (last visited Oct. 17, 2005).

[28] *See* P.J. Louis, *VoIP: The Killer Application*, *at* http://www.mobilein.com/Perspectives/Authors/VoIP-1.htm (last visited Oct. 17, 2005).

D. The Incumbents' Dilemma

Previously, VoIP was largely invisible to end users, as carriers cautiously applied the technology inside their networks to gain the efficiencies of packet-switched transport, as opposed to circuit-switched transport. Now, VoIP has emerged onto the desktop and is profoundly changing customers' experience both in the cost and the functionality of telephone communications.

Many incumbent local phone companies ('ILECs', or 'incumbent local exchange carriers') have been reluctant to promote VoIP, because doing so would undercut prices for their traditional voice services. Even when they have done so, they have often required customers to keep their traditional telephone lines, marketing VoIP service as a second-line replacement.

Incumbents rightfully fear the impact of VoIP. For example, in March 2004, Standard & Poor's put Verizon Communications' long-term credit ratings on review for a possible downgrade, citing the burgeoning ability of cable companies to offer Internet-based phone service as a 'substantial' new industry threat. The dilemma for all incumbent providers of traditional telephone services is no longer whether, but rather when and how, to offer VoIP to consumers. A related issue for all VoIP providers will be whether to offer higher quality, more expensive VoIP over 'managed' IP networks or lower quality, less expensive VoIP over the public Internet.

ILECs, seeking to hold onto their monopoly-sown customer base, have resisted the onslaught of VoIP in a number of ways. For example, initially they refused to allow defecting telephone customers to take their telephone numbers with them ('number portability'), hoping that customers' unwillingness to abandon their numbers would stem the tide of defections to VoIP. Incumbents also have sought to discourage customers from dropping their POTS in favour of a competing VoIP service by tying a customer's right to continue subscribing to the incumbent's DSL Internet access service to retaining mandatory PSTN telephone service (bundling), a tactic that has led competitors (such as cable television operators) and consumer advocates (including state attorneys general) to insist that incumbents offer 'naked DSL', i.e. DSL free of any requirement that a subscriber take the incumbent's telephone service as well.

E. VoIP Growth is About to Explode

As VoIP technology has improved, feature-richness has increased, service issues have been resolved, the number of VoIP providers has risen, the retail

price of the service has fallen and consumers have embraced VoIP in rapidly increasing numbers. Some residential users have subscribed to VoIP as a second line, while others have replaced their traditional landline service completely. Businesses too have begun enthusiastically migrating to VoIP in truly impressive numbers. For example:

- Vonage announced that its customer base grew from about 100,000 lines at the end of 2003 to nearly 400,000 lines at the end of 2004.[29] It predicts that this will grow to one million customers by the end of 2005.[30]
- There were more than 600,000 subscribers to VoIP services in the United States by the end of 2004, up from about 130,000 in 2003.[31] That number is predicted to grow to 12.1 million by 2009.[32]

---

[29] *See* Press Release, Vonage, Vonage Crosses 400,000 Line Mark (Jan. 5, 2005), http://www.vonage.com/corporate/press_index.php?PR=2005_01_05_0 (last visited Oct. 7, 2005) (claiming that Vonage ended 2004 with more than 390,000 subscribers, thereby nearly doubling its subscriber base in less than six months and representing an increase of approximately 300,000 lines for the year).

[30] *See* Ben Charny, *Vonage Seeks a Million Users by '06*, CNET NEWS, Mar. 7, 2005, *at* http://news.com.com/Vonage+seeks+a+million+users+by+06/2100-7352_3-5603040.html (last visited Oct. 17, 2005) (quoting Vonage CEO Jeffrey Citron in his belief that the company will have a million subscribers by the end of 2005). Vonage appears to be well on its way to meeting this goal. As of early March 2005, the company reported that it already had over 500,000 lines in service and was adding new lines at the rate of 15,000 per week. Colin Haley, *Vonage's Hits and Misses*, INTERNETNEWS.COM, Mar. 7, 2005, *at* http://www.internetnews.com/infra/article.php/3487886 (last visited Oct. 17, 2005) (noting also that, despite impressive growth, Vonage has not been immune to problems, including a software glitch this year that knocked out service to half of its subscribers).

[31] *Vonage Dodges State Regulations*, WIRED NEWS, Nov. 9, 2004, *at* http://www.wired.com/news/ebiz/0,1272,65655,00.html (last visited Oct. 17, 2005) (citing statistics provided by The Yankee Group, a Boston-based communications research firm).

[32] Michael Singer, *VoIP to Fuel Plague of 'Dialing for Dollars'*, INTERNETNEWS.COM, Mar. 11, 2005, *at* http://www.internetnews.com/xSP/article.php/3489591 (last visited Oct. 17, 2005) (citing a report by Jupiter Research and adding that VoIP is expected to become even more popular outside of the United States).

- US carriers spent approximately $3 billion on VoIP equipment in 2004, a figure that is expected to rise to $4.42 billion for 2005.[33] It is forecasted that such expenditures will approach $11 billion per year in 2009.[34]
- The number of Internet-based phone lines in the US grew from well under one million in 2002 to approximately five million by the end of 2004.[35]
- VoIP service revenue in North America crossed $1.3 billion in 2004 and is predicted to grow to $19.9 billion in 2009.[36]
- More than 12% of all US businesses used VoIP services in 2004, up from just 3% in 2003.[37] The number of US businesses using VoIP is expected to triple in 2005, accounting for more than 30% of voice lines in the enterprise market.[38]

---

[33] *Internet Phones Likely to See Price Competition*, BIZREPORT, Mar. 24, 2005, *at* http://www.bizreport.com/news/8787/ (last visited Oct. 17, 2005) (pointing out that the market for VoIP equipment, which includes phones, hardware and software, jumped 78% in 2004).

[34] *Id*.

[35] Peter Burrows, *Net Phones Start Ringing Up Customers*, BUSINESSWEEK ONLINE, Dec. 29, 2003, *at* http://www.businessweek.com/@@kVQLHIYQciY5FRoA/magazine/content/03_52/b3864039.htm (last visited Oct. 17, 2005) (citing a report by Adventis Corp. and noting that the growth in VoIP is attributed to affordable broadband and VoIP lines that can be established for ten to twenty percent of the cost of deploying a regular phone line).

[36] *See* Press Release, Infonetics Research, Inc., VoIP Service Revenue Tops $1.3B in 2004, Skyrockets to $20B in 2009 (May 5, 2005), *available at* http://www.infonetics.com/resources/purple.shtml?ms05.vip.nr.shtml (last visited Oct. 17, 2005) (announcing the findings of Infonetics Research's latest report on VoIP services, which predicts a 1,431% increase in VoIP service revenue between 2004 and 2009).

[37] *Corporate VoIP Diffusion Rate up to 12 Percent in 2004*, GLOBAL SOURCES, Dec. 22, 2004, *at* http://www.globalsources.com/gsol/I/Internet-telephone/a/9000000059002.htm (last visited Nov. 2, 2005).

[38] *IP Telephony Adoption to Triple in 2005*, NEW TELEPHONY, Mar. 14, 2005, at 10, *at* http://www.nxtbook.com/fx/books/virgo/newtelephony-mar14-05/ (last visited Oct. 17, 2005) (referring to a study conducted by In-Stat in which even companies with fewer than 100 employees expressed interest in adopting VoIP technology).

- Worldwide, the numbers have grown even larger. Skype Technologies[39] announced that its premium paid service, SkypeOut, which allows users to connect to a PSTN number anywhere in the world,[40] passed the one-million-user threshold in March 2005.[41] Overall, Skype has more than 29 million registered users, most of whom use the company's free peer-to-peer Internet phone service.[42]
- Worldwide, it is predicted that 40% of all businesses will use VoIP by 2009.[43]

IP telephony's enhanced efficiency and functionality and its broad applicability to both commercial and residential uses and its rapid adoption worldwide have made it a force to be reckoned with. However, although the popularity of Internet telephony continues to grow at a staggering pace, not everyone views it from the same perspective.

IV. THE PROS AND CONS OF VOIP

A. Arguments Against VoIP

The most vocal opponents of VoIP have been incumbent monopoly local telephone companies. Facing the inevitable extinction of their increasingly archaic traditional switched network infrastructure and erosion of their local monopolies, ILECs have asserted before regulatory authorities not that VoIP should be forbidden, but rather that it should be saddled with a number of regulatory requirements that would slow the roll-out of VoIP services and

---

[39] Skype, a global communications company based on peer-to-peer technology, was founded in 2003 by Niklas Zennström of Sweden and Janus Friis of Denmark. *Skype Founders*, *at* http://www.skype.com/company/founders.html (last visited Oct. 17, 2005).

[40] *Id*.

[41] *Skype Signs One Millionth Paid VoIP User*, ADVANCED IP PIPELINE, Mar. 11, 2005, *at* http://www.advancedippipeline.com/159401456 (last visited Oct. 18, 2005).

[42] *See id*. (noting also that Skype's CEO and co-founder reports that the company is registering approximately 155,000 new users a day).

[43] *Internet Travel Monitor - Research & Legislation Alert: Businesses Ask VoIP to Hold Their Calls*, Jan. 27, 2005, *at* http://www.tripinfo.com/ITM/Articles2005/ITM854.html (last visited Nov. 1, 2005).

reduce the efficiency, efficacy and retail cost-effectiveness of the developing technology. In advancing this regulatory agenda, ILECs have argued that:

- VoIP harms incumbent telephone companies because it bypasses their services and undermines their revenue base.
- VoIP providers, for the most part, do not pay the fees that are used to support universal service/access.
- Many VoIP services do not currently support emergency ('E-911') services.
- VoIP is inferior in quality to traditional telephone services.
- VoIP widens the digital divide.

ILECs are not the only ones who have taken VoIP to task. In a recent case in Texas, the State Attorney General sued Vonage Holdings Corporation, a leading provider of VoIP services in the United States, after two residential subscribers of Vonage's VoIP service were shot during an attempted burglary of their home.[44] When the victims' daughter attempted to dial 911 for help over the family's Vonage connection, she was informed that emergency access was not available from that line.[45] The lawsuit is based on Vonage's alleged

[44] *See* Ted Hearn, *Texas AG Sues Vonage Over 911*, MULTICHANNEL NEWS, Mar. 22, 2005, *at* http://www.multichannel.com/article/CA512263?display=Search+Results%20&%20text=Texas+AG+Sues+Vonage+Over+911 (last visited Oct. 18, 2005) (quoting the Texas Attorney General that the victims' failure to obtain 911 access through their home telephone "is not just about bad customer service - it's a matter of life and death"). Other States also recently have set their sights on VoIP. In Michigan, the Attorney General issued a "consumer alert" warning residents that VoIP is not capable of offering the same emergency 911 services as traditional landline telephone services. *See Michigan Attorney General Raises VoIP 911 Alarm*, VOIP NEWS, Apr. 16, 2005, *at* http://www.voip-news.com/art/7l.html (last visited Oct. 15, 2005). In Connecticut, the Attorney General filed a lawsuit similar to that brought in Texas, alleging that Vonage misled consumers in Connecticut regarding the company's emergency dialling services. *See Connecticut Sues Vonage over 911 Policy*, REUTERS, May 4, 2005, *at* http://www.reuters.com/NewsArticle.jhtml? type=Internet News&storyID=8387447 (last visited Oct. 2, 2005).

[45] *See* News Release, Attorney General of Texas Greg Abbott, Texas Attorney General Abbott Takes Legal Action to Protect Internet Phone Customers (Mar. 22, 2005), *at* http://www.oag.state.tx.us/oagnews/release.php?id=850&PHPSESSID=v1rbktaf 4pp4rphg28e2v45pd4 (last visited Oct. 17, 2005) (explaining that Vonage customers must take proactive steps to activate the company's 911 dialling feature, and even then the service may not be as reliable as the emergency service offered by traditional phone carriers because calls are routed through administrative lines, instead of directly to call-station operators responsible for dispatching emergency vehicles).

failure to clearly disclose to its customers the lack of traditional E-911 emergency access.[46] According to the complaint, which was filed under the Texas Deceptive Trade Practices Consumer Act (DTPA)[47], Vonage markets its VoIP services as a replacement for traditional telephone service without clearly distinguishing the differences between traditional E-911 services and the emergency calling feature offered with VoIP.[48] The State of Texas is seeking injunctive relief and civil penalties amounting to $20,000 per violation for five alleged violations of the DTPA, as well as costs and attorney's fees.[49]

B. Responses

In response, VoIP proponents have emphasised the technological efficacy and cost-effectiveness of Internet telephony, the ability of the medium to provide competition to incumbent monopolies, and the benefit that VoIP would bring to business and residential consumers through lower-cost and more feature-rich telephone service. For example, they have asserted:

- Protecting incumbent telephone operators' monopolies retards economic and technological development.
- Ultimately, the questions of which services to 'tax' and which services to support financially are political and economic questions, separate from whether VoIP should be freely permitted.
- Some Internet-based VoIP providers furnish varying ranges of emergency services, and will do so increasingly as consumers demand further technical advances. Consumers should be the ultimate judges of what constitutes acceptable quality at what price.
- VoIP technology will reduce the digital divide by lowering long-distance and international calling charges (either to individual homes or public telecentres), making those services available to people who currently cannot afford them.

---

[46] *Id*.

[47] TEX. BUS. & COM. CODE § 17.47 (Veron 2002 & Supp. 2005).

[48] *See* Texas v. Vonage Holdings Corp., Cause GV500567, Plaintiff's Original Petition (filed Mar. 22, 2005), *available at* http://www.oag.state.tx.us/newspubs/releases/2005/032205vonagepop.pdf.

[49] *Id*.

While the debate regarding VoIP certainly will continue, in the future it will focus not on whether there should be Internet telephony, but rather on the rules that should govern its growth and development. As is often the case, uncertainty could do almost as much harm as the adoption of rules that directly restrict IP telephony's deployment and permitted scope of use. In that setting, it is particularly important that policymakers and regulators around the world act promptly to remove barriers and resist the temptation to impose burdensome requirements that could stunt the growth of this dynamic new medium of communications.

V. VOIP IN THE USA: SHOULD VOIP BE REGULATED AND, IF SO, HOW?

At the beginning of 2004, the legal and regulatory status of VoIP in the United States was entirely uncertain.[50] Although several rulings have since been issued by US agencies and courts that begin to address the regulatory classification of VoIP, many important legal issues and the practical matters that they will control remain unresolved.

A. US Deregulatory Policy Regarding the Internet

The roots of the debate over the regulatory status of VoIP go back to the earliest days of the Internet. A quarter of a century ago, the US Federal Communications Commission made the policy decision that information services, the precursor of today's Internet, should not be subjected to the traditional regulation that had been applied broadly to telecommunications services in the United States, many of which were monopoly-based.[51] That approach was embraced by the US Congress in the Telecommunications Act of 1996,[52] where Congress expressed its unambiguous preference for a national policy "to preserve the vibrant and competitive free market that presently exists for the Internet and other interactive computer services, *unfettered by Federal or State regulation*."[53] (emphasis supplied)

[50] *See* Burt Braverman, *Voice Over Internet Protocol: Will Legal Uncertainty Shackle a Promising New Technology?, at* http://www.crblaw.com/news/BBraverman_VoIP_Presentation.ppt.

[51] *See generally* In the Matter of Amendment of Section 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry), Docket No. 20828, 77 F.C.C.2d 384 (May 2, 1980).

[52] 110 Stat. 56 (1996) (current version at 47 U.S.C. § 151 (1996)).

[53] 47 U.S.C. § 230 (b)(3) (1996).

This policy determination recognises that Internet-based services exist in a dynamic, rapidly changing environment that is ill-suited to the century-old model of telephone regulation. In the words of the FCC's recently retired Chairman, Michael Powell:

> *Competitive market forces, rather than prescriptive rules, will respond to public need much more quickly and more effectively than even the best intentioned responses of government regulators. Indeed, our best hope for continuing the investment, innovation, choice and competition that characterises Internet services today lies in limiting to a minimum the labyrinth of regulations and fees that apply to the Internet.*[54] (emphasis supplied)

B. The US Legal Framework Relevant to VoIP

In the United States, 'telecommunications services' (traditional voice telephony) are regulated at two levels. Long-distance and international services are regulated by the *federal* (US national) government, while local services are regulated by the *states*. Regulations imposed on providers of telecommunications services require them, among other things, to make payments to 'universal services funds'. These funds are designed to ensure that telephone facilities and services are made available to all persons and all areas, including low-income groups and geographical areas where it otherwise might be uneconomical to build telephone facilities and provide telephone services. Telecommunications services providers are also required to install equipment and technology to support emergency telephone services and to ensure that the hearing-impaired and other disabled persons have access to telephone services.

In contrast to telecommunications services, 'information services' (Internet, computer services, voicemail, etc.) are unregulated. Providers of information services generally are not required to comply with regulations relating to universal service, E-911, and provision of services to the disabled.

C. The Issues

The expanding use of VoIP inevitably raises both theoretical and practical issues. From a theoretical standpoint, the issue is whether to extend legacy

[54] Separate Statement of (Former) Chairman Michael K. Powell, *In the Matter of IP-Enabled Services, Notice of Proposed Rulemaking*, WC Docket No. 04-36, 19 FCC Rcd 4863 (rel. March 10, 2004), http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-243868A2.doc.

regulation to Internet telephony and, if not, then how (if at all) to regulate IP telephony. In other words, what regulatory classification should be given to VoIP? Is VoIP an 'information service', and thus unregulated or a 'telecommunications service', and therefore regulated for federal regulatory purposes - or does neither regulatory classification neatly apply?[55]

The different types of VoIP noted above should, and likely will, be judged separately for regulatory purposes. Those with a look and feel most like traditional phone offerings are more likely to be found to be telecommunications services and therefore subjected to telephone-like regulatory burdens, while others will not. For example, AT&T sought exemption from telecommunications access charges based on the argument that it used the Internet for a portion of the transmission of its long-distance traffic. However, the FCC rejected its request, finding that AT&T's service looked and felt to the consumer like a traditional phone service.[56] In contrast, pulver.com and Vonage, whose services have characteristics that distinguish them from POTS both technologically and in the eyes of consumers, have largely beaten back attempts to impose telecommunications regulation on their VoIP services.[57]

However, VoIP providers may be cursed by their own success. The pressure to classify VoIP services as telecommunications services will grow in proportion to the acceptance that such services achieve in the marketplace as a replacement for traditional POTS.

---

[55] 47 U.S.C. § 153(20) (1996) states that the term "information service" means the "offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications, and includes electronic publishing, but does not include any use of any such capability for the management, control, or operation of a telecommunications system or the management of a telecommunications service." In comparison, 47 U.S.C. § 153(46) (1996) defines a "telecommunications service" as the "offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used." "Telecommunications", in turn, is defined in 47 U.S.C. § 153(43) (1996) as "the transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received."

[56] *See* discussion *infra* section V(A)(3).

[57] *See* discussion *infra* sections V(A)(1) and V(A)(5).

In the coming year, regulators in the United States, like their counterparts worldwide, will need to grapple with a number of challenging issues: If VoIP is not regulated like POTS, how will important programs such as E-911 services, universal service and services for the hearing impaired and disabled be funded? What are the competitive consequences of allowing VoIP providers to be free from most federal and state regulation while providers of POTS remain subject to such regulation? Is this the beginning of the end for traditional telephone regulation as we have known it for the past century - and would that be a bad thing? Is it unnecessary and unwise to regulate this competitive nascent service and would such regulation retard innovation and development? These issues dominate the VoIP debate in the United States and transcend the dialogue in all countries over the regulatory classification of Internet telephony.

D. The Battle between the States and the FCC

Generally speaking, the FCC has jurisdiction over interstate services and the states have jurisdiction over intrastate services. Initial VoIP applications involved long-distance and international calling, making the FCC the lead agency. But increasingly, as quality has improved and more people have adopted VoIP as their primary telephone service, it looks much more like local service and now plainly entails significant intrastate calling as a PSTN-substitute service, giving states more ammunition for their case for the assertion of regulatory authority. Likewise, as high intrastate access charges, especially by small ILECs, have led VoIP providers to offer intrastate calling, the issue increasingly has come to the attention of state regulators.

Responding to these developments, a number of states and cities have attempted to regulate VoIP. The telecommunications regulatory authorities in several states (such as Minnesota,[58] New York[59] and

[58] *In the Matter of the Complaint of the Minnesota Department of Commerce Against Vonage Holding Corp. Regarding Lack of Authority to Operate in Minnesota*, 2003 Min. PUC LEXIS 94, at *16 (2003) (finding that Vonage offers two-way communication that is functionally no different from any other telephone service, and that Vonage therefore falls within the meaning of telephone service as defined by Minnesota statute and is subject to regulation by the Minnesota PUC); Vonage Holdings Corp. v. Minn. Pub. Utils. Comm'n, 290 F. Supp. 2d 993 (D. Minn. Oct. 16, 2003) (enjoining enforcement of the Minnesota Public Utilities Commission's order that required Vonage to comply with Minnesota laws regulating telephone companies), *aff'd* 394 F.3d 568 (8th Cir. 2004).

[59] *Complaint of Frontier Telephone of Rochester, Inc. Against Vonage Holdings Corporation Concerning Provision of Local Exchange and InterExchange Telephone Service in New York State in*

Washington[60]) have ruled that VoIP is subject to state regulation by public utility commissions, including requirements that the companies seek permission to provide service, file rate tariffs, be subject to some form of rate regulation, and contribute to universal service and E-911 subsidy funds. Some cities, such as Portland, Oregon, have attempted to impose taxes on VoIP revenues.[61]

In the midst of the states' rush to regulate VoIP, the FCC issued several rulings in 2004 that began to assert federal jurisdiction in a manner and to an extent that will leave states only a limited role in regulating VoIP services. Federal courts have also issued several rulings generally supportive of federal jurisdiction.[62]

VI. 2004: THE DAWN OF REGULATORY CERTAINTY IN THE USA

In 2004, and most recently in June 2005, the Federal Communications Commission and federal courts issued several significant rulings in the United States. These rulings are the first important steps in answering the fundamental jurisdictional questions that will determine whether VoIP in the US will be allowed to flourish in a lightly regulated environment or it will be subjected to more pervasive federal and state regulation that could threaten the pace and scope of innovation and investment in this dynamic medium.

Violation of the Public Service Law, 2004 N.Y. PUC LEXIS 194, at *2 (2004) (finding that Vonage, in offering and providing its service in New York, is a telephone corporation "as defined in the PSL [Public Service Law] and is, therefore, subject to basic statutory requirements"). *See also* Vonage Holdings Corp. v. New York Pub. Serv. Comm'n, 04 Civ. 4306 (S.D.N.Y. July 16, 2004) (order enjoining the New York Public Service Commission from regulating Vonage's services until the FCC resolves issues relevant to the merits of the case).

[60] *In the Matter of the Petition of The Washington Exchange Carrier Association For Order Requiring WebTel Wireless, Inc. to Register as a Telecommunications Company or Cease and Desist Doing Business as a Telecommunications Company*, 2004 Wash. UTC LEXIS 718, at *3 (2004) (determining that "WebTel is a telecommunications company doing business in Washington and is subject to our jurisdiction").

[61] In Portland, the city is proposing a gross receipts tax of five percent on all telecom services, regardless of the technology employed in the provision of such services. The new tax would cover conventional landline telephone service, VoIP, wireless and cable telephony. *See State Telecom Activities*, COMMUNICATIONS DAILY, Jul. 8, 2005, at 5 (adding that the city council is scheduled to consider the proposal in late 2005).

[62] *See* discussion *infra* section V.

A. FCC Actions

1. Order Granting Declaratory Petition of pulver.com

In February 2004, the FCC issued an order declaring that pulver.com's free computer-to-computer FWD (Free World Dialup) service is an unregulated, jurisdictionally interstate information service.[63] The ruling was based on a precise technical analysis of how FWD works.[64] Specifically, FWD offers membership in a directory look-up service that permits members to determine which other FWD users are online.[65] Without providing transmission functionality to members, FWD enables members to make calls to other members who are online and thereby to engage in peer-to-peer communication similar to instant messaging and e-mail by means of a separately obtained broadband connection and also with specialised hardware and/or software.[66] Calls are routed via special numbers rather than traditional ten-digit phone numbers, and members use their PCs rather than traditional phone sets.[67]

Given this unique protocol, the FCC concluded that FWD is not telecommunications as defined by the Telecommunications Act, because pulver.com does not provide transmission functionality to its members;[68] instead, it uses transmission independently provided by others.[69] It provides information - addressing information regarding which other members are online.[70] The FCC also determined that FWD is not a telecommunications service as defined by the Act.[71] In order to be a telecommunications service,

---

[63] Petition for Declaratory Ruling That pulver.com's Free World Dialup is Neither Telecommunications Nor a Telecommunications Service, Memorandum Opinion and Order, WC Docket No. 03-45, 19 FCC Rcd 3307, ¶ 1 (rel. February 19, 2004) [hereinafter Pulver Declaratory Ruling].

[64] *Id*. at 3309-11, ¶ 4-7.

[65] *Id*. at 3310, ¶ 6.

[66] *Id*. at 3309-10, ¶ 5.

[67] *Id*.

[68] *Id*. at 3312, ¶ 9.

[69] *Id*.

[70] *Id*.

[71] *Id*. at 3312, ¶ 10.

the service must, at a minimum, be offered for a fee. As the FCC noted, FWD is free.[72]

Instead, the FCC held that FWD is an information service as defined by the Act.[73] The addressing information that identifies who actually is online and available for peer-to-peer communication is new information, not merely information embodied in a existing communications network.[74] The FCC held that it alone occupies this field[75] and that states may not impose economic regulation (such as price regulation, entry/exit regulation, tariff requirements or minimum service standards) on FWD.[76]

Two aspects of the FCC's discussion were suggestive of how it might approach future VoIP-related issues. First, the FCC relied heavily on the fact that the pulver.com service works by means of IP addresses, which do not contain meaningful information about the *physical location* of the parties communicating.[77] Because it is impossible to tell where either party to the communication might be,[78] the FCC's traditional 'end-to-end' test cannot be used to determine whether a normal circuit-switched telephonic communication is intrastate or interstate.[79] Relying on the fact that pulver.com's subscribers are located all over the country and the world, the FCC concluded that the service necessarily included a significant amount of *interstate communication*.[80] This rationale for *exclusive federal jurisdiction* would

---

[72] *Id*. at 3312-13, ¶ 10.

[73] *Id*. at 3313, ¶ 11-14.

[74] *Id*. at 3312, ¶ 9 (citing 47 U.S.C. § 153(43) and noting that the information that FWD provides is not "information of the user's choosing, without change in the form or content of the information as sent and received").

[75] *Id*. at 3316, ¶ 15 (stating that the FWD is an unregulated information service, which falls under the FCC's jurisdiction).

[76] *Id*. at 3318, ¶ 18 (reasoning that Congress expressed its preference for "a national policy to preserve the vibrant and free market that presently exists for the Internet and interactive computer services").

[77] *Id*. at 3313, ¶ 11.

[78] *Id*. at 3310, ¶ 5.

[79] *Id*. at 3320-21, ¶ 21.

[80] *Id*. at 3320-22, ¶ 20-22 (finding that FWD would be considered an interstate information service in accordance with the FCC's 'mixed-use' doctrine).

appear to apply not just to FWD, but also to any communications service where the locations of the communicating parties are indeterminate.[81]

Second, the FCC invoked the US Constitution's 'Commerce Clause',[82] finding that there would be no "legitimate public policy purpose" served by state imposition of traditional economic regulation on FWD and concluding that the burdens of such regulation on interstate commerce would be "clearly excessive in relation to the putative local benefits."[83] By invoking the Commerce Clause, the FCC asserted the authority to pass judgment on the legitimacy of state efforts to regulate certain communications services, including the right to declare that any 'local benefits' that states might assert to protect their regulatory authority are not significant enough to justify interference with interstate activity.[84] This rationale, if sustained, is a powerful tool that the FCC can use to dictate the regulatory treatment of services and activities with mixed interstate-intrastate aspects.

2. Notice of Proposed Rulemaking on IP-Enabled Services

In March 2004, the FCC released its long-awaited notice of proposed rulemaking (NPRM) to examine legal and regulatory issues related to 'IP-enabled services' - the newly coined phrase that the FCC uses to describe voice services and applications that make use of Internet Protocol.[85] To stimulate discussion regarding the proper means of distinguishing among IP-enabled services, the FCC provided a list of functional and economic factors that it might use to divide these services into categories for different regulatory treatment:

---

[81] *Id*. at 3322, ¶ 22.

[82] U.S. Const. art. 1, § 8, cl. 3 (giving Congress the power to "regulate commerce with foreign nations, and among the several states, and with the Indian tribes"); *see* Oregon Waste Sys. v. Dep't of Envt'l Quality, 511 U.S. 93, 98 (1994) (finding that the Commerce Clause "denies the States the power unjustifiably to discriminate against or burden the interstate flow of articles of commerce").

[83] Pulver Declaratory Ruling, *supra* note 63, at 3322-23, ¶ 23-24.

[84] *Id*. at 3323, ¶ 24 ("In a dynamic market such as the market for Internet applications like FWD, we find that imposing this substantial burden would make little sense and would almost certainly be significant and negative for the development of new and innovative IP services and applications.").

[85] *In the Matter of IP-Enabled Services, Notice of Proposed Rulemaking*, WC Docket No. 04-36, 19 FCC Rcd 4863, 4864, ¶ 1 (rel. March 10, 2004).

- the extent to which a service is functionally equivalent to traditional telephone services;
- the extent to which the service is a substitute for traditional telephone services;
- whether the service interconnects with the traditional telephone network (the PSTN) and uses North American Number Plan (NANP) resources;
- whether the service uses peer-to-peer technology or a centralised server; and
- whether any regulatory obligation should distinguish among the underlying transmission facility, the communications protocols used to transmit the information, and the applications used by the end-user to send and receive information.[86]

The NPRM focused mainly on one type of IP-enabled service - VoIP.[87] The NPRM inquired whether VoIP should remain unregulated or should be subject to some form of regulation[88] and whether any such regulation should be based on (i) the traditional common carrier regime created for monopoly providers of traditional telephone services,[89] (ii) the largely unregulated information service rules[90] or (iii) some new regulatory scheme under the FCC's ancillary Title I powers.[91] The FCC invited comment on the classification and treatment of different types of VoIP services, ranging from services such as Vonage that piggyback on broadband services provided by other companies

---

[86] *Id*. at 4886-4890, ¶ 36-37.

