UNIT 2 EMERGING ISSUES IN INTELLECTUAL PROPERTY

Structure

2.1 INTRODUCTION

The global intellectual property system has constantly to cope with new challenges as on the one hand advances in science and technology give rise to ever new unprecedented issues and, on the other, new, legitimate claims crop up from commercialisation of knowledge embedded in traditional systems. The emergence of information and communication technology (ICT), and biotechnology (BT), the two fields of knowledge which have seen staggering advances at breath-taking pace, has posed new issues before the IP protection system. The progress in these two fields has literally transformed the way one had known the world, transacted business and carried out other activities even only a quarter century ago. Similarly as the conduct of R & D as mega business brought out predatory forays into commercialisation of knowledge embedded in traditional systems and exploitation of cultural heritage of indigenous communities without any share or acknowledgement going to the traditional communities that owned these resources, several issues of ethics and equity have come to the fore.

Objectives

After reading this Unit, you will be able to appreciate:

- the challenges which are thrown up by the advances in the ICT and BT before the global IP regime;
- the issues of ethics and equity that have surfaced with the commercial exploitation of cultural heritage of indigenous communities and traditional societies; and
- the role of WIPO in resolving these challenges and issues amicably through evolution of consensus at the international level.

2.2 ADVANCES IN INFORMATION AND COMMUNICATION TECHNOLOGY– CHALLENGES FOR IP IN DIGITAL ECONOMY

Advances in ICT have radically transformed the way the world lived only a few decades ago. The way we work and do business, access information, study, write and reproduce works, convene conferences, communicate with fellow beings, entertain

ourselves, seek medical advice, pay taxes, order things, in short practically everything about our living has changed due to these advances, particularly the digital transmission systems like the internet, satellite broadcasting, cable television etc. We are truly living in a digital economy.

Digital economy has posed several challenges for the IPR. The first one arises in copying: the technology has made copying extremely easy and simple; copies can be made fast and in very large numbers at small cost practically by anybody anywhere; each copy is almost as good as the original and can itself be an independent source of high-fidelity copies. Similarly dissemination of information through internet can be extremely fast – information sent by one individual to a group of persons, can be forwarded again by each recipient with the same ease and the numbers of the recipient can explode exponentially. Enforcing IP law against copying becomes extremely difficult under these circumstances. This is to be seen in the context of the general perception that copying an IP work, which is the subject matter of the copyright, for personal/private use is 'fair use'. In a printed work, the compensation the author gets is in proportion to the number of the copies sold. In the case of a digitally disseminated work, this course has no application. Here one has to think of digital means to control access to, or permit copying of the work.

The problem of piracy becomes still graver with multiple-user computer systems, where a pirated digital work loaded on to the system can be used by several persons, all at the same time.

A difficult challenge is posed by the ease of manipulation of a digital work, which is popularly referred to as 'mixing' in India. Such mixing may result in products which may be termed as new and marketed as such. Re-engineering computer programmes can transform them. The copyright protection that gives the original author a right in the derivative work is not so easy to enforce in such cases. It calls for a new set of regulations that can be enforced.

Copyright as it exists today extends over several categories of works: literary, dramatic, musical, painting, photographs, audio-visual recordings, broadcasts, performances, etc. The digital technology makes it possible to combine several attributes in a single work – text, images, sound. It is quite possible that a work will result, sooner rather than later, that will not fall under any of the existing categories.

The protection of IPRs over digital products is clearly a new challenge and it is receiving due attention globally. Two approaches to meet the challenges are: control of access and metering usage. Protection of integrity of the work is an area of concern.

2.2.1 Electronic Commerce

There is no precise definition of electronic commerce. Broadly it is understood to mean commercial activity conducted across electronic media, mainly through internet, which is a global information system based on a global infrastructure of computer and telecommunication technologies. A whole lot of commercial activities e.g. advertising, buying, selling, money and other transactions are conducted over the internet for our purpose. We will include all commercial and financial transactions under the term electronic commerce, or e-commerce. E-commerce leads to greater economic efficiency and profitability as also to improved competitiveness. It accelerates the evolution of information society. The emergence of information super highways and national information infrastructures are pointers in that direction.

A major challenge to the IPR system from the wide use of internet arises from the fact that while IPRs are territorial in nature, internet use knows no national boundaries. Digital data transmission cuts across borders, information moves globally and is accessible from anywhere in the world. Information placed on the internet can be

simultaneously accessed by indefinite number of people from all over the globe. It calls for a new globally acceptable IPR regulatory regime.

2.2.2 WIPO's Role

As the Internet continues its remarkable expansion, its capacity to disseminate information, knowledge and content has thrust the intellectual property system to the center of the debate over the future shape of the online world. In this new and rapidly changing environment, information and knowledge are increasingly the source of value; hence the intellectual property system – the body of law protecting creations of the mind – is crucial in maintaining a stable and equitable foundation for the development of the digital society.

