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Brazil's Informatics Bargaining Chip: Playing The Third World Card

Leigh E. Thomas

BRAZIL'S INFORMATICS BARGAINING CHIP: PLAYING THE THIRD-WORLD CARD

I. INTRODUCTION

In today's high-tech business and trade arena, information is simultaneously a resource, a raw material, and a commodity. Since the turn of the century, the world demand for information has increased dramatically. To meet this demand, or in the alternative, driven by it, technological changes have occurred in this century on a heretofore unknown scale. This proliferation of new technologies has had a profound effect on both international trade policies and international politics, and has given rise to a whole new industry called Information Services.

The last decade has seen a dramatic increase in the growth of internationally-operated computer communication systems and data processing services. These systems process and transmit data from terminals to computers, or between computers, in networks that may span several countries.[1] This new technological industry of high speed computer communication has not only touched, but has revolutionized fields concerned with global telephone and television services, military operations, banking and international commerce, tourism, management of multinational businesses, and dissemination of scientific data.[2] Rapid data communication is now essential for the continued operation and management of many of these fields.

The worldwide availability of computer communications and information services has created a trade in these services, complete with all the traditional aspects of an international industry, such as competition between foreign vendors, taxes and duties, and regulations that appear to favor domestic vendors.[3] In addition, it has created a host of new policy issues and a new esoteric terminology of its own. A discussion of these policies focuses on the issue of Transborder Data Flow.

Transborder Data Flow (TDF) has been defined as "the electronic transmission of computer-generated and machine-readable digital data between countries."[4] This flow of digital data usually

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1. See Turn, *Privacy Protection and Security in Transnational Data Processing Systems*, 16 STAN. J. INT'L L. 67 (1980).
2. See Novotny, *Transborder Data Flows and International Law: A Framework for Policy-Oriented Inquiry*, 16 STAN. J. INT'L L. 141, 142 (1980).
3. *See* Turn, *supra* note 1, at 68.
4. Seidman, *Transborder Data Flow: Regulation of International Information Flow and the Brazilian Example*, 1 J.L. TECH. 31, 32 (1985).

occurs via satellite, microwave, cable, or conventional radio, where each mode can transport voice, image, character, and other symbols in digital bit streams.[5] The problems surrounding TDF are a result of the merger of computer and telecommunication technologies.[6] Those problems increasingly involve political conflicts concerning issues of access, use, and control of TDF. Indeed, some social commentators suggest that "we are experiencing a revolution every bit as significant as that of the industrial era."[7]

Primary users of TDF include governments and multinational corporations (MNCs). In order to deal competitively in information technology, it is necessary to have competitive equipment, such as state-of-the-art computer technology. For this reason, there is a need to examine TDF as it relates to each user's attitude toward the commodity of information as well as the way in which that information relates to each user's concept of the technology involved. In this way, it is possible to identify and evaluate the major points of conflict and of cooperation.

A new subgroup of information services has developed as a result of ongoing developments in the field of micro-electronics.[8] This development is concerned with data industries, which differ from traditional information industries in that they use digital data technologies. Such technologies are viewed as the core of both the data-goods industries and the data-services industries.[9] Partly as a result of these developments, the information sector is contributing increasingly to the gross domestic product (GDP) of many developing countries such as Brazil.[10]

Together, the Third World countries occupy only a tiny portion of the world market in computer potential; generous estimates place it at between 5% and 7% of the total.[11] Even though Latin America accounts for 60% of the mass media in the Third World, there exists an enormous gap in the existing potential of Third

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5. *See id.*

6. Fishman, *Introduction to Transborder Data Flows*, 16 STAN. J. INT'L L. 1, 2 (1980). In the summer of 1980, the *Stanford Journal of International Law* devoted an entire volume to the subject of transborder data flow. In this collection, the authors discuss various international political concerns facing TDF. *Id. See supra* notes 1-2.

7. *Id.* at 3.

8. K.P. SAUVANT, TRADE AND FOREIGN DIRECT INVESTMENT IN DATA SERVICES 7 (1984).

9. *Id.*

10. *Id.*

11. A. MATTELART & H. SCHMUCLER, COMMUNICATION AND INFORMATION TECHNOLOGIES: FREEDOM OF CHOICE FOR LATIN AMERICA 65 (1985) [hereinafter FREEDOM OF CHOICE].