[87] *Id*. at 4871-4876, ¶ 10-15.

[88] *Id*. at 4890-4897, ¶ 38-49.

[89] *Id*. at 4895, ¶ 46 (citing Title II of the Communications Act of 1996 (current version at 47 U.S.C. § 201 (1996)) as governing the regulation of common carrier telecommunications).

[90] *Id*. (citing Title VI of the Communications Act of 1996 (current version at 47 U.S.C. § 521 et. seq.) as governing the regulation of cable communications).

[91] *See id*. (citing Title I of the Communications Act of 1996 (current version at 47 U.S.C. § 151 *et*. *seq*.) for the proposition that Title I "confers upon the Commission ancillary jurisdiction over matters that are not expressly within the scope of a specific statutory mandate but nevertheless necessary to the Commission's execution of its specific statutorily prescribed functions"); *see also id*. (*citing* Computer & Communications Indus. Ass'n v. FCC, 693 F.2d 198, 213 (D.C. Cir. 1982), which declared that the Commission's Title I authority is "well settled").

to traditional telecom providers transitioning their circuit-switched networks to IP-based solutions to wireless providers that furnish multimedia services over their networks using the Internet Protocol.[92] These other services pose more difficult questions for the FCC than services like FWD, since most tend to offer access to the PSTN.[93]

Referring to traditional telephone companies' universal service fund, inter-carrier compensation, E-911, privacy and consumer protection obligations, the FCC asked which, if any, of these traditional requirements should apply to VoIP providers.[94] It noted that, in addressing these issues, it "would start from the premise that IP-enabled services are *minimally regulated*."[95] (emphasis supplied) The FCC observed that the increasing demand for IP-enabled services, and VoIP services in particular, will encourage consumers to demand more broadband connections and thereby support the FCC's goal of encouraging the widespread deployment of advanced communications services.[96] It stated that it will rely wherever possible on competition, and will apply "discrete regulatory requirements only where such requirements are necessary to fulfil important policy objectives."[97]

Addressing an issue of great interest to essentially all segments of the industry - inter-carrier compensation for VoIP[98] - the FCC tentatively

---

[92] *Id*. at 4883-84, ¶ 31-32.

[93] *Id*. at 4884, ¶ 32.

[94] *Id*. at 4886-87, ¶ 35-36.

[95] *Id*. at 4868, ¶ 5.

[96] *Id*.

[97] *Id*.

[98] *See id*. at 4904 ¶ 61 n.178 (citing 47 C.F.R. § 69.5(b), which states that "carrier charges shall be computed and assessed upon all interexchange carriers that use local exchange switching facilities for the provision of interstate and foreign telecommunications services"). The Communications Act requires an incumbent local exchange carrier to provide to any requesting telecommunications carrier interconnection with the ILEC's network "for the transmission and routing of telephone exchange service and exchange access." 47 U.S.C. § 251(c)(2) (1996). Inter-carrier compensation, or reciprocal compensation, is a fee agreement for charges assessed by local exchange carriers on service providers for sending traffic to the PSTN. 47 U.S.C. § 251(b)(5) (1996) (establishing reciprocal compensation arrangements "for the transport and termination of telecommunications"). The FCC believes that "the cost of the PSTN should be borne equitably among those that use it…" 19 FCC Rcd at 4904,

concluded that any service provider sending traffic to the PSTN should be subject to "similar" compensation obligations.[99] That situation, however, does not exist today, because there currently are different compensation regimes that apply in different situations.[100] This suggests that the FCC will want to coordinate this aspect of the regulatory regime applicable to VoIP with its ongoing efforts to establish a unified inter-carrier compensation system.

3. Order Denying Declaratory Petition of AT&T

In April 2004, the FCC ruled that an AT&T service, in which some calls were routed over the Internet, resembled a telecommunications service more than a VoIP service and therefore that AT&T should pay access fees to other telephone carriers with which it interconnected for delivery of its customers' calls.[101] AT&T had petitioned the FCC for a declaratory ruling that its IP telephony was exempt from interstate access charges in response to efforts by ILECs to impose such charges on AT&T's service.[102]

The FCC ruled that AT&T's phone-to-phone VoIP service is a telecommunications service subject to interstate access charges, at least on a going-forward basis.[103] Like its earlier ruling regarding pulver.com's Free World Dialup service, this ruling was carefully confined to the facts before the agency,

---

¶ 61. The pricing for reciprocal or inter-carrier compensation must be just, reasonable and nondiscriminatory, but may include a reasonable profit for the local exchange carrier. *See* 47 U.S.C. § 252(d) (1996) (allowing compensation for costs incurred in providing interconnection, as well as transport and termination of traffic).

[99] 19 FCC Rcd at 4885, ¶ 33.

[100] In the US, inter-carrier compensation includes access charges and reciprocal compensation. Under current rules, there are three factors that determine the rate for inter-carrier compensation: 1) the type of communication traffic at issue; 2) the types of carriers involved; and 3) the end points of the communication. However, the FCC has recognised that the current system cannot be sustained in the developing marketplace, and is presently considering revision of these rules. *See generally Developing a Unified Inter-carrier Compensation Regime*, Further Notice of Proposed Rulemaking, CC Docket No. 01-92, 20 FCC Rcd 4685 (rel. Mar. 3, 2005).

[101] Petition for Declaratory Ruling that AT&T's Phone-to-Phone IP Telephony Services are Exempt from Access Charges, Order, WC Docket No. 02-361, 19 FCC Rcd 7457, 7466, ¶ 12-15 (rel. April 21, 2004) [hereinafter AT&T Petition].

[102] *See id*. at 7457, ¶ 1.

[103] *Id*. at 7466, ¶ 14-15.

and should not prevent the FCC from reaching a different policy result in its ongoing investigation into IP-enabled communications or in its far-reaching 'inter-carrier compensation' docket.[104] The key factor, as far as the FCC was concerned, was that AT&T uses transmission in IP format only as an internal network matter for some portion of a call between two end users, but does *not* offer the end users themselves any additional functionality or access to information as compared to a normal long-distance call.[105] Indeed, the end users typically are not even aware that anything other than a normal long-distance call is occurring.[106] The FCC employed the traditional 'net protocol conversion' test[107] to conclude that, unlike FWD, AT&T's offering did not meet the statutory definition for an 'information service', for which there could be either zero or reduced access charges.[108] This was in contrast to Free World Dialup, where the free calls that customers make are routed entirely over the Internet and never interconnect with the PSTN.[109] With a broadband connection, FWD members talk with each other computer-to-computer.[110]

The FCC rejected calls by some ILECs for an immediate determination that AT&T owed access charges retroactively for traffic that had been

---

[104] *Id*. at 7457-58, ¶ 1-2.

[105] *Id*. at 7465, 12-13. Specifically, the FCC determined that because AT&T does not offer end users a "capability for generating, acquiring, storing, transforming, processing, retrieving, utilising, or making available information," its service therefore is not an information service.

[106] *Id*.

[107] *See generally In Re Implementation of the Non-Accounting Safeguards of Sections 271 and 272 of the Communications Act of 1934*, First Report and Order and Further Notice of Proposed Rulemaking, CC Docket No. 96-149, 11 FCC Rcd 21905, 21957-58, ¶ 106 (rel. Dec. 26, 1996) (describing the net protocol conversion test and its use in distinguishing "telecommunications services" and "information services").

[108] *AT&T Petition*, *supra* note 101, at 7465, ¶ 13. For a discussion of reduced access charges, *see 1983 MTS/WATS Market Structure Order*, 97 FCC 2d 682, 715 (1983) (exempting enhanced service providers (ESPs) from the payment of certain interstate access charges, and treating ESPs as end-users for the purpose of assessing access charges). *See also GTE Telephone Operators GTOC Tariff No. 1 GTE Transmittal No. 1148*, Memorandum Opinion and Order, CC Docket No. 98-79, 13 FCC Rcd 22466, 22469-70, ¶ 7 (October 30, 1998), *recon. denied* (February 26, 1999) (explaining reduced rates enjoyed by ESPs treated as end-users as compared to access charges assessed on traditional carriers).

[109] *See* Pulver Declaratory Ruling, *supra* note 63, at 3309, ¶ 4-5.

[110] *Id*. at 3309, ¶ 5.

terminated using this service.[111] Instead, the FCC ruled that whether to apply the decision retroactively would have to be determined on a case-by-case basis, considering the overall equities of doing so.[112] Following the FCC's decision, Southwestern Bell Telephone (SBC) filed a legal action against AT&T in the US District Court for the Eastern District of Missouri, seeking recovery of at least $141 million in access charges from AT&T.[113] Other ILECs have followed suit.[114] While AT&T may face short-term exposure for retroactive access charges, this decision merely establishes the broad parameters for how VoIP services fare under current inter-carrier compensation regimes.[115] FWD and other services that do not touch the PSTN are not subject to historic access charges, whereas VoIP services that mimic traditional circuit-switched services and begin and end on the PSTN are subject to such charges.[116] The real game remains in the FCC's VoIP rulemaking and inter-carrier compensation docket, where the agency likely will reach a policy decision that VoIP services that pass the "net protocol conversion" test - in whole or in part - could well be subject to inter-carrier compensation arrangements that are a fraction of present retail access charge levels.

---

[111] AT&T Petition, *supra note* 101, at 7470-7472, ¶ 21-23.

[112] *Id*. at 7471, ¶ 22.

[113] Southwestern Bell Telephone L.P. v. AT&T Corp., 4:04-cv-00474-HEA (E.D. Mo. Apr. 22, 2004). SBC alleged, among other things, that AT&T orchestrated and implemented a fraudulent scheme to avoid tariffed access charges by delivering its long-distance calls to SBC for termination over facilities to which AT&T obtained access under the condition that the facilities be used for local traffic, thereby disguising its long-distance calls as local calls. Further, SBC argued that, in light of the FCC's decision regarding the AT&T Petition, AT&T had no excuse for its failure to pay lawfully tariffed access charges for all of the long-distance voice traffic it had delivered to SBC for termination. The case was dismissed with prejudice upon the filing of a stipulation of the parties, suggesting that a private settlement of the litigation had been reached.

[114] For example, following the FCC's decision regarding the AT&T Petition, Qwest Communications sued AT&T in federal court to recover tens of millions of dollars of access fees. Qwest Communications v. AT&T Corp., 1:04-cv-00909-EWN-MJW (D. Co. May 5, 2004). Qwest also alleged, among other things, that AT&T committed fraud by using local facilities to terminate long-distance calls, thereby violating tariffed access billing provisions. Id. The case is ongoing.

[115] *See* AT&T Petition, *supra* note 101, at 7466-67, ¶ 15.

[116] *See id*. at 7466-69, ¶ 15-18.

4. Order Applying CALEA to Certain Broadband and VoIP Service Providers

In August 2004, the FCC issued a notice of proposed rulemaking regarding the applicability of the Communications Assistance for Law Enforcement Act (CALEA)[117] to packet-mode services such as broadband Internet access and VoIP.[118] CALEA requires telecommunications carriers to ensure that their equipment is capable of providing electronic surveillance capabilities to law enforcement agencies.[119] In issuing the NPRM, the FCC tentatively concluded that Congress intended the scope of CALEA's definition of the term 'telecommunications carrier' to be broader than that of the Communications Act,[120] and that 'managed' VoIP services are subject to CALEA.[121] Under that rationale, a VoIP provider would be required to make call-identifying information available to law enforcement authorities so long as the information is "reasonably available" without "significantly modifying a network."[122]

In August 2005, the FCC issued an order determining that certain providers of broadband and VoIP services must be prepared to accommodate law enforcement wiretaps because these services essentially act as a replacement

---

[117] 47 U.S.C. § 1001 (1996).

[118] *In the Matter of Communications Assistance for Law Enforcement Act and Broadband Access Services*, Notice of Proposed Rulemaking and Declaratory Ruling, ET Docket No. 04-295, 19 FCC Rcd 15676 (rel. August 9, 2004) [hereinafter *CALEA and Broadband Access NPRM*].

[119] *See* 47 U.S.C. § 1002 (requiring a telecommunications carrier to ensure that it is capable of "expeditiously isolating and enabling the government…to intercept…all wire and electronic communications carried by the carrier").

[120] *See CALEA and Broadband Access NPRM, supra* note 118, at 15697, ¶ 41 ("[I]t is 'a matter of law that the entities and services subject to CALEA *must be based on the CALEA definition*…independently of their classification for the separate purposes of the Communications Act.'" (*citing Communications Assistance for Law Enforcement Act*, Second Report and Order, CC Docket No. 97-213, 15 FCC Rcd 7105, 7112, 13 (2000)) (emphasis in original). *See also CALEA and Broadband Access NPRM, supra* note 118, 19 FCC Rcd at 15696-703 (discussing the statutory definition of "telecommunications").

[121] *Id*. at 15708-709, ¶ 56 (describing managed VoIP services as offerings to the "general public as a means of communicating with any telephone subscriber, including parties reachable only through the PSTN"); *cf*. *id*. at 15709, ¶ 58 (seeking comment on the proposition that non-managed VoIP services should not be subject to CALEA). *See generally id*. at 15707-710, ¶ 53-59 (explaining why managed VoIP services satisfy the requirements for CALEA applicability).

[122] *Id*. at 15714, ¶ 68.

for conventional telecommunications services.[123] As such, the FCC concluded that these new services are subject to the requirements set forth under CALEA for court-ordered wiretaps. However, the scope of the order is limited to services that permit users to place and to receive calls through the PSTN. In reaching its decision, the Commission found that CALEA's definition of a telecommunications carrier is broader than the definition provided in the Communications Act, and therefore may cover providers of services that ordinarily would not be considered telecommunications services.

5. Order Granting Declaratory Petition of Vonage Holdings

In November 2004, the FCC granted in part a request by Vonage Holdings for a declaratory ruling pre-empting an order of the Minnesota Public Service Commission that would have subjected Vonage to various types of traditional state telecommunications regulation.[124] The FCC declared that Internet phone service should not be governed by the same regulations as traditional phone service.[125]

In the FCC's view, the technical configuration of the Vonage service - in which an individual customer's VoIP telephone is usable on essentially any broadband Internet connection anywhere in the world - makes it impossible to separately identify purely intrastate components from purely interstate components.[126] Consequently, the FCC concluded that it is impossible to subject the service to two different regulatory schemes, thus warranting *unified*

---

[123] *See* News Release, Federal Communications Commission, FCC Requires Certain Broadband and VoIP Providers to Accommodate Wiretaps (Aug. 5, 2005), http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-260434A1.doc.

[124] Vonage Holdings Corporation Petition for Declaratory Ruling Concerning an Order of the Minnesota Public Utilities Commission, Memorandum Opinion and Order, WC Docket No. 03-211, 19 FCC Rcd 22404, 22405, ¶ 1 (rel. Nov. 12, 2004) [hereinafter Vonage Petition] (making clear that the "[Federal Communications] Commission, not the state commissions, has the responsibility and obligations to decide whether certain regulations apply" to IP-enabled services).

[125] *Id*. (holding that state regulations must "yield to important federal objectives").

[126] *Id*. at 22418, ¶ 23 (finding no plausible approach to separating Vonage's service into interstate and intrastate components because the service is "far too multifaceted for simple identification of the user's location to indicate jurisdiction").

federal jurisdiction. The FCC commented that any service with a similar architecture also would be treated as entirely interstate in nature.[127]

The FCC stated that its ruling would apply to cable television, telephone and other companies that offer an Internet phone service similar to that which Vonage provides.[128] The FCC observed that Vonage's service and cable-provided VoIP were similar because both involved the offering of a suite of features and functions, a broadband connection and certain customer-premises equipment compatible with IP technology.[129] The FCC also relied on the fact that Vonage and cable VoIP both route traffic across state lines based on network architectures that do not conform to state boundaries.[130]

Nonetheless, the FCC's decision did *not* address a number of issues. Vonage had asked the FCC to classify it as an information service instead of as a telecommunications service.[131] Such a move would have had a profound impact on the industry because it would mean that providers of VoIP services would not have to pay the taxes and fees that traditional phone companies pay. The FCC did not rule on that request.[132] Nor did the FCC address the applicability to VoIP of general state laws governing taxation, fraud, commercial dealings, marketing, advertising and other business practices.[133] Finally, the FCC's order

---

[127] *Id*. at 22424, ¶ 32 (finding that the "practical inseverability" of other IP-enabled services similar to Vonage precludes state regulation).

[128] *Id*. ("Accordingly, to the extent other entities, such as cable companies, provide VoIP services, we would preempt state regulation to an extent comparable to what we have done in this Order.").

[129] *See id*. at 22424, ¶ 32 n.113 (citing letters from various cable providers exhorting the Commission to extend the benefits of preemption to all VoIP providers because, while the network architecture of each cable VoIP provider is not identical, they are similar in their centralised network design).

[130] *Id*. (citing letters from various cable providers describing the difficulty in identifying whether a customer is accessing features at home or from a remote location).

[131] *Id*. at 22410, ¶ 12.

[132] *Id*. at 22411, ¶ 14 (reaching its decision "irrespective of the definitional classification of [Vonage's service] under the Act, i.e., telecommunications or information service, a determination we do not reach in this Order").

[133] *Id*. at 22404, ¶ 1 (expressly stating that it was avoiding this issue: "We express no opinion here on the applicability to Vonage of Minnesota's general laws governing entities conducting

did not address the applicability of access charges to VoIP.[134] These and other decisions have apparently been deferred to the FCC's ongoing general rulemaking docket considering IP-enabled services.[135]

Several states appealed the FCC's decision to the Circuit Courts, including California,[136] Minnesota,[137] New York[138] and Ohio.[139] The Minnesota, New York and Ohio cases were subsequently transferred to the United States Court of Appeals for the Ninth Circuit to be consolidated with the California appeal. However, on April 12, 2005, the State of California moved for dismissal, which was granted by the Ninth Circuit on April 15, 2005. Following dismissal of the California case, the remaining cases were consolidated and transferred again, this time to the US Court of Appeals for the Eighth Circuit. A briefing order for these cases is expected to be released by the Court of Appeals in the near future.

---

business within the state, such as laws concerning taxation; fraud; general commercial dealings; and marketing, advertising, and other business practices. We expect, however, that as we move forward in establishing policy and rules for DigitalVoice and other IP-enabled services, states will continue to play their vital role in protecting consumers from fraud, enforcing fair business practices, for example, in advertising and billing, and generally responding to consumer inquiries and complaints.").

[134] In recent related matters, Level 3, a Colorado-based wholesale Internet and telecommunications provider, withdrew its petition regarding VoIP and access charges the night before the FCC was to issue a ruling, apparently in light of Chairman Powell's resignation from the FCC. Analysts believed that Level 3's withdrawal reflected its fear that an adverse ruling by the FCC would weaken Level 3's legal position against ILECs regarding access charges. Paul Kapustka, *Level 3 Withdraws VoIP Fees Petition*, NETWORKING PIPELINE, Mar. 22, 2005, *at* http://www.networkingpipeline.com/news/159904175 (last visited Nov. 1, 2005).

[135] *In the Matter of IP-Enabled Services*, Notice of Proposed Rulemaking, WC Docket No. 04-36, 19 FCC Rcd 4863 (rel. Mar. 10, 2004).

[136] Cal. Pub. Utils. Comm'n. v. FCC, No. 05-70007, Petition for Review (9th Cir. Jan. 3, 2005).

[137] Minn. Pub. Utils. Comm'n v. FCC, No. 05-1069, Petition for Review (8th Cir. Jan. 6, 2005); *see also* Nat'l Ass'n of State Util. Consumer Advocates v. FCC, No. 05-1122, Petition for Review (8th Cir. Jan. 11, 2005).

[138] N.Y. Pub. Serv. Comm'n v. FCC, No. 05-0160, Petition for Review (2d Cir. Jan. 10, 2005).

[139] Pub. Utils. Comm'n of Ohio v. FCC, No. 05-3056, Petition for Review (6th Cir. Jan. 10, 2005).

The Ninth Circuit Court of Appeals, in a prior case, rejected the FCC's attempt to classify cable television operators' high-speed modem service as an unregulated information service.[140] However, in a decision issued on June 27, 2005, the US Supreme Court reversed the decision of the Court of Appeals, holding that the FCC's classification of cable modem service as an information service was entitled to deference. In a 6-3 decision, the Supreme Court held that the Court of Appeals had erred in failing to defer to the FCC's reasonable policy choice, in which the agency had concluded, based on the ambiguous provisions of the Communications Act, that a cable modem service was not part telecommunications service and part information service, as the Court of Appeals had held, but rather was a pure information service.[141] The Supreme Court's decision will not fully resolve the issue, as further contentious debate will no doubt ensue both before the FCC and in Congress regarding the manner in which and the extent to which cable modem service ultimately should be regulated.[142]

---

[140] FCC v. Brand X Internet Servs., 345 F.3d 1120 (9th Cir. 2003), *cert. granted*, 125 S. Ct. 655 (2004), *rev'd sub nom. and remanded by* Nat'l Cable & Telecomm. Ass'n v. Brand X Internet Serv., 2005 U.S. LEXIS 5018 (2005).

[141] Nat'l Cable & Telecomm. Ass'n v. Brand X Internet Serv., 2005 U.S. LEXIS 5018 (2005). The Court found that the FCC properly interpreted the definitions of 'information' and 'telecommunications' in the Communications Act. The Court accepted the FCC's conclusion that cable television operators do not "offer" telecommunications services because no telecommunications component is separately "offered" on a "stand-alone" basis; rather, any telecommunications element is "sufficiently integrated with the finished service to make it reasonable to describe the two as a single, integrated offering." *Id.* at *43.

[142] Prompted by the Supreme Court's decision, the FCC issued an order deregulating ILECs' DSL service, which previously had been treated by the FCC as a telecommunications service subject to common carriage and nondiscrimination obligations, but which the agency now declared, in light of the Supreme Court's Brand X decision, to be an unregulated information service. *See* News Release, Federal Communications Commission, FCC Eliminates Mandated Sharing Requirement on Incumbents' Wireline Broadband Internet Access Services (Aug. 5, 2005), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-260433A1.doc. As a consequence of the FCC's ruling, in approximately one year ILECs no will longer be required to allow competing ISPs access to ILEC DSL platforms or offer the resale of DSL service. In a separate statement released concurrently with the DSL announcement, the FCC advised that ILECs and cable operators would be subject to Net Neutrality requirements, and that they must not block subscribers from accessing competing ISPs' content or websites, which presumably would include Internet telephony services that compete with the ILEC's or cable operator's own proprietary VoIP service. *See* News Release, Federal Communications Commission, FCC Adopts Policy Statement (Aug. 5, 2005), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-260435A1.doc.

6. Order Imposing E-911 Service Obligations on VoIP Providers

In June 2005, the FCC issued an order establishing rules that require providers of an "interconnected VoIP service" - generally any VoIP service that allows end-users to send calls to or from the public switched telephone network - to provide certain E-911 services to their customers.[143] Under the new rules, beginning November 28, 2005, all providers of interconnected VoIP service must provide E-911 service to all of their customers as a standard feature of service. In practice, this means that these providers must transmit all 911 calls to the local public safety answering point (PSAP), along with the caller's call-back number and the caller's registered geographic location. Interconnected VoIP service providers may fulfil these obligations by interconnecting directly to the existing E-911 wireline network (generally operated by ILECs), by indirect interconnection through a third party such as a competitive LEC, or via any other technological 'solution' that achieves the same result. Service providers must obtain, prior to the initiation of service, the end user's geographic location and provide the end user with a means of updating that information at any time.

In addition, beginning July 29, 2005, the rules require all covered entities to take a number of affirmative actions to inform and educate their subscribers of the limitations of E-911 service offered by interconnected VoIP service providers. One of these obligations is that service providers must advise all of their subscribers, both new and existing, of the circumstances under which E-911 service may not be available or may otherwise be limited as compared to traditional E-911 telephone service. Service providers also must distribute to all subscribers, both new and existing, "warning stickers or other appropriate labels" advising them if E-911 service may be limited or not available.

Although certainly marking a first significant step in this area, the FCC's order put off some of the more challenging questions surrounding the

---

[143] The FCC defines an interconnected VoIP service as any service that (1) enables real-time, two-way voice communications; (2) requires a broadband connection from the user's location; (3) utilises Internet Protocol (IP) handsets; and (4) permits users to direct calls to and receive calls from the PSTN. This definition covers a broad class of VoIP service providers, ranging from location-specific VoIP services provided by, for example, cable television companies to 'nomadic' VoIP services provided by Vonage and others. *E911 Requirements for IP-Enabled Service Providers*, First Report and Order and Notice of Proposed Rulemaking, WC Docket No. 05-196, 20 FCC Rcd 10245 (rel. June 3, 2005); *see also* Nuvio Corp. v. FCC, No. 05-1248, Petition for Review (D.C. Cir. July 11, 2005).

application of E-911 principles to services that can be utilised on a nomadic basis in different geographic locations. The order includes a notice of proposed rulemaking that solicits comments on how to deal with a number of technical and operational issues associated with the provision of E-911 service as it relates to interconnected VoIP service and, in particular, to nomadic services. The order also left unanswered the fundamental issue of whether or not interconnected VoIP services should be classified as information services under Title I of the Communications Act or as telecommunications services under Title II. Although the FCC intentionally avoided answering this question, it did however assert that its authority over this area is derived from both Title I and Title II of the Act.

This order represents the FCC's first substantive step towards imposing a regulatory regime on VoIP service providers that utilise IP-enabled networks or technologies. Exactly what that regime will look like is quite unclear, as the FCC still faces other very challenging issues, including the development of a unified inter-carrier compensation regime, the possible application of universal service charges, the application of CALEA and other federal surveillance statutes, and other public safety and disability access issues.

B. Court Actions

1. US District Court Order Enjoining New York State Telecom Regulation of Vonage Holdings

In July 2004, a US District Court issued a preliminary injunction against the New York State Public Service Commission, prohibiting it from requiring Vonage Holdings Corporation to obtain an operating certificate as a condition to Vonage continuing to provide VoIP service to its customers in the State of New York.[144] In a ruling that mirrored an October 2003 federal district court order in Minnesota against that State's Public Service Commission,[145] the US District Court for the Southern District of New York enjoined New York State regulators from taking any further action to regulate Vonage until the FCC

---

[144] Vonage Holdings Corp. v. New York Pub. Serv. Comm'n, 04 Civ. 4306 (S.D.N.Y. July 16, 2004) (order granting preliminary injunction).

[145] Vonage Holdings Corp. v. Minn. Pub. Utils. Comm'n, 290 F. Supp. 2d 993 (D. Minn. Oct. 16, 2003), *aff'd* 394 F.3d 568 (8th Cir. 2004).

ruled in various pending VoIP proceedings.[146] On November 14, 2004, the FCC issued its unanimous ruling pre-empting an order of the Minnesota Public Utilities Commission that would have subjected Vonage to various types of traditional, state telecommunications regulations.[147] Based upon the FCC's action, Vonage moved for a permanent injunction in December 2004.[148] A decision has not yet been issued on the request for permanent injunction, but the preliminary injunction will remain in effect until such time as the court rules.

2. The US Court of Appeals' Decision Affirming an Injunction Against State Telecom Regulation of Vonage Holdings in Minnesota

In December 2004, the US Court of Appeals for the Eighth Circuit upheld a lower court's order enjoining the State of Minnesota's Public Utility Commission from regulating Vonage Holdings' VoIP service.[149] The appellate court's ruling came on the heels of and relied upon the FCC's November 2004 *Vonage* decision, referring to that decision as "dispositively support[ing] the District Court's injunction."[150] Although the Court of Appeals deferred to the FCC's order, the Court did not review its merits, holding, on jurisdictional grounds, that such review could occur only in a new case brought to challenge the agency's ruling.[151]

Interestingly, the FCC's decision - which was premised on a finding that VoIP is *interstate* in nature and therefore within the FCC's jurisdiction, but which expressly declined to decide whether VoIP is an information service or a telecommunications service - was based on a *different* predicate than the lower court's decision in the *Vonage* case, which found that VoIP was an

---

[146] Vonage Holdings Corp. v. New York Pub. Serv. Comm'n, 04 Civ. 4306 (S.D.N.Y. July 16, 2004), at ¶ 3-4.

[147] Vonage Holdings Corporation Petition for Declaratory Ruling Concerning an Order of the Minnesota Public Utilities Commission, Memorandum Opinion and Order, WC Docket No. 03-211, 19 FCC Rcd 22404, 22405, ¶ 1 (rel. Nov. 12, 2004).

[148] Vonage Holding Corp. v. New York Pub. Serv. Comm'n, 04 Civ. 4306 (S.D.N.Y. Dec. 20, 2004) (motion for permanent injunctive relief).

[149] Vonage Holdings Corp. v. Minnesota Pub. Util. Comm'n., 394 F.3d 568 (8th Cir. 2004).

[150] *Id*. at 569.

[151] *Id*.

information service. Yet, the Court of Appeals relied on the FCC's decision in affirming the lower court's injunction. Because the appellate court accorded the FCC order such broad deference, it seems unlikely that any other state commission will be successful in attempting to regulate VoIP in the short-term, at least until judicial review of the FCC's *Vonage* and NPRM rulings has occurred.

C. Legislation

There has been little federal legislative activity affecting Internet telephony. In April 2004, the US Congress enacted the Internet Tax Nondiscrimination Act, which extended a moratorium on taxes on Internet access through November 2007.[152] However, the law exempts VoIP from the moratorium.[153] The effect of the exemption may be tempered somewhat by the FCC's recent decision pre-empting traditional state public utility regulation of certain types of VoIP service.[154] Also, the Act makes clear that the moratorium does not affect E-911 and universal service charges issues.[155]

For the moment, Congress appears willing to allow the FCC and the courts to grapple with the thorny issue of how to regulate Internet telephony. However, if proposals for the omnibus re-write of US telecommunication laws move forward over the next year, it is certain that VoIP will be addressed by Congress as part of that review.[156]

---

[152] Internet Tax Nondiscrimination Act, Pub. L. No. 108-435, 118 Stat. 2615 (current version at 47 USC § 151 (2005)). On April 19, 2005 a bill was introduced in the United States Senate to make the moratorium on Internet access taxes permanent. The bill is currently in Committee and has not yet been passed. *See* S. 849, 109th Cong. 1st Sess. (2005).