While the intellectual property system will play a critical role in shaping the digital world, the Internet will have a profound effect on the system itself. The long-term influences are as yet unclear. What is immediately apparent, however, is that this new medium presents a host of complex opportunities and challenges for the intellectual property community.

As the international intellectual property organization, WIPO has launched a far-reaching program of activities - the WIPO Digital Agenda - which reflect and respond to the influence of the Internet and digital technologies on the intellectual property system, and vice-versa, in the coming years. The Organization is committed to formulating appropriate responses aimed at encouraging the dissemination and exploitation of creative works and knowledge on the Internet, as well as at protecting the rights of their creators. In the constantly evolving digital environment, this is a truly unique challenge.

Issues that are covered by the Digital Agenda (see below) include the challenge of the digital divide, the application of intellectual property law in transactions via the Internet, the impact of the Internet and digital technologies on the areas of copyright and related rights, trademarks and domain names, and patents, as well as dispute resolution.

The WIPO Digital Agenda was launched in September 1999 by the Director General of WIPO at the WIPO International Conference on Electronic Commerce and Intellectual Property. It was approved later that month by WIPO's Member States at their General Assembly.

To keep the public fully informed about its activities under the Digital Agenda, WIPO has created a website dedicated to electronic commerce issues. This web site, maintained in English, French and Spanish, provides extensive information regarding WIPO programs in the areas concerned, background papers on substantive issues, and a comprehensive calendar for meetings. The web site can be found at http://ecommerce.wipo.int/. Information updates regarding WIPO electronic commerce program activities and meetings will also be sent by e-mail to interested parties on a quarterly basis. Persons wishing to receive such information updates can register for this purpose at http://ecommerce.wipo.int/information/updates/index.html.

The WIPO Digital Agenda

1. Broaden the participation of developing countries through the use of WIPONET and other means for

    - access to IP information
    - participation in global policy formulation
    - opportunities to use their IP assets in ecommerce.

2. Promote adjustment of the international legislative framework to facilitate ecommerce through

   - the extension of the principles of the WIPO Performances and Phonograms Treaty (WPPT) to audiovisual performances
   - the adaptation of broadcasters' rights to the digital era
   - progress towards a possible international instrument on the protection of databases.

3. Implement the recommendations of the Report of the WIPO Domain Name Process and pursue compatibility between identifiers in the real and virtual worlds by establishing rules for mutual respect and eliminating contradictions between the domain name system and the intellectual property system.

4. The interoperability and interconnection of electronic copyright management Develop appropriate principles with the aim of establishing, at the appropriate time at the international level, rules for determining the circumstances of intellectual property liability of Online Service Providers, compatible within a framework of general liability rules for OSPs.

5. Promote adjustment of the institutional framework for facilitating the exploitation of intellectual property in the public interest in a global economy and on a global medium through administrative coordination and, where desired by users, the implementation of practical systems in respect of

   - systems and their metadata (i.e., the information about the copyrighted material stored in these systems)
   - the online licensing of the digital expression of cultural heritage
   - the online administration of IP disputes.

6. Introduce and develop online procedures for the filing and administration of international applications for the PCT, the Madrid System and the Hague Agreement at the earliest possible date.

7. Study and, where appropriate, respond in a timely and effective manner to the need for practical measures designed to improve the management of cultural and other digital assets at the international level by, for example, investigating the desirability and efficacy of

   - model procedures and forms for global licensing of digital assets
   - the notarization of electronic documents
   - the introduction of a procedure for the certification of websites for compliance with appropriate intellectual property standards and procedures.

8. Study any other emerging intellectual property issues related to electronic commerce and, where appropriate, develop norms in relation to such issues.

9. Coordinate with other international organizations in the formulation of appropriate international positions on horizontal issues affecting IP, in particular

   - the validity of electronic contracts
   - jurisdiction.

2.2.3 Internet Domain Names Disputes

What is a domain name?

A domain name is the address of a web site that is intended to be easily identifiable and easy to remember, such as *yahoo.com*, or *wipo.int*. These user-friendly addresses

for websites help connect computers - and people - on the Internet. Because they are easy to remember and use, domain names have become business identifiers and, increasingly, even trademarks themselves, such as *amazon.com*. By using existing trademarks for domain names - *sony.com,* for example - businesses attract potential customers to their websites.

What is the nature of the disputes?

Domain name disputes arise largely from the practice of *cybersquatting*, which involves the pre-emptive registration of trademarks by third parties as domain names.