World countries as compared to more industrialized countries, such as the United States. Brazil, the most advanced of the Third World countries in the information business, occupied sixteenth place in 1978 with $194 million dollars in computer and office equipment imports.[12] In comparison, the United States ranked first, importing $1,962 million dollars in equipment.[13] In January 1981, existing computers in developing countries represented 5.7% of the world total in volume and 4.2% in value.[14] Of this, Latin America accounted for 54% of the computer resources of the Third World, and Brazil, Mexico and Venezuela together possessed 77% of the Latin American total.[15]

The development of new technology in computers and data processing stimulates development of computer software and information services. Recently, Brazil has sought to deal with many of the computer software issues facing that country by drafting new software protection legislation. This note examines that proposed software legislation as it relates to (1) Brazil's response to the sovereignty issues surrounding Informatics, the Brazilian policy of protectionism of digitally-based computer and electronic equipment;[16] (2) the United States' response to the Informatics policy conflict between sovereignty and the free flow of information; and (3) possible solutions to the problems facing U.S. multinational corporations which have trade or business involvement with computer technology in Brazil.

Since 1980, a shift in TDF policy has occurred in many nations, including Brazil. The concern for personal data protection and individual privacy, which was prevalent until 1980, has dwindled as interest in business and transnational communication intensified.[17] This note focuses on the tension which exists between a developing country, such as Brazil, and the United States concern-

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12. *Id.*

13. *Id.* at 65-6.

14. *Id.* at 67.

15. *Id.*

16. "Informatics is a term used in Europe and the Third World to describe the information industries of telecommunications and data processing. It refers to data processing for information services via automatic machines. *See* Recent Development, *Brazilian Computer Import Restrictions: Technological Independence and Commercial Reality*, 17 LAW & POL'Y INT'L BUS. 619 (1985) (authored by Anne Piorkowski) [hereinafter Recent Development]; *See also* Seidman, *supra* note 4.

17. *See id.* at 45 (citing Gassman, *The Changing Nature of Transborder Data Flows*, in 1986 TRANSBORDER DATA FLOWS: PROCEEDINGS OF AN OECD CONFERENCE HELD DECEMBER 1983 7, 8.

ing the protection of technological information by focusing on the events surrounding Brazil's announcement in 1984 of legislation regulating its market for computer products.

II. INTERNATIONAL INFORMATION FLOW AND THE BRAZILIAN INFORMATICS LAW

On October 29, 1984, despite "sharp objections from the United States and other countries,"[18] the National Congress of Brazil passed a new Informatics law[19] which reserved its "domestic market for mini- and microcomputers to 1,006 Brazilian-owned companies for eight years."[20] While most developing countries encourage the influx of foreign technology, Brazil is taking a different approach.[21] Once Brazil determined that technological independence was necessary for economic and military security, it "imposed a policy of protectionism intended to foster its own domestic informatics industry."[22] This protectionist policy is referred to as a "reserved market"; it serves to encourage Brazil's technological industry by giving preferential treatment to its domestic enterprises.

Specifically, the Informatics legislation provides the basic legal framework for the development of a domestic computer industry by offering major financial incentives to Brazilian firms and by allowing the Brazilian government to impose temporary restrictions, at any time, on "production, sale, importation, and exportation of computers and related products."[23] In addition, foreign firms selling computer equipment and support services in Brazil are required to disclose, to a Brazilian regulatory agency, all the technical information Brazil feels is "necessary" to allow interconnection of their products with those produced by other firms.[24] Functionally, the Informatics legislation imposes temporary restrictions on activities such as research; the import, export, manufacture, mar-

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18. *See Brazil Prepares to Institute New Computer Software Protection Despite U.S. Protest,* 1 INT'L TRADE REP. (BNA) 321 (1984).
19. UNCLASSIFIED U.S. COMM. DEP'T DOC., Oct., 1984, subject: *Translation of Brazilian Law No. 7.232,* Oct. 29, 1984 [hereinafter INFORMATICS LAW] (on file at the offices of the *University of Miami Inter-American Law Review). See also* 25 I.L.M. 868 (1986) (English translation from the Portuguese by Pinheiro Neto-Advogados, of Brazil).
20. *Brazil, Tax: New Informatics Law,* INT'L BUS. LAW., Mar. 1985, at 101-03.
21. *See* Recent Development, *supra* note 16, at 619.
22. *Id.*
23. *See Brazil's Proposed National Computer Law Would Regulate Imports of Goods, Services,* 1 INT'L TRADE REP. (BNA) 158 (1984).
24. *Id.*

keting and operation of machines, equipment and devices based on digital techniques are similarly restricted.[25] One commentator described Brazil's Informatics law as arguably affecting "any firm which owns a piece of electronic equipment such as a calculator or electronic typewriter" because of the law's "broad definition of the machines which fall within [its] scope."[26]