[153] *Id*. § 1108.

[154] Vonage Holdings Corporation Petition for Declaratory Ruling Concerning an Order of the Minnesota Public Utilities Commission, Memorandum Opinion and Order, WC Docket No. 03-211, 19 FCC Rcd 22404, 22405 ¶ 1 (rel. Nov. 12, 2004).

[155] *See* Internet Tax Nondiscrimination Act, Pub. L. No. 108-435, 118 Stat. 2615 (current version at 47 U.S.C. § 151 (2005)), at Sec. 1107(b).

[156] *See*, *e.g.*, Broadband Investment and Consumer Choice Act, S.1504, 109th Cong. (2005). The bill, proposed by Senator John Ensign, advocates a market-based approach and is intended to promote competition. It contains provisions prohibiting broadband service providers from blocking VoIP.

VII. THE INTERNATIONAL CONTEXT

Despite the rapid growth of VoIP, as of January 2005 only 49 out of 189 member states of the International Telecommunication Union (ITU) had clearly stated that VoIP is a legal service.[157] Regulatory approaches toward VoIP vary from country to country, but most have either left VoIP largely unregulated or prohibited VoIP completely.[158] As noted by the ITU, countries in which VoIP is banned tend to be those "where a telecommunication monopoly of the international gateway existed."[159] In such nations, monopolies have exerted pressure on regulatory authorities to prohibit VoIP in order to avoid losing revenues through price arbitrage.[160] Despite these efforts, VoIP use continues to accelerate and already constitutes a significant portion of international voice traffic.[161]

The rising global popularity of VoIP is partly attributable to increased broadband penetration rates.[162] The enhanced VoIP service quality that broadband subscribers today experience in comparison to that which was available in the mid-1990s when VoIP began to emerge[163] and the significant cost savings of VoIP[164] have spurred a sharp increase in global traffic of Internet

---

[157] ITU News, *supra* note 22, at 4-5 (noting that, although VoIP is now considered "mainstream," there currently are more countries today that outlaw VoIP than those that allow it).

[158] *See id*. at 5 (reporting the findings of a survey of 132 ITU Member States conducted in 2004, where countries' treatment of VoIP was classified in the following categories: No Policy for IP Telephony (11), Full Competition (49), Partial Competition (11), Prohibited (24), Restricted (37)).

[159] *Id*. at 4.

[160] *Id*. at 6 (hypothesising that even though VoIP has flourished in countries that have not imposed regulation, some form of regulation - particularly regulation pertaining to interconnection, access to numbering resources, and essential facilities - may actually aid future VoIP deployment).

[161] *See* VoN WHITE PAPER, supra note 2, at 5 (up to 12% of international calls).

[162] The ITU estimates that at the beginning of 2004, there were more than 102 million broadband subscribers in approximately 100 countries. ITU News, *supra* note 22, at 5.

[163] *See id*. at 5-6 (explaining that people who "experimented with IP Telephony" at that time often did so through slow-speed, dial-up Internet access).

[164] *See id*. at 8 (comparing the cost of VoIP to traditional international calls, and noting that

telephony.[165] As the number of VoIP users continues to rise, so does the need to provide regulatory clarity.

Due to historical dependence upon incoming net settlement payments for voice traffic from more industrialised nations, developing countries have been disproportionately affected by the 'cannibalising' of revenues associated with the growth of international VoIP traffic.[166] In many cases, their response has been to treat VoIP restrictively either by allowing it to be used only by the monopoly incumbent, or by forbidding it altogether.[167] Other developing nations, however, have taken a more positive view, embracing VoIP as an integral tool in lowering costs to consumers, increasing competition, expanding broadband deployment[168] and bringing needed revenue to local economies.[169]

Perplexingly, use of this cost-saving technology often is restricted in countries with low tele-density levels that would benefit greatly from its deployment.[170] The roll-out of IP technology in developing countries would

---

"VoIP minutes are typically priced at between one-fifth and one-tenth of the price of circuit-switched minutes").

[165] *FCC's Abelson Urges Business Leaders to "Think Globally"'*, 2(30) TELECOM POL'Y REP. (Aug. 4, 2004), http://www.findarticles.com/p/articles/mi_m0PJR/is_30_2/ai_n6144372 (last visited Oct. 21, 2005) (citing figures provided by FCC International Bureau Chief Don Abelson, who at a roundtable discussion in July 2004 noted the "astounding" growth of IP-based services in certain parts of the world) [hereinafter *Abelson*].

[166] ITU News, *supra* note 22, at 8.

[167] *See* ITU News, *supra* note 22, at 9 (citing the example of Egypt, where Telecom Egypt was granted monopoly rights to provide IP telephony). *See also id.* at 5 (noting that there are 24 ITU Member States that prohibit IP telephony, either through IP-based networks or the public Internet).

[168] VOIN WHITE PAPER, *supra* note 2, at 11.

[169] Ewan McPhie, *Restricting VoIP and WiFi Costs South Africa its Position as a Technology Leader in Africa*, BRIDGES.ORG, May 25, 2004, *at* http://www.bridges.org/e-policy/comments/voip_wifi/ (last visited Oct. 18, 2005) (discussing the role of VoIP in lowering the costs of locating and operating call centers in locations such as India and South Africa). These call centres provide outsourced telephone support services to "developed countries" at a significantly lower cost, while at the same time creating local jobs and bringing cash to local economies. *Id.*

[170] *See id.* (referring to the example of South Africa, where until 2005, VoIP use was limited to areas where less than five percent of the population has access to a telephone). B*ut see South Africa Set to Shake Up Telecoms Monopoly*, 5002 COMPUTERWIRE, Sept. 7, 2004, http://

allow for the provision of *both* voice and data services on a single combined economical network - a huge cost savings over traditional technology where voice and data are transmitted over separate networks - and would hasten the delivery of modernised telecommunications and information services to the people of such regions.[171]

Some countries in developing regions such as Africa have recognised the benefits of VoIP and legalised its use.[172] The policy group Bridges.org observed that "[t]hese progressive governments are boldly embracing new technologies to gain the long-term benefits of [information and communications technology], despite potential short-term losses in revenue as incumbent telecommunications providers restructure their approaches."[173]

European regulators also have taken strides to create a favourable environment for the growth of VoIP. At a recent plenary session of the European Regulators Group (ERG), held in Brussels, Belgium from February 10-11, 2005, the Group expressed its commitment to "creating a regulatory environment in which VoIP services can flourish."[174] In the Common Statement issued by the Group, regulators recognised the importance of ensuring that regulatory obligations on VoIP are objective, technology-neutral, non-discriminatory and transparent.[175] However, the Group qualified its endorsement, stating that national regulatory authorities may need to apply different measures within

---

www.cbronline.com/article_news.asp?guid=93B7D30E-8347-47A1-A3E6-0B8CCE08B0F7 (last visited Oct. 18, 2005) (reporting the announcement by the South African Communications Minister that, beginning in 2005, value-added network service providers would be allowed to utilise an Internet platform to carry voice calls).

[171] *See* McPhie, *supra* note 169 (arguing that "[r]emoving restrictions and allowing competition to thrive in the communications sector will lead to greater choice, lower prices, and the proliferation of innovative services").

[172] *See id.* (pointing to countries such as Algeria, Mauritius, Mali, Nigeria and Kenya that are "moving to the forefront" of the communications arena in Africa by legalising VoIP).

[173] *Id*.

[174] Press Release, European Regulators Group, European Regulators issue Statement on VoIP; Focus on Core Topics in 2005 (Feb. 11, 2005), http://erg.eu.int/doc/publications/erg12_press_release.pdf.

[175] *See* European Regulators Group, ERG Common Statement for VoIP Regulatory Approaches 1, *at* http://www.erg.eu.int/doc/publications/erg0512_voip_common_statement.pdf.

their own countries in order to meet the ERG's objectives, and reserved to national regulators the authority to 'clarify' the rights and obligations of VoIP providers.[176] How VoIP service providers will be affected by the ERG's agreement is uncertain, particularly given the substantial reservation of regulatory power to national governments and the existing differences in the VoIP regulatory approaches of European nations.[177] The United Kingdom and Germany are noteworthy examples.

A. United Kingdom

The Office of Communications ("Ofcom"), an independent regulator and competition authority for U.K. communications industries, has taken what some VoIP service providers consider a "pro-competition" approach to regulating VoIP in the U.K.[178] Ofcom states that it is seeking to create an environment in which new technologies such as VoIP can flourish in the marketplace, so that consumers can benefit from a wider and more innovative range of services.[179] Taking a similar approach to that adopted by the United States by the Federal Communications Commission, Ofcom aims to limit the extent to which regulation creates distortions in the market.[180]

For example, although Ofcom initially determined that non-geographic numbers were suitable and sufficient to meet the needs of Communications Providers requiring numbers to launch VoIP services, it later recognised that the then available non-geographic number ranges failed to adequately meet

---

[176] *Id*. at 1-4.

[177] *See* Ivar Ekman, *Next Call for Net Phoning: Regulation*, INT'L HERALD TRIB., May 26, 2005, *available at* http://www.iht.com/articles/2005/05/25/business/netphone.php (last visited Oct. 23, 2005) (explaining that even though the European Union's "central bureaucracy" has taken a light regulatory approach that favours growth and innovation, much of the regulatory power concerning VoIP remains at the national level in Europe, thereby resulting in a dramatically different regulatory landscape in each of the European Union's 25 member states).

[178] *See Vonage Launch Underlines Importance of Numbering Policy*, POLICY TRACKER, Jan. 13, 2005, http://www.vonage.com/media/pdf/res_01_13policytracker_05.pdf (last visited Oct. 20, 2005) (noting that Vonage chose the U.K. as its first European launch location due to the favourable regulatory environment there).

[179] *See* U.K. Office of Communications, *New Voice Services - A Consultation and Interim Guidance*, Sept. 6, 2004, http://www.ofcom.org.uk/consult/condocs/new_voice/anew_voice/?a=87101.

[180] *Id*.

the requirements for these services.[181] Consequently, Ofcom approved a new 056 number range for VoIP services.[182] The new numbering code is non-geographic, thereby giving consumers access to phone numbers that may be used anywhere in the country and that are not linked to any one particular location.[183] In order to facilitate a consumer's switch from traditional telephone service to VoIP, Ofcom also approved VoIP service providers' use of geographic numbers beginning with 01 or 02.[184]

Reflecting its lighter regulatory touch, Ofcom also has proposed that it is unnecessary for all voice services to offer access to all of the supporting features of traditional voice service, such as emergency calls (999).[185] In advancing that proposal, Ofcom reasoned that firstly, most telecom providers will offer access to 999 anyway and that most consumers likely would want at least one phone line with 999 access and therefore would select a provider that offered it; and secondly, that requiring all voice services to offer the same features could hinder companies from creating new products and offering customers more choices.[186]

---

[181] *See* U.K. Office of Communications, Numbering Arrangements for Voice over Broadband Services, Feb. 24, 2004, at 1, ¶ 1.3, *available at* http://www.ofcom.org.uk/consult/condocs/vob/vobs/vobs.pdf [hereinafter *OFCOM Numbering Arrangements*].

[182] *Id*. (noting that numbers in the 056 range are not related to specific local areas; thus, they could be used for new services from anywhere with a broadband Internet connection); *see also* Graeme Wearden, *Ofcom Cheers Industry with VoIP Number Ruling*, ZDNET UK, Sept. 6, 2004, at http://news.zdnet.co.uk/communications/networks/0,39020345,39165620,00.htm (last visited Oct. 18, 2005); Press Release, U.K. Office of Communications, Ofcom to Encourage the Development of New Voice Services (Sept. 6, 2004) http://www.ofcom.org.uk/media/news/2004/09/nr_20040906.

[183] *Id*.

[184] *See id*. (explaining that the transition would be easier because consumers switching from traditional service to VoIP would not have to change telephone numbers).

[185] *See* U.K. Office of Communications, *New Voice Services - A Plain English Summary*, *at* http://www.ofcom.org.uk/consult/condocs/new_voice/anew_voice/new_voice_pes/.

[186] *Id*. In late 2004, Ofcom conducted an extensive public consultation concerning "how functional and reliable VoIP service should have to be," including 999 access. *See* Wearden, *supra* note 182. As of mid-2005, the results of this public consultation were still being considered by Ofcom and had not yet been released. *See* Carolyn Boyle, *Tune In, Turn On*, LEGAL WEEK, Apr. 14, 2005, *at* http://www.legalweek.com/ViewItem.asp?id=23749&Keyword=Tune (last visited Oct. 22, 2005).

B. Germany

The regulatory environment in Germany has made it more difficult for VoIP providers to effectively market their services and has discouraged some VoIP providers from entering the German market,[187] although rule changes currently are being considered. Presently, the German Regulatory Authority for Telecommunications and Posts ("RegTP") limits the allocation of geographic numbers to "network operators," thereby curtailing access to these numbers by Internet-based service providers that do not have their own networks.[188] Instead, VoIP service providers are assigned non-geographic numbers beginning with the 032 prefix, regardless of where the service is based.[189] RegTP imposed this restriction despite the fact that offering geographic numbers can be a particularly vital element in a VoIP provider's business plan to attract prospective consumers.[190]

---

[187] *See Vonage Launch Underlines Importance of Numbering Policy*, POLICY TRACKER, Jan. 13, 2005, *at* http://www.vonage.com/media/pdf/res_01_13policytracker_05.pdf (last visited Oct. 21, 2005) (noting that Jeffery Citron, CEO of Vonage, objected to Germany's position on VoIP because it impaired VoIP providers' ability to compete with incumbents, and that Vonage was discouraged from entering the German market because of the lack of availability of geographic numbers to Internet-based service providers).

[188] *See German Regulators Consider Easing VoIP Rules*, TELECOMWEB, Dec. 2, 2004, *available at* http://www.telecomweb.com/news/1101751714.htm (last visited June 3, 2005).

[189] *VoIP Regulation: Getting Caught in the Wrong Place*, TOTAL TELECOM MAGAZINE, Feb. 1, 2005, at 16-18.

[190] *Compare id*. (quoting the co-founder of VoIP service provider Gossiptel on her belief that "[n]on-geographic numbering is a major restriction in Germany"), *and* Simon Taylor, *EU Regulators Agree to Level VoIP Playing Field*, IDG NEWS SERVICE, Feb. 11, 2005, *at* http://www.itworld.com/Net/3303/050211euvoip/ (last visited Oct. 23, 2005) (categorising the assignment of non-geographic numbers as "a strategy that can impinge upon VoIP players if customers prefer local numbers for business reasons"), *with* European Commission, *The Treatment of VoIP under the EU Regulatory Framework*, June 14, 2004, at 18, *at* http://europa.eu.int/information_society/topics/ecomm/doc/useful_information/library/commiss_serv_doc/406_14_voip_consult_paper_v2_1.pdf (encouraging member states to foster competition and provide access to geographic numbers), *and Ofcom Numbering Arrangements*, *supra* note 181, at 11, ¶ 4.4 (explaining that geographic numbering is particularly important for residential consumers because the services are easier to market if familiar numbering resources are used, and because it offers consumers greater certainty of the inclusion in calling options packages).

However, this approach is currently being revisited by RegTP,[191] which has stated that it is trying to strike a balance between creating a framework that encourages competition through the use of new technologies and services and preserving consumer interests and the security interests of Germany.[192] In addition to considering whether to allow VoIP service providers access to geographic numbers,[193] RegTP is also considering reducing the size of number blocks for allocation from 1,000 to 100.[194] Nevertheless, German regulators have made it clear that local numbers will not be assigned to people who do not reside in the area to which such numbers have been assigned.[195]

In Germany, as in the UK, decisions in coming months on pending proposals should provide a much clearer forecast of the regulatory climate that VoIP service providers will face, and whether they will be allowed to flourish in a lightly regulated environment.

VII. IP TELEPHONY IN INDIA

The regulatory landscape in India concerning Internet telephony has changed considerably since its first introduction, but the government's official disposition towards IP telephony, as of now, remains restrictive and unduly protective of incumbents.

---

[191] *See* Press Release, RegTP, *RegTP*: *Regulatory Authority Creates Framework for Internet Telephony*, Nov. 15, 2004, http://www.regtp.de/en/aktuelles/pm/03117/index.html (noting that RegTP is planning to amend the regulations on geographic numbers to accommodate developments in the VoIP sector, which means that it will be possible for all providers offering access to the public telephone network to file for geographic number allocations).

[192] *See* RegTP, *Voice over IP Consultation*, *at* http://www.regtp.de/en/reg_tele/start/in_05-15-00-00-00_m/index.html (last visited Oct. 15, 2005).

[193] *See* Eva Bakowicz, *T-Online Starts to Offer VoIP Calls*, WORLD MARKETS ANALYSIS, Apr. 18, 2005, at 6 (noting that RegTP's decision to consider allowing VoIP providers to apply for geographic numbers stems from the regulator's intent to encourage competition).

[194] *See German Regulators Consider Easing VoIP Rules*, TELECOMWEB, Dec. 2, 2004, *at* http://www.telecomweb.com/news/1101751714.htm (last visited Oct. 8, 2005) (explaining that reducing the quantity of numbers in allocated blocks would lessen the chance of "number hoarding" by larger carriers and also would significantly decrease the entry cost for VoIP service providers).

[195] *Id*. (explaining that, pursuant to the German numbering system, it would be impossible for a local German telephone number to ring on a VoIP phone in another country).

In 1999, Internet Telephony was banned in India.[196] By 2001, India's Department of Telecommunications recognised the need to re-evaluate its position on Internet telephony and requested that the Telecom Regulatory Authority of India (TRAI) prepare recommendations on the opening up of this technology. TRAI released its recommendations on Internet telephony in February 2002.[197] These recommendations subsequently were adopted by the Department of Telecommunications on March 15, 2002.[198] Despite a general trend toward the "opening up of Internet Telephony" and a dramatic increase in the amount of VoIP traffic to India,[199] the regulatory environment in India continues to pose significantly greater hurdles to the provision of IP telephony, in comparison to the relatively hands-off approach adopted in countries such as the United Kingdom and the United States.[200]

In India, Internet telephony may be provided only by Internet Service Providers (ISPs) within their service areas.[201] ISPs seeking to provide VoIP services must obtain a licence amendment to that effect,[202] and may not

[196] *See* India's New Telecom Policy 1999 § 3.2, *available at* http://www.trai.gov.in/npt1999.htm (noting that Internet telephony "shall not be permitted at this stage," but that the topic would be subject to future review by the Government).

[197] *See* Telecom Regulatory Authority of India, Recommendations on Opening Up of Internet Telephony § A(2), Feb. 20, 2002, *available at* http://www.trai.gov.in/IP_Recommendations.htm (clarifying that the February 2002 Recommendations were formulated by an internal group within TRAI after consulting with the general public and with all stakeholders) [hereinafter TRAI Recommendations].

[198] *See* Press Release, Press Information Bureau, Government of India, Government Accepts TRAI Recommendations on Opening Up of Internet Telephony (Mar. 15, 2002), *available at* http://pib.nic.in/archieve/lreleng/lyr2002/rmar2002/15032002/r1503200217.html.

[199] For example, VoIP traffic to India increased 190 percent in 2002. *See Abelson*, *supra* note 164 (citing figures provided by FCC International Bureau Chief Don Abelson, who at a roundtable discussion in July 2004 underscored the "astounding" growth of IP-based services in certain parts of the world and the need for US telecom industry leaders to be mindful of related developments around the world).

[200] See Department of Telecommunications, Government of India, Guidelines for Issue of Permission to Offer Internet Telephony Services, at § 1, Apr. 1, 2002, *available at* http://www.dotindia.com/isp/guidelines.doc (referring to the decision of the Government of India to allow Internet telephony through ISPs after April 1, 2002, but setting forth various restrictions on these services) [hereinafter "DoT Guidelines"].

[201] *Id*. at § 1.

[202] *Id*. at § 8(i).

interconnect voice calls with ISPs who are not licensed to offer Internet telephony services.[203] In addition, Internet telephony is allowed only where it falls into one of three narrow categories:

- PC to PC (either within or outside India),
- PC to Telephone (where the PC is located in India and the telephone is located outside India),
- IP based H.323/SIP Terminals in India to similar Terminals either within India or abroad that employ the Internet Assigned Numbers Authority (IANA) IP addressing scheme.[204]

The expressed rationale for these restrictions on Internet telephony is protection of the status of facilities-based operators.[205] As explained by the TRAI, India's facilities-based operators are subject to a universal service obligation and thus are required to provide telephone service in rural and other unprofitable areas.[206] In the TRAI's view, if Internet telephony is allowed to disrupt the PSTN/ISDN settlement system, facilities-based operators, particularly International Long-Distance Operators (ILDOs), may lose revenue needed to roll out new infrastructure and facilities-based networks, in turn causing a negative impact on India's tele-density goals.[207]

In furtherance of the deferential treatment of facilities-based operators, the TRAI and India's Department of Telecommunications (DoT) have placed traditional telephony and Internet telephony into two distinct categories, noting that at the time the recommendations on opening up Internet telephony were drafted, comparable levels of service between the two technologies were not yet available.[208] Regulators classify Internet telephony as an "Application

---

[203] *Id*. at § 3(vi).

[204] *Id*. at § 2.1.

[205] *See* TRAI Recommendations, *supra* note 197, at § B.2.3 (referring to facilities-based operators and noting that "it is important not to disturb significantly their revenue streams to which they are entitled in accordance with the stipulations in the Licenses granted to them").

[206] *Id*.

[207] Telecom Regulatory Authority of India, Explanatory Memorandum to Recommendations of the TRAI on Opening Up of Internet Telephony § I (1.2), Feb. 20, 2002, http://www.trai.gov.in/Explanatory_Memorandum(20-02-2002).htm.

[208] *See id*.at § I(1.4) (stating that "there is a need to clearly differentiate between PSTN base

Service" capable of processing voice signals that is employed through the public Internet.[209]

Unlike VoIP services in the US, which frequently begin or end (or both) through the PSTN, Internet telephony in India may not involve the PSTN or make any use of a traditional analogue telephone located within the country.[210] Although ISPs are not permitted to utilise the PSTN in the provision of Internet telephony services, facilities-based operators in India may incorporate VoIP technology into their respective networks as part of a "managed VoIP backbone".[211] According to the TRAI, the capacity to deploy a managed VoIP backbone in lieu of the PSTN backbone is intended to give facilities-based operators broader choices in determining the most cost-effective means to provide service in their areas, and thereby to enable facilities-based operators to invest realised savings in the last mile of the access network.[212]

Despite the apparent good intentions of India's telecom regulatory authorities in attempting to protect facilities-based operators' ability to meet

---

real-time telephony, and Internet Telephony offered on the public Internet, which is a voice application, based on client server architecture of the Internet, and is non real-time and thus at present cannot be compared to the conventional telephony service derived from PSTN/ ISDN/PLMN"). *See also* DoT Guidelines, *supra* note 200, at § 2.4.

[209] *Id*. at § B.2.1 (noting further that Internet telephony in India shall conform to the IANA IP addressing scheme, as opposed to the ITU's E.164 Global Switched Telephone Network numbering scheme).

[210] The DoT Guidelines do not consider the following as Internet telephony services:

(i) Voice communication from anywhere to anywhere by means of dialing a telephone number (PSTN/ISDN/PLMN) as defined in National Numbering Plan.
(ii) Originating the voice communication service from a Telephone in India.
(iii) Terminating the voice communication to Telephone within India.
(iv) Establishing connection to any Public Switched Network in India.
(v) Dial up lines with outward dialing facility from nodes.

DoT Guidelines, *supra* note 200, at § 3(i)-3(v).

[211] *See* TRAI Recommendations, *supra* note 197, at §§ 3.2 and 4.2 (explaining that permission to employ a managed VoIP backbone is contingent upon the operator's ability to deliver toll quality service over a backbone that is transparent to both fax and calls from voice band modems). Operators may also offer "lower than toll quality" telephony service over a managed VoIP backbone, so long as subscribers are notified of the lower quality of service, the lower applicable tariff and the distinctive service code. *Id*. at § 4.3.

[212] *Id*. at § 4.1.

their universal service obligations and to invest in infrastructure, the TRAI's and DoT's view may be shortsighted. The preferential treatment being accorded to incumbent carriers, and the restrictions and burdens being imposed on competitive Internet telephone providers risk delaying, and perhaps even irreparably injuring, the development of a corps of competitive Internet telephone service providers in India. The fate of the CLEC industry in the United States bears fair warning of the likely outcome of a regulatory regime that is too deferential to and protective of, incumbent facilities-based carriers. Should that be the course followed in India, the country may fail to fully realise the benefit of a communications medium that otherwise could provide a growth engine for its economy and deliver state-of-the-art telecommunications and information services to its citizens.

VIII. CONCLUSION

While the FCC and court decisions of 2004 and 2005 have begun to define the regulatory framework that will be applied to VoIP in the United States, it likely will be at least another two years until there is real certainty about what that framework will look like. In that time, the FCC will issue decisions in its Packet-IP Services, inter-carrier compensation and other rulemaking proceedings, and interested parties undoubtedly will pursue judicial review of those rulings. Congress may enter the mix as well, should it proceed to rewrite the US telecommunication laws. Although the technological and economic efficacy of VoIP ensures that it will continue to revolutionise telephony in the United States and abroad, these proceedings will play a significant role in determining just how soon and to what extent American businesses and consumers will enjoy the full benefits of VoIP telephony. Moreover, as consolidation in the US telephone industry continues (witness, for example, the recent Verizon-MCI, Southwestern Bell-AT&T and Sprint-Nextel mergers), reducing the extent of competition and extending oligopoly conditions in the US wireline and wireless telephone markets, VoIP - with lower capital requirements and numerous upstart ventures - will provide some discipline to the increasing market power of the remaining incumbent carriers.

Elsewhere around the globe, similar administrative, legislative and judicial deliberations will be following a somewhat parallel course, although not necessarily as quickly or with the same results. Particularly in less developed countries, where there is a greater digital divide and where IP telephony

promises greenfield benefits, it will be especially important for decision-makers to scrutinise incumbent monopolists' claims that the introduction of Internet telephony will jeopardise rather than hasten the advent of universal service and infrastructure development. In formulating telephone regulatory policy for the next decade, regulators worldwide need to consider the greatly enhanced efficiency and functionality of telephone services and networks that can be realised through Internet telephony in a free, open and competitive marketplace that is unhampered by restrictive and burdensome regulation.

THE INDIAN JOURNAL OF LAW AND TECHNOLOGY
Volume 1, 2005

COPYRIGHT, CULTURAL PRODUCTION AND OPEN-CONTENT LICENSING

*Lawrence Liang**

ABSTRACT

This article seeks to introduce the complex world of open-content licences against the backdrop of the massive expansion of copyright in recent years and the increasing threat posed by copyright licences to the world of cultural production. The world of open content has been inspired by the free software movement and hence this article begins with an overview of the conceptual challenges posed to copyright by free software movement. It then moves into an analysis of the ways in which the terms of free software may be understood for the purposes of cultural production and what such a translation may entail. We then go through a brief survey of the history of open-content licences and discuss a few routes through which we may read licences not only as legal documents but also as cultural documents.

TABLE OF CONTENTS

---

* Researcher and Member, Alternative Law Forum, Bangalore; B.A., LL.B.(Hons.) '98, National Law School of India University; LL.M. '99, University of Warwick. This paper is part of the collaborative research project "IP and Knowledge/Culture Commons" between the Alternative Law Forum and SARAI: CSDS. The research for this paper was carried out during a residency at the Piet Zwart Institute, Rotterdam. Special thanks to Matthew Fuller and, of course, all usual disclaimers apply.

I. INTRODUCTION: THE CD WRITER AS A WEAPON OF MASS DESTRUCTION

In the past few years the debate on copyright has taken on gigantic proportions and it has emerged as the dominant metaphor of the information era, with the struggle for control over information producing new discourses of anxiety and conflict. It would not be an overstatement to say that copyright has become a media event, and rarely does a day go by without some story of

copyright violation or infringement.[1] The large media players, such as the Recording Industry Association of America (RIAA) and the Motion Picture Association of America (MPAA), scream themselves hoarse about the scale of piracy and how peer-to-peer networks and file-sharing are causing the death of the music and film industry. Famous music stars such as Madonna appear on advertisements on television pleading with young people to stop downloading music for free, and there is a massive increase in the number of lawsuits against people providing file-sharing networks, including students creating file-sharing networks within universities. At the same time that this new language of criminality is being created, older metaphors such as piracy emerge as the dominant mode of characterising the prevalence of non-legal media in many parts of the world, but particularly focusing on Asia. The latest allegation is that pirated music and software helps fund terrorist organisations such as Al-Qaeda.[2]

In the eighteenth century, the movement from a largely agrarian to an industrial form of economy in several countries saw massive transformations taking place in the realm of property law. This period was marked by sharp social conflict and all kinds of laws emerged to protect property and regulate everyday life. New languages of criminality, new forms of property protection

---

[1] *See generally* Peter Jaszi, *International Copyright from Basics to Current Issues*, *in* Advanced Seminar on Copyright Law 2001, 653 PLI/Pat 301 (2001). *See*, *e.g.*, Martin Wainwright, *Harry Potter and the Wizard Idea to Foil Cinema Pirates*, The Guardian, May 31, 2004, http://film.guardian.co.uk/harrypotter/news/0,10608,1228308,00.html.

[2] A statement by the US Department of Transportation states, "They run computer manufacturing plants and noodle shops, sell 'designer clothes' and 'bargain basement' CDs. They invest, pay taxes, give to charity, and fly like trapeze artists between one international venture and another. The end game, however, is not to buy a bigger house or send the kids to an Ivy League school - it's to blow up a building, to hijack a jet, to release a plague, and to kill thousands of innocent civilians." *Financing Terror - Profits From Counterfeit Goods Pay For Attacks*, 36 Transit Security Newsletter (Office of Safety and Security, U.S. Department of Transportation, Washington, D.C., U.S.A.), May 2003, at 2, *available at* http://transit-safety.volpe.dot.gov/Security/newsletters/html/Vol36/Page2.asp. *But see* Nitin Govil, *War in the Age of Pirate Reproduction*, *in* Sarai Reader 04: Crisis/Media 378 (Monica Narula et al. eds., 2004). This declaration has been similarly followed up by the Indian copyright enforcers (led by former Commissioner of Police Julio Ribiero) who have stated that music piracy funds Jihadi terrorists. *See* R. Rangaraj, *Music Piracy and Terrorism*, *at* http://www.chennaionline.com/musicnew/films/09musicpiracy.asp (last visited Oct. 7, 2005).

and a sharp increase in the use of force against offenders (ranging from people who 'stole fruits from trees' to people who illegally occupied land) came about as a consequence. We are constantly reminded that we are in an era of transition, and it is difficult to find a piece of futurology that does not proclaim that we are now living in an information era. This transition has been marked by the attempts to define new regimes of property, giving rise to sharp social conflicts over the definitions and extent of such property.