Cybersquatters exploit the first-come, first-served nature of the domain name registration system to register names of trademarks, famous people or businesses with which they have no connection. Since registration of domain names is relatively simple and inexpensive – less than US$100 in most cases – cybersquatters often register hundreds of such names as domain names.

As the holders of these registrations, cybersquatters often then put the domain names up for auction, or offer them for sale directly to the company or person involved, at prices far beyond the cost of registration. Alternatively, they often keep the registration and use the good name of the person or business associated with that domain name to attract business for their own sites.

Why so many disputes?

There is no agreement within the Internet community that would allow organizations that register domain names to pre-screen the filing of potentially problematic names. The reasons vary, ranging from allowing easy registrations to stimulate business, to the practical difficulties involved in determining who holds the rights to a name, to the principle of freedom of expression. Furthermore, the increasing business value of domain names on the Internet has led to more cybersquatting, which results in more disputes and litigation between the cybersquatters and the businesses or individuals whose names have been registered in bad faith.

How did WIPO get involved in the resolution of disputes?

The Internet grew rapidly over the last decade as a place to do business, although no international legal standards existed to resolve domain name disputes. The Internet Corporation for Assigned Names and Numbers (ICANN), the organization responsible for, among other things, management of the generic top level domains such as .com, .net and .org, was in urgent need of a solution to the dispute resolution problem. The process of negotiating a new international treaty was considered too slow, and new national laws would most likely be too diverse. What was needed were internationally uniform and mandatory procedures to deal with what are frequently cross-border disputes.

With the support of its member States, WIPO – which is mandated to promote the protection of intellectual property worldwide – conducted extensive consultations with members of the Internet community around the world, after which it prepared and published a report containing recommendations dealing with domain name issues. Based on the report's recommendations, ICANN adopted the Uniform Domain Name Dispute Resolution Policy (UDRP). The UDRP went into effect on December 1, 1999, for all ICANN-accredited registrars of Internet domain names.

Under the UDRP, WIPO is the leading ICANN-accredited domain name dispute resolution service providers. Additionally, a growing number of registrars of country code top-level domains have designated WIPO as a dispute resolution service provider.

How does the UDRP work?

The UDRP permits complainants to file a case with a resolution service provider, specifying:

- the domain name in question,
- the respondent or holder of the domain name,
- the registrar with whom the domain name was registered,
- the grounds for the complaint.

Such grounds include, as their central criteria, the way in which the domain name is identical or similar to a trademark to which the complainant has rights; why the respondent should be considered as having no rights or legitimate interests in respect of the domain name that is the subject of the complaint; and why the domain name should be considered as having been registered and used in bad faith.

Who makes the decisions and how does WIPO ensure that there is no conflict of interest?

Taking into account the specific circumstances of each dispute, such as the nationality of the parties, WIPO appoints an expert "neutral", or a panelist (from a roster of some 200 independent individuals qualified for deciding such cases) to review the dispute and issue a decision. Either party to the dispute may opt to have one or three panelists assigned to the case.

Panelists must confirm to WIPO the absence of any potential conflict of interest before taking a case, as well as disclose in a written statement any and all facts that should be considered prior to appointment. In the event that one of the parties involved in a case raises a specific objection to a panelist, WIPO will consider offering a replacement.

What factors guide the panelists' decisions?

- Whether the domain name is *identical* or *confusingly similar* to a trademark or service mark in which the complainant has rights.
- Whether the respondent has any *rights* or *legitimate interests* in the domain name (for example, the legitimate offering of goods and services under the same name).
- Whether the domain name was registered and is being used in *bad faith***.**

What accounts for WIPO's popularity as a resolution service provider?

WIPO's resolution service offers highly qualified neutral panelists, thorough and expeditious administrative procedures, and overall impartiality and credibility.

Dispute resolution at WIPO is much faster than normal litigation in the courts. A domain name case filed with WIPO is normally concluded within two months, using on-line procedures, whereas litigation can take much longer.

Fees are also much lower than normal litigation. There are no in-person hearings, except in extraordinary cases. Minimal filing requirements also help reduce costs. For resolution of a case involving one to five domain names, with a single panelist, the cost is US$ 1,500; for three panelists, the total cost is US$ 3,000. For six to ten domain names, the cost is US$ 2,000 for a single panelist and US$ 4,000 for three panelists.

What are the resolutions offered by WIPO, and are they binding?

A domain name is either **cancelled, transferred**, or **sustained** (i.e., the complaint is denied and the respondent keeps the domain name). Some examples of cases that

received significant media attention include ***juliaroberts.com*** and ***jimihendrix.com***, which were transferred to the individuals or their families. A complaint involving ***sting.com***, filed by the singer known as Sting, was denied for a variety of reasons, principally that the domain name registrant was also known by the same nickname, as well as the fact that the name is a common word in the English language and is not necessarily an exclusive trademark.

