

Protection in International Market

All parties benefit when national laws favor and encourage transfer of technology

BY BARRY D. REIN*

The intellectual property laws of developing countries should be focused on creating for that country indigenous expertise and indigenous industries that will make a contribution far beyond their cost to the economic success and overall well-being of the country. It is the purpose of intellectual property laws to motivate individuals to contribute to the collective benefit by rewarding them in a fair way for their contributions. To that end, the laws must be as strong and as clear as possible and must be applicable to citizens and foreign nationals alike. Enactment and enforcement of such laws will telegraph the message to the world community that the country respects law and property rights, and is a fair and attractive place in which to do business. It will create a climate favorable to foreign investment. Note in this regard that a reputation for piracy, which some countries have accepted, does not attract investment and in that sense sacrifices important long-term goals for a perceived short-term gain. It is akin to trading one's birthright for a bowl of pottage. The clarity of the laws and the predictability of their application are equally important to attract investment. Absent a reasonable level of confidence in the meaning and enforceability of the laws, foreign companies will opt to invest elsewhere.

The purpose of intellectual property laws should be to provide a magnet for investment. Then, a country may selectively accept or exclude particular ventures or may condition them on the basis of other sets of laws, usually referred to as technology transfer laws. We believe fundamentally that such laws should be minimal and that technology transfer should be regulated by free-market forces. To the extent a country deems it necessary to carry out a policy of limiting or conditioning technology transfer, however, it is important that that policy be enacted in a separate law so as not to impair the benefits of clear laws to protect intellectual property.

Consider the current business climate in the United States with respect to software:

— Software is a \$13 billion business in the United States today.¹ It is the most rapidly growing sector

of our economy, providing jobs for 135,000 people.²

— The advent of the ubiquitous microcomputer has accelerated the trend toward development of software independently from hardware; anyone can do it.

— Absent a legal system that adequately protects software, there is no incentive to develop it.

— Most mass-market software has a lifespan of only two or three years; if you cannot secure and enforce property rights in it within that brief time span, people will not invest time and effort in developing it.

— As a practical matter, it is difficult to detect much software copying. It had been estimated that for every legitimate software copy sold in the United States today, there is an illegal copy. The world volume of counterfeit sales in 1985 was estimated at \$800 million.³ This heightens the need to offer effective legal protection against copying when it is detected.

— The ability to enter into licensing agreements for software is important, since licensing may be the best way for a U.S. manufacturer to secure distribution in another country, and may also give the licensees in that country greater participation in adding value to the products than other marketing methods. Licensing is impractical without adequate laws to secure and enforce intellectual property rights.

— Effective criminal sanctions are essential to deal with software piracy. Governmental cooperation is necessary for enforcing criminal remedies.

— Software development is increasingly a global enterprise. Software manufacturers in the U.S. and other technologically advanced countries look to developing countries both as markets and as sources of software development (i.e. conversions) just as they have looked to some of those countries for development and manufacturing products.

For example, American companies contracted recently with companies in Hungary to convert programs written for one microcomputer to those operable on another, and also to write new programs. The marketplace limits the prices that can be charged for such programs, making the cost of doing the programming here prohibitive. Programming costs are sufficiently lower in Hungary to make them marketable in the United States and other developed countries. Hungary gains increased employment and a growing fund of programming expertise.

Programming can be done by small groups. It does not take a large company. In fact, a large company is

*Partner, Pennie & Edmonds, New York, New York; paper presented at LES/UNIDO meeting, Vienna, Austria, November 1986.

1. Figures provided by the Association of Data Processing Service Organizations.

2. Ibid.

3. Ibid.

often less able to innovate successfully in software than smaller ones. A company closest to the ultimate market for the software can best develop new software products. Hence, the global community is natural for software development, with a host of companies fitting together, their strengths and weaknesses complementing each other.

In our technological and rapidly changing world, it is essential to maintain a fund of expertise in each country that can continue to grow and develop. Any country can create an environment for its young people to learn computer literacy, and this is essential if they are to achieve and retain competitiveness in the world community. In the knowledge lies the power, and the power of each country in the software industry lies in the knowledge of its people.

For those countries whose people have been educated sufficiently to take advantage of it, software will bring knowledge and the ability to gain knowledge to an increasing degree in the future. Data bases, so valuable today, will become knowledge bases and will become more readily accessible to all. In order to build on the knowledge of our predecessors, we must have their aggregate knowledge accessible to us in up-to-date knowledge bases. Those who don't will forever be constrained to reinvent the wheel.