Even as this new regime of property attempts to entrench itself alongside the older structures of capitalism by creating a new language of criminality, there is also another language that has been emerging as a response to this regime of copyright - the language of 'openness', 'collaborative production' and 'freedom' with respect to information goods, cultural production and participation in the information economy. This new language has been enabled to a large extent by the success of the Free Libre Open Source Software (hereinafter FLOSS)[3] movement with its poster-boy product, the GNU Linux operating system, being promoted as a viable alternative to the world of classical copyright.

The discourse enabled by free software travels various routes: it provides support for the liberal discourse of public law in the US, it emerges as a counter-hegemonic force to the US software industry in Europe and, of course, it speaks to the older discourse of developmentalism in 'Third World countries'. None of these is completely true or false. The fact is that the free software movement has created a counter-imagination to the dominant narrative of copyright and has created the ability to look at experimenting with alternative models of knowledge production and distribution in the information era that does not have to rely on the totalising logic of copyright laws that seek to exclude. Instead, it rearticulates the use of copyright law as a tool to promote a vibrant public domain of information and content, of collaborative production and networked distribution.

We have seen a rapid emulation of the principles of free software in other fields, especially in the realm of content and the process of cultural production in the form of the creation of cultural artefacts such as music, literature and

[3] The term Free Libre Open Source Software is preferred to the terms Open Source Software and Free Software. It refers to a model of software production (e.g. GNU Linux) which grants the users various freedoms, as opposed to proprietary software such as Microsoft.

art. The idea of open source has now moved to the idea of open content, where increasingly more and more people are familiarising themselves with a new language that demands knowledge of 'collaboration', 'sharing' and other such concepts. It is not as though this vocabulary is new, and in fact it could be argued that these practices really form the core of what cultural production is all about; yet, they seem to have gained added value in light of the onslaught on copyright. It is as though the hidden or repressed memory of cultural production has returned after struggling against the hegemonic myth of copyright and, as studies in psychoanalysis reiterate, there is nothing more powerful than the return of the repressed.

Even as copyright law and copyright enforcement increasingly become more globalised (or, more accurately, Americanised), so do the alternatives to copyright.[4] There surely has to be a good reason why so many people from different cultures are embracing the new language of open production and collaboration. As Robert F. Kennedy put it, "There is a Chinese curse which says, 'May he live in interesting times.' Like it or not, we live in interesting times."[5] Jeremy Rifkin, characterising these 'interesting times' as a new 'age of access', argues that there is a fundamental shift in our understanding of the logic of production, distribution and consumption, with a shift from conventional notions of the market to the idea of networks. For instance, the culture of the Internet is predicated on a culture of networked distribution and circulation. He sees the culture of the networked economy as fundamentally shaping the way people think about production, distribution and collaboration and rendering conventional forms of regulation and structuring of economic transactions incompatible with the new framework. As he puts it:

> *The young people of the new 'protean' generation are far more comfortable conducting business and engaging in social activity in the worlds of electronic commerce and cyberspace, and they adapt easily to the many stimulated*

[4] FLOSS has become extremely popular in many developing countries, as are open content models such as creative commons, and there are currently more than twenty national chapters of the Creative Commons globally. *See* Niranjan Rajani et al., *Free as in Education: Significance of the Free/Libre and Open Source Software for Developing Countries*, http://www.maailma.kaapeli.fi/FLOSSReport1.0.html (last visited Oct. 5, 2005).

[5] Robert F. Kennedy, Address at the University of Cape Town, Cape Town, South Africa (June 6, 1966).

> *worlds that make up the cultural economy… For them, access is already a way of life, and while property is important, being connected is even more important. The people of the twenty-first century are likely to see themselves as nodes in embedded networks of shared interests as they are to perceive themselves as autonomous agents in a Darwinian world of competitive survival. For them, personal freedom has less to do with the right of possession and the ability to exclude others and more to do with the right to be included in webs of mutual relationships*.[6]

While the world of free software has certainly proved some of Rifkin's speculations about the motivations of people in the contemporary era,[7] it would be premature to conclude that the 'age of access' has been established in all realms of knowledge and cultural production. In this article I shall be posing the problem of what it may mean to translate the terms of the FLOSS model into other domains of cultural production such as the arts and media. Some of the questions this raises are:

- How do we begin to understand the idea of open code as a metaphor to other domains?
- Is the idea of open code translatable across different configurations of knowledge? For instance, can it be translated from the world of academic knowledge production into the world of scientific research?
- Does it run into any serious difficulty when it encounters other forms of knowledge which may not have the same characteristics as code, for example, when we move into the domains of embedded knowledge such as dance and martial arts?
- How do we read attempts at translating the world of open-source licensing into the world of cultural production, both legally as well as in terms of the larger social imaginaries that they both enable and the public discourse that they generate?
- How do we read a licence not merely as a legal document but as a cultural document?

---

[6] JEREMY RIFKIN, THE AGE OF ACCESS 12 (2000).

[7] *See* Rishab Aiyer Ghosh, *Cooking Pot Markets: An Economic Model for the Trade in Free Goods and Services on the Internet*, 3(3) FIRST MONDAY (Mar. 2, 1998), *at* http://www.firstmonday.org/issues/issue3_3/ghosh/ (last visited Oct. 7, 2005).

I would also like to caution against some of the trends in the open content debate and signal to other ways of looking at the ideas of creativity and access.

This article seeks to serve as an introduction to the idea of open-content licensing as well as discuss collaborative production beyond the question of licences.

II. CONTEXTUALISING THE HISTORY OF COPYRIGHT AND LICENCES

Copyright has always had a troubled relationship with technologies, especially with any technology that allows for cheaper reproduction and distribution. Emerging as it did in the context of the print revolution, copyright law has found it difficult to break off its umbilical relationship with changes in technologies of reproduction. However, none of the previous conflicts, such as broadcasting disputes over FM radio, the problem of photography and the attempt to tame video technology, seem to have caught the imagination of the public as much as the contemporary debate over copyright and the Internet. Perhaps this is because, in the past, the end user was only indirectly involved in the struggle over copyright as a consumer, rather than as an active actor or reproducer. In the *Betamax* case[8], for instance, even though the issue was the fact that consumers could tape their favourite programs from television and watch them at a later time, the infringement case was filed against Sony, the manufacturer of the videotape recorder, rather than against any individual.

However, there has been a significant shift in recent copyright battles, and the focus of the industry seems now to be to create a situation of panic by taking direct action against individuals involved in file-sharing. This section attempts to narrate a brief history of copyright to discuss the context in which it emerged and look at the connections and the older histories that mark our entry point into the contemporary debates and trace the fundamental principles which underlie much of copyright doctrine. I also argue that there is something about the contemporary digital scenario which is in a very different vein from the previous disputes around copyright.

---

[8] Universal City Studios, Inc. v. Sony Corp. of America, 480 F. Supp. 429 (C.D. Cal. 1979).

A. A Genealogical Account of the Author in Copyright

Before the invention of the printing press, the act of writing was a very localised activity and it was impossible to disseminate knowledge in any significant manner since the impracticality and inaccuracies of large-scale copying prevented any widespread use of the written work. The invention of the printing press enabled a number of innovations, such as the increased ease and accuracy of duplication and the viability of mass distribution. The printing press also revolutionised information storage and retrieval. This improvement in the ability to accurately reproduce works fostered an understanding that progress could occur through a process of revision and improvement. The increased accuracy and rapidity of new editions made possible by the printing press made more recent editions more valuable. Printing provided a mechanism by which a larger reading public developed by providing access to a larger number of people, thereby substantially affecting the constitution of the emerging public sphere.

This new reading public created a further demand for books, both originals and reprints, and set in motion the crucial conflict over the ownership of such information. This is crucial in the history of contemporary intellectual property because a sufficient market for books to sustain a commercial system of cultural production had to exist before a formal regime of intellectual property could materialise.[9] What was earlier the monopoly of the Stationers' Company, a guild recognised and regulated by the Crown, became a mass industrial activity with a number of publishers in the provinces (Scotland) publishing cheap reprints for the new reading public. The reaction from the literary and artistic world was to move away from the 'ills of industrial revolution', and they began deploying the notion of the author as a unique and transcendent being, possessing originality of spirit.[10] This romantic model was used as a means of rescuing the artists' works from the hostile market and the public for whom mass production made works available as never before, but at the risk of turning it into an industrial product. The romantic artist was therefore deemed to have property in an uncommodifiable imaginary self, so originality was elevated to being located in and belonging to the self of the author. Because the artist owns his original person or spirit, works created by such authors were also

[9] *See* MARK ROSE, AUTHORS AND OWNERS: THE INVENTION OF COPYRIGHT 10 (1993).

[10] *See* James Boyle, *A Theory of Law and Information: Copyright, Spleens, Blackmail, and Insider Trading*, 80 CAL. L. REV. 1413, 1461-1470 (1992).

deemed to be original; they could thus distinguish their personality from the expanding realm of mass produced goods.[11]

As a result, the concept of the modern proprietary author was used as a weapon in the struggle between the London booksellers and the booksellers of the provinces, culminating in the landmark case of *Donaldson* v. *Becket*.[12] The claim in this case was made in the name of protecting the rights of authors, although no author was involved in the case, and the individuality of their ideas, even though the primary beneficiaries from this new system of knowledge ownership were publishers, since all authors assigned their copyright to the publishers before publication. The modern proprietary author merely served as a useful euphemism for protecting company rights to copy.

For approximately the first two hundred years of copyright history, copyright was primarily concerned with a limited domain of protection, namely the right of reproduction. This is not to say that there were no attempts to extend the scope of this right by including licensing terms that extended beyond the right to produce the product and attempted to control it even after it had been sold. The concept of restricting user rights through licences has been used in the past by book publishers and sound recording companies. For instance, in the case of the old Victrola recordings, the jacket stated that use

---

[11] For an overview of the history of romantic authorship in copyright law, *see generally* Martha Woodmansee, *The Genius and the Copyright: Economic and Legal Conditions of the Emergence of the 'Author'*, 17 EIGHTEENTH CENTURY STUDIES 425 (1984); Martha Woodmansee, *On the Author Effect: Recovering Collectivity*, 10 CARDOZO ARTS & ENT. L.J. 279 (1992); Mark Rose, *The Author as Proprietor:* Donaldson *v.* Becket *and the Genealogy of Modern Authorship*, 23 REPRESENTATIONS 51 (1988); Peter Jaszi, *On the Author Effect: Contemporary Copyright and Collective Creativity*, 10 CARDOZO ARTS & ENT. L.J. 293 (1992).

[12] 17 PARL. HIST. ENG. 953 (1774). In this case, a Scottish bookseller called Alexander Donaldson published an edition of the book *The Seasons* by James Thomson. The copyright for this book belonged to Thomas Becket and a group of other London booksellers and printers. The issue was whether the Statute of Anne determined the whole extent of protection and literary property was thereby only a statutory right, a limited creation of the state, or an absolute and perpetual common law right for which the Statute of Anne was merely a supplement. Alexander Donaldson contended that once the twenty-eight-year maximum term of copyright under the Statute of Anne had expired, a work became freely available. The respondents, on the other hand, asserted that there was an underlying common law right and thereby perpetual copyright. The House of Lords ruled in favour of Donaldson and held that copyright is not perpetual and is valid only for a specific period. This is often referred to as the first landmark case on copyright.

of the recording was licensed to one Victrola machine and did not allow retransfer of one's copy of the recording. However, this was not looked upon favourably by courts, and the landmark case in this regard was *Bobbs-Merrill Co*. v. *Straus*.[13] In this case, the Bobbs-Merrill Company sued Isidor and Nathan Straus, the partners in a booksellers' partnership called R.H. Macy & Company, because they sold copies of a book called *The Castaway*, published by the Bobbs-Merrill Company with a listed retail price of $1, in contravention of a restriction in the licence given under the copyright notice which stated: "The price of this book at retail is $1 net. No dealer is licensed to sell it at a less price, and a sale at a less price will be treated as an infringement of the copyright." The US Supreme Court declared this restriction ineffective, considering it a matter of copyright policy. This verdict contributed to the abandonment of such practices and the emergence of the 'first sale' or 'exhaustion of rights' doctrine in copyright law, under which, when a transaction is a sale in commercial reality, publishers lose authority to control redistributions of copies of their works.[14]

B. Expansion of Copyright over the Years

Initially, the practices of people operated on the presumption that everything was in the public domain, except where otherwise stated, and copyright did not play much of a role. The history of copyright has centred on a reversal of this presumption to the extent that everything is assumed to be protected unless specifically stated to be in the public domain.[15] Creators of cultural content from Disney to Bappi Lahiri, for instance, did not think twice about building on works that were circulating in the public domain. In fact, much of our cultural heritage emerges from acts of 'inspired copying'. It is therefore ironic in this context to read about Bappi Lahiri suing Dr. Dre for sampling his song *Kaliyon Ka Chaman* in Truth Hurts' hit *Addictive*.[16] What enables this shift of Bappi from being an inspired creator to a righteously indignant, rights-possessing author whose valuable rights are being violated?

---

[13] 210 U.S. 339 (1908).

[14] Pamela Samuelson, *Legally Speaking: Does Information Really Want to be Licensed?*, *at* http: //sims.berkeley.edu/~pam/papers/acm_2B.html (last visited Oct. 7, 2005).

[15] *See* James Boyle, *The Second Enclosure Movement and the Construction of the Public Domain*, 66 LAW & CONTEMP. PROBS. 33, 36-40 (2003).

[16] Truth Hurts featuring Rakim, *Addictive*, on TRUTHFULLY SPEAKING (Interscope Records 2002); *see Indian Composer Wins Hip-Hop Wrangle*, REUTERS, Feb. 4, 2003.

There are three ways in which we can account for the expansion of copyright. These are the term of copyright, the reach of copyright and the scope of copyright. When copyright began in 1709 with the Statute of Anne, it was for a limited term of fourteen years, but over the years there has been a gradual expansion of the term of copyright. Currently, it ranges from sixty to ninety years after the death of the author - in India, the term of copyright lasts for sixty years after the death of the author, while it is eighty years in the US and ninety years in Europe. This has primarily been the result of the initiative of the entertainment industry. For instance, the Disney Corporation has been one of the major actors in pushing for an extension of the term of copyright, resulting in characters such as Mickey Mouse still being under copyright long after they would otherwise have become public domain and much being written about 'the mouse who ate up the public domain'.[17]

The latest extension in the US via the Copyright Term Extension Act[18] (also known as the Sonny Bono Act) was challenged by Lawrence Lessig and others in *Eldred* v. *Ashcroft*,[19] where Lessig used the argument that the extension term violated both the copyright clause of the Constitution and the First Amendment. However, the Supreme Court upheld the validity of the extension. While the case was an interesting attempt at linking copyright to constitutional doctrines, the oldest public law tradition, it also reveals the serious limitation of constitutional arguments when it comes to questioning property. This is a theme that I shall tackle in some detail when I attempt a critique of the dominant liberal constitutional discourse on the debate on copyright.

The second area of expansion of copyright has been in terms of the reach of copyright. While copyright was initially supposed to be for the protection of 'original' works of authorship, the idea of originality in copyright being a very minimal one, it has now allowed for all kinds of works to be brought

---

[17] *See, e.g.*, Jason Krause, *A Mickey Mouse Law*?, 1. No. 8 A.B.A. J. E-Rep. 8 (2002); Jessica Litman, *Mickey Mouse Emeritus: Character Protection and the Public Domain*, 11 U. Miami Ent. & Sports L. Rev. 429 (1994).

[18] 17 U.S.C. § 302 (1998). It was tabled in 1998 and sought to extend the term of copyright in the United States by another twenty years. This was primarily done to ensure that Disney could continue to enjoy the monopoly that it had over its characters.

[19] 537 U.S. 186 (2003).

under the rubric of a copyright claim. It is ironic that the same doctrine of copyright and authorship that is used to protect the rights of a single author over his or her work is used in the same way to protect the rights of a large corporation employing thousands of coders to prepare software. The question of databases, for example, is an area of contention in copyright law. The argument against allowing copyright to cover databases is that originality requires proving a de minimis standard of originality and that in order to fall under the protection of copyright law, it must be shown that there was a modicum of originality combined with investment and labour. Databases, however, are contended to be mere collections of facts and as such unworthy of being treated as original works of authorship.[20]

Finally, and most troubling, has been the expansion of the scope of copyright. Initially, copyright was primarily concerned with a single right - the right to reproduce or the right to make copies. However, the emergence of new technologies and media has extended the life of the cultural commodity. For instance, a Spider-Man film is as much about the ability to control the franchising of the associated merchandise, such as video games and T-shirts, as it is about the film itself. In cultural terms, it also becomes an endless commodity of signification. For instance, the ubiquitous Barbie doll globalises itself as the African Barbie, the Chinese Barbie and the samosa-eating Indian Barbie, while it simultaneously becomes the basis for cultural appropriation and social commentary in the form of the anorexic Barbie, a commentary on sexuality politics in the form of the lesbian Barbie, and so on. This expansion often borders on allowing copyright to act as a mechanism of censorship rather than merely as a tool for the protection of authors or creators. For instance, Alice Randall, an African-American author who rewrote *Gone with the Wind* from the perspective of Scarlet O'Hara's Mulatto half sister[21], was sued for copyright infringement and an injunction was granted against the publication of the work.[22] However, the US Court of Appeals overturned the lower court's

---

[20] Feist Publications Inc. v. Rural Telephone Service Company Inc., 499 U.S. 340 (1991).

[21] ALICE RANDALL, THE WIND DONE GONE (2001).

[22] Suntrust Bank v. Houghton Mifflin Co., 136 F. Supp.2d 1357 (N.D. Ga., 2001), *vacated*, 268 F.3d 1257 (11th Cir. 2001). *See also* Yochai Benkler, *Through the Looking Glass: Alice and the Constitutional Foundations of the Public Domain*, 66 LAW & CONTEMP. PROBS. 173, 173 (2003).

injunction order.[23] The international scale of copyright law also makes this into a problem of considerable global dimensions as far as cultural production is concerned.

The monopoly of large media corporations has already been well documented.[24] In this highly unequal world of media control and ownership, copyright has also become a tool to discipline unruly media players in the non-Western world.

The Indian film industry, commonly referred to as Bollywood, has been known to a certain extent for its creative adaptation of Hollywood hits. Some of these are done with almost religious rigour, ensuring that the copy is as close to the original as possible, and yet, in every such instance, the text must necessarily be rendered intelligible to the Indian audience. This is a subject that has undergone serious ethnographic analysis in terms of what makes a 'cultural copy' - for instance, what are the conditions that are taken into mind while translating a *Seven Brides for Seven Brothers* into a *Satte Pe Satta*?[25] Very often, there have been Indian versions of Hollywood films that have been far better than the originals, such as *Masoom*, a remake of *Man, Woman and Child*. In 2003, however, upon learning that her novel *A Woman of Substance* was being made into a TV serial entitled *Karishma*: *A Miracle of Destiny,* Barbara Taylor Bradford, the grand old lady of pulp, flew into India and promptly filed an injunction suit in an attempt to prevent it from being broadcast. However, copyright law does not protect ideas but the expression of those ideas, and therefore Bradford's suit was curious because the idea behind *A Woman of Substance*, the story of a woman going from rags to riches, would not be covered by copyright law.[26] What Bradford and others like her fail to realise is that adaptations and copying are central to the process of cultural production. A quick survey of Hollywood's own history will reveal the number of 'inspired' films made in the United States of America itself.

---

[23] Suntrust Bank v. Houghton Mifflin Co., 268 F.3d 1257 (11th Cir. 2001).

[24] *See, e.g.*, Edward S. Herman & Robert W. McChesney, The Global Media: The New Missionaries Of Corporate Capitalism (1998).

[25] *See, e.g.*, Veena Das, *The Small Community of Love,* 525 Seminar 56 (2003).

[26] Barbara Taylor Bradford v. Sahara Media Entertainment Ltd, MANU/SC/0420/2003.

This trend of using a property argument to engage in what effectively amounts to censorship is not restricted to copyright alone; it is even more prominent in trademark law. The intersection of these various intellectual property laws certainly merits further attention in the context of the way in which concepts jump from one field to another. One of the areas of enquiry, for instance, has been the ease with which judges have adapted the idea of authorship from copyright and applied them in cases of trademark and even in patents.[27] For instance, the question of authorship of trademarks is often discussed.

One instance of cultural appropriation being prevented by the use of copyright/trademark claims occurred when San Francisco Arts & Athletics, Inc., a non-profit California corporation, wanted to hold a Gay Olympics as a recreational alternative for gay men and women and also as a political statement about the status of homosexuals in society, given that there had been a number of other similar uses of the Olympic metaphor, such as the Special Olympics and the Teen Olympics. However, the Supreme Court upheld the right of the United States Olympic Committee (USOC) to deny permission to the corporation to use the word 'Olympic' to describe and promote the gay athletic events in *San Francisco Arts & Athletics, Inc*. v. *United States Olympic Committee*[28] (the event was finally called the Gay Games).

In another such case, a card bearing a picture of John Wayne, wearing a cowboy hat and bright red lipstick, with the caption "It's such a bitch being butch", was objected to by his children, among others, not only on the ground that its sellers were making money from The Duke's image that should go to his family, but also that the card was 'tasteless' and demeaned his hard-earned conservative macho image.[29]

---

[27] *See generally* James Boyle, *A Theory of Law and Information: Copyright, Spleens, Blackmail, and Insider Trading*, 80 CAL. L. REV. 1415 (1992); Keith Aoki, *Authors, Inventors, and Trademark Owners: Private Intellectual Property & the Public Domain Part I*, 18 COLUM-VLA J. L. & ARTS 1 (1993).

[28] 483 U.S. 522 (1987).

[29] Michael Madow, P*rivate Ownership of Public Image: Popular Culture and Publicity Rights*, 81 CAL. L. REV. 125, 144 (1993). For a further exploration of the value of the celebrity persona in the context of other icons, such as James Dean and Madonna, *see* Rosemary Coombe, *Author/izing the Celebrity: Publicity Rights, Postmodern Politics, and Unauthorized Genders*, 10 CARDOZO ARTS & ENT. L. J. 365 (1992).

Similarly, in *White* v. *Samsung Electronics America*,[30] Vanna White, who played a robot in the TV show *The Wheel of Fortune*, successfully prevented a spoof of her in a futuristic ad by Samsung, in which a woman dressed as a robot was shown turning into a wheel. In his dissenting judgement, Judge Alex Kozinski stated:[31]

> *Clint Eastwood doesn't want the tabloids to write about him. Rudolf Valentino's heirs want to control his film biography. The Girl Scouts don't want their image soiled by association with certain activities. George Lucas wants to keep Strategic Defense Initiative fans from calling it 'Star Wars'. PepsiCo doesn't want singers to use the word 'Pepsi' in their songs. Guy Lombardo wants an exclusive property right to ads that show big bands playing on New Year's Eve. Uri Geller thinks he should be paid for ads showing psychics bending metal through telekinesis. Paul Prudhomme, that household name, thinks the same about ads featuring corpulent bearded chefs. And scads of copyright holders see purple when their creations are made fun of. Something very dangerous is going on here.*

In present times, where do we even begin to draw the line between culture and property, where, from the time that we wake up to the time that we go to sleep, we are engaging with media forms and property of all kinds, ranging from advertisements, music and films to software and mobile phones? In the words of Michel de Certeau: "Everyday life invents itself by poaching in countless ways on the property of others."[32] Take, for instance, the cultural media commodity classically referred to as a film text. Bhrigupati Singh, for instance, provocatively argues that the object which until recently could be referred to as cinema may not quite exist any longer, as it has changed completely in its shape, form and mode of dispersal. Taking the case of *Kabhi Khushi Kabhi Gham* (Sometimes Happiness, Sometimes Sadness), the 2002 Bollywood blockbuster (otherwise referred to as K3G), Singh says that the star of the film, Shah Rukh Khan,

> *flows uninterrupted and simultaneous into a Pepsi ad on Star Plus* [an Indian television channel], *a rerun of* Baazigar [Gambler] *on Sony*

---

[30] 989 F.2d 1512 (1993).

[31] *Id*. at 1512-1513 (Kozinski, O'Scannlain and Kleinfeld, JJ., dissenting).

[32] Michel de Certeau, The Practice of Everyday Life xi (Steven Rendall trans., 1984).

> *TV, into an Ericsson ad in* The Times of India*, only to reappear on the upper left corner of the MSN Hotmail India screensaver. Amitabh Bachchan plays an ageing corporate scion… and benevolently distributes money and a few minutes of fame to the Indian middle class on* Kaun Banega Crorepati [the Indian version of *Who Wants to be a Millionaire?*]. *K3G the film itself appears in only a fraction of the cinema halls in any of the big Indian cities on the day of its release, simultaneously screened with a shaky and uncertain print on TV by various cablewallahs, flooding various electronic bazaars soon after as an easily copied VCD, its songs long-since* [sic] *released (and 'pirated') on CD and cassette*.[33]

The core copyright industries are serious business: the top three exports of the US, for instance, are movies, music and software, amounting to $88.97 billion in terms of exports in 2001, far ahead of industries such as the chemical and automobile industries.[34] It is only within this context of the global political economy of the media industry that we can even begin to understand the ramifications of licensing in copyright law. The contemporary media empire, as we have seen, is an empire of convergence and of cross-holdings and the classical distinctions of media just do not apply any longer. For example, the same corporation could own a publishing house, a newspaper, a television company and a film production house and the newspaper could review a book published by the publishing house, which could then be made into a television mini-series by the television company or into a film by the film production house.[35] Control over derivative rights through licensing becomes crucial to

---

[33] Bhrigupati Singh, *The Problem*, 525 SEMINAR 12, 12 (2003).

[34] Press Release, Motion Picture Association of America, Study Shows Copyright Industries as Largest Contributor to the U.S. Economy (Apr. 22, 2002), *available at* http://www.mpaa.org/copyright/2002_04_22.htm (last visited Oct. 6, 2005). *See also* JOHN HOWKINS, THE CREATIVE ECONOMY: HOW PEOPLE MAKE MONEY FROM IDEAS 116 (2002).

[35] For instance, News Corporation owns 175 newspapers, 20th Century Fox and the Fox Broadcasting Network, which includes Fox News and twenty-two television stations covering 45% of American households. It also owns twenty-five magazines, HarperCollins and Star TV in Asia. *See* News Corporation, *Newspapers*, *at* http://www.newscorp.com/operations/newspapers.html (last visited Oct. 5, 2005); News Corporation, *Television*, *at* http://www.newscorp.com/operations/television.html (last visited Oct. 5, 2005); News Corporation, *Magazines and Inserts*, *at* http://www.newscorp.com/operations/magazines.html (last visited Oct. 5, 2005); News Corporation, *Books*, *at* http://www.newscorp.com/operations/books.html (last visited Oct. 5, 2005).

the conception of global media empires as the disaggregated media commodity, which can be controlled through time and space, is critical to the maintenance of such empires.

What do I mean by a 'disaggregated media commodity' and how does it relate centrally to the use of copyright to control time and space? Let's take the example of *The Matrix* as a media commodity. *The Matrix* began its life in the form of a theatrical release (sometimes preceded by audio release, as in India), with the first release in the 'advanced markets', primarily the United States and Europe. It was then released in the Asia-Pacific region and then moved onto the rest of Asia, Latin America and finally to Africa. The commodity was thus disaggregated in spatial terms, allowing for a maximising of the returns on revenue from various geographical areas. The next avatar of the Matrix was in the form of the soundtrack of the film, which underwent a similar geographical release but was also released in simultaneous media forms: the cassette, the CD, the music video, the mp3, the music DVD. The film was then released for home consumption via DVD, VCD, VHS, and this created sale rights and rental rights, also broken down into various geographical regions. Then there were the broadcast rights, in the form of satellite television, cable television and pay-per-view. After that came the various adaptation rights, from translation to derivative works (in the form of the cartoon film *Animatrix*), a cartoon series, the video game *Enter the Matrix*, comic books, novelisation, toys etc. There were also the various merchandising tie-ups that take place whenever a film is released (in this case with Ericsson phones).

What is essential for a strategy for this disaggregated media commodity to work is the ability to control the various rights that are embodied in a media commodity such as *The Matrix*. This happens through distribution strategies that use copyright licensing to ensure that the owner of the media commodity determines the exact timing of the release of each component of the media commodity. One strategy that distributors use, for instance, is the appropriately-titled 'windowing' strategy, which allows for the creation of ancillary markets, extending the markets, maximising the returns on the commodity, and maximising consumption and revenue.

C. The Emergence of a Licensing Framework

The power of a licence as a tool of the copyright industries lies not only in its ability to control the media commodity but, more importantly, in terms

of the cultural ramifications of the licence itself. As a result, it becomes increasingly difficult to distinguish the product from the licence, which is particularly true of the world of software and new media. In the history of copyright law, the concern was initially with the ability to copy - what one did with the copy was not a matter of copyright law. Thus, if I bought a book, I was free to tear the book, to quote it, to critique it, to lend it to a friend to sell it at a much cheaper price to a second-hand bookshop, where it would in turn be sold to another buyer, and so on. This was determined by the doctrine of exhaustion or the doctrine of first sale. However, in the case of media commodities, the doctrine of first sale never really comes into play, because a media commodity is never sold, at least not in the classical sense of the word, but is instead always licensed out under terms and conditions determined by the owner of the copyright. A licence is a limited transfer of rights to use information on stated terms and conditions. This can be contrasted with the dominant paradigm of the manufacturing age, the sale of copies. Sales involved a complete transfer of ownership rights in particular copies from the vendor to the purchaser, following which the purchaser could largely do with his or her copies whatever he or she wished. If you own a copy of a copyrighted work, you can sell or give it away to friends. However, you can generally redistribute a licensed copy only if you have specially contracted for the right to do this.[36]

Initially, software was never seen as a product that was sold to the customer and, more often than not, since the main business was really in the mainframes, it came free with the computer. However, with the decrease in the price of computers and hardware and the emergence of a mass market for computers by the 1980s, the time was ripe for software to become a valuable form of intellectual property that would not be sold, but licensed under stringent terms and conditions. In the words of Microsoft's licensing officials, the licence *is* the product.[37] Therefore, although what you get is what you pay for, what you get is a licence with highly restrictive terms, any breach of which terminates your rights under the licence and transforms you from being a licensee to being an outlaw. As Pamela Samuelson puts it, "If information ever wanted to

---

[36] *See* 17 U.S.C. § 106(3).