There are no monetary damages applied in UDRP domain name disputes, and no injunctive relief is available. The accredited domain name registrars - which have agreed to abide by the UDRP - implement a decision after a period of ten days, unless the decision is appealed in that time.

The resolutions offered by WIPO are mandatory in the sense that accredited registrars are bound to take the necessary steps to enforce a decision, such as transferring the name concerned. However, under the UDRP, either party retains the option to take the dispute to a court of competent jurisdiction for independent resolution.

Will UDRP dispute resolution stifle the Internet?

On the contrary, domain name registration procedures remain flexible and open to everyone. In fact, the number of disputes represent a mere fraction of the more than 33 million domain names in use on the Internet today. The number of cases filed in 2000 was 1850; it has been progressively coming down every year since then, and in 2003 it was 1053. With the success and reputation of WIPO's dispute resolution services, awareness is increasing among Internet users that abusive practices regarding domain names will no longer go uncontested, and that a quick and simple recourse exists. This helps assure a general reliability of domain names on the Internet.

What is WIPO doing to further improve the reliability of domain names?

The UDRP was originally designed for settling disputes in generic top-level domains such as .com, .net, and .org. However, some country code domain name registrars also have started to adopt the UDRP or similar policies, and WIPO has begun providing dispute resolution services for country code top-level domains - for example, .VE for Venezuela and .TV for Tuvalu - further increasing reliability among domain names on the Internet.

WIPO is now addressing the question of protection for identifiers other than trademarks, such as geographical indications - for wine-producing regions, for example – personal names (considering protection other than as a recognized trademark, for which they may already qualify under the UDRP), trade names, and names or acronyms of international intergovernmental organizations.

Developments in the field of domain names and related dispute resolution are extremely dynamic. Continuously updated information on this subject is available on the Internet at http://arbiter.wipo.int/domains, as well as at http://ecommerce.wipo.int/domains.

SAQ 1

Spend 3 min.

Mark the following statements as True (T) or False (F):

- Protection of integrity of copyrighted works is easy with all the advances in digital technology
- Cybersquatting is at the root of internet domain name disputes
- The number of domain name disputes compared to the total number of addresses on the web is very small.

2.3 BIOTECHNOLOGY AND IP

Biotechnology utilises biological processes; its techniques use living organisms or parts of them and naturally occurring proteins and enzymes, or these compounds derived from living systems.

The economic potential of biotechnological processes and products is recognised to be vast. The scope of inventions and innovation in biotechnology is limitless. And the demand for venture capital for establishing biotech-based industry is huge. In view of these characteristics biotechnology presents a hot area for intellectual property. However, the field bristles with sensitive, ethical and moral issues which generate heated controversy.

The difficulties partly arise because the existing intellectual property system has been basically designed for inanimate objects. Living objects, natural or engineered have not been traditionally regarded as subject matter of intellectual property. But the fact that they represent a literal gold mine for products and processes to meet a number of human wants and serve science and society is compelling a re-examination of views and issues, and the situation of living systems and technology based on them is undergoing transformation. Micro organisms were widely used in pharmaceutical research by 1980 and many industrialised countries brought them under patent cover. Culture of tissues and cells from plants and animals including man soon followed. However, this trade gave rise to debates around several issues: ethical issues in biotech inventions which generally used techniques like recombinant DNA, cell fusion, manipulation of embryos; rights of researchers and communities; farmers privilege, sharing of genetic material, distinction between 'discovery' and invention, etc.

A point of difficulty arises because IPR is granted in lieu of an adequate description of invention, subject to other criteria, but as a biological invention involves a living substance it may not be possible to do so. Also, the invention can not be reproduced if the biological material is not available. This led to a system of international repositories where all biological materials are to be deposited by inventors as required under the Budapest Treaty on the International Recognition of the Deposit of Micro organisms for the Purposes of Patent Procedure. However, each member-State, party to the Treaty has to legislate such provision into its national law.

The 'discovery vs. invention' debate acquires extra edge in the case of biological invention. Logically, if man notices a biological substance that already existed in nature and observes its properties, for the first time ever, he is on to a discovery, not an invention. These are products of nature, not human inventions. Similarly, all natural biological processes of reproduction in animals and plants are not inventions to be patented. The question of patent will arise if there is human intervention that leads to some thing that fulfils criteria of patentability. However, things do not seem to be so simple and straight and the most developed block of nations (the USA, the European Union, Japan) seems to be concluding that naturally occurring substances including micro organisms would qualify for patents if they 'are isolated for the first time in a form or purity that did not occur in nature', have been identified distinctly and have industrial application.