If a country fails to enact adequate intellectual property protection laws, it can expect fairly predictable consequences. It will be an outsider to the global software community, and will have a much harder time building the infrastructure necessary to use and to produce software. It may get some programs more cheaply, through piracy, but will frighten away the very people needed to build local expertise. Suppliers of software will not provide support or maintenance for users of pirated software, and they will adopt strategies such as building in need for greater support and selling only second-rate software. Users of pirated software will have no access to the vendor for meeting particular needs and problems. This will result in exactly what most developing countries are working so hard to avoid. They will pay and invest but will not build the expertise to develop or use software for the good of their entire country.

FORMS OF INTELLECTUAL PROPERTY PROTECTION APPLICABLE TO SOFTWARE

Both civil and criminal laws are needed in the area of software. On the civil side, in the United States software is protected under patent, copyright and trade secret laws, as well as a unique kind of statute recently enacted to protect semiconductor circuits for computers, the Semiconductor Chip Protection Act of 1984. Without detailing the criminal laws, they are important because they bring the machinery of government, including the police and investigative agencies, to bear in situations where the cost and difficulty of civil prosecution by private parties renders them futile.

In the United States, programs are patentable to the extent that they are part of machines or methods that they do not monopolize use of a mathematical algorithm. Virtually all software is protectable by copyright, as are data bases. The copyright term is the life of the author plus 50 years, and the author has the exclusive

right to make and distribute copies to use the software in a computer and to adapt and translate it, for example into other computer languages.

Judicial decisions have confirmed that copyright extends to operating system software, microcode, translations to different program languages and for different machines, to all media in which software may be written, and, most recently to the "look and feel" of screen formats and sequences presented to the user *Broderbund Software, Inc. v. Unison World Inc.*, No. C-85 3457 WHO (Northern District California October 2, 1986).

The law of trade secrets, and the protection afforded by contract to confidential information, are extremely important to the extent that there may remain any secrets in fact, after the software is commercially sold. Shrink-wrap license statutes are beginning to strengthen protection for mass-marketed software, although the enforceability of these licenses in the absence of such a statute has never been tested.

The 1984 Semiconductor Chip Protection Act is not for software, but is closely related in that it protects the design of semiconductor chips for 10 years. Citizens of any country can secure rights under the Chip Protection Act provided that their own countries offer corresponding rights to citizens of the United States. This reciprocity requirement is reflective of a broader United States concern, that global competition be free and fair competition. (See the report of the President's Commission on Industrial Competitiveness, "Global Competition, The New Reality," page 52 (1985).)

Important Remedies

Importantly, there are effective remedies against violation of these rights. Both damages and injunctive relief are available. Rapid preliminary injunctive relief is available, when justified, for violation of trade secret, copyright and patent rights. Punitive damages are available when warranted, to discourage illegal copying. The U.S. government will move quickly to impose criminal penalties on software pirates.

How does the American businessman, accustomed to this environment of protection, view the prospects of marketing his software in developing countries generally? This must be viewed on a country by country basis. Statutory language is only one piece of the picture.

At least as important, in each country, are the availability of *effective* remedies; the willingness of the government to cooperate in rooting out the prosecuting infringers, particularly pirates; and the availability of case law, government pronouncements or other assurances that effective and clear remedies will be available.

Extraordinary delay in securing relief renders any remedy useless. This was a major factor in the recent arguments whether the cases against Union Carbide arising out of the Bhopal disaster should be tried in Indian or United States courts. It is a recurring recent concern, also, in connection with Mexico's prosecution of drug enforcement cases.

Absent some assurance of an effective scope of protection, rights are perceived as too uncertain. For example, if software is protected in source code but not in object code, or protected when written on paper but not in ROM, there is effectively no protection.

Absent decisional law, or very clear and comprehen-

sive statutes or strong expressions by a government of its intention to protect intellectual property rights, a U.S. businessman is likely to be reluctant to take chances on doing business subject to those laws. A reputation for pirating audio or videotapes, or satellite signals, tends to give a country an unsavory reputation for software piracy as well.

CONCLUSION

Software is a global enterprise. Computer literacy is necessary to participate in the worldwide information economy, to truly take advantage of computers as they permeate every sector of the economy and our lives.

Some developing countries have seen the benefits of strong intellectual property laws and are acting to secure benefit. For example, Korea and Singapore, once reluctant to enact meaningful intellectual property laws, are now doing so.

We share common problems, despite our differences. We all need to understand how to foster development and commercialization of technology in our particular countries, and to gain the wisdom to guide each of our countries toward this goal. We are all in the same global lifeboat. In other words, as one of our American constitutional forebears put it, urging the signing of our Declaration of Independence, we must hang together as a civilized world community, or we will no doubt hang separately.