By its terms, the Informatics law imposes temporary restrictions on the import and marketing of informatics goods and services[27] (emphasis added). In Brazil, computers belong to the goods category, while computer software is in the service category. Informatics restrictions generally will not apply to: 1) firms that use national (Brazilian-developed) technology, provided they do not take advantage of any government-sponsored financial or benefit programs,[28] or 2) goods which do not depend on the importation of foreign parts, spares, or components in their production.[29] The marketing of even locally produced informatics goods and services,

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25. INFORMATICS LAW, supra note 19, art. 3. *See also* Recent Development, *supra* note 16, at 625. The 1984 informatics law was adopted by Brazil to be as all-encompassing as possible and to retain broad powers in its administrative bodies. The law was intended to become the "legal instrument for monitoring the computerization of Brazilian society. . .;" its main features include:
(1) Creation of the National Council of Informatics and Automation (CONIN) which was responsible for elaborating the National Plan for Informatics to be submitted every third year to the National Congress.
(2) Adoption of restrictions on production, operation, marketing, and importing of technical goods and services in informatics (i.e., mini- and microcomputers). These restrictions are temporary and will remain in force until the national companies are consolidated and able to compete in the international market.
(3) "National companies" are considered to be those with headquarters in Brazil, and whose control is permanently, exclusively, and unconditionally in the hands of Brazilian persons or entities.
(4) Provisions for receiving tax exemptions of up to 100% on imports and industrial products for research and development projects and also for production of goods and services of informatics to national companies.
(5) Provisions for interested foreign companies to produce their equipment in the informatics export districts located in the north and northeast regions of Brazil; this production must be destined exclusively for the foreign market.
(6) Fiscal incentives for purchasing shares of national companies linked to informatics.
(7) Creation of the National Informatics Center Foundation to promote scientific and technological research in informatics; for example, the Special Informatics Fund, created by the same law.
See Seidman, supra note 4, at 61-62 (citing L. Fonseca, High Technology Development in Brazil (Dec. 1984) (unpublished work on file with the J.L. TECH.)).
   26. *See* Recent Development, supra note 16, at 625. *See also Tighter Restrictions on Informatics Loom in Brazil*, Bus. Latin Am., Aug. 15, 1984, at 257, col. 1.
   27. INFORMATICS LAW, *supra* note 19, art. 9.
   28. *Id.* at art. 9, cl. I.
   29. *Id.* at art. 9, cl. II.

however, can be restricted domestically whenever Brazil's administrative agency finds that a monopoly may exist.[30] Brazil fears that if the computer market is supplied solely by American and Japanese firms, for example, there would be no possibility of Brazil developing its own technology in this area.[31] Before one can develop an understanding of Brazil's Informatics legislation and the related arguments for or against a less drastic import restriction scheme, however, the background and government policies surrounding the legislation's passage must first be examined.

A. Laying the Informatics Groundwork

In 1983, it was estimated that Brazil ranked between seventh and tenth in the world computer market,[32] thus representing an example of a fairly advanced developing country with a technology transfer law. Accordingly, in Brazil, the government permits access to its computer market only for those agreeing to the transfer of technology.[33] To implement this broad governmental policy, Brazil has created an extensive regulatory network that initiates guidelines and monitors compliance with its informatics policy.

Although the Coordinating Commission for Data Processing Activities (CAPRE) was established in Brazil in 1972 to "rationalize the use of electronic data processing by Government agencies,"[34] four years later CAPRE was assigned the task of formulating an industrial policy for informatics,[35] and, in order to protect the informatics industry, it was given some authority over the importation of data processing equipment.[36] Thus, in four years, CAPRE shifted its objective from being a coordinating agency to

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30. *Id.* at art 10. *See also* Recent Development, *supra* note 16, at 625.

31. *See supra* note 23, at 159.