A European Commission (EC) Directive gives a list of biological inventions which should be regarded as non-patentable on grounds of public order and morality. It includes:

- processes for cloning human beings;
- processes for modifying the germ line genetic identity of human beings;
- use of human embryo for industrial or commercial purposes; and

- processes for modifying the genetic identity of animals which are likely to cause them suffering without any substantial benefit to man or animal, and also animals resulting from such process.

The TRIPS Agreement does not define 'micro organism' but makes it obligatory to provide patent protection for 'micro organisms' and 'microbiological processes'. Thus a State has some flexibility in deciding what can be protected under 'micro organisms'. The TRIPS requires plant varieties to be protected by patents or by a *sui generis* system or by a combination of both, but countries could exclude plants from patenting.

2.3.1 Human Genome

The draft of the genetic master blue print of a human being is ready; preliminary sequence maps of the human genome have been made. The questions pertinent to intellectual property are: Who owns the data? Are genes or parts of genes patentable? If so, under what conditions? Is the donor of human genetic issue relevant from the IP point of view, if its study leads to a patentable product? This last question is particularly important because it involves the questions of informed consent and benefit sharing. While patent is not concerned with the donor consent and developed countries pay scant regard to consent and benefit sharing, the developing countries regard them as key issues in any collaboration for research, using indigenous genetic material.

There is substantial opinion against patenting of genes: it is feared that once genes become private property, full benefits of genome decoding will not be available; the counterpoint advanced by drug developing companies is that without patent rights, it would not be possible to fund research into new drug development.

The main arguments against patenting of genes are: (i) genes being natural entities can not be owned by any body; (ii) genes being discoveries have no element of novelty or inventiveness and thus do not qualify as invention; (iii) the processes for isolation and cloning of genes are well known.

In most developed countries human gene sequences are patentable as part of genomic invention. There could be multiple patents on different parts of the same gene sequence. It makes further examination of and research into gene sequence very costly as licences will have to be obtained from the several owners of different patents concerned with the work, and costs for searching different patents will have to be paid.

There is a rush from companies, having large databases of ESTs to patent these ESTs in the hope that usefulness of these fragments will be found at some future date. There is strong opinion against patenting such gene fragments because it is early stage of genome research and the applicants know little about the functions and uses of genes and have not even characterised them.

2.4 TRADITIONAL KNOWLEDGE, FOLK LORE, BIODIVERSITY AND IP

Traditional Knowledge (TK) refers to the total stock of knowledge and practices developed and used by a community over centuries to meet different life situations. It will include traditional medicine and healing practices, folk lore and folk art, ethnic and ethnographic products. TK is the outcome of an indigenous community's observations and experiences, and expressions of its creative urges in various forms through the long march of history. The Indian systems of medicine like Ayurveda and Siddha are recognised to be very well developed and intensely knowledge based. Besides them folk medicines and psychotherapeutic healing practices call for attention. India has rich traditions of folk art and craft, folk music, folk dance and

folk drama. This is largely true of all indigenous communities of the world. They have fabulous knowledge of natural resources around them – herbs and plants, animals including insects, reptiles and birds, minerals, water resources. Above all they have developed ways to live in harmony with nature in an eminently sustainable way, preserving and enhancing the biodiversity and endeavouring to give back to the nature what one is obliged to take away from it.

TK is an omnibus term that would cover knowledge of a community about science technology, agriculture, medicine, biodiversity, folk art, craft, dance, drama, music, designs and motifs, symbols, stories and movable cultural properties.

Products based on traditional knowledge and indigenous resources through the application of modern science and technology have generated mega businesses. The folk art in its many forms stands transformed into a big cultural industry. This transformation of the TK into big commerce brings in its wake the issues of intellectual property.

It may be pointed out that the TK and the folklore on the one hand, and the IP system on the other, have very different sources of inspiration and motivation, and cultural attitudes. TK has sustained communities providing them with sources of income, items of food and other necessities of life as also effective health care in a very sustainable way. Exploitation of nature for personal greed is largely unknown in indigenous communities. There is emphasis on community as the owner of natural resources, rather than the individual. The value system of IP springs from the concept of private ownership of one's intellectual creation, and exclusion of others from sharing the fruits of ones intellectual labour. The two divergent approaches need to be reconciled in the interest of both equity and scientific progress.

The traditional knowledge does not have always to be old; in fact, it could be contemporary. TK is the knowledge that traditional communities have been developing to face and solve the problems of life as they face. As the social environment gradually but surely changes, the newer generations have to cope with the change and add to the total stock of knowledge. The new contribution becomes an integral part of the TK. The critical thing is that the creation, verification and adoption of new knowledge takes place according to the norms and practices of the traditional system.

WIPO Work on Traditional Knowledge

More recently, international intellectual property policy debate has broadened its focus to consider the related issue of traditional knowledge (TK), and particularly how traditional knowledge may be protected through the intellectual property system.