[37] Robert W. Gomulkiewicz, *The License is the Product: Comments on the Promise of Article 2B for Software and Information Licensing*, 13 BERK. TECH. L.J. 891, 891 (1998).

be free, it must have changed its mind because under [US law], information seems intent on being licensed."[38]

Licences are, in fact, the invisible norms of cyberspace. Just as we encounter legality on a day to day basis, from the rules of which side of the road that one drives on to the buying of tickets on a train or a bus ride, there are licensing norms that govern our travel and explorations in cyberspace. We often take these rules for granted, in the same way that we may not necessarily obey a green light/red light rule while walking across a road, but the analogy becomes a little scary if we were to think of the real space that we inhabit as being only populated by signs which are prohibitory, ("Do not pluck flowers, in fact do not even smell them, and if you do smell them remember to leave behind your royalty payment, and do not even think of taking a photograph as the rights are already owned by the FlowerPics Corporation.") While this may seem a little exaggerated, it would be useful for you to have a look at the terms and conditions that are imposed on your usage of the website the next time you visit a website or even check your e-mail account.[39]

The Microsoft End-User License Agreement (EULA) merits examination in this context, as most EULAs resemble the Microsoft EULA, since it is the market leader in software. A comparison of the Microsoft EULA with the GNU General Public License (GPL) seems to indicate that they differ greatly

---

[38] Samuelson, *supra* note 14.

[39] For instance, the terms and conditions on the Walt Disney Internet Group site read:

> *If, through participation in certain activities, you send any material (e.g., postings to chat, boards, or contests) or, despite our request, you send us unsolicited creative suggestions, ideas, notes, drawings, concepts, or other information (collectively, the "Submissions"), the Submissions shall be deemed, and shall remain, our property. None of the Submissions shall be subject to any obligation of confidentiality on our part and we shall not be liable for any use or disclosure of any Submissions. Without limitation of the foregoing, we shall exclusively own all now-known or hereafter existing rights to the Submissions of every kind and nature throughout the universe and shall be entitled to unrestricted use of the Submissions for any purpose whatsoever, commercial or otherwise, without compensation to the provider of the Submissions or any other person or entity.*

Walt Disney Internet Group, *Terms of Use, at* http://disney.go.com/corporate/legal/terms.html (last visited Oct. 10, 2005). These conditions, however, go far beyond the basic minimum required to defeat a claim for misappropriation or implied promise to pay for the poster's ideas. Michael J. Madison, *Legal-ware: Contract and Copyright in the Digital Age*, 67 FORDHAM L. REV. 1025, 1072 n.164 (December 1998).

in whom they intend to protect. The Microsoft EULA appears to protect Microsoft and limit the ability of the end users to take actions and make choices. In contrast, the GPL seems to be designed primarily in order to apportion rights to the end-users and then protect the software's originating developers with regard to continuing to make the source code available in perpetuity.[40]

One of the most amusing spoofs of most EULAs or click-wrap/shrink-wrap licences is the Illegal Art EULA.[41] What is alarming is that it probably is very close to the truth if you were to translate the legal impact of most EULAs. The licence reads as follows:

> *ELECTRONIC END USER LICENSE AGREEMENT FOR VIEWING ILLEGAL ART EXHIBIT WEBSITE AND FOR USE OF LUMBER AND/OR PET OWNERSHIP*
>
> *NOTICE TO USER: BY METABOLIZING YOU ACCEPT ALL THE TERMS AND CONDITIONS OF THIS AGREEMENT INCLUDING, BUT NOT LIMITED TO, USE OF YOUR HOME AND CAR BY THE AUTHORS OF THIS AGREEMENT*
>
> ...
>
> *1.2 You may make and distribute unlimited copies of the Website, including copies for commercial distribution, as long as each copy that you make and distribute contains this Agreement and is created in one of the following media: carved out of ice, as in an ice sculpture centrepiece; smeared in mustard on the side of a white or off-white panel van; or taught to a parrot who is then condemned to fly the earth for eternity, incessantly repeating the mantra of this Website.*
>
> ...
>
> *The Website is also protected by United States Copyright Law and a group of big, scary goons who will happily beat you until you're ejecting teeth like a winning slot machine.*

---

[40] Con Zymaris, *A Comparison of the GPL and the Microsoft EULA, at* http://voidmain.is-a-geek.net/docs/comparing_the_gpl_to_eula.html (last visited Oct. 10, 2005).

[41] Jason Torchinsky, *Electronic End User License Agreement for Viewing Illegal Art Exhibit Website and for Use of Lumber and/or Pet Ownership, at* http://www.illegal-art.org/contract.html (last visited Oct. 10, 2005).

However, as I have stated before, it is not the fact that the licences themselves are becoming more and more restrictive that alarms me. What is perhaps more disturbing is that the licence as a model of regulating knowledge circulation is becoming a norm that pervades not merely a set of products, such as media commodities, but even older forms that have started taking on the characteristics of a licence. Thus, even the idea of a book is slowly coming closer to being in the form of a licence, rather than a commodity that is sold and exchanged. This is a major conceptual shift - it does not merely entail a change of strategy of distribution or commercial exploitation but fundamentally alters the very idea of what we have so far taken for granted in terms of ways in which we perceive distribution of knowledge and culture. Books and other printed works, the most traditional of copyrighted works, are increasingly accompanied by copyright notices that not only state the identity of the copyright owner but also purport to restrict unauthorised reuse of the copyrighted material. For instance, a recent licence accompanying a legal textbook says "No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the publisher."[42] Similar restrictions are likely to become increasingly common and prominent in the case of musical and pre-recorded visual recordings, which, like books, have traditionally been distributed publicly through sales rather than licences.[43]

This leads onto the next point, which is the fact that we can understand when books start becoming software or code in a technological sense, such as the creation of new forms of delivery of books, one instance of which is e-books. However, this shift has not just been a technological one; it is also cultural and conceptual. For instance, the Adobe eBook Reader (now replaced by the new Adobe Reader) was designed to deliver electronic forms of books to readers/subscribers. All the eBooks come with elaborate instructions of what you may or may not do with them. Most of these instructions or permissions deal with the nature of rights that may or may not be granted with respect to the e-book, such as the number of pages that you can print in a day, whether

---

[42] ROBERT P. MERGES ET AL., INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE iv (1997).

[43] *Supra* note 39, *at* 1065 - 1067.

the book can be read aloud on the computer and whether you can copy and paste from the text of the book. We could even imagine the ability to have these controls in the case of works that are not in the public domain, but when these controls start working for works that are in the public domain as well, there is something wrong. According to Lessig,

> *This is the future of copyright law: not so much copyright law as copyright code. The controls over access to content will not be controls that are ratified by courts; the controls over access to content will be controls that are coded by programmers. And, whereas the controls that are built into the law are always to be checked by a judge, the controls that are built into the technology have no similar built-in check.*[44]

Lessig narrates a rather humorous story that involved a publicity debacle for Adobe in the early days of its e-book business:

> *Among the books that you could download for free on the Adobe site was a copy of* Alice's Adventures in Wonderland. *This wonderful book is in the public domain. Yet when you clicked on Permissions for that book, you got the following report:*
>
> *Copy*
>
> *No text selections can be copied from this book to the clipboard.*
>
> *Print*
>
> *No printing is permitted on this book.*
>
> *Lend*
>
> *This book cannot be lent or given to someone else.*
>
> *Give*
>
> *This book cannot be given to someone else.*
>
> *Read Aloud*
>
> *This book cannot be read aloud.*[45]

Here was a public domain children's book that you were not allowed to copy, not allowed to lend, not allowed to give, and, as the "permissions"

---

[44] LAWRENCE LESSIG, FREE CULTURE 152 (2004).

[45] *Id.* at 153.

indicated, not allowed to "read aloud"! The public relations nightmare attached to that final permission. For the text did not say that you were not permitted to use the Read Aloud button; it said you did not have the permission to read the book aloud. That led some people to think that Adobe was restricting the right of parents, for example, to read the book to their children, which seemed, to say the least, absurd. Adobe responded quickly that it was absurd to think that it was trying to restrict the right to read a book aloud. Obviously it was only restricting the ability to use the Read Aloud button to have the book read aloud. But the question Adobe never did answer is this: Would Adobe thus agree that a consumer was free to use software to hack around the restrictions built into the eBook Reader? If a company developed a program to disable the technological protection built into an Adobe eBook so that a blind person, say, could use a computer to read the book aloud, would Adobe agree that such a use of an eBook Reader was fair? Adobe didn't answer because the answer, however absurd it might seem, is no.

The technological and conceptual move of transforming the idea of a book into code is the best illustration of what Peter Jaszi has called the movement of regulating copyright, not through law, but through para-copyright and meta-copyright.[46] This is the increasing regulation of copyright through contract and through technology, which can even overcome the internal restrictions and limitations that a legal system can impose, such as the fair use doctrine. In the Indian context, for instance, it is appalling that the State has not made available even basic legal information in the form of statutes and legal decisions, while private content providers provide what is essentially public domain information at ridiculously high prices. There is also an increasing trend of moving beyond classical issues of enforcement into the realm of copyright education. The World Intellectual Property Organisation (WIPO), for instance, contends that the battle of copyright is going to be a battle for souls, as more and more young people grow up with a very different ethos of access, being primarily an Internet generation. Therefore, the focus is now shifting to copyright education, where children are bring taught concepts such as the values of copyright and intellectual property.[47] Two illustrations of

---

[46] *Id.*

[47] World Intellectual Property Organization, *At Home with Invention: Intellectual Property in Everyday Life, at* http://www.wipo.int/about-ip/en/athome.htm (last visited Oct. 2, 2005).

this are the Cyberbee copyright instructor for children[48] and Ippy, the intellectual property cartoon,[49] which teaches children to protect their works of authorship such as drawings that they make in school and poems that they write ("Maybe you have invented a new toy or game, written a story or song, or figured out a new way of doing something…") and then offers advice on how children can protect their creations.

In the context of this increasingly chaotic world of copyright, the FLOSS movement emerges as a significant challenge and we begin to appreciate the legal innovation of the GNU GPL. The greatest danger that we face is not so much the fact that corporations are colonising the entire language of creativity and production, but that there is a great possibility that this language is actually being internalised - what Marx would term not merely the formal but also the substantive submission to the mythology of copyright. An example of this is the essay contest conducted by WIPO called "What Does Intellectual Property Mean to Me in My Everyday Life?"[50] The FLOSS movement and the open-content movement that it has inspired are thus very important symbolic resources that we can avail of to counter the self-perpetuating myth of copyright.

III. THE LEGAL INNOVATION OF THE GNU GPL AND THE FLOSS MOVEMENT

One aspect of the history of free software that merits particular attention is the legal innovation on which the free software movement is based. Initially, software was treated as a service and viewed simply as the labour component of a computer sales transaction. Purchasers would buy the computer and the computer company would program it for them. Computer engineers commonly gave away software because it was the hardware that brought in the money. At first, there was very little software available and "researchers typically

---

[48] Linda Joseph, Linda Resch & Leni Donlan, *Copyright with Cyberbee, at* http://www.cyberbee.com/cb_copyright.swf (last visited Oct. 2, 2005).

[49] IP Australia, *Ippy's Big Idea, at* http://www.innovated.gov.au/Ippy/html/p01.asp (last visited Oct. 2, 2005).

[50] World Intellectual Property Organization, *WIPO International Essay Competition: Rules of Procedure, at* http://www.wipo.int/about-ip/en/world_ip/2002/essay_rules.htm#P23_483 (last visited Oct. 5, 2005).

swapped programs, embellishing one another's work without much attention to taking credit or nailing down commercial rights."[51] In the late 1960s and 1970s, developers who were writing specialised software for particular clients wanted to protect their works and 'licensed' their software to customers while retaining ownership of the software. The licensing concept, derived from property law, basically grants permission to enter or use another's property. The use of property law would stem from the fact that intellectual property has economic value. Software was still in its infancy and it was on the US Copyright Act's list of copyrightable items.[52] As it became more widely available, software became increasingly property-like. Eventually, in 1976, after much deliberation, the US Congress applied copyright law to software in the new Copyright Act, thereby strengthening the enforceability of the licences.[53]

Richard Stallman, a programmer at MIT, encountered problems with copyrighted code when he tried to write the drivers for a printer function and realised that he did not have access to the code. He decided to write an operating system that would be licensed and developed on very different principles - the GNU - and thus the free software movement was born. The movement created the GNU GPL, a licence model that is highly popular across the world, which in turn has become inspiration for similar licensing models beyond the world of software.

The GNU GPL is a licence that that is designed to grant you certain fundamental freedoms. These are:

- Users should be allowed to run the software for any purpose.
- Users should be able to closely examine and study the software and should be able to freely modify and improve it to fill their needs better.

---

[51] H.G. Pascal Zachary, *Free for All: Richard Stallman Is Consumed by the Fight to End Copyrighting of Software*, WALL ST. J., May 20, 1991, at R23.

[52] *See* 17 U.S.C.A. § 107.

[53] *See generally* Robert W. Gomulkiewicz, *How Copyleft Uses License Rights to Succeed in the Open Source Software Revolution and the Implications for Article 2B*, 36 HOUS. L. REV., 193 (1999); Dennis S. Karjala, *Federal Preemption of Shrinkwrap and On-Line Licenses*, 22 U. DAYTON L. REV. 511 (1997); Mark A. Lemley, B*eyond Preemption: The Law and Policy of Intellectual Property Licensing*, 87 CAL. L. REV. 111 (1999); Joanne Benoit Nakos, *An Analysis of the Effect of New Technology on the Rights Conveyed by Copyright License Agreements*, 25 CUMB. L. REV 433 (1994-1995).

- Users should be able to give copies of the software to other people to whom the software will be useful.
- Users should be able to improve the software and freely distribute their improvements to the broader public so that they all benefit as a whole.

Therefore, the free software model differs drastically from the traditional principles of licensing, followed by the 'closed-source' or proprietary software model. However, the GNU GPL model is based on an innovative use rather than an abandonment of copyright, as the FLOSS model is predicated on ensuring that the fundamental freedoms are not taken away or removed from the public domain and therefore a condition to this effect is attached to the use of free software. Thus any person who uses free software to create a derivative work or an adaptation of the software must ensure that this software is also licensed on the same terms and conditions, i.e. under the GNU GPL. If the author of a piece of free software decided to relinquish his copyright, it would mean that someone could use his code, create a derivative work and then license it as a proprietary piece of code, thereby preventing others from making use of the software in a free manner.[54]

Another fundamental shift introduced by the GNU GPL was that it was the first licence that actually sought to grant positive rights instead of restricting rights, thereby reshaping the possibilities within copyright law itself. If the legislative intention behind copyright was to ensure that there was greater access to information and knowledge,[55] then clearly these goals had been waylaid long ago by the increasing commodification of culture through copyright.[56]

---

[54] The word 'free' can sometimes be confusing as it often refers to the pricing issue, but the word 'free' as used in free software refers not to pricing but to freedom, as in liberty. Thus, you can charge for free software (for instance Red Hat, one of the distributors of GNU Linux), or you can have software which is available free of cost but does not grant you any freedoms (such as Internet Explorer).

[55] For example, the Statute of Anne, the first copyright legislation, was prefaced: "An act for the encouragement of learning, by vesting the copies of printed books in the authors or purchasers of such copies, during the times therein mentioned."

[56] RONALD BETTIG, COPYRIGHTING CULTURE 35 (1996).

While there have been doubts raised about the legal validity of the GNU GPL, any answer at the moment can only be speculative. Even if a court of law were to find the GNU GPL to be legally invalid, it would have to do so on a technical point and would not be able to detract from what the GNU GPL has come to signify. I am therefore more interested in pursuing the worlds that the GPL and the free software model in general have opened up, as well as the conceptual challenges that it poses to the fundamental assumptions of copyright law.

IV. CONCEPTUAL CHALLENGES POSED TO COPYRIGHT BY THE FREE SOFTWARE MOVEMENT

The pillars of copyright have historically been, and still are, authorship, originality and incentive. Following from this, the question that is put to us is: how can we reconcile the open model of production, first in software and, as it progresses, in cultural production, with these pillars? A significant movement in copyright theory began with a conference organised by Peter Jaszi and Martha Woodmansee,[57] in which an attempt was made to bring in literary theorists to speak to copyright lawyers about the implication of developments in literary theory, especially in the context of the works of post-structural thinkers such as Roland Barthes and Michel Foucault, on classical doctrines of copyright such as authorship and originality.[58] The outcome has been dedicated

---

[57] This movement has significantly influenced copyright theory and a number of scholars have now used literary theory to interrogate the terms of copyright. *See, e.g.*, JAMES BOYLE, SHAMANS, SOFTWARE AND SPLEENS: LAW AND THE CONSTRUCTION OF THE INFORMATION SOCIETY (1996); MARK ROSE, AUTHORS AND OWNERS: THE INVENTION OF COPYRIGHT (1993); MARTHA WOODMANSEE, THE AUTHOR, ART, AND THE MARKET: REREADING THE HISTORY OF AESTHETICS (1994); THE CONSTRUCTION OF AUTHORSHIP: TEXTUAL APPROPRIATION IN LAW AND LITERATURE (Martha Woodmansee & Peter Jaszi eds., 1994); Rosemary J. Coombe, *Objects of Property and Subjects of Politics: Intellectual Property Laws and Democratic Dialogue*, 69 TEX. L. REV. 1853 (1991); Jane C. Ginsburg, *A Tale of Two Copyrights: Literary Property in Revolutionary France and America*, 64 TUL. L. REV. 991 (1990); Mark Rose, *The Author as Proprietor:* Donaldson *v.* Becket *and the Genealogy of Modern Authorship*, 23 REPRESENTATIONS 51 (1988); Woodmansee, *supra* note 11.

[58] ROLAND BARTHES, THE DEATH OF THE AUTHOR 1968; ROLAND BARTHES, IMAGE-MUSIC-TEXT 142-8 (Stephen Heath trans., 1977); Michel Foucault, *What is an Author?* (Donald F. Bouchard & Sherry Simon trans.), *in* LANGUAGE, COUNTER-MEMORY, PRACTICE: SELECTED ESSAYS AND INTERVIEWS 124-127 (Donald F. Bouchard ed., 1977).

scholarship, which over the past ten years has eroded the idea of the romantic genius author, especially in terms of the way the idea of the author has influenced much of copyright theory and decisions in copyright cases.

The post-structural critique of authorship and the FLOSS/copyleft movement draws attention to the need for a re-examination of some of the fundamental doctrines of copyright in light of the developments in modes of cultural creation and production and the crisis that copyright law is facing.[59] This crisis is in part a question of the control of media in the increasingly unequal world of globalisation and it has been highlighted by artists' efforts to break away from the framework that was supposed to protect their rights. An example of these efforts is the Free Art License that was initiated by artists themselves and posits itself as a licence with a copyleft attitude.[60]

It is surprising that one rarely finds any mention of the author, that sacred cow of copyright, in the entire discussion of the alternative offered by copyleft. This absence in free art contracts unfortunately conceals the importance of the author in the philosophical model of copyleft. From open source to art, a radically new view of creation has been mapped out which has shifted and reconfigured the roles of the work and the user, as well as that of the author. This is not very different from the notions of post-structuralism and postmodern literary critique that have deconstructed the concepts of 'work' and 'author'.

Barthes questioned the centrality of the author as the only means through which the meaning of the text could be organised and identified it as emerging

---

[59] Severine Dusollier, *Open Source and Copyleft: Authorship Reconsidered?*, 26 COLUM. J. L. & ARTS 281 (2003).

[60] In the words of Severine Dusollier, who deals with the post-structural critique:

> *Thus, the Free Art License developed in France by artists and theoreticians encourages authors to protect their work using a model that includes exchange, freedom of reproduction, and even appropriation. The name given to this new paradigm of creation is copyleft. The play on words highlights the opposition between copyright and copyleft, where right refers to the law while left refers to the relinquishing of any law. The term deftly signals that notions of copyleft are potentially antithetical to the current dominant model of copyright. Prior to its extension to artistic practices, the copyleft movement took root in the field of computer programming, proclaiming freedom of access to the source code of the software and emphasizing the need for collective and distributive creation. This "open source" model, born out of the 1980's, served as a touchstone for supporters favouring the extension of copyleft to other forms of creation.*

Dusollier, *supra* note 59, at 282.

from theological presumptions of the 'Author-God'. According him, the social task of generating meaning was assigned a meagre role and very little credit was given to it since the dominant understanding was that the work contained the message of the Author-God. He proposed the idea of moving away from this centrality of the work to the idea of a text. To him, a text is necessarily decentralised, unenclosed and plural such that

> *a text consists not of a line of words releasing a single 'theological' meaning (the 'message' of the Author-God), but of a multi-dimensional space in which are married and contested several writings, none of which is original: the text is a tissue of quotations drawn from the innumerable centres of culture*.[61]

The text also abolishes the sharp divide in the author-reader binary and starts becoming something that is shared by the author and the reader. This new conception of the text envisages an active role for the reader to engage as a collaborator. This is a significant shift for copyright - while it has also been premised on the centrality of the author's investment in a work, it has always ignored the social process of authorship and cannot conceive of the reader except as a passive consumer of the work. This new model creates the idea of a user/producer. The simultaneousness of being both a user *and* a producer is especially critical in the case of texts such as software, where one cannot remain merely a passive user. This implication of the user in the process of creation is clearly recognised in the founding principles of both the free software and free art movements.

If one extends this to the realm of computer programming, the process of exchange and collaboration can be said to destroy the unit of software as a finished and closed work, as they are no longer units of closed language in the form of closed source code, but rather containing multiple evolving components and thereby forming a complete discussion in themselves.[62] Barthes's aesthetic

---

[61] BARTHES, *supra note* 58, at 142-8.

[62] Dusollier explains this in the context of software as follows:

> *It is not surprising in this respect that the creative model of open source was developed, crystallized, and theorized around software and digital technology. This is in part because software, in the end, is merely text, and, in addition, is considered by copyright law as a literary work. It is also in part because the environment of information and communication networks, particularly appropriate for hypertext, realizes Barthes' reflections according to which "the metaphor of the Text is that of the network," as opposed to the metaphor of the*

model in which "the Text is tested only in an activity, a production" is also suggested by the learning of a common language that is entailed by this process.[63]

The idea of granting freedoms and rights to the user in a free software scenario is based on a movement from restriction to freedom and also radically reconfigures the idea of the user, making the user an important contributor in the eventual evolution of the work. The free software movement's extraordinary success has been its ability to inspire thousands of software programmers across the world, who constantly share, critique and add to the code, making it a product of collaborative authorship. Digital technology and the Internet accelerate the erosion of the author-user bipolarity on which the traditional structure of copyright is based. The interactivity permitted by digital technology transforms the user from a passive consumer into an active participant. As Dusollier puts it:

> *What Barthes said of the Text could certainly be said of the consumption of software. Software, like Text, exists only if used. In such a paradigm, use is creation… The user-creator must appropriate the work. The intent of the license is to open access and authorize use by the largest number of users possible. Enjoyment of the work is increased by the multiple potential uses and users, stimulating new conditions of creation that amplify the possibilities of (re)-creation…*[64]

However, a central weakness of Dusollier's approach is that she oversimplifies the transition from free software to free art. She assumes that there can be an automatic and uncomplicated extrapolation of the terms of the free software movement, including the principles of the GNU GPL, to the realm of cultural production, without taking into account the specificity

---

> *work which is closer to that of the organism. A certain legal doctrine also conceptualizes software in discourse.*

Dusollier, *supra* note 59, at 290. *See also* Brian F. Fitzgerald, *Seventh Annual Tenzer Lecture 1999: Software as Discourse: The Power of Intellectual Property in Digital Architecture*, 18 CARDOZO ARTS & ENT. L. J. 337, 344-358 (2000).

[63] Roland Barthes, *From Work to Text*, *in* THE RUSTLE OF LANGUAGE 63 (Richard Howard trans., 1986).

[64] Dusollier, *supra* note 59, at 291-293.

of the form of knowledge that software may be embedded in, as opposed to practices that have a very different approach to the ideas of knowledge, authorship and creation. In the next segment of this article, I will discuss what such an extrapolation might imply, to what extent the licensing model can be replicated, what some of the problems that we may run into when we attempt a straightforward mapping of the GNU GPL onto the cultural domain are, and the ways in which we can think of collaborative production and practices beyond the question of licences.

V. TRANSLATING OPEN-SOURCE CONCEPTS INTO THE REALM OF CULTURAL PRODUCTION

Given that the FLOSS movement has attracted considerable media attention and it has emerged as an important alternative to the copyright regime, there is a danger that we may see it as having started a movement of collaborative authorship and production, or discovering a 'new' ethos of production. Nothing could be further from the truth - in reality, creativity and cultural production have historically always collaborated to use and build on existing works. This memory of creativity and production is one that has been dulled by the elaborate story of copyright and its modernist Baudelairean fantasy of stunning originality inspired by genius. The FLOSS movement and the GNU GPL enable us to refresh our memory of cultural production as an endless act of collaboration and to use a new language - that of the licence through which this approach to production can rearticulate itself.

A. 'Rescension'

The great Indian epics, the Ramayana and the Mahabharata, are good examples of texts that cannot be identified as having any single author. While Valmiki and Ved Vyasa are popularly referred to as the authors of the Ramayana and the Mahabharata respectively, it is important to remember that every reference to 'Valmiki's Ramayana' is precisely that, a version that is identified with the contribution of Valmiki. It does not negate the existence of multiple versions of the Ramayana, some of which have very different readings from the primary text. In parts of South India and Sri Lanka, for instance, there exist versions in which Rama is seen as an Aryan invader and coloniser of the Dravidian race, and Ravana is seen as the heroic god. This is a complete

reversal of the roles assigned to them in the popular version of the Ramayana, and yet it exists without having to make a competing claim for veracity.[65] It is perhaps then more useful to think in terms of a 'rescension', rather than an original or a copy. A rescension is a work that is created through a modification, adaptation, addition, or use of an existing work, but each rescension stands in relational autonomy to every other rescension. It is not treated as a replacement of another work even if it modifies its reading. Instead, it has the status of an individual work created through an interactive process with other works.[66]

The first thing that strikes us when we attempt to extrapolate the terms of the FLOSS movement to the domain of cultural production is that it can very easily become a distribution issue alone. However, this would be tragic since distribution is the ability to allow people's works to be accessed without limitations. As discussed earlier, the challenge of the FLOSS model arises from the fact that it creates a scenario where the user-producer model becomes the norm, which allows for the re-articulation of the idea of work as a collaborative process. The idea of collaboration may mean very different things in the case of software and in the case of other forms of creativity. For instance, there may be various forms of collaboration with rules and norms of their own which do not quite fit within the licensing model.

The GNU GPL evolved within the history of a particular practice, where the very idea of the licence as determining the mode of production was critical.

---

[65] PAULA RICHMAN, MANY RAMAYANAS: THE DIVERSITY OF A NARRATIVE TRADITION IN SOUTH ASIA 172 (1991).

[66] The Raqs Media Collective describes a rescension as

> *A re-telling, a word taken to signify the simultaneous existence of different versions of a narrative within oral, and from now onwards, digital cultures. Thus one can speak of a 'southern' or a 'northern' rescension of a myth, or of a 'female' or 'male' rescension of a story, or the possibility (to begin with) of Delhi/Berlin/Tehran 'rescensions' of a digital work. The concept of rescension is contraindicative of the notion of hierarchy. A rescension cannot be an improvement, nor can it connote a diminishing of value. A rescension is that version which does not act as a replacement for any other configuration of its constitutive materials. The existence of multiple rescensions is a guarantor of an idea or a work's ubiquity. This ensures that the constellation of narrative, signs and images that a work embodies is present, and waiting for iteration at more than one site at any given time. Rescensions are portable and are carried within orbiting kernels within a space. Rescensions taken together constitute ensembles that may form an interconnected web of ideas, images and signs.*

Raqs Media Collective, A Concise Lexicon of/for the Digital Commons, at http://www.raqsmediacollective.net/texts4.html (last visited Oct. 6, 2005).

As a response to the dominant model, this licence could, however, speak to or for an alternative experience without too many problems of translation, since it still operated within the domain of software. I am not suggesting that such a translation is not possible from software to other forms of production. However, this translation may not be as neat as expected but this should not be cause for concern. Beyond the question of the licence, there are alternative routes that are grounded in or emerge from the nature of practice itself.

A universal grammar forms the basis of the language(s) of software. Given its grounding in the sciences, it becomes easier for software to become a part of a larger network of labour and production as well as adaptation. This provides software with a certain fluid character. There is also a certain disembodied quality to labour in software - the condition that, for instance, allows for the emergence of new divisions of labour and the 'offshore software development' model. Of course, this quality also allows for a certain amount of ease with which collaborative efforts can take place even in the comfort of relative autonomy. In fact, it could even be contended that sometimes the collaboration is possible precisely because of the relative personal distance between collaborators on a project.

The question of the 'functional' aspect of software is also fundamental to its nature, where the form of knowledge and its functionality are very closely connected. In some ways, if compared to speech, this would perhaps be very close to Austin's idea of the 'speech act'[67] - there is very little that software says which does not also at the same time have a functional value to it. This is not to say that questions of aesthetics do not play a role in software. While their role is important, the beauty of code may be judged by a different set of aesthetic considerations than is usually the case when we think of cultural production.

Finally, software as a set of discursive practices, as a body of knowledge and as a form of organising labour, has not been affected by the aura of the romantic genius creator. Software practitioners have not had to bear the burden of an account of authorship in the manner that the world of the arts and letters has had to.

---

[67] *See* JOHN L. AUSTIN, HOW TO DO THINGS WITH WORDS 4 (J.O. Urmson *et al.* eds., 1975).