32. *See U.S. Software Protection: Problems of Trade Secret Estoppel Under International and Brazilian Technology Transfer Regimes*, 23 COLUM. J. TRANSNAT'L L. 679, 689 (1985) (authored by Joel R. Reidenberg) [hereinafter *U.S. Software Protection*] (citing TIGRE, TECHNOLOGY AND COMPETITION IN THE BRAZILIAN COMPUTER INDUSTRY 5 (1983)).

33. *See supra* note 32 (citing Castro, *The Computer Industry: Restrictions and Performance Requirements*, in HIGH TECHNOLOGY INDUSTRIES: PROFILES AND OUTLOOKS OF THE COMPUTER INDUSTRY 55 (published by the U.S. Dep't. of Commerce, 1983)).

34. *See* Seidman, *supra* note 4, at 57 (citing SPECIAL SECRETARIAT OF INFORMATION OF THE NATIONAL SECURITY COUNCIL OF THE PRESIDENCY OF THE REPUBLIC OF BRAZIL, TRANS-BORDER DATA FLOW AND BRAZIL: THE ROLE OF TRANSNATIONAL CORPORATIONS, IMPACTS OF TRANSBORDER DATA FLOWS AND EFFECTS OF NATIONAL POLICIES 5-7, at 187 (1982) [hereinafter BRAZILIAN CASE STUDY].

35. *See* Seidman, *supra* note 4, at 57.

36. *See* BRAZILIAN CASE STUDY, *supra* note 34.

being an agency supervising the implementtion of an aggressive industrial policy. Three years after this transformation, in 1979, CAPRE was succeeded by the Special Secretariat for Informatics (SEI), Brazil's "watchdog agency", whose job was to regulate, among other things, the in-flow of computer technology.[37]

In 1982, SEI promulgated Normative Act No. 22, which expressly requires registration of computer programs "made available to the public in the Brazilian marketplace."[38] Under this regulation, registration with SEI is required for all software "intended for use. . . in Brazilian territory,"[39] and, furthermore, SEI must approve any "agreements involving computer programs."[40] In addition to these registration and approval requirements, any software transfer agreement must be recorded with the National Industrial Property Institute (INPI), which is the Brazilian Patent and Trademark Office; this requirement applies to commercial distribution as well as to distribution within a multinational corporation.[41] The basis for this regulation is Brazil's desire to outlaw certain contractual provisions, namely, "restrictions after expiration of an agreement; restrictions after expiration of industrial property rights; restrictions on research and development; restrictions on the access of new technology; and restrictions on distributions or sales."[42] The foregoing contract provisions, which are forbidden by the SEI, always are requested by the software-supplying party and are important for maintaining U.S. trade secret protection.[43] This

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37. Decree No. 84,067 of Oct. 8, 1979. EEI's authority was greatly expanded over that of CAPRE, but the policy objectives remained similar: "to enhance the ability of [Brazilian] national corporations to manufacture increasingly complex technologies." Seidman, *supra* note 4, at 57.

38. Normative Act No. 22 (Dec. 7, 1982), *translated in* Daniel, *Notes from Brazil,* 82 PAT. & TRADEMARK REV. 97, 108-11 (1984) [hereinafter Normative Act No. 22]. The regulations issued by the INPI or the SEI are referrred to as *Atos Normativos,* or Normative Acts. These acts are not signed by the President of the Republic of Brazil nor by the Minister, but are signed by the President of INPI, a position comparable to a chairman or director. Normative Acts differ from legislation and legislative regulations in that they are made by the INPI, and they can be changed by that agency. Nattier, *Brazil,* in TECHNOLOGY TRANS-FER: LAWS AND PRACTICE IN LATIN AMERICA 145, 154 (B. Carl ed. 1980).

39. Normative Act No. 22, *supra* note 38, art. 1. *See also U.S. Software Protection, supra* note 32, at 690.

40. Normative Act No. 22, *supra* note 38, at art. 5(b).

41. *See U.S. Software Protection, supra* note 32, at 690.

42. *Id.* at 690. Restrictions after expiration allow confidentiality requirements to survive the duration of any licensing or transfer agreement. Restrictions on research and development which hinder access and distribution are used to guard further the secrecy of the software. *Id.* at n. 82.

43. *Id.* at 691.

restriction on contractual provisions creates an immediate tension between Brazil's policy that unpatented technological information should be freely available to all Brazilians as soon as possible, and the U.S. corporation's unwillingness to divulge trade secrets.