Increasingly, traditional knowledge is considered as the content, substance or idea of knowledge (such as traditional know-how about the medicinal use of a plant, or traditional ecological management practices), as distinct from the form, expression or representation of traditional cultures (such as a traditional song, performance, oral narrative or graphic design), which are known as TCEs or expressions of folklore. This section reviews the current debate about traditional knowledge protection, which is at a more exploratory stage but is nonetheless an area of high policy priority for many countries, and is under active consideration within WIPO as well as several other international organizations.

Holders of Traditional Knowledge, such as indigenous and local communities, have stressed that there is a holistic relationship between their traditional knowledge, the genetic resources (such as plants) which form part of their environment, and the TCEs or expressions of folklore that reflect their cultural identity. The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore (the IGC) was established in 2001 to address these issues in a comprehensive way, and has therefore considered the protection of

both traditional knowledge and TCEs, together with intellectual property aspects of genetic resources.

The call for protection of traditional knowledge through the intellectual property system raises challenging questions:

- What is traditional knowledge?
- Can the astonishing diversity of indigenous and local intellectual and spiritual traditions be bundled together into one single definition, without losing the diversity that is their lifeblood?
- What is meant by "protection"? What is to be protected, and what is it to be protected from, for what purpose, and for whose benefit? If there are to be rights in traditional knowledge, who should own the rights, and how should they be enforced?

In addressing these issues, the IGC's work on traditional knowledge protection has also highlighted deeper concerns. For instance, there are concerns that attempts to protect traditional knowledge within the intellectual property system could turn traditional knowledge into an asset sought by third parties, thereby separating it from the very communities that create and nurture it, and consequently depriving them of vital benefits. So communities have maintained that any protection of traditional knowledge should remain true to its spiritual, scientific and legal roots. For many communities, the ancestral customary laws and practices that determine how knowledge should be protected are integral to the knowledge itself: traditional law and knowledge form an indivisible whole. Should these roots – the community life, the traditional practices and beliefs that are integral to traditional knowledge – be protected just as much as the intellectual and cultural fruits they have yielded?

Traditional Knowledge and the Intellectual Property System

This means that the search for traditional knowledge protection can amount to a fundamental reassessment of the basic principles and assumptions of the intellectual property system, and a complex debate about how traditional knowledge relates to the formal concepts and structures of the modern intellectual property systems. Some argue that intellectual property facilitates the assertion of illegitimate property rights over material derived from traditional knowledge. But practice has shown how intellectual property systems can strengthen the authority of the holders of traditional knowledge and associated genetic resources, and can help to define and structure how their intangible assets are used and the benefits equitably shared.

Much depends on opening up more practical options to indigenous and local communities, and enhancing their capacity for benefiting from their options. This poses the crucial question: What is the immediate need? Is it to create new forms of legal protection for traditional knowledge, to strengthen communities' capacity for making use of existing mechanisms or to build coordinated links between development and adaptation of legal systems and practical capacity-building?

Traditional Knowledge and the Global Marketplace

The debate about traditional knowledge protection has come to a head because of the increased perceived value of traditional knowledge in the global marketplace. Traditional knowledge and associated genetic resources have been drawn on to create new products, pharmaceuticals and agricultural products. In addition, the cultural, spiritual and technological dimensions of many traditional knowledge systems have survived, often adapting to the challenges of contact and interaction with modern technological society: traditional knowledge remains part of the life of many living communities, and should not be relegated to the archives as a historical curiosity. Certainly, traditional knowledge is a new concept in international intellectual property.

WIPO initiated work on traditional knowledge in 1998, and the Convention on Biological Diversity, a landmark in the recognition of traditional knowledge in international law, was concluded in 1992.

Yet traditional knowledge constitutes some of humankind's oldest intellectual traditions and systems of knowledge and belief. Technical know-how, TCEs and the natural environment interact and interplay in a complex manner, finding expression in customary practices, community laws and ethical standards. For some traditional communities, customary law creates a vital link between access to and custodianship of traditional knowledge, and a sense of responsibility to respect, preserve and use it appropriately. These forms of knowledge, law and custodianship long predate the emergence of modern intellectual property law. So one concern is to respect and safeguard these traditional legal concepts and traditional knowledge management systems. Traditional wisdom has also been vital for the conservation of the natural environment, and is an essential source of information about the preservation and sustainable use of biological resources. It is therefore no coincidence that the first recognition of traditional knowledge as such in an international legal setting was in relation to the conservation of biological diversity.