I will now try to use an instance of a very different kind of knowledge/practice to look at the question of the form of knowledge in terms of its fluidity or embeddedness. This does not imply that there are no practices in the realm of knowledge or cultural production which do not share this quality of disembodiedness and hence I will not concentrate on the models that have worked, such as literary collaboration, music and film. What is of interest is what happens when the FLOSS model encounters a practice which does not allow itself to be easily detached from its context. A dialogue may begin to take place between code and other forms of knowledge/practice to look at the different qualities of code and different qualities of cultural production to see if there is a fit at all.

B. Choreography and Open-Source Production

Dance is one of the best examples of a practice that demonstrates the embodied nature of knowledge/practice. Scott deLahunta, a choreographer and dance teacher, has been working on the issue of what it would mean to extrapolate the terms of open-source production of software to the realm of choreography.[68] The central questions in his work are those of authorship and originality in choreography - whether or not "choreographic methods are decoded through forms of discourse and could the sharing of these methods constitute a form of Open Source."[69]

Tracing a history of contemporary dance and documentation processes, deLahunta says that prior to the 1960s, documentation of specific choreographic methods for contemporary dance was minimal, and the major shift took place when, in 1958, choreographer and teacher Doris Humphrey, wrote a small book entitled *The Art of Making Dances*. This book, published in 1959 and again in 1987, is widely perceived to be the first book to comprehensively present the art of choreography in a 'how to' manual for dance making, and has become a canonical text for most dance composition courses.

DeLahunta then goes on to describe the collective process of the creation of open-source software:

---

[68] Scott deLahunta, *Open Source Choreography?*, *in* CODE - THE LANGUAGE OF OUR TIME 304 (Christine Schöpf & Gerfried Stocker eds., 2003).

[69] *Id*.

> *It would be difficult to apply this concept of collective creativity as it might relate to choreography. I have suggested that choreographers and writers/ interviewers work together collectively to provide open access through discourse to explanations and explications of choreographic method (a type of intellectual property), but I would not refer to this as a form of collective creativity as the dances that are made are almost always reconfigured as objects of individual choreographic authorship. As such, in fact, copyright law in many countries protects these dances. Neither could one say that 'open access' to discourses about dance making is anything like open access to software code despite some correspondence between choreographic methods and code that can be teased out by looking at the work of choreographers who have at some point in their career made dances based almost entirely on a set of rules or instructions or an 'algorithm' and as such their 'source code' is freely available.*[70]

For instance, in the 1970s, the New York-based choreographer Trisha Brown did two performances based completely on a form of code and actually wrote out an algorithm for two pieces which provided step-by-step instructions on how the dance was to be performed. There are therefore some similarities between the manner in which a dance is notated and the elements of code but according to deLahunta, the distinction lies in the fact that software code is inherently generative as opposed to dance notation, which is used to preserve and restage choreographies after they have been created, not to create them.[71] However, if one is not looking at a rule-based system of choreography (such as dance notations), but instead at the material practices that are informed by a sense of acknowledgement, of collaboration and copying, a very different analysis is required. Through a video demonstration in a presentation made at the Piet Zwart Institute, Rotterdam, deLahunta demonstrated that the history of the body in dance has always been a mimetic one - it learns by watching and incorporates the memory of other bodies, including the way that other bodies fall without hurting themselves, the way that they adapt to assuming new positions.[72] The body combines this new knowledge with what it already knows to create new dance movements, new languages which it begins to speak in, and so on. This is certainly a mode of collaboration - even if the

[70] *Id.* at 306.

[71] *Id.* at 307.

[72] Scott deLahunta, Presentation at the Piet Zwart Institute, Rotterdam, (June 2004).

dance is not created collectively, it is the use of bits of code from here and there to create a new program. How do the terms of the copyright-copyleft debate deal with such a rescension, which is neither an original nor a copy, neither new nor old? What does it mean to extrapolate the terms of the open-source debate to such a domain of practices?

An increasing number of contemporary dancers are experimenting with code by using techniques based on software that enables three-dimensional rendering of a movement or creates layers through which a particular movement may be interpreted.[73] The dance performance may thus often be mixed with other media, the effects of which are sometimes achieved by code. We therefore have a situation where there may be elements in dance that could be mapped onto code, though again not quite establishing a fit. However, there are also certain stubborn practices - the memory of the dancing and the falling body - which do not get disembodied, and in many ways, these seem the most resistant to being captured within a licensing framework. Within the ethic of the choreography, the freedom to perform some person's piece or even incorporate someone's piece may only be a small portion of the story of collaboration. Questions such as whether the software licences preserving free access to source code suggest adaptations to the choreography copyright law arise. This sort of question seriously threatens our comparison. Another question is whether one would need to know how to choreograph to use the source code of a particular dance. This merits the examination of the possibilities of knowledge as something other than property and perhaps a greater understanding of creative processes and the creation of dances using 'source codes'. A dance performance might then be perceived as inseparable from the process and if choreographic processes were better understood, they could be used to produce things other than performance.[74]

Can we then reverse the question of how the terms of the free software movement may be extrapolated to other domains of knowledge and cultural production? Unfortunately, this approach sees the licence as an extension of the disembodied code it arises from. It also sees the licence as being able to travel into other domains where knowledge, practice, performance and creation are so centrally embodied that it finds it difficult to detach the practice from

---

[73] deLahunta, *supra* note 68, at 307-309.

[74] *Id*. at 309.

the form of knowledge distribution in which the practice engages. This gives rise to the question of what the histories of collaboration, learning and sharing that exist in various practices are and what form they take when they encounter the 'ecology of knowledge' problem in the world of intellectual property.

Similar questions would arise, for instance, if we attempt to fit the open-source debate into the domain of 'traditional knowledge'. While choreography is embedded in the mimetic body, in the context of traditional knowledge one may encounter forms of knowing and going about being embodied within a social fabric, brought together in the form of collective memory, myth, stories, songs, secrets, languages, regions and communities.

C. 'Open Production' and Authorship

There are still more challenges posed by the extrapolation of FLOSS principles to the domain of cultural production. The authorial or artistic era, which forms the basis of much of copyright law, emerged from the history of the romantic movement in literature and therefore affects the debates on cultural creativity far more seriously than any other domain of knowledge production. Even where a practitioner recodifies and appropriates, there is still a need to distinguish through the authorial imprint of having created something 'new'. In itself, there may be nothing seriously wrong with this desire, as it often propels the very basis of the creative drive. However, there is a danger that the authorial or artistic aura may make it more difficult for people to participate in a truly collaborative manner. Open-content licences do not erase authorship and, in fact, it could be argued that the elaborate procedures that are often set up in open licences to document and track authorial investments change and resurrect the author in a world of industrial/cultural production (where authorship is reduced to anonymity by virtue of being either 'works done in the course of employment' or 'works for hire' - that great demonstration of the alienation of labour principle). The documentation of authorship, however, does not address the problem of the hangover of the romantic genius author as an ever-ready category that influences much of the ideas of creation and cultural production.

In fact, one area in which this is occurring is that of new media practices, not at the level of new media art, but at the level where the computer is increasingly becoming the primary source of entertainment and experimentation. The user/producer model in software is still in many ways

not the most democratic model through which we can think of the idea of users/producers/collaborators. In most parts of the world, the end user of the operating system has no great desire to modify the code, and the freedoms that are spoken of in the GNU GPL only address a small, albeit important, segment of users who are also coders. In many ways the user/producer model is rendered more democratic when end users are seen not as people who necessarily want to modify the code behind an application but as people who learn how to operate various programs, tinker with them and use them to fine-tune content which may itself be proprietary.

Cheaper digital technologies have converted every computer into a potential low-cost media studio, and it is here that we can be optimistic about a new ethos of work and play that is not based necessarily on romantic gestures of rebellion but whose practices are necessarily infused with a certain ethos of sharing, networked access, and so on. Rephrasing the maxim 'after such knowledge, what laughter?'[75], it could be said of the post-Napster generation, brought up on an ethic of file-sharing, 'after such sharing, what closure?' The world of open content and collaboration is often thought of only in terms of content. However, the idea of openness may actually emerge not merely from the content alone but also from the hardware, the software and the application. This sharing also affects the process of content production.

The world of first-generation copyright conflicts over technologies such as the printing press was part of the tradition of heavy modernity, where the language of technology was highly exclusionary, being attached to the larger ideas of modernity, science and millennial aspirations of transformations and emancipations. The movement into what Bauman has characterised as a 'liquid modernity'[76], or what we may term 'digital modernity', as opposed to analogue, opens up an arena of participation in new ways. Students in Bangalore, India, for instance, have been experimenting with making their own documentaries on cheap low-end digital cameras, editing the films using illegal software and distributing them through informal circuits. There is a grammar of new media that is being learned in various ways and through various circuits, and this grammar is not limited to the elite. This spills out from cyber-cafés and SMSes across various parts of the city and is predicated on what Lessig terms 'tinkering

[75] Sidra DeKoven Ezrahi, *After Such Knowledge, What Laughter?*, 14 YALE J. CRIT. 287 (2001).

[76] *See* generally ZYGMUNT BAUMAN, LIQUID MODERNITY (2000).

cultures'.[77] If the grammar of heavy modernity was based on literacy and access to knowledge, the new grammar is a far more porous, tactile and rapid form of language that spreads itself. The user/producer in terms of new media is still a gawky young kid, and in a few years he should reach the prime of his youth, fluent with the language of collaboration, open access and shared creativity. This move has been termed a move away from a 'read-only' culture to a 'read-and-write' culture.

Copyright faces a crisis not because the new technologies of control are unable to keep up with the new technologies of distribution but because the internal coherence of its narrative has begun to crumble. Jessica Litman has made a rather simple but pertinent argument about why most people do not obey copyright laws: simply because they do not make sense to them.[78] For a generation that learns through the Control-C and Control-V functions and decries any restrictions on access, the blackmail of originality and authorship does not make much sense.

Lessig captures the spirit of this new grammar well in his account of a project called *Just Think*!, which consists of two buses filled with technologies that teach children to tinker with digital film. *Just Think*! is a project that enables children to make films as a way to understand and critique the filmed culture that they find all around them. Each year, these buses travel to more than thirty schools and enable three to five hundred children to learn something about media by doing something with media. The cost of media technology, such as digital video systems, has fallen dramatically. These buses are filled with technology that would have cost hundreds of thousands of dollars just ten years ago, and it is now feasible to imagine not just buses like this, but classrooms across the country where children are learning more and more of something teachers call 'media literacy'. This may seem like an odd way to think about 'literacy', since for most people, literacy is confined to reading and writing. However, in a world where children watch 390 hours of television commercials per year an average, or between 20,000 and 45,000 commercials overall, it is increasingly important to understand the 'grammar' of media.[79]

---

[77] Lessig, *supra* note 44, at 46.

[78] Jessica Litman, Digital Copyright 155 (2000).

[79] Lessig, *supra* note 44, at 35-36.

VI. MAPPING OUT THE DOMAIN OF OPEN-CONTENT LICENCES

There are various ways in which we can map out the kinds of open content licences. These are:

A. Chronologically

We can see open-content licences in a chronological manner, outlining the development of these licences, for example, from the Free Art License to the Creative Commons, and map out the differences that have arisen. This is not a very useful approach from the point of view of an end user, although it may be so academically.

A useful way of classifying the licences not completely from a chronological point of view but retaining a linear narrative would be on the basis of the family or the pedigree of licences, e.g. GNU GPL-inspired licences, EFF-Type licences, Creative Commons licences.

B. On the Basis of the Medium They Address

While choosing a licence, it must first be seen whether it is a general licence or a specific licence. A general licence is a one-size-fits-all kind of licence where the specific nature of the content does not matter. Thus, this licence will be chosen not because it is specifically designed for the medium in which the work resides (for example, music) but for the content of the licence. The open-content Creative Commons licences are examples of general content licences.

A specific licence, on the other hand, is designed with a particular medium in mind. Most specific licences deal with music as a medium. Thus, within music, there is a choice between the EFF Free Audio License, the Ethymonics Free Music License and the Open Music licences as well as the Creative Commons music licence. Specific licences are invariably preferable to general licences since they are better equipped to attend to some of the nuanced requirements that may arise from particular media.

C. On the Basis of the Nature of the Licence

Open-content licences may also be categorised according to the nature of the licence. There are some licences that may be closer, for instance, to the principle of the GNU GPL, which means that they believe in absolute freedom and very few restrictions may be imposed on the work as well as on derivative

works. Similarly, there may be other licences that grant the basic freedoms but allow the licensor to impose restrictions on specialised rights such as commercial usage and creation of derivative works. Of course, these divisions are never absolute, even within a class or family of licences. For instance, within the creative commons licences, there may be a completely open licence that allows for all rights, while you could also have a licence that allows certain rights but simultaneously imposes many restrictions.

As mentioned earlier, the question of validity has plagued the GNU GPL. While this question is still to be answered in a court of law, it has become an important factor to be kept in mind while drafting an open-content licence. If open-content licences are classified chronologically into first-generation (free art, open content, Open Audio) and second-generation (Creative Commons licences), a significant shift in the second-generation licences becomes evident.

Some of the first-generation licences are marked by a crisp polemical statement, which acts both as the preamble to the licence and as an ideological statement against copyright, without the impersonal feel of legal language. The licence was like a 'speech act' - it was both the site of, as well as the reason for, a transformation in the way that the production and distribution of knowledge was conceptualised. Despite the fact that most first-generation licences were probably less effective as legal documents than the second-generation licences, they retained a certain political charge as licences, which seems to be absent in the more legally efficient second-generation licences.

The second-generation licences are more 'professional' in that they resemble legal documents more closely. Given the fact that licences are supposed to be the primary building blocks for shared creation, it is very important that they should stand good in a court of law. It is as though the performative aspect of the licence has been removed and the ideological battle now occurs outside the licence, rather than in the licence itself. This reflects a shift towards a more formal form in the second-generation licences, which in turn is reflected in the larger debate on copyright. For some, the battle over copyright is not merely about the future of creativity but is also linked to the larger future of capital, as it seeks to create new forms of property. This process of 'cleaning up the licences' also often means an inability to deal with practices in the murkier areas of law. However, it is important to avoid allowing open-content licences to gentrify the debate on copyright.

VII. NOT BY ONE PATH ALONE: REVISITING OPEN-CONTENT LICENCES THROUGH HISTORY AND ANTHROPOLOGY

Slovenian philosopher Slavoj Zizek narrated an interesting story of how he hated eating in Chinese restaurants because it involved everyone sharing and digging into the main course. A friend suggested that this may be symptomatic of Zizek's fear of sharing a sexual partner. Zizek responded that, on the contrary, his refusal to share a sexual partner was perhaps symptomatic of his hatred for sharing a main course in a dinner.[80]

Reading licences, we are often faced with a similar predicament, where we tend to put the licence in the foreground at the cost of seeing the broader changes and social imaginaries that it enables. The open licence movement is often read in a narrow technical manner as though the entire question were a legal one, in terms of the validity of the licence, the legal innovation, and so on. This approach overlooks the fact that beneath the licence lie new ways of organising modes of production and distribution of knowledge and creativity. This article has, *inter alia*, attempted to map out the various open-content licences, and the metaphor 'mapping' captures the limitation of such a task very well. The map is always an imprecise distortion - it does not reveal the hidden secrets of the city, its surprises or its anxieties. The licence is not the story of cultural production. The licence can and will only remain as an imprecise attempt to capture the complexity of what is actually happening at the level of the new principles through which people are willing to engage in the act of collaborating, creating and sharing.

Being framed within the debate on intellectual property and the politics of open versus closed systems of knowledge creation, the question of property is always assumed to be the subject matter of copyright as well as copyleft. There are alternative approaches to looking at the issue of open-content licensing. I will attempt to read licences in two different ways: as offering an opportunity to move beyond the property and law question, and examining the larger social implications of the open-content licensing model. I will then offer two critiques of the existing discourse on open content/copyleft, as an insider to the debate. While the concepts of open source and open content

---

[80] SLAVOJ ZIZEK, ENJOY YOUR SYMPTOM!: JACQUES LAÇAN IN HOLLYWOOD AND OUT ix (1992).

are admirable, I would like to advance the debate beyond what I believe is a largely US-centric approach to the question of the public domain.

A. Open Licensing and the Repressed Memory of Gifts

Marcel Mauss, an anthropologist, with his work on the phenomenon of the gift, the first detailed study of a non-monetised economy of transactions, has opened up a completely new area of enquiry.[81] The gift economy, a particularly fascinating phenomenon, is marked by complex relationships of reciprocities. The idea that there is no such thing as a free gift is true, though not in the monetary sense of the term. The giving and taking of a gift sets in motion a complex relationship of reciprocity, where a gift transaction is always incomplete until the person receiving the gift has also given it back. The relationship of reciprocity is certainly not restricted to the gift-giver and the gift-taker. The exchange of the gift actually brings into play an economy of circulation, which includes a wider network of participation by members of the community. However, the gift economy should not be considered restricted only to a particular time period or a geographical region - it should be understood as a metaphor for the practices of a wider range of communities. One such gift community, for instance, is the academic community, which is organised more on the principles of gift-giving than on the principles of a monetised community, with research being contributed to the world of knowledge and the researcher thus being considered as a gifted academic. A gift economy sustains itself on very important social principles and fictions, wherein people see themselves simultaneously as recipients, givers and carriers of the gift. This is necessarily a fragile community, with the symbolic fiction guaranteeing social cohesion, and often there is conflict, tension, fragmentation, differentiation and dissent.

There has been some writing about open-source software operating on the principles of a gift economy. However, since my attempt is to offer alternative modes of reading the open-content licence, I would like to focus on the relationship of the gift to the principles of contract, with the gift as the repressed memory of a pre-contract era. Mauss's work has been seen as an initial speculative attempt to trace the origin of the modern contract, but a gift is a contract that deals with anarchistic property. The critical difference

---

[81] Marcel Mauss, The Gift: The Form and Reason for Exchange in Archaic Societies (2000).

between a gift transaction and a transaction governed by a contract is that the gift exchange takes place within the realm of being a 'total social phenomenon' in which religious, legal, moral, economic and aesthetic institutions appear simultaneously.[82] It is only when the transaction is disaggregated from the larger social network that the form of the modern contract begins to take shape.

When disaggregated from the total social phenomenon, the subject of the transaction (either the commodity or property) begins to take a life of its own and assumes its own rationality. It is only when the commodity begins to have a rationality divorced from the social context that the modern contract becomes intelligible. To become a legal instrument, the contract needs to be based on the foundational principles of justice, since that is the key determinant in the legal world. What, however, complicates the story, is the fact that we do not necessarily organise our lives only according to the principles of justice - we love, we forget, we forgive, we empathise and experience a whole range of other emotions that do not necessarily base themselves on the rationality of justice or the structured orderliness of 'fairness'. Hyde, for instance, says that a modern court of law would be truly perplexed at having to decide a case of ingratitude ("I gave him a gift but he did not show any reciprocity").[83] The modern law of contract does not require any reciprocity for a transaction which does not have the intention to be a contract and yet, in the world of gift-giving and gift-taking, ingratitude is a very important marker of whether the duties or reciprocities brought about by the gift have been fulfilled.

Most critiques of modern law have the danger of romanticising tradition and converting the entire issue into being one of the conflicts between tradition and modernity. The discussion on gifts as an alternative mode of looking at transactions and exchanges will therefore seem to some as being grounded in theological niceties. I am certainly not a traditionalist, but I would argue that every single tenet of modern law is itself based on its own mythologies, and if you start peeling, then you will uncover some of the theological basis of much of modern law.

---

[82] Lewis Hyde, The Gift: Imagination and the Erotic Life of Property 86 (1999).

[83] *Id.* at 88.

The easiest mistake that we can make when characterising something as a gift is to think of it in terms of it being free, or being something that we do not have to pay a price for - and that is the logic of the disaggregated commodity that has a life of its own. In gift economies the 'price' is the reciprocity, a reciprocity that was often obtained through word and deed (phrases such as "I am giving you my word" are still very much in fashion), rather than through any formal instrument, backed by the sovereign authority of law. But as modern law entered more and more into the domain of the heart, it began to secure by law what was earlier secured by word and deed, and as the strength of the contract increased, one saw a corresponding decrease of the spirit of the gift, until the gift emerged only as something subsumed within the monetised economy and stood for something that one did not have to pay for.

I mentioned earlier that the gift exchange takes place in the realm of anarchist property. It is interesting to go back into principles of anarchism and their relationship to the contract. The anarchists have always believed that the codification of anything is a diminishing of life: this was not merely a class issue for them in terms of the fact that codification of debt and contract serve particular classes but also that such codification results in a separation of the thing from its spirit. Thus, historically, one of the first things that any revolution would see would be the burning of official debt records as one of the first steps after the revolution. While this could be seen in terms of a move towards bringing back a certain status quo that erased debts, it can also read as an attempt to preserve the ambiguity and inexactness that makes the gift exchange social. If gratitude is, as Simmell says, "the moral memory of mankind, then it is a move to refresh a memory dulled by property and contract".[84]

I find the metaphor of the gift a useful one as an entry point into understanding the nature of open source/open content, because the alternative reading of the licence has always been through the metaphor of the social contract. Commentators have attempted to argue that given the uncertainty of the legal status of the GNU GPL, it should be read more as a social contract than as a legal contract. The reason that I find the metaphor of the social contract troubling is because of the violent history in which the social contract is necessarily implicated. The social contract theorists such as Locke painted the picture of a pre-social world of the state of nature, which was marked by

---

[84] *Id.* at 89.

the absence of private property and consequently the absence of a rule of law, which allegedly maintained the security of life. It is however, important to remember that the societies that Locke was describing were not merely metaphorical accounts of the West before the social contract but were actually based on living societies in which gift cultures thrived.

We have seen in our mapping of open licences that there is still an inexactitude that marks them, and my analysis of the licences is not necessarily based on their legal status in terms of which licences will necessarily hold up before a court of law. It is difficult to win this battle between one's legal pragmatism and one's idealism because the Creative Commons licences clearly mark a quantum leap in terms of the quality of the drafting and their status as legal documents; in other words all the markers of the move towards a more formal and regulated regime which sheds the inexactness and imprecise nature of its predecessor licences. And yet it is important to read the other licences as attempting to sustain the memory of gift-giving and gift-taking, with all its imperfections intact.

B. Fuzzy Communities and Narrative Contracts

The second challenge for us while thinking through the idea of the open-source or open-content community as sustained through the mythical allegiance to a licence is to understand the exact nature of this community and the nature of the contract that binds them. The GNU GPL or the Creative Commons licences, while being on the one hand about the licensor in relationship to the general public, and in relation to the work, are also at the same time a symbolic commitment to a larger community. The whole point of a general public licence is that it is targeted at a larger community and not aimed only at the monadic individual as in the case, for instance, of an end user licence agreement. Exactly what, then, is the nature of this commitment?

I will borrow from a very unlikely source to try to characterise the nature of the community that emerges from such licences - Indian historian Sudipta Kaviraj, who uses the idea of the narrative contract in the context of providing an account of the emergence of the fiction of India as well as the emergence of the nationalist public. Kaviraj poses the question of how a fictive community can come into being with the ability to transcend its immediate temporal experience to the experience of an abstraction such as the nation. He argues that the process entails the movement from the idea of a fuzzy community to

an enumerated one. A fuzzy community is always an imprecise community, and lacks the coherence provided the moment you become a part of an enumerated community (for example, being counted as 'a citizen of India'). This movement from a fuzzy to an enumerated community in the case of nationalism is accomplished by the category of the citizen subject, an omnibus category that works primarily as a transactional site and as a mechanism for all other actions that we collectively call democracy - in short, as the beginning of a narration.

Thus, the movement for Kaviraj is obtained through the coming into being of a narration and, for him,

> *[t]he narrative structure sometimes aspires to be a contract; the telling of a story brings into immediate play some story conventions invoking a narrative community. Ordinarily these are coincident in terms of their frontiers with social communities of some form. To some extent all such communities, from the stable to the emergent, use narratives as a technique of staging together, redrawing the boundaries or reinforcing them. Participating in a movement includes or involves something like accepting contractual obligations and I suspect some of the affiliation of the individual to movements counteracting a monadic individualism is accomplished by narrative contracts.*[85]

I find the metaphor of the contract in the way that Kaviraj uses it very interesting. It ties in with the gift community, which also "involves something like accepting contractual obligations". The narrative contract for Kaviraj serves two purposes; on the one hand it brings the individual into a relationship of some obligation, but on the other hand it also brings the individual into a network or an imagined community of some form with which the individual can counteract monadic individualism. While, for the purposes of national histories, the site where this narrative contract takes place is the constitution/ nation, how is this useful in our understanding and reading of open-content licences?

---

[85] Sudipta Kaviraj, *The Imaginary Institution of India*, *in* 7 SUBALTERN STUDIES 1 (Partha Chatterjee & Gyanendra Pandey eds., 1993).

The open-content licence also requires the taking up of certain commitments and obligations on the part of the licensor/licensee, but more interestingly, unlike an end user licence agreement, the signing of the open licence brings into play a similar kind of narrative contract as well in which one participates in the larger community of like-minded people who have also either licensed open content or use open content. The difference for me, however, is that without such a monumental fiction such as the nation to sustain this imagined community, it is a community that will always remain in a state of fuzziness, aspiring or moving towards enumeration, an enumeration which will never be complete, precisely because of the spatial and temporal fluidities that mark this community. It is in fact far more interesting to see this state of fuzziness.

C. Free as in America

In the last two segments I will offer a critique of some strands of the free software/open cultures debate, with special reference to the larger political and economic context in which much of the discourse of freedom is located, namely the United States. In a recent article Martin Hardie has provided a scathing critique of the liberal constitutional discourse on which the entire language of the free software movement is based, and the problems with subscribing to this notion and vision of freedom.[86] The word freedom, seen in the context of the invasion of Afghanistan, the freeing of Iraq and the other freedom projects of the United Empire of America Corporation, does seem rather scary. As Hardie puts it:

> *FLOSS currently resides within a particularly American vision of freedom which seems to be spreading virus-like in its quest to smooth the space of the globe. With this vision and this tendency, fear and control are sought to be generated with the invoking of images of the enemies of freedom often related to the 'war on terror'. But these images form only some of the gloss of the spectacle necessitated by this overarching tendency toward global corporate or imperial sovereignty.*[87]

---

[86] Martin Hardie, *FLOSS and the 'Crisis': Foreigner in a Free Land?*, *in* SARAI READER 04: CRISIS/ MEDIA 384 (Monica Narula et al. eds., 2004).

[87] *Id*. at 385.

Hardie argues that the usual rhetoric of freedom as it appears in the copyleft movement is configured within the larger constitutional and political rhetoric of freedom as understood in the US. The constitutional vision of freedom itself is predicated on a larger idea of the freedom of property or the freedom of capital, and the use of this idea of freedom as it emanates from within the heart of capital, as it were, will prove to be a dangerous trend because, when freedom of speech is pitted against freedom of property, it is inevitably freedom of property that prevails. He says:

> *It appears to me that to pose speech against property in the forums of capital, as the rhetoric of FLOSS seeks to do, within the context of the rhetoric of American freedom, is to concede the struggle to a form of American constituted power, privileged by capital within the realms of imperial sovereignty. It is more than likely, given the intersections I seek to describe, that it will be property that comes out on top. Even if that means perpetual crisis, and continual management and control of the hackers, pirates, terrorists and other barbarians who seek to escape the bounds of freedom.*[88]

Using Lessig's characterisation of the struggle over copyright as a struggle over American values and the future of freedom in America, Hardie proposes that 'free as in freedom' can also be read 'free as in America'. This notion of freedom runs through the works of most American scholars who are on the public-domain side of the copyright debate, situating the conflict as though it were only a matter of the history of the United States and the use of the language of the commons and public domain is to invoke a universal history, but specifically addressing the problems of the US. The critical scholarship on copyright in the US has taken an automatic turn to the Constitution and particularly to the First Amendment, or the right to freedom of speech and expression. This is perhaps best illustrated by *Eldred* v. *Ashcroft*[89], in which the Copyright Extension Term Act was challenged on the grounds that it violated the copyright clause as well as the First Amendment to the US Constitution. Hardie characterises this reliance on the constitutional framework as the domain beyond politics - a transcendental foundationalism.

---

[88] *Id*.

[89] 537 U.S. 186 (2003).

Locating the larger political dimension of US constitutional history, Hardie cites the works of Negri to show

> *how American constituent power, founded upon the frontier, in the end was submitted to the constitution… The homo politicus of the revolution must submit to the political machine of the constitution, rather than in the free space of the frontier, the individual is constrained to that of the constitution… it is absorbed, appropriated by the constitution, transformed into an element of the constitutional machine. It becomes constitutional machinery. What constituent power undergoes here is an actual change of paradigm… shifting it away from its meaning as active participation in the government to a negative meaning - that of an action… under the aegis of the law… It is not conceived as something that founds the constitution, but as the fuel of its engine… no longer an attribute of the people…* [it] *has a model of political society. The constitution becomes an organism with its own life with the people reduced to a formal element of government, 'a modality of organised power'. And at the heart of this organised power, "The constitution is elevated to the kingdom of monetary circulation", money replaces the frontier, as Negri describes the "…organism by which Hamilton is inspired is that of the 'powerful abstraction' of money, of its circulation, and of its pulse… he… reorganizes power around financial capital". Thus when I speak of 'Free as in America', I refer to this America constituted on power and confined by 'the transcendental theory of the foundation', and with it the always theological foundations of capital's economy.*[90]

Thus the libertarian vision of Stallman and the constitutional vision of Lessig are both based on and necessarily bound within this constituted freedom in the context of capital. What, then, does the free software movement mean for people who situate themselves on the margins both of capital as well of empire, and who are struggling against the gigantic machine of the empire? Assuming that there are emancipatory possibilities that arise from the use of free software, which in many ways stands in opposition, both real and symbolic, to the biggest billboard of global capitalism, Microsoft, what does it mean to participate in the movement, while also recognising the ideological foundations

---

[90] Hardie, *supra* note 86 at 386.

upon which it is based? Furthermore, when the entire project is so centrally tied to the US constitutional developments, then we need to pay some attention to the nuances in the constitutional history of the US, with respect to conflicts between property and other freedoms. Citing early constitutional developments, Hardie argues that property has always been "the fundamental constitutional value, liberty ... the primary constitutional right, and substantive due process ... the instrument for their accomplishment..."[91] *Allgeyer* v. *State of Louisiana*[92] summed up the Supreme Court's jurisprudence at the time:

> *The 'liberty' mentioned in* [the 14th] *amendment means not only the right of the citizen to be free from the mere physical restraint of his person … but the term is deemed to embrace the right of the citizen to be free in the enjoyment of all his faculties; … and for that purpose to enter into all contracts which maybe proper, necessary and essential to his carrying out to a successful conclusion the purposes above mentioned.*[93]

It was the last right, that of contract, which the Court came to consider paramount. For Hardie, the outcome of the *Eldred* challenge does not come as a surprise - after all, the bold move of pitting freedom of speech and expression against freedom of property was always going to be in favour of freedom of property, since copyright law celebrates the profit motive and seeks to serve public interest thus rather than through preserving the freedom of speech and expression.