B.   The Brazilian Informatics Regime

1.   Overview of the Plan

On September 30, 1985, approximately one year after the new Informatics legislation was approved by the National Congress of Brazil, the first National Informatics Plan (Plan) required by this new legislation was submitted by the National Council of Informatics and Automation (CONIN) to the Brazilian Congress. CONIN was created to control the SEI and is directly responsible to the President of Brazil.[44]

The Plan announced external and internal strategies aimed at accomplishing three objectives:

(1) increasing economic and political/military autonomy;
(2) increasing economic productivity; and
(3) spreading the benefits of the new informatics policies to the Brazilian public.[45]

Brazil's external strategy calls for "safeguarding the principles of national informatics policy" by organizing international cooperation programs to develop new technologies with other developing countries. Specifically, China, Argentina, Mexico and India are seen as the most likely sources of cooperation with Brazil.[46] Brazil's internal strategy focuses upon four major efforts: 1) diffusing benefits of informatics through better social services; 2) consolidating production of goods and services, particularly microelectronics and software; 3) strengthening research and development efforts in Brazil; and 4) increasing formation of human resources by upgrading informative programs. This fourth objective could be attained, for example, by granting overseas scholarships to Brazilian students for doctoral studies where no domestic program is available.[47]

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44. *See supra* note 4, at 63-64. For an overview of the provisions of the 1984 Brazilian Informatics Law, see *supra* note 25 and accompanying text.

45. *See supra* note 4, at 64.

46. *See id.* at 64.

47. *See id.*

From the perspective of the U.S. computer industry, U.S. computer companies have not prospered in Brazil under the informatics regime; in fact, many have been forced to close some Brazilian plants because of the informatics "national company" rule.[48] Furthermore, U.S. companies lost millions of dollars when they were forced to sell their Brazilian subsidiaries at a fraction of their investment cost.[49] Even non-computer related U.S. companies which rely on electronics in their businesses are having difficulties with the Brazilian policies. For example, "United Press International (UPI) has had difficulty obtaining spare parts for its U.S.-made machines."[50] From the perspective of the Brazilian computer industry, the flip-side of U.S. woes does not look much brighter. The export prospects for Brazilian computer manufacturers do not look very promising largely because their equipment is frequently antiquated and is often more expensive. The educational resources needed to train engineers are also lacking, and Brazil's lesser-known brands cannot compete with the established well-known names in the international market.[51]

In light of the foregoing, one wonders why a developing country so conscious of progress would deliberately sabotage its efforts to compete with new technologies by imposing upon itself such an inwardly-focused technological trade policy. To begin to answer this question, one must focus on the problem from the Brazilian point of view.

2. Brazil's National Sovereignty

The stated purpose of the SEI and INPI in Brazil is to promote the development of Brazilian trade and industry, but Brazil's policies and general hostile attitudes toward foreign technology often operate to the detriment of foreign transferors of technology and thus indirectly stifle Brazilian development. Specifically, Bra-

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48. *See* Recent Development, *supra* note 16, at 635.

49. *See id.* For example, in 1983 Philco (a consumer electronics subsidiary of Ford Motor Company) was forced to close a Brazilian plant that had produced silicone chips since 1979 because of an SEI ruling that the reserve market policy applied to semi-conductors. The plant was sold to Brazilian groups for $9 million—$21 million less than Philco had invested in the plant over the previous three years. *Id.* at 635-36.

50. *See id.* at 636.

51. As of late 1984, Brazilian-made computers cost Brazilians from two to eight times the price charged on the international market for similar equipment because of high tariffs placed on foreign components and peripheral equipment in an effort to encourage domestic production of these computer products. *See id.* at 632-34.

zil's erection of barriers to the free flow of information and technology are implemented for the purpose of protecting various economic, political, and social interests related to the preservation of national sovereignty,[52] but these barriers also serve to stifle the foreign investment of technology in Brazil. Indeed, Professor Keith Rosenn has pointed out that "access to the most modern computer technology is critical if Brazilian industry is to become competitive in world markets. Creating monopolies for Brazilian computer companies may ultimately prove as disastrous to Brazilian development as the creation of a government monopoly in oil exploration."[53] By cutting itself off from foreign technology, many critics argue that "Brazil will relegate its computer industry to the use of technology which is constantly behind the "state-of-the-art."[54]