Challenges for the Future

Future development of traditional knowledge protection therefore confronts a number of seeming paradoxes:

- this is a strikingly new area of international cooperation in intellectual property, but it concerns knowledge and systems of knowledge that have deep and ancient roots;
- it is an international issue, marked by a search for global solutions, but it concerns traditional knowledge systems that are highly diverse and are inherently embedded in local customary law and the natural environment;
- traditional knowledge and the formal legal means of protecting it are seen as
- different things (just as an invention and the patent which protects it are distinct concepts), but for indigenous communities, having traditional knowledge and also having the responsibility for safeguarding it and using it according to customary law form an indivisible whole.

International progress on traditional knowledge protection is currently at a crossroads. The debate has already yielded a much clearer shared understanding of the basic ideas and concepts for traditional knowledge protection, and a more focused understanding of what the policy choices are. Several specific initiatives have already enhanced the practical recognition of traditional knowledge within the patent system, so that traditional knowledge is less likely to be the subject matter of ill-founded patent claims. The possibilities for protecting traditional knowledge through existing legal tools, including the law of confidential information (traditional knowledge as undisclosed technical know-how), geographical indications (some products are literal embodiments of geographically-localized traditional knowledge) and patent law (over 20,000 patent applications have been filed in China for innovations in the field of traditional Chinese medicine).

In addition, several countries have introduced *sui generis* protection of traditional knowledge, and this practical experience is helping to guide understanding of what further legal steps are needed to prevent the misappropriation and misuse of traditional knowledge.

The use of existing and new intellectual property approaches alone will not resolve the challenges confronting traditional communities today, who will need to draw on a range of legal and practical tools to strengthen respect for the customary laws that protect their traditional knowledge. Yet there are grounds for optimism that judicious use of the intellectual property system can be a useful support for these communities, and can contribute to their cultural and economic well-being and autonomy. Practical

experience, in turn, should lead to greater understanding of what new legal measures are needed, at the national and international levels.

2.4.1 Biodiversity

Biodiversity refers to the variety of life-forms (living organisms) found in different eco-systems on land and water. Developing countries are vastly rich in biodiversity, both in the plant and the animal kingdoms. These varieties together with TK become hugely beneficial for scientific research and development of pharmaceutical and cosmetic products, besides other products which make mega business. Access to biodiversity and TK is therefore highly coveted. However, since modern scientific research and product development are beyond the resources, both in terms of knowledge of modern science and technology, and finance, the exploitation of biodiversity and TK by companies and entrepreneurs of developed countries has often resulted in no benefit to the indigenous communities to which they belonged. This is seen as inequitous and unjustified. Efforts are on to ensure that the donors of the genetic material and the TK receive due recognition and a due share in profits.

Such conflict of interest is particularly keen because indigenous herbs and plants are extensively used in traditional systems of medicine. Besides medicines and healthcare products, plants are widely used for food and beauty products which are huge industries themselves. The issue of conflicting interests between the makers of the products and the communities from whom the plants and the TK are taken becomes more difficult because accessing plant material directly from the communities is not always necessary. Once a plant has been taken out, lawfully or otherwise, modern science has made it easy to propagate it through techniques like tissue culture, cell culture or transgenic technology.

The inevitable intrusion of the global IP system into the domain of the traditional knowledge has thrown up two very different, conflicting views that need to be resolved. One view strongly argues for the extension of the IP system to cover TK as it would give a boost to innovation and bring the TK into the main economic space. The contending view holds that this way the TK, which is the property of the community, is appropriated by a few and exploited for their commercial benefit. To reconcile these antagonistic views the developed countries could ensure that the traditional communities get an equitable share from the commercial benefits that are made possible due to the use of their genetic resources and TK.

SAQ 2

Mark the following statements as True (T) or False (F):

Traditional Knowledge

- is the ancient Knowledge available with local communities T/F
- is the knowledge created by local communities to deal with the challenges of their social and physical environment T/F
- can be contemporary knowledge developed and maintained in its local context. T/F

The Role of WIPO

WIPO is expected by its Member States to be present at international discussions relating to genetic resources, traditional knowledge and folklore, to help clarify as far as possible the implications for intellectual property. This involves identifying and addressing the relevant intellectual property issues. WIPO is also expected to engage in work and facilitate discussions with a view to bringing about progress in the consideration of the issues.

In this context, a WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore was established in September 2000 by WIPO Member States. The primary themes that it would address in the course of its work include the intellectual property questions raised by:

- access to genetic resources and benefit-sharing;
- protection of traditional knowledge, whether or not associated with those resources;
- protection of expressions of folklore.

Besides WIPO's Member States, the many Non-Governmental Organizations (NGOs) that have observer status in dealings with WIPO will be invited to meetings of the Intergovernmental Committee. Other NGOs may be interested on a case-by-case basis.