Hardie concludes by reassessing the idea of free software movement, and instead of posing it, as it normally is, from within either the libertarian stream or the liberal stream, he argues for a closer examination of the terms under which we can speak of this new emerging community, as well as the ways in which we can reclaim the stories and mythologies that tell of free software and free content, and the importance of these stories as framing a viable alternative to the 'free as in freedom' language. As he puts it:

> *FLOSS at its heart is another form of community knowledge production; it is a community formed through a language of production that goes beyond*

---

[91] Hardie, *supra* note 86, at 391.

[92] 165 U.S. 578 (1897).

[93] *Id*. at 589.

the discourses and rhetoric I have tried to describe here, and as is the case with other forms of community knowledge production, its longevity as an alternative to Imperial sovereignty requires more than simple repetition of currently accepted dogma. Autonomous production of knowledge and the lives of the multiplicity of locals that inhabit this earth will not be ensured by repeating mantras such as 'free as in freedom'. To do so will simply continue us along the merry path of totalising one vision of the world and imposing it upon the rest. Should we - rather than trying to make all forms of community knowledge production conform to this peculiarly American vision of freedom, chanting along the way, 'information just wants to be free' - not recognize that the potential and position of FLOSS is just one of the many manifestations of community knowledge production, a very special one indeed, and thus commence our analysis and discourse from there?[94]

D. Pirate Aesthetics and Transformative Authorship

Finally, I would like to extend and add to Hardie's critique of the FLOSS debate for its American vision of freedom by looking at the basis upon which Lessig can justify P2P, file-sharing and transformative copying while disavowing the kind of commercial piracy that takes place in Asia or the piracy that feeds off existing work, without making any contributions or that simply reproduces endlessly.

The public domain argument in the US is a relatively familiar one, and in a nutshell, the arguments run like this:

Every aspect of what we call the public domain is now proliferated by images, signs, inventions and products, which are protected by one form of intellectual property or another. In addition there is an increasing trend of domains that were earlier outside the scope of intellectual property protection being brought under the rubric of intellectual property right. This expansion of intellectual property rights into public life has resulted in a privatisation of the public domain itself, where almost every cultural resource is increasingly the subject of protection. Therefore it can be argued that the public domain is shrinking. Scholars such as Rosemary Coombe have consistently argued that the very practice of a political public domain has relied on the ability of various

---

[94] Hardie, *supra* note 86, at 393.

people (consumers) to engage in critical dialogic practices and these practices do not merely take existing signs for what they are, but determine what meaning itself is through processes of appropriation, recodification and transformation.[95] If all signs are, therefore, the subject of intellectual property rights and entitled to protection, there is a danger that dialogic practices themselves are under threat as the owner of the signs will have the ability to determine the scope of the use of the signs, and that the owners of these signs will have the ability to freeze the meanings of these signs and hence curtail the very possibility of critical dialogue. Over the years there has been a strong judicial trend towards curtailing any kind of critical practice and that this is a violation of First Amendment rights or the right of freedom of speech and expression.[96]

There are, therefore, two dominant legal arguments that seem to motivate the critical copyright debate amongst US scholars: one is the First Amendment and freedom of speech position, and the other relies on existing doctrines within copyright law such as the fair use doctrine. The case that would best exemplify the position that most critical scholars in the US would hold is *Campbell* v. *Acuff-Rose Music, Inc*.[97], where the US Supreme Court held that parody was a part of the fair use doctrine. In this case 2Live Crew created a parody of Roy Orbison's song, *Pretty Woman*, and when sued for copyright infringement, claimed a fair use exception. The Court reasoned that their rendition of the song had 'transformative authorship', and could be considered an original by itself since it involved creativity, labour and so on. The idea that I want to deal with in particular is the idea of transformative authorship and, as we can see, that the ghosts of copyright still hover around even in the culture of the copy.

---

[95] *See* Rosemary Coombe, *Fear, Hope, and Longing for the Future of Authorship and a Revitalized Public Domain in Global Regimes of Intellectual Property*, 52 DEPAUL L. REV. 1171, 1181-1191 (2003); *See also* Rosemary Coombe, Presentation at the Conference on the Public Domain (Nov. 9, 2001), *available at* http://realserver.law.duke.edu/ramgen/publicdomain/public%20domain%20panel%203.rm (last visited Oct. 10, 2005).

[96] Lawrence Liang, *Global Commons, Public Space and Contemporary IPR*, *at* http://212.67.202.188/~wacc01/modules.php?name=News&file=article&sid=810 (last visited Oct. 8, 2005).

[97] 510 U.S. 569 (1994).

For Lessig and others, such a copy is a part of the US tradition, but is this the only history of the public domain that is available to us? What happens if there isn't any transformative authorship; what happens when the copying is literally the churning out of hundreds and hundreds of copies of the latest DVDs? Do we, the critical scholars of copyright, then turn away our faces in embarrassment at this rampant culture of illegality? Do we then declare that this form of piracy is absolutely unacceptable to us and that there is no argument about this, since it violates existing law?

This is where one's location matters in the conflict over copyright. I think it is easy, situated within the confines of the liberal debate in the US, to decry commercial piracy that does not involve any transformative authorship. It emerges as the ahistorical embodiment of evil, much like the figure of the bandit in Hindi cinema. But like the bandit in Hindi cinema, piracy in Asian countries (a classification that makes about as much sense to me as saying 'Asian food') may have deep-rooted histories, histories that do not have any neat public domains to speak of, but instead involve messy histories of exclusions, of elite public domains and pirate aesthetics. My argument is that by looking for transformative authorship one is merely looking at a content problem. Also, one may not find any straightforward accounts of the romantic counter-publics appropriating symbols of capital to transform them into sites of struggles (and other similar cultural studies-inspired slogans). But yet, if you look a little closer at some of the histories of these useless, untransformative acts of piracy, you may still find that it does have things in common with the aspirations of creating a more plural, more diverse public sphere of cultural production and participation. Though bandwidth is still a huge issue in a country like India, I do not understand too much of the debate on the social role and function of P2P and file-sharing networks, at least not in an experiential sense. Of course, though one extends one's support and solidarity in their struggle against the excesses of copyright, there really is no index that we can use to map the Internet-based file-sharing and P2P networks in India.

However, we do find our ways out of the bandwidth problem, usually in the form of the neighbourhood pirate who supplies cheap pirated DVDs or the media hot spots that exist in most Indian cities that provide free software (free as in Microsoft) to the vast majority of the population entering the world of technology and media. The pirate therefore appears in many ways as the 'subterranean other' of the hacker, lacking the sexiness of the hacker and the

moral higher ground of the FLOSS junkie, but certainly not lacking in a rich history of his own, and in this final segment, I will try to provide a very cursory history of the background to understanding media transformations and practices in India.

Peter Manuel, an ethnomusicologist, provides us with an excellent history of the emergence of new media in India, tracing out the cassette revolution that took place from the mid-1980s.[98] This revolution, he claims, created a new aesthetic of media production and consumption that escapes the totalising imagination of old media in the form of national television, radio and cinema. According to him, new media challenges the one-way, monopolistic, homogenising tendencies of old media as it tends to be decentralised in ownership, control and consumption patterns and hence offers greater potential for consumer input and interaction. I shall briefly summarise Manuel's account of the emergence of cassette culture in India.

In 1908, the British-owned GCI had established its factory in Calcutta and through exclusive distribution agreements, it came to dominate the market in an absolute manner.[99] The monopoly had profound cultural impact in terms of the local genres and languages, which it either appropriated, ignored or reduced to dialects. The necessity of an all-India market to ensure great profits ensured the emergence of an all-India aesthetic form in film music. The dominance of the Hindi film music and the monopoly of GCI continued till well past the postcolonial period.[100]

The development model adopted by the Nehruvian state emphasised state investment in large-scale infrastructure projects such as dams, mines and factories, while discouraging luxury consumption through high import tariffs. These policies of over taxation and cumbersome licensing inhibited the consumer electronics and related industries. Manuel reports that by the late seventies, however, large numbers of immigrant workers to the Gulf countries had begun to bring back cassette players (Japanese two-in-ones) into India, and the ubiquitous cassette player soon became a symbol of affluence and object of modern desire. This is also the period that saw the emergence of a

---

[98] PETER MANUEL, CASSETTE CULTURE: POPULAR MUSIC AND TECHNOLOGY IN NORTH INDIA (2001).

[99] *Id*. at 37.

[100] *Id*. at 37-46.

nascent market for pirated cassettes of film music, feeding off the growth of cassette players and also contributing to the expansion of the grey market where such 'luxury' items could be purchased by the relatively well-off.

The liberalisation policy of the state in the late 1970s, designed to stimulate growth, demand, exports and product quality, saw the liberalisation of many import restrictions. The burgeoning middle class stimulated the electronic industry, and while a few were willing to pay the high import duties on foreign electronic goods, a larger number were content to buy them off the grey market.

Certain significant developments in this period helped to create a mature market for the consumer electronics industry:

- The reduction of duties enabled Indian manufacturers to import selected components for local manufacture of cassette players.
- New policies encouraged foreign collaborations in the field of consumer electronics, including magnetic tape production.
- Tape coating became big in India and from the period of 1982 to 1985, record dealers switched to cassettes. By the mid-1980s, cassettes came to account for 95% of the market.[101]

Sales of cassettes went from $1.2 million in 1980 to $12 million in 1986 and $21 million in 1990. Exports of Indian-made records jumped from Rs. 1.65 million in 1983 to Rs. 99.75 million in 1987. By the end of the 1980s, Indian consumers had purchased around 2.5 million cassette players.[102] This period also saw the swift decline of GCI-HMV as the sole dominant player in the industry and the emergence of a handful of large players and over 500 small music production companies. In just a few years, India had become the world's second largest manufacturer of cassettes. This period also saw the decline of film music as the dominant aesthetic form and the rise of a whole new range of forms, from devotional music to local language songs, as other kinds of markets began to emerge.[103]

---

[101] *Id*. at 60-75.

[102] *Id*. at 62.

[103] *Id* at 60-75.

This period of tremendous growth is, however, marked clearly by its troubled relationship with legality, with various practices often straddling both the worlds of legality and illegality, sometimes making it difficult to distinguish one from the other. In its initial boom period, most of the music companies were a part of the informal sector, which was well networked. They often worked with illegally obtained components to ensure the cost-effectiveness of their product. These ranged from smuggled goods to indigenously manufactured but unlicensed products, components and magnetic tapes.

It is in this context that we can evaluate the story of one such maverick entrepreneur who, with a combination of dynamic business skills, ruthless tactics and an elastic idea of legality, came to shape the music industry. In 1979, two brothers, Gulshan and Gopal Arora, who ran a fruit juice shop in Delhi and were also electronics buffs, began a small studio where they recorded Garhwali, Punjabi and Bhojpuri songs. After borrowing some money they visited Japan, Hong Kong and Korea to study cassette technology and the industry. They returned to set up a factory in India to produce magnetic tapes and also started producing cassettes and silicon paper. They eventually built a complete manufacturing plant where they offered duplication services to the smaller regional cassette producers. By the late eighties, the company, T-Series, emerged as the clear market leader. They are currently worth over $120 million and have diversified into manufacturing videotapes, televisions, VCD players, MP3 players, washing machines and even detergents.[104]

The elastic legality of Gulshan Kumar's world translated itself in the following manner:

- Using a provision in the fair use clause of the Indian Copyright Act, 1957 which allows for version recording, to issue thousands of cover versions of GCI's classic film songs, particularly those which HMV itself found to be unfeasible to release. T-Series also changed the rules of distribution by moving into neighbourhood shops, grocery shops, paanwallas, and teashops to literally convert the cassette into a bazaar product.

---

[104] *Id*. at 67-71.

- Straightforward copyright infringement in the form of pirated releases of popular hits, relying on the lax enforcement of copyright laws.
- Illegally obtaining film scores even before the release of the film to ensure that their recordings were the first to hit the market.
- Buying up and inserting huge amounts of inferior tape into the products of established brands, which were then resold to discredit the well-established names.

While one could easily dismiss these practices as unscrupulous, unethical or clearly illegal activities, we also need to keep in mind the overall impact that T-Series had on the music industry in India and cassette culture itself. T-Series created a new cassette-consuming public by focusing on various genres and languages that were being completely ignored by HMV. HMV had promoted Hindi at the cost of many other languages that it deemed to be unfeasible in economic terms given the scale of their operations. By changing the rules of the game and introducing for the first time the idea of networked production, where it would offer its duplication services to a number of the small players, T-Series revived smaller traditions of music. The reduction of the price of cassettes by T-Series also created a mass commodity.

Clearly, no straightforward account of legality and business ethics can capture the dynamics and the network of interests that fuelled the cassette revolution. For instance, in an interview, one of the employees of T-Series stated:

> *What the people say about our activities in the early years - it is mostly true. But I tell you that back then, the big Ghazal singers would come to us and ask us to market pirated versions of their own cassettes, for their own publicity, since HMV wasn't really able to keep up with the demand.*[105]

Similarly, even major players like HMV in the past dealt with the pirates. For instance, when HMV found that it could not meet the demands for one of their biggest hits, *Maine Pyar Kiya*, they are reported to have entered into an agreement with the pirates whereby the pirates would raise their price from Rs. 11 to Rs. 13 and pay HMV half a rupee for every unit that they sold on the

---

[105] *Id.* at 68-69.

condition that HMV did not sue them or raid their businesses. Other producers are also known to have colluded with pirates in production and marketing so that they can minimise their cost, the taxes payable and royalties by hiding the extent of their sales.[106]

The role played by piracy in the creation of a market, in the process of creating a lock-in period and also in the reduction of price, has been clearly demonstrated in the software industry and the film industry. (For example, the price of VCDs has come down to Rs. 99, even less than what the pirated copy used to be at Rs. 100.) Similarly, the Free School Street phenomenon of Calcutta created a sub-cultural consumption of large amounts of 1960s rock before these tapes were available in the Indian markets. Without such a niche élite public, it is highly debatable as to whether Magnasound could have emerged in the early nineties as the most important player in the English music industry in India.[107]

Ironically, after its rather chequered history with copyright law, T-Series is now one of the most aggressive enforcers of copyright in India. It has a battery of professionals, generally retired police officials, who monitor copyright and trademark infringement cases. Another piece of irony lies in Peter Manuel's conclusion to the history of cassette cultures in India. After providing us with a fascinating look at the ad hoc world of innovation based on very porous ideas of legality, Manuel speculates on the possible developments in the future where he says,

> *In India a pre-recorded CD costs as much as Rs. 250 or twelve times the price of a tape. CD players themselves are Rs. 5000 upwards, which would constitute a fortune for most Indians. As a result, CDs naturally remain confined to the upper class. For the music producer, the growth of the CD market is seen as a possible weapon against piracy, as CDs cannot be duplicated* (onto other CDs).

Ravi Sundaram has dealt with the phenomenon of piracy and illegal media cultures in the new media city, and according to him, this world of non-legal

---

[106] Lawrence Liang, Porous Legalities and Avenues of Participation, in SARAI READER 05: BARE ACTS 6, 8-11 (Monica Narula et al. eds., 2005).

[107] *Id*.

media in a number of south Asian cities, marked by its rather ad hoc innovativeness and its various strategies of survival, is the world of recycled modernity.[108] It exists in the quotidian spaces of the everyday and cannot be understood within the terms of the earlier publics (the nationalist public and the elite public sphere). Fuelled by aspirations of upward mobility, it is an account of the claims to modernity made by a class of people, otherwise unaccounted for by the metanarrative of the nationalist project of modernity.

These cultures of recycling do not, however, exhibit any of the characteristic valour or romance of counter-publics. Beginning with the audiocassette revolution that we examined and moving rapidly into the worlds of computers and digital entertainment, this world has been based on a dispersed logic of production and consumption, and marked by is preponderant illegality. This rearticulated entry point into the modern is also contemporaneous with the emergence of the global moment. With this arrival of the global via media, new forms of labour, such as call centres and the software industry in India, replace the earlier configuration of national/modern with the global modern.

So if the desire to be modern was marked critically by the space of the nation as the site of modernity, this rearticulates itself in the wake of globalisation to align with the idea of the global as the site of modernity.

Is there then no possibility of a dialogue between this messy world of piracy and the liberal constitutional debate on copyright? One should never give up on debate and dialogue, and of course when the debate excludes your own realities from its imagination, you are reminded of the dominant positions of other realities. I do hope that this brief account of piracy in India provides a better social context, which should make it more difficult to be able to justify transformative piracies while decrying commercial piracy. In a country where bandwidth is still a serious issue, it makes little sense to speak of file-sharing and P2P networks. While file-sharing may be a reality for a small number of people who have access to broadband connections, piracy often acts as the unofficial P2P network, distributing technology and content to a large number of people.

---

[108] Ravi Sundaram, *Recycling Modernity: Pirate Electronic Cultures in India*, SARAI READER 01: THE PUBLIC DOMAIN 93 (Geert Lovink & Raqs Media Collective eds., 2001); Ravi Sundaram, *Electronic Marginality: Or, Alternative Cyberfutures in the Third World*, *at* http://www.ljudmila.org/nettime/zkp4/08.htm (last visited Oct. 22, 2005).

The idea of transformative authorship that informs much of the critical debate on copyright in the West does not have a clear resonance in many Asian countries, where transformative authorship exists alongside transformations in the political economy of technology. In *Fogerty* v. *Fantasy, Inc.*[109], the Court made an argument that ideas were like the water in a common well, and it should be readily available for all to use. The metaphor of the well is a striking one because the history of the well in a country such as India has been the history of a highly contested space, where access to village wells has been coded in terms of caste. If we understand practices of gaining access to the technological well, can we then begin to contextualise what transformative authorship may mean beyond the Western world, where access to the tools of transformation are presumed? The cassette revolution that I used as an illustration demonstrates the larger content implications of a change in access to means of production in media. It would therefore be futile to claim sympathy to transformative authorship and claim intolerance for piracy of software and content.

VIII. CONCLUSION

While the expansionist ambitions of copyright have inspired initiatives such as the open-content movement, it would be a mistake for us to read these developments only through a legal lens. The battle over copyright ranges from questions of epistemology (the example of dance) to questions of international politics (the critique offered by Hardie). The task ahead of us is to explore in further detail the range and complexities of the questions raised by the copyright/copyleft debate.

It is also important to explore the social role played by non-legal cultures, such as piracy, which often get narrated out as a result of the terms that the copyleft movement sets for itself. For instance, the copyleft movement would argue that while copyright was initially supposed to be about the promotion of creativity and innovation, it fails to do this, and the copyleft movement instead offers an alternative account of creativity and innovation.

A critical assumption of the counter-movement however is a value-neutral account of creativity. The story of the cassette revolution in India reveals a

---

[109] 510 U.S. 517 (1994).

highly energetic account of everyday creativity and innovation, but one that cannot be represented in the language of 'alternatives' to copyright. It instead demands that we start looking at creativity not just through the lens of content, but by locating questions of technological equity and access within the larger questions of how people participate and insert themselves into the stubborn worlds of culture and creativity. This reframing of the creativity question will only assist us in framing alternatives which do not end up recycling techno-elitist accounts often implicit in the language of free software and open content, but will force us to engage more critically with the social life of knowledge and intellectual property.

THE INDIAN JOURNAL OF LAW AND TECHNOLOGY
Volume 1, 2005

A FOREIGN OUTLOOK ON *SATYAM INFOWAY LTD.* v. *SIFFYNET SOLUTIONS PVT. LTD.*

*Cédric Manara**

The first dispute over a domain name occurred in 1993, over the name mtv.com.[1] Since then, there have been innumerous rulings all around the world made under national laws or under the Uniform Domain Name Dispute Resolution Policy.[2] The online publication of many of these decisions has led to an interesting phenomenon, *viz.* the citation of foreign precedents in briefs, and consequently foreign rulings influencing courts that are dealing with a dispute over a domain name for the first time. The creation of the UDRP is in itself a kind of synthesis of diverse and multinational legal approaches to the resolution of disputes between trademark-holders and domain name-owners. UDRP practice has also helped lawyers and courts to define common criteria borrowed from this policy, to determine if a domain name registration is abusive or not.[3]

---

* Associate Professor of Law, EDHEC Business School, Nice; LL.B. '94, University of Lille 2; Pre-Doctoral Course on Theory of Law '95, University of Lille 2; Candidate, Ph.D. (Law), University of Lille 2 (dissertation entitled *Le Nom de Domaine: Essai sur la Polyvalence Juridique*).

[1] Doug Mohney, *Happy Birthday mtv.com*, INQUIRER, July 8, 2003, *available at* http://www.theinquirer.net/?article=10377 (last visited Oct. 5, 2005).

[2] As of May 10, 2004, there have been 13,311 decisions, according to the Internet Corporation for Assigned Names and Numbers' [hereinafter ICANN] statistics. ICANN, *Statistical Summary of Proceedings under Uniform Domain Name Resolution Policy*, *at* http://www.icann.org/udrp/proceedings-stat.htm (last visited Oct. 5, 2005).

[3] *See* ICANN, *Uniform Domain Name Dispute Resolution Policy* (approved Oct. 24, 1999), *at* http://www.icann.org/udrp/udrp-policy-24oct99.htm (last visited Oct. 5, 2005) [hereinafter UDRP]. *See also* ICANN, *Rules for Uniform Domain Name Dispute Resolution Policy* (approved Oct. 24, 1999), *at* http://www.icann.org/dndr/udrp/uniform-rules.htm (last visited Oct. 5, 2005) [hereinafter Rules]. Both the UDRP and the Rules for the UDRP explicitly recognize the jurisdiction of national courts in resolving domain name disputes. ¶ 4(k) of the UDRP allows the parties to a dispute to approach a court of competent jurisdiction before the

Even after ten years of domain name disputes all over the world, there have been very few rulings by supreme courts and all of them are recent. There have been decisions in Austria[4], Germany[5] and France[6], but interestingly, there has not yet been a single Supreme Court order in the United States of America, where the Internet was born, its law developed and where the earliest domain name disputes were fought.[7] The scarcity of authoritative decisions regarding

commencement or after the conclusion of the proceedings under the UDRP. Under ¶ 3(b)(xiii) of the Rules, at the time of making the complaint, the Complainant has to state that they will submit, with respect to any challenges to a decision in the administrative proceeding cancelling or transferring the domain name, to the jurisdiction of the courts in at least one specified Mutual Jurisdiction. In case the Administrative Panel concludes that the domain name in dispute is to be cancelled or transferred, under the provisions of the UDRP, ICANN will wait for ten business days after being informed of the Panel's decision within which the aggrieved respondents may file a suit against the Complainant in a court of mutual jurisdiction to which the Complainant has submitted. On receipt of any official documentation that is proof of such lawsuit, ICANN will not implement the decision of the Panel until the dispute in such Court is resolved. Further, under Rule 18, if any party initiates any legal proceedings (not restricted to a Court of submitted mutual jurisdiction) before or during the pendency of the proceedings before the Panel, the Panel has the discretion to suspend or terminate the proceedings before it or continue to a decision.

[4] *See* Oberster Gerichtshof, Sept. 13, 2000, 4 Ob 198/00x, bundesheer.at – ÖBl 2001, 35, *reviewed by* Katrin Hanschitz & Peter Poch, Case Comment, *Austria: Trade Marks - Internet Domain Names*, 23 EUR. INTELL. PROP. REV. N25-26 (2001); Oberster Gerichtshof, Feb. 24, 1998, 4 OB 36/98t, jusline I – ÖBl 1998, 241, *reviewed by* Heinz Rindler & Peter Poch, Case Comment, Austria: Trade Marks - Internet Domain Names, 20 EUR. INTELL. PROP. REV. N126-127 (1998). It may, however, be pertinent to note that in the third and most recent one, Oberster Gerichtshof, Mar. 16, 2004, 4 Ob 42/04m, delikomat.com – ÖBl 2004, 54, the Austrian Supreme Court did not directly address a domain name dispute, but, in fact, ruled that a defendant who is guilty of 'domain grabbing' must reimburse the plaintiff for World Intellectual Property Organisation (WIPO) procedure costs.

[5] *See* Bundesgerichtshof, Deutsche Shell GmbH v. Dr. Andreas Shell (shell.de), Nov. 22, 2001, I ZR 138/99, http://www.jurpc.de/rechtspr/20020139.htm; Bundesgerichtshof, Vereinigung des Mitwohnzentralen v. Ring Europäischer Mitwohnzentralen (mithwonzentrale.de), May 17, 2001, http://www.jurpc.de/rechtspr/20010219.htm. *See also* Roland Kunze, *Generic Internet Domains in the Light of German Trade Mark and Unfair Competition Law*, 24 EUR. INTELL. PROP. REV. 424 (2002).

[6] Cour de Cassation (Chambre Commerciale et Financière), July 7, 2004, Dalloz, 2004, Actualité Jurisprudentielle, 2151, Cédric Manara; Cour de Cassation (Chambre Commerciale et Financière), February 22, 2005, Dalloz, 2005, Actualité Jurisprudentielle, 885, Cédric Manara.

[7] The U.S. Supreme Court on April 18, 2005, turned down an appeal by Japanese automaker

domain names means that the judgment of the Supreme Court of India in *Satyam Infoway Ltd*. v. *Siffynet Solutions Pvt*. *Ltd*.[8] is of significant interest.

I. BACKGROUND TO THE INDIAN SUPREME COURT DECISION

The defendant was the holder of two domain names, siffynet.com and siffynet.net. The plaintiff company, Satyam Infoway, incorporated in 1995, registered several domain names that included the fanciful word 'sify': sifynet.com, sifymall.com, sifyrealestate.com, etc. The similarity between these names registered in 1999 and the two domain names of Siffynet Solutions (registered later in 2001), led Satyam Infoway to file a suit in the City Civil Court of Bangalore on the basis that the defendant was passing off its business and services by using its business name and domain name. The Court acknowledged that the plaintiff was the prior user of the trade name 'Sify' and that it had earned a good reputation in connection with Internet and computer services under this name. The Court stated that Siffynet Solutions' domain names were similar to the domain names of the plaintiff, and that confusion would be caused in the mind of the general public by such deceptive similarity. The Court was pleased to grant a temporary injunction in favour of the plaintiff. The case was brought before the High Court, which allowed the appeal. According to the High Court, the respondent was doing business other than what was being done by the appellant, so consumers could not be misled nor misguided, and would not get confused. The High Court also underscored the point that the plaintiff company had a separate trade name - Satyam Infoway - which it could use if it were not granted an order of injunction.

Since the complaint was filed in order to protect a trade name, there could have been recourse to the UDRP procedure. Even if the UDRP has been designed for abusive registrations of trademarks, it is still possible to get protection for a trade name under it, when it is deemed equivalent to a

---

Nissan to block Uzi Nissan, a North Carolina man, from using nissan.net and nissan.com. *See Nissan's Appeal over Website Rejected*, L.A. TIMES, Apr. 19, 2005, at C2.

[8] (2004) 6 S.C.C. 145.

trademark.[9] This is despite the World Intellectual Property Organization (WIPO) not being favourably disposed towards this trend.[10] In fact there is already a precedent of an Indian firm having taken advantage of this broad interpretation of the UDRP rules.[11] However, here, since the plaintiff chose to bring the case before a national court, it gave a chance to the Supreme Court of India to pronounce its first decision on domain names.[12]

The Court's judgement offers an interesting perspective on domain name disputes to the legal community in India and beyond. It characterises the domain name under two main aspects – as "an address for computers" and, also as a "business identifier" owing to increased commercial activity on the Internet.[13]

---

[9] *See*, *e.g.*, LIN Television Corporation v. Home In USA and Home In USA, Inc, WIPO D2000-0257 (June 2, 2000), *at* http://arbiter.wipo.int/domains/decisions/html/2000/d2000-0257.html; Cedar Trade Associates, Inc. v. Gregg Ricks, NAF 93633 (February 25, 2000), *at* http://www.arbforum.com/domains/decisions/93633.htm.

[10] Second WIPO Internet Domain Process, *The Recognition of Rights and the Use of Names in the Internet Domain Names System*, September 3, 2001, § 318 to 320, *at* http://arbiter.wipo.int/processes/process2/report/html/report.html.

[11] Online Ltd. v. Applying Thought.com, AF-0198 (eResolution July 7, 2000), *at* http://www.disputes.org/decisions/0198.htm (in which "the supporting documents presented by the Complainant [were] not trademark registration documents under India's Trade & Merchandise Marks Act 1958, Trade & Merchandise Marks Rules 1959, or any other Indian law or regulation respecting trade marks").

[12] Under the UDRP, ICANN will cancel, transfer or make changes to a domain name only under one of the following three circumstances and no others:

> a. receipt of written or appropriate electronic instructions from you or your authorized agent to take such action (except when the domain name is in dispute);
>
> b. receipt of an order from a court or arbitral tribunal, in each case of competent jurisdiction, requiring such action;
>
> c. receipt of a decision of an Administrative Panel requiring such action in any administrative proceeding to which you were a party and which was conducted under this Policy or a later version of this Policy adopted by ICANN. *See* UDRP, *supra* note 3, at ¶ 3.

[13] *Satyam*, (2004) 6 S.C.C. at 150.

II. THE IRRELEVANCE OF THE TECHNICAL NATURE OF A DOMAIN NAME IN A DISPUTE BETWEEN BUSINESS USERS

The respondent's first argument was to contend that a domain name is merely an address on the Internet.[14] To say that a domain name is an address is similar to comparing a contract to an agreement: It merely amounts to a circular argument, and one cannot draw any legal consequence from this contention. If a domain name is only regarded as a technical tool, such an approach is neutral to lawyers because it does not highlight the features of a domain name. From a technical viewpoint, a domain name is part of the Internet communication system and allows anyone to access a website. When the name is used for business, and becomes the vehicle of the firm's identity, it cannot be viewed only as a technical tool, but also has to be recognised as a sign with specific features. However, can it be protected as such, and can there be a property right over it?