Brazil's views of national sovereignty, when compared with its desire to become competitive in a highly technological world market, would seem to be competing interests; in fact, from the U.S. point of view it would seem that Brazil is "going about it the wrong way." The nature of the dilemma facing Brazil may be seen as a campaign for self-reliance. The success of Brazil's (or any other developing nation's) drive for advancement in the technological world is dependent upon its ability both to acquire and to employ data processing and telecommunications technologies.[55] In an attempt to promote these technologies, many lesser developed countries have adopted national informatics plans and policies, even though the very policies that they adopt to further their development actually create barriers to the international flow of information so vital to their development.[56]

Information is a resource which yields certain economic, political, and technological advantages, and for this reason Brazil seeks to exert complete control over its own information resources and the advantages flowing therefrom. According to the Brazilian logic, use of these resources by another country would threaten Brazil's

52. For a discussion of national sovereignty, as it relates to information flow, see Novotny, *supra* note 2, at 160-66. *See also* Eger, *The Global Phenomenon of Teleinformatics: An Introduction*, 14 CORNELL INT'L L.J. 203, 231-34 (1981).

53. Rosenn, *Regulation of Foreign Investment in Brazil: A Critical Analysis*, 15 LAW AM. 307, 364-65 (1983).

54. *See* Recent Development, *supra* note 16, at 631.

55. For a discussion of national sovereignty and the ways in which informatics policies promote economic, social and political development see Bortnick, *International Information Flow: The Developing World Perspective*, 14 CORNELL INTERNAT'L L.J. 333 (1981).

56. *Id.*

national sovereignty by undermining its control.[57] Brazil fears that loss of control will result in vulnerability in the areas of equipment and services, as well as encourage cultural erosion through the introduction of new values and perspectives that may conflict with those traditionally held in Brazil. The Brazilians are also wary of overdependence, which they feel could be caused by having to utilize foreign data processing and communication services in order to perform their necessary information-processing functions and then being forced to buy back this processed information at a higher price.[58] In fact, as one commentator stated, the lesser-developed countries such as Brazil "approach informatics problems from the perspective of information and technology 'have-nots'. Their concerns revolve around their lack of access to both technology and the world's store of knowledge."[59]

But there has been another force, that of the military, behind the Brazilian informatics movement. The military seized power in 1964, and it was not until March 1985 that Brazil elected its first civilian president in over 20 years.[60] In the mid-1970s, the Brazilian government began serious efforts to develop its computer technology, and, at that time, Brazil was concerned that the U.S. would cut off its sales of computer technology and paralyze Brazil both militarily and economically.[61] The SEI, which was created in 1979, was headed by Army and Navy engineers and was originally created to administer the military's informatics policies.[62] It is difficult, however, to assess the extent of the role that military policy played in the formulation of Brazil's informatics policy. As one commentator has noted, "although initially national security justified Brazil's informatics protectionism . . ., economic concerns ultimately spurred the passage of the informatics law."[63] Whatever their primary motivation, governments such as Brazil began to fear that the countries they depended upon for foreign computer technology would not always fulfill their demands.

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57. *Id.* at 338.

58. *Id.* at 338-40.

59. *See id.* at 335.

60. *See* Recent Development, *supra* note 16, at 622. Tancredo de Almeida Neves was elected president on January 15, 1985. On March 14, 1985, one day before he was to take office, Neves underwent emergency surgery. Elected Vice President Jose Sarney automatically became the next civilian president when Neves died on April 21, 1985, never having been sworn in.

61. *Id.* at 623.

62. *Id.* at 622

63. *Id.*

Developing countries, such as Brazil, lack effective information technology systems of their own for several reasons:

> 1) They lack a technological infrastructure that would provide an environment for research, development, and local innovation;
> 2) They lack an information infrastructure—the complex network of institutions, organizations, resources and the systems and services which would support the flow of information from the generator to the user;
> 3) They lack available capital for investment in high technology products and services; and
> 4) They spend very little on research and development.[64]

Computer technology, along with the software and the hardware which support that field, continues to advance. To stay abreast of the rest of the world in information technology, Brazil must be able to keep up with the ongoing technological developments in both the hardware and the software areas. Even though hardware costs continue to decline as a result of the continued miniaturization of electronic components, the cost of software seems always to be rising. Just as state-of-the-art computer hardware is essential to information and to communication technologies, competitive and up-to-date computer software is just as essential. Unfortunately, Brazil and many other developing countries do not yet have the complete capability of developing or producing their own computer software.[65] Some experts have postulated that present Brazilian computer "technology has already become outdated by at least five years."[66] Once a substantial gap is created in such a rapidly-advancing field, it becomes very unlikely that Brazil will be able to seriously compete in that market. In any event, this is definitely an area in which Brazil should consider liberalizing its market reserve policy.