Before the creation of the Intergovernmental Committee, WIPO had already held various meetings and carried out various activities on the subject. These included the drafting of a questionnaire to gather information on the protection of biotechnological inventions in the member States of WIPO, including certain aspects regarding intellectual property and genetic resources, as well as a study on the Role of Intellectual Property Rights in the Sharing of Benefits Arising from the Use of Biological Resources and Associated Traditional Knowledge. This project was implemented in close collaboration with the United Nations Environment Program.

WIPO carried out nine fact-finding missions to the South Pacific, South Asia, Southern and Eastern Africa, North America, West Africa, Arab countries, South America, Central America and the Caribbean. Those missions identified and explored the intellectual property needs and expectations of holders of traditional knowledge, in order to strengthen the role of the intellectual property system in their cultural, social and economic development. The missions also provided an opportunity for stake-holders and practitioners in communities to consider present or future solutions to ensure that the intellectual property rights of the holders of traditional knowledge, innovations and culture are protected.

A Working Group on Biotechnology met in November 1999 which adopted a set of projects on intellectual property and the legal protection of biotechnological inventions. Two global roundtables were held to discuss the relationship between intellectual property and traditional knowledge, namely a Roundtable on Intellectual Property and Indigenous Peoples in July 1998 and a Roundtable on Intellectual Property and Traditional Knowledge in November 1999.

Four Regional Consultations on the Protection of Expressions of Folklore took place in 1999, for Africa, for Asia and the Pacific, for the Arab countries and for Latin America and the Caribbean. Each meeting adopted proposals for the continuation of the work undertaken. Finally, an interregional Meeting on Intellectual Property and Genetic Resources was held at WIPO in April 2000, which in particular took stock of the work being undertaken within WIPO on those subjects.

It is important to protect and promote TK. Protection would mean two things: (a) to protect TK from unauthorised use by third parties; (b) to prohibit use that may erode it, and adversely impact the life or living of the community. Promotion of TK would require a multi-pronged approach. This would seek to encourage innovation based on TK and emphasise commercialisation of elements of TK that are amenable to it, ensuring equitable sharing of benefits. Enlisting participation of indigenous communities, a sustainable use of natural resources has to be ensured. The access to TK for various purposes has to be closely monitored to ensure demands for growth and equity.

2.5 SUMMARY

- Advances in ICT have changed the way people live, work and conduct business. Reproduction with high fidelity, in very large numbers, has become easy and cheap. It can be done anywhere and transmitted from any where to anywhere on the globe across national boundaries. Enforcing IPR under these circumstances is difficult.
- Multiple user computer systems enable pirated digital works to be used by several persons simultaneously.
- Manipulation of digital works is easy, leading the resulting work to be claimed as new and original.
- Protection of IP over digital products is following two approaches: control of access; metering usage. Protecting integrity of work is an area of concern.
- WIPO through its Digital Agenda is helping in crystallising all issues and evolving their solutions through international consensus.
- A domain name is the address of a website. Disputes arise due to cybersquatting. WIPO is the leading ICANN accredited agency for resolution of domain name disputes.
- Biotechnological processes and products have vast economic potential, and thus they are hot items of IP. It is full of ethical questions and moral debates.
- Access to rich biodiversity and traditional knowledge of developing nations for developing biotechnological processes and products raises questions of ownership and benefit sharing.
- Extension of IP to living things is recent. It raises question of discovery vs invention besides the propriety of appropriating natural living organisms as private property.
- The USPTO does not grant patent on a fundamental gene, ESTs or SNPs, unless they have a role in human health and a commercial potential.
- Traditional Knowledge covers knowledge of a community to deal with all life situations i.e. its science and technology, agriculture, medicine, biodiversity, folk art and craft, folk music and dance, drama, folk motifs, designs and symbols, in fact all moveable cultural material.
- TK and the folk lore, on the one hand, and the IP system on the other, are products of two very different cultural and value systems, one regarding knowledge and folklore as belonging to the community, the other seeing creations of ones own mind and skills as belonging to the individual, as personal property. A reconciliation of the two views is engaging serious attention at the international level with WIPO playing a lead role.

2.6 TERMINAL QUESTIONS

Spend 15 *min.*

1. What is a Domain Name? How do domain name disputes arise? What role does WIPO play in the resolution of domain name disputes?
2. Discuss the issues thrown up before the IP regime due to the emergence of biotechnology as an area seeing rapid scientific and technological development.
3. What are the issues involved in the commercialisation of technology based on exploitation of traditional knowledge, folk lore, and biodiversity, within the

prevailing global IP regime. Define each of these three terms, namely, traditional knowledge, folk lore, and biodiversity.

2.7 ANSWERS AND HINTS

Self Assessment Questions

1. F; T; T
2. F; T; T

Terminal Questions

1. Refer 2.2.2.
2. Refer 2.3.
3. Refer 2.4.