III. A DOMAIN NAME AS A DISTINCTIVE SIGN

In order to answer the question posed in the preceding section, the Court first distinguishes between the different signs used by the appellant. This company was incorporated in 1995, under the name Satyam Infoway, which is used extensively to promote its identity in real space. In 1999, it registered several domain names which have in common the word Sify, a word coined by the appellant using the elements of its corporate name. It is clear from the facts that the appellant has a separate trade name, and the conflict was solely about the *electronic identity* of the appellant. The Supreme Court of India and the courts below framed the core legal question properly, but ought to have delineated the facts that needed consideration more precisely in order to issue a ruling pertinent to the electronic environment, as I will discuss below.

The core question is: Can domain names be subject to an intellectual property right? The first problem lies in the definition of intellectual property.

---

[14] *Id*. at 149. It is significant to note that the Court is mistaken when it suggests that that the appellant's domain names were registered with the ICANN and the WIPO. In fact, domain names are not registered with the ICANN, but with registrars accredited by the ICANN.

The main international treaties on intellectual property[15] do not define the concept of intellectual property - they merely give a definition of what is subject to an intellectual property right. In the scope of these treaties, there are trademarks, copyrights, industrial designs, patents, geographical indications and topographies of integrated circuits. However, there is no mention of domain names in existing international conventions, and that is why domain names cannot be statutorily listed in the intellectual property category.

There is no recognition of rights over a domain name in national laws and India, like most other States, does not provide a specific legal regime with regard to it. In fact it seems that, in some jurisdictions, legislators are reluctant to grant them protection equivalent to other distinctive signs.[16] The absence of a definition meant that the Supreme Court of India could not rely on a positive statutory basis and instead had to seek other ways to ensure defensive protection to domain names.

Following the reasoning of the City Civil Court and the High Court, the Supreme Court of India proceeded on the basis that principles relating to passing-off actions in connection with trademarks could apply to domain names. After recapitulating the provisions of the Indian Trade Marks Act 1999 (sections 2(1)(m) to 2(zb)), the Court concluded that a domain name is a sign which can have a distinguishing function indicating the source of a good or of a service and that it thus has the usual features of a trademark.[17]

---

[15] Berne Convention for the Protection of Literary and Artistic Works, art. 2, Sept. 9, 1886, as last revised July 24, 1971, 25 U.S.T. 1341: 828 U.N.T.S. 221; Paris Convention for the Protection of Industrial Property, art. 1, Mar. 20, 1883, 13 U.S.T. 2: 828 U.N.T.S. 107, as last revised at the Stockholm Revision Conference, July 14, 1967, 21 U.S.T. 1538: 828 U.N.T.S. 303. *See also* European Commission, *Statement by the European Commission Concerning Article 2 of Directive 2004/48/EC of the European Parliament and of the Council on the Enforcement of Intellectual Property Rights*, 2005/295/EC, O.J. (L 94/37) (April 13, 2005), *available at* http://europa.eu.int/eurlex/lex/LexUriServ/site/en/oj/2005/l_094/l_09420050413en00370037.pdf.

[16] For a recent example, *see* Italian Decreto Legislativo No. 30 of Feb. 10, 2005, Gazz. Uff. No. 52, Mar. 30, 2005, http://gazzette.comune.jesi.an.it/2005/52/7.htm.

[17] *Satyam*, (2004) 6 S.C.C. at 150. Such a finding is correct in India, a common law country, where it is not compulsory to register a trademark. However, in other countries such as France, Spain, Italy and Monaco, registration of a sign is compulsory for the grant of trademark rights over it. In these countries, even if the definition of a trademark is more or less the same as in India – "any sign capable of graphic representation which serves to distinguish

After putting domain names in the same category as trademarks, the Court did not focus on domain names anymore, since there is no use of the phrases 'domain name' or 'domain names'.[18] It then shifts its focus to passing-off actions in trademark law. In fact the Court seems to have likened domain names to trademarks, and it seems to assume that it can by mere substitution directly apply the legal provisions applicable to trademarks to the issue at hand. I disagree with this thesis.

IV. DOMAIN NAMES ARE DISTINCTIVE SIGNS, BUT CAN THEY BE DEEMED TRADEMARKS?

There is a difference in the relationship between users and domain names that does not exist with trademarks: To surf the web, users type a domain name in their Internet browser to access a website. This is not the case with trademarks: Consumers react to trademarks, but they do not act or interact with them.

The only distinction the Court drew between trademarks and domain names was the distinction in the manner in which the two operate: "A trademark is protected by the laws of the country where such trademark may be registered … On the other hand, since the Internet allows for access without any geographical limitation, a domain name is potentially accessible irrespective of the geographical location of the consumers"[19] and the consequence, according to the Court, is "not only that a domain name would require worldwide exclusivity but also that national laws might be inadequate to effectively protect a domain name".[20] The Court ignored other distinctions such as the fact that a domain name can only be made of letters or numerals,

---

the goods or services of a person" – the judicial outcome would have been different, because of the need to formally hold the trademark. Therefore, the ruling of the Court cannot be universal.

[18] *Satyam*, (2004) 6 S.C.C. at 150-151.

[19] *Id*. at 152.

[20] *Id*. The necessity of an alert vigil in cases where services are being rendered on the internet has been stressed upon even by the High Court in *Yahoo! Inc* v. *Akash Arora*, [1999] F.S.R. 931, the rationale being easy access by anyone across the globe.

but a trademark may be figurative.[21] Another evident but important distinction lies in the fact that domain names can only be found on the Internet. Again, given the difference of nature and significance between a domain name and a trademark, a domain name should be examined only in conjunction with the environment in which it is used.

V. DOMAIN NAMES AND CONFUSION: A WEB OF UNCERTAINTY

According to the Court, "…[t]he use of the same or similar domain name may lead to a *diversion* of users which could result from such users mistakenly accessing one domain name instead of another."[22] (emphasis supplied)

The issue is whether this notion of 'diversion' is appropriate in the case of domain names. The World Wide Web is a disorganised world – users know that they will always find information on the Internet, but not necessarily the information that they seek. Several U.S. courts have already addressed this in previous rulings,[23] observing that consumers frequently do not find the website they are looking for, a phenomenon which is unique to the Internet: confusion is consubstantial to the web, and 'diversion' to domain names. Therefore, the question arises as to whether one can consider the idea of confusion of the consumer to be realistic and 'legally significant' when cyberspace itself is a world of confusion. As succinctly noted by a United States District Court,

---

[21] The Court on the basis of its earlier premise compares the words 'Sify' and 'Siffy' as if they were verbal trademarks. *See Satyam*, (2004) 6 S.C.C. at 155.

[22] *Satyam*, (2004) 6 S.C.C. at 151. It is pertinent to note that the Indian Supreme Court noted that ordinary consumers and users seeking to locate the functions available under one domain name may be confused if they accidentally arrived at a different but similar web site which offers no such services. Here, the Court modifies the stated assertion by assuming that websites as well as domain names are similar. *Satyam*, (2004) 6 S.C.C. at 157.

[23] Chatam International, Inc. v. Bodum, Inc., 157 F. Supp. 2d 549, 558 (E.D. Pa., 2001) (dealing with a case of 'initial interest confusion' which permits a finding of a likelihood of confusion although the consumer quickly becomes aware of the source's actual identity.); Strick Corporation v. James B. Strickland, Jr., 162 F. Supp. 2d 372, 377 (E.D. Pa., 2001); Hasbro v. Clue Computing, 232 F.3d 1, 2 (1st Cir., 2000). *See also* Warm Things, Inc. v. Adam S. Weiss, WIPO D2002-0085 (April 18, 2002), *at* http://arbiter.wipo.int/domains/decisions/html/2002/d2002-0085.html (reiterating the role of initial interest confusion with respect to the Internet on the basis of U.S. Courts' decisions).

"Internet surfers are inured to the false starts and excursions awaiting them in this evolving medium."[24]

VI. ELEVATING THE UDRP: RE-MIXING LAWS

The electronic environment is a global one. The transnational nature of electronic networks led ICANN to develop the UDRP, a transnational procedure designed to help trademark owners fight abusive registrations.[25] According to the Court, "the defences available to a complaint are… substantially similar to those available to an action for passing off under trademark law".[26] It is true that there are "substantially similar" features, but

---

[24] Chatam International, Inc. v. Bodum, Inc., 157 F. Supp. 2d 549, 559 (E.D. Pa., 2001), *citing* The Network Network v. CBS, Inc., 54 U.S.P.Q.2d 1150 (Cent. Dist. Cal., 2000).

[25] Under the UDRP the Complainant has to prove the all of the following three allegations in order to be successful in a dispute:

> (i) the respondent's domain name is identical or confusingly similar to a trademark or service mark in which the complainant has rights;
>
> (ii) they have no rights or legitimate interests in respect of the domain name; and
>
> (iii) the domain name has been registered and is being used in bad faith.

Instances of bad faith include:

> (i) circumstances indicating that the respondents have registered or acquired the domain name primarily for the purpose of selling, renting, or otherwise transferring the domain name registration to the complainant who is the owner of the trademark or service mark, or to a competitor of that complainant, for valuable consideration in excess of their documented out-of-pocket costs directly related to the domain name; or
>
> (ii) they have registered the domain name in order to prevent the owner of the trademark or service mark from reflecting the mark in a corresponding domain name, provided that they have engaged in a pattern of such conduct; or
>
> (iii) they have registered the domain name primarily for the purpose of disrupting the business of a competitor; or
>
> (iv) by using the domain name, they have intentionally attempted to attract, for commercial gain, Internet users to their web site or other on-line location, by creating a likelihood of confusion with the complainant's mark as to the source, sponsorship, affiliation, or endorsement of their web site or location or of a product or service on their web site or location.

See UDRP, *supra* note 3, at ¶ 4.

[26] *Satyam*, (2004) 6 S.C.C. at 153-154.

this is not entirely correct. The concept of passing off underlies the UDRP procedure, which is influenced by the Lanham Act 1946, the main statute on trademark in the US, which in turn is influenced by common law jurisprudence, where the notion of passing off exists. Even though the phrase 'passing off' is not in the UDRP rules, the Court interprets the provisions and concepts of Indian trademark law with the help of the UDRP rules. This virtually elevates the UDRP rules, a private source of law, to the status of an international treaty.[27]

Is it correct on the Court's part to use the UDRP rules as a relevant and applicable source of law simply because there are no domestic legal provisions pertaining to domain names? This is clearly audacious, but this is exactly what the Supreme Court of India has done. In this case the complainant, the only person entitled to launch a UDRP procedure (and thereby be subjected to its provisions), had decided not to be bound by the terms of the policy. In fact the outcome of a UDRP decision could have well been different from the outcome in the case. The UDRP rules were not pertinent to the case because they were only designed for conflict between a trademark on one side and a domain name on the other and nothing else. In this case, Siffynet had used the mark 'Sify' in its business name, but the plaintiff had *not* used such a sign as trademark, and only a few UDRP decisions have granted protection to trade names.[28]

Not only does the Court partially ground its decision in the UDRP rules, it also interprets them in a very extensive manner. The Court assumed, for instance, that the rules apply to disputes "between domain name owners inter se".[29]

The issue is really whether there are UDRP precedents where a domain name has been deemed equivalent to the mark regarding which there is a complaint. Putting aside a lone vague decision that can be interpreted as

---

[27] *Id*. at 152-153.

[28] LIN Television Corporation v. Home In USA and Home In USA, Inc, WIPO D2000-0257 (June 2, 2000), *at* http://arbiter.wipo.int/domains/decisions/html/2000/d2000-0257.html; Cedar Trade Associates, Inc. v. Gregg Ricks, NAF 93633 (February 25, 2000), *at* http://www.arbforum.com/domains/decisions/93633.htm.

[29] *Satyam*, (2004) 6 S.C.C. at 153-154.

recognising rights on domain names[30], at least one panel has clearly stated that violation of rights on a prior domain name is not within the scope of the Policy.[31] In any case, even if the Court can be criticised for using the UDRP rules as it did, there were no adverse consequences on the facts of the present case, as the bad faith of the domain name owner was quite evident.[32]

VI. IN CONCLUSION: A MODERN DECISION

With law very often lagging behind technology, the existing body of law proves to be inadequate. Solutions have to be pieced together by deriving them from a variety of sources, thereby sidestepping the traditional practice of placing reliance on only those laws that are the 'commands of the sovereign' in the positivist conception. The Supreme Court of India, in this decision, refers to international organisations such as the WIPO and private bodies such as the ICANN which are involved in formulating technology law. In a rather radical move, which appears to address a void in the law, the Court also mixes a purely private dispute resolution policy (the UDRP) with national laws. In doing so, the Supreme Court of India gives an example of a modern decision in an interconnected world, further reinforcing its place in the international judicial network.[33]

---

[30] Singapore Airlines Limited v. European Travel Network, WIPO D2000-0641 ¶ 6 (August 29, 2000), *at* http://arbiter.wipo.int/domains/decisions/html/2000/d2000-0641.html ("The Complainant has registered the domain name 'singaporeair.com' with NSI, as well as other domain names containing 'singaporeair' with country codes, *e.g.*, 'singaporeair.com.sg', 'singaporeair.com.de'. It claims common law trademark rights for 'singaporeair' in cyberspace in those jurisdictions where such rights are recognized, including the United States. … The domain names 'singaporeairlines.org', 'singaporeair.net' and 'singaporeair.org' are obviously identical or confusingly similar to the Complainant's marks, whether registered or common law. The fact that in two of them the letters 'lines' are omitted does not diminish the fact that the marks refer clearly to an airline with a close connection with Singapore – in fact the universally-known Singapore Airlines.")

[31] Cadbury Limited v. Jonathan Harris, WIPO D2000-1249 ¶ 6 (December 6, 2000), *at* http://arbiter.wipo.int/domains/decisions/html/2000/d2000-1249.html ("[T]he Complainant has registered – and is using – the domain name cadburyland.co.uk which is, in effect, identical to the disputed domain name. Similarity with existing domain names is not an offence under the ICANN Policy, but in these circumstances for the Respondents to chide the Complainant for not having previously registered cadburyland.com is plainly unfair.")

[32] *Satyam*, (2004) 6 S.C.C. at 155-156.

[33] Anne-Marie Slaughter, A New World Order 65-103 (2004).

THE INDIAN JOURNAL OF LAW AND TECHNOLOGY
Volume 1, 2005

INTELLECTUAL PROPERTY AND INDIA'S DEVELOPMENT POLICY

*Sudhir Krishnaswamy**

I. INTRODUCTION

As India wades into the 21st century, we are faced with a strategic choice about how we imagine and institutionalise new modes of regulation of access, control and production of information, knowledge and cultural resources. The rapid legislative activity on intellectual property, most recently the Patent (3rd Amendment) Act, 2005, has so radically shifted the goalposts of the debate that we are still to catch our breath! This essay is an exercise in deep breathing and careful reasoning to relieve us from our present breathless state.

Let us begin with Garrett Hardin's contestable prognosis on the 'tragedy of the commons'[1] which has grounded recent debate on intellectual property policy. Operating from his premise, we can agree that the ideal regulatory framework for public goods is one that maximises access and use of these goods while ensuring the sustainable preservation and regeneration of the resource. We may then deploy this ecological metaphor of the commons to set up a benchmark against which we assess the relative merits of regulatory strategies which respond to analytically identical problems with information, knowledge and cultural resources.[2] Let us name the two facets of this regulatory benchmark

* College Teaching Fellow in Law, Pembroke College, University of Oxford; B.A. LL.B. (Hons.) '97, National Law School of India University; B.C.L. '98, D. Phil Candidate, Pembroke College, University of Oxford. An earlier version of this essay was awarded the first place in the INDEA National Essay Competition 2005.

[1] *See* Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243, 1244 (1968).

[2] The application of this ecological metaphor to intellectual property policy has been the subject of much theoretical work. *See, e.g.*, Yochai Benkler, *Commons-Based Strategies for Global Redistribution of Information and Knowledge, at* http://www.benkler.org/Commons-based_strategies_for_development.html (last visited Oct. 18, 2005).

the 'access maximising' and 'sustainable production' imperatives. Having got this far, the rest of this essay seeks to identify the best regulatory strategy as one that responds adequately to both these strategies simultaneously.

II. FRAMING A POST-INDEPENDENCE INTELLECTUAL PROPERTY POLICY

A. Patent Law

The Ayyangar Committee Report on Patent Law offers us a well-articulated insight into the regulatory mindset of the Indian State with respect to patent policy in the 1970s.[3] The Report takes stock of patents granted and pending applications to find that ownership of patents is primarily with multi-national companies. It recommends that the best response to this situation, 'in the national interest', is to adopt a defensive patent policy which accommodates the drive for the autarkic, endogenous development of the national economy. This policy, which denied product patents in two key sectors of the economy - pharmaceutical drugs and agricultural chemicals - endured until we signed the Trade Related Intellectual Property Rights Agreement in 1994.

Before going any further, let us assess this strategy. It was certainly successful in promoting domestic pharmaceutical and fertiliser companies in developing a low-cost, high-access generics market. These firms innovatively developed new production processes and novel formulations and modes of delivery and the technological capacity to emerge as new players in the global market for generics. However, even the most passionate advocate for this policy would grudgingly concede that this policy failed to discover newer drugs.[4] These firms which exploited the commons of ideas created by the patent policy failed to sustain this commons by replenishing it with a culture of innovation and invention. The patent turn in the 1990s, which is now complete with the Patent (3rd Amendment) Act, 2005, though not clearly articulated in a policy

---

[3] N.R. AYYANGAR, REPORT ON THE REVISION OF THE PATENTS LAW (1959).

[4] *See generally* N. Lalitha, *Indian Pharmaceutical Industry in WTO Regime*, 37 ECON. & POL. WKLY. 3542 (Aug. 24, 2002). *See also* Nandan Kamath, Operation Successful but Patient Dead?: Law Reform, The Growth of India's Pharmaceutical Industry, and the Effects on Health and Development (2001-2002) (unpublished M.Sc. thesis, University of Oxford), *available at* http://users.ox.ac.uk/~edip/kamath.pdf (last visited Oct. 5, 2005).

document, promises to reorient these priorities.[5] We are likely to see a significant increase in the patenting of new drugs and molecules by foreign and Indian companies, but there will be a concomitant rise in prices and deterioration in access to drugs for consumers. It may be that a vigorous competition or drug price control policy may contain some of the adverse affects of this turn, but it seems that we are condemned to the eternal play of one imperative at the cost of the other.

B. Copyright Law

Now we move from drugs to music. Till the early 1990s, the Gramophone Company of India and the public broadcasting behemoths, All India Radio and Doordarshan, authored the cultural policies and market practices which defined both the content of music and the spatial and pricing terms on which it was accessed. The maverick Gulshan Kumar deployed a combination of superior production technology, guile and market savvy to unseat the Gramophone Company of India from its lofty perch. The Indian state had not, as it had with patent law, evolved a copyright law policy which paid heed to the imperative of reasonable access to these resources. What it lacked in policy it more than made up with lax implementation. The ability of the T-Series music phenomenon to storm the sound recording market with affordable classics and a rapidly expanding repertoire of musical forms in several languages is well documented by Peter Manuel.[6] Lawrence Liang's insightful legal analysis of this phenomenon goes beyond the stale legal binaries of legal and pirated music to understand how Super Cassettes with the T-Series brand recreated the mass market by generating new audiences for sound recordings.[7] Far from drawing support from copyright law policy, this market was created in the grey interstitial spaces in copyright law. Ironically, Super Cassettes Limited, which was among the key beneficiaries of the lassitude of the Indian state in enforcing

---

[5] For criticisms of the amendment, *see generally* Biswajit Dhar & Niranjan Rao, *Reflections on a TRIPs Compliant Law*, 40 ECON. & POL. WKLY. 1500 (Apr. 9, 2005); K.M. Gopakumar & Tahir Amin, *Patents (Amendment) Bill 2005: A Critique*, 40 ECON. & POL. WKLY. 1503-1505 (Apr. 9, 2005).

[6] PETER MANUEL, CASSETTE CULTURE: POPULAR MUSIC AND TECHNOLOGY IN NORTH INDIA 67-71 (1993).

[7] Lawrence Liang, *Porous Legalities and Avenues of Participation*, *in* SARAI READER 05: BARE ACTS 6, 8-11 (Monica Narula et al., eds., 2005).

copyright, is now among the most vigorous enforcers of its copyrights. The ongoing court battles on version recording and radio broadcasting are testimony to this new dynamic in the sound recording industry.[8]

Presently, satellite broadcasting and private FM radio threaten the broadcasting monopolies of All India Radio and Doordarshan much like T-Series did HMV! The sloth bears of the public broadcasting era seem set to be buffeted by stormy weather from the new upstarts who threaten to change the rules of the game. The Supreme Court's efforts at offering ingenious public law remedies to facilitate low-priced access to cricket match spectators via Doordarshan at Ten Sports' expense failed to account for the costs of production involved.[9] At this early stage it is unclear if the legal territory of broadcasting is likely to be defined in the realm of constitutional rights-based writ litigation or by the creativity and foresight of private lawyers working the contours of copyright law.[10] Radio Mirchi's efforts at securing a compulsory license to broadcast music owned by Super Cassettes Limited is another early case that will etch out the likely contours along which copyright law will regulate broadcasting in India. As this contest is being played out in the courts, and not the executive and legislative branches of government, judges will need to display great dexterity in fashioning remedies which appreciate the twin imperatives of maximising access while sustaining the production of goods of a public character.

Copyright policy faces its sternest test in the realm of computer software. The open-source movement, while asserting copyright over code, has developed an innovative licensing strategy that keeps source code in the public domain. By ensuring that rights over distribution and further modification are not monetised, the virally transmitted obligations of the open source license satisfy the twin imperatives of the commons: maximising access and sustaining

---

[8] Super Cassettes Ltd v. Bathla Cassette Industries, I.A. No. 1766/93 in Suit No. 381 of 1993, Delhi High Court, decided on Sept. 9, 2003.

[9] *See* Ten Sports v. Citizen Consumer and Civic Action Group, (2004) 5 S.C.C. 351.

[10] For detailed analysis of recent cases on free speech, *see* V. Raghavan, *Reflections on Freedom of Speech and Broadcasting in India*, *in* HUMAN RIGHTS, CRIMINAL JUSTICE AND CONSTITUTIONAL EMPOWERMENT (K. Chockalingam & C. Raj Kumar eds., 2004).

the production of public goods.[11] When President A.P.J. Abdul Kalam endorses open-source software as the development alternative for India in the field of information technology, he pays heed only to the cost implications of such a move.[12] In other words, open-source software provides a contingent strategy to him that furthers the developmentalist visions of a surging Indian economy catching up with the west. Such a blinkered view, like the patent policy in the 1970s, blinds us to the crucial second imperative of a sustainable commons which is continually replenished by the production of public goods. This second limb holds out far greater revolutionary potential for the ways in which knowledge is configured, developed and used.

C. Traditional Knowledge

The debate on protecting traditional knowledge in India best depicts the multi-dimensional character of the debate on the regulation of information, knowledge and cultural resources. We may usefully isolate two strands of this debate on the basis of the policy frameworks they offer to resolve of the problem. First, there are those who entrap the policy debate in colonialism, where wealthy Western nations and multi-national companies are seen to be expropriating 'our' indigenous knowledge to immense profit.[13] The moral panic around neem, basmati and turmeric, among others, bears testimony to this view. The biopiracy agitators fail to interrogate the nationalist premise on which this polemic stands. Is the threat of biopiracy merely one that comes from without? Would we be content if it were established that Indian pharmaceutical companies exploited this knowledge? The nationalist lens characteristic of this view prompts a regulatory response transferring control over traditional knowledge resources to a select cabal of state bureaucrats in a move that would rival the nineteenth- and twentieth-century transfers of

---

[11] *See* Jonathan Zittrain, *Normative Principle for Evaluating Free and Proprietary Software*, 71 U. CHI. L. REV. 265 (2004) for an attempt at developing a normative analysis of free and proprietary software. *See* Richard A. Epstein, *The Creators Own Ideas*, *available at* http://www.technologyreview.com/articles/05/06/issue/feature_creators.asp (last visited Oct. 7, 2005) for recent criticism on the free software movement.

[12] *Go for Open Source Code, Kalam tells IT Industry*, FIN. EXPRESS, May 29, 2003, http://www.financialexpress.com/fe_full_story.php?content_id=35147 (last visited Oct. 12, 2005).

[13] *See India Wins Landmark Patent Battle*, *at* http://news.bbc.co.uk/2/hi/science/nature/4333627.stm (last visited Sep. 9, 2005) (discussing the recent European Patent Office decision to revoke neem patents).

natural resources such as forests to the hands of the colonial forest department. Madhav Gadgil and Ramachandra Guha have, in fact, explored the scale and perversion of the expropriation whereby state bureaucrats developed into a breed of rent-seekers over forest lands to the exclusion of tribal communities.[14] There is little evidence to suggest that the state bureaucracies constituted by the recently enacted Biological Diversity Act of 2002 will conduct themselves in any differently. Our recent history teaches us that 'nationalising' resources in the name of 'our' common heritage has a troubled legacy and, notwithstanding the emotive appeal of the biopiracy debate, we must resist such an option with traditional knowledge.

A second strand to the debate avoids the clutches of the self-aggrandising state and argues for a regulatory response which facilitates individuals and communities acting in their own interest by securing conventional intellectual property protection or a suitably designed *sui generis* property regime.[15] It diagnoses the problem with traditional knowledge as merely one of accommodating these knowledge forms within pre-existing legal formats or, if that proves too difficult, of devising new stronger property regimes which iron out these difficulties. By focusing on communities and individuals who operate out of the spotlight of urban intellectual property lawyers, organisations such as Sristi and the National Innovation Foundation attempt to secure to innovators the fruits of intellectual property protection and venture capital funding, which nurtures enterprises to scale. Such an approach supposes the problem not to be with a property regime per se but only with who the beneficiaries of such a regime are and the terms and conditions under which one secures legal protection.[16] Therefore, if the Indian state or other civil

---

[14] RAMACHANDRA GUHA & MADHAV GADGIL, THIS FISSURED LAND: AN ECOLOGICAL HISTORY OF INDIA 140-145 (1993).

[15] For a detailed elaboration of the latter version, *see generally* N.S. Gopalakrishnan, *Protection of Traditional Knowledge: The Need for a Sui Generis Law in India*, 5 J. WORLD INTELL. PROP. 725 (2002) (identifying the basic principles based on which a *sui generis* law can be enacted in India to effectively protect the interests of the holders of traditional knowledge).

[16] Anil K. Gupta, *How Can Asian Countries Protect Traditional Knowledge, Farmers Rights and Access to Genetic Resources through the Implementation or Review of the WTO TRIPS Agreement?*, Address at the Joint ICTSD/CEE/HBF Regional Dialogue for Governments and Civil Society, Chiang Mai, Thailand (March 29-30, 2001), *available at* http://www.ictsd.org/dlogue/2001-03-29/Gupta.doc (last visited Nov. 3, 2005).

society actors were to develop facilitating structures which allow previously excluded peoples to access these property regimes, the market would take care of the rest. Ironically, the role of such intermediaries in generating databases of traditional knowledge or ex situ and in situ conservation sites for biodiversity, whether motivated by developmental or ecological concerns, may have inadvertently obviated the possibility of protection under existing patent rules.[17]

Setting aside such crucial problems which arise with the extension of property protection to traditional knowledge, the success of this approach would be measured by the number of innovators earning financial rewards. There is no significant evidence of this as yet but in the event of such success there are likely to be serious issues relating to individual innovators laying claim to communal creations, or the need for trusts and societies representing communities of creators. This would call for a great deal of legal ingenuity[18] and insight into the political economy of communal creation. The battles between the power-loom weavers and traditional handloom weavers with respect to the geographical indication filing for Pochampalli sarees is an example of the kinds of issues that we will confront using such an approach.[19]

Both approaches to traditional knowledge discussed above fail to satisfy the benchmarks identified at the start of this essay. While a state regulation model fails to deliver on both access-maximising and sustainable production standards, the property model will almost certainly fail to satisfy the latter standard. Art historians remind us about how active borrowing (read copying!) from existing weaving and art traditions such as ikat, as well as the influence of political movements such as Vinoba Bhave's Bhoodan movement, moulded the aesthetic practices of the Pochampalli silk weavers. By freezing this tradition within an intellectual property format, we will arrest this rich process of creativity enabled by a culture of sharing and borrowing. A property strategy threatens to ossify cultural creativity and starve the commons.

---

[17] Anil K. Gupta, *Is All TK a Prior Art?*, *at* http://www.sristi.org/papers/new/Is%20all%20TK%20a% 20prior%20Art.PDF, ¶ 3-4 (last visited Nov. 3, 2005).

[18] *See* Bulun Bulun v. R & T Textiles Pty. Ltd., 86 F.C.R. 244 (1998) (discussing a similar problem in Australia).

[19] Nithya Reddy, Traditional Knowledge Protection: A Case Study of Pochampalli Sarees, Address at ALF-SARAI Student Workshop, Bangalore (July 23, 2004).

III. IN LIEU OF A CONCLUSION

As we peep over the ledge looking into the new century, our genius will lie in devising a regulatory policy for information, knowledge and cultural resources which revitalises and sustains a vibrant public domain. A commons-based approach does not automatically mean that all resources must be committed to an unregulated public domain. On the contrary, a carefully designed legal strategy, such as that developed by the open-source movement, responding to the political economy of computer software, needs to be imagined and deployed in fields ranging from traditional knowledge protection[20] to trademark and patent law. The Directory of Open Access Journals (www.doaj.org) and the Public Library of Science (www.public libraryofscience.org) are efforts in the field of academic publishing pioneering the extension of public domain strategies beyond computer software. It is only the vitality of our understanding and imagination and clarity of purpose that can see us through the battles over the regulation of information, knowledge and cultural resources that lie ahead.

[20] For a recent discussion of attempts to advance public domain strategies for traditional knowledge, *see* Anupam Chander & Madhavi Sunder, *The Romance of the Public Domain*, 92 CALIF. L. REV. 1331, 1366-1372 (2004).