C. Brazil's Approach to Software

Brazil's informatics policies not only affect equipment such as computers, hardware, components and peripheral devices; they also affect all types of information technologies that are considered to be commercial products with a corresponding economic value.[67]

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64. *See* Bortnick, *supra* note 55, at 335-36.
65. *See id.*
66. *See* Recent Development, *supra* note 16, at 632.
67. *See* Bortnick, *supra* note 55, at 342.

Due to the valuable and costly technological information repre-
sented in a supplier's software, the United States, unlike Brazil,
will recognize and protect developers of software by granting ex-
tensive intellectual property rights for software creations. In all
cases, however, a software developer must maintain the secrecy el-
ement in order to ensure that he does not lose the protection af-
forded to the creative ideas behind the software. Disclosure of the
source code or the documentation or any revelation of the underly-
ing ideas will destroy the protection granted to software develop-
ers. Consequently, those ideas will then become public information
and will no longer be entitled to protection. The U.S. software sup-
pliers in Brazil are concerned with protection of proprietary rights
in software programs.

Computer software is considered a service under Brazil's in-
formatics legislation and may be imported only under a technology
transfer contract approved by the INPI.[68] Neither patent nor copy-
right protection is presently available for software in Brazil, al-
though a Draft Bill, proposing copyright protection for software, is
currently being considered by CONIN.[69] Brazil does not follow the
general internationally accepted policy of regarding software as a
literary work, appropriate for copyright protection.[70] If the Bill
goes forward, however, it could be an indication that Brazil's posi-
tion is changing. The proposed Bill will be extensively discussed in
the sections to follow.

For over a decade the United Nations Conference on Trade
and Development (UNCTAD) has sought to work out a code of
conduct for the international transfer of technology, seeking in the
process to elaborate rights and obligations for both the software
supplier and the software acquirer.[71] "The UNCTAD code defines
transfer of technology as the transfer of systematic knowledge for
the manufacture of a product, for the application of a process or
for the rendering of a service . . .,[72] and explicitly states that . . .
know-how and technological expertise in the form of . . . instruc-

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68. *See* Recent Development, *supra* note 16, at 637 n. 130.

69. Gazeta Mercantil, Aug. 28, 1986, at 1, col. 2. *See infra* note 80.

70. *See id.* (citing Bawer, *New Law Affects Brazil's Big "Informatics" Market*, Bus.
Am., Dec. 10, 1984, at 45).

71. *See U.S. Software Protection, supra* note 32, at 687-88 (construing UNCTAD Code
Ch. 2.1(x), U.N. Doc. TD/CODE TOT/41, at 5 (1983)).

72. *Id.* at 688 (citing UNCTAD Code Ch. 1.2, U.N. Doc. TD/CODE TOT/41, at 2
(1983)).

tions[73] are also considered technology. . . . This definition of know-how includes trade secrets and software since they are essentially confidential instructions."[74] While the UNCTAD code would apply to all transactions crossing national borders (including transfers between parent and subsidiary), it is not certain whether the code applies to transactions within a developing country, such as transactions between companies under foreign control.[75] It is also unclear how a foreign country's own national regulations, such as Brazil's informatics law, would affect a software license agreement under the UNCTAD Code.[76]

In addition to registration and approval requirements for foreign technology imposed by Brazil's Normative Act No. 22, Normative Act No. 15 establishes five categories of technology transfer: (1) patent licenses; (2) trademark licenses; (3) agreements for transferring industrial technology or know-how; (4) technical industrial cooperation agreements; and (5) specialized technical services agreements.[77] Further, Normative Act No. 17 considers all materials originating with the following sources to be within the public domain:

a) applications which have been closed or denied;
b) patents which have expired;
c) patents granted in other countries and not applied for or granted in Brazil;
d) all technology not protected by patent; and
e) all technology comprised within the state-of-the-art.[78]

At least two problems with this public domain doctrine become immediately obvious; these concern provisions (a) and (d) above. First, Normative Act No. 22 requires that the SEI and INPI must approve all technology transfer agreements. Brazil has developed an extremely broad interpretation of the term "similar"

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73. *Id.*

74. *See U.S. Software Protection, supra* note 32, at 688 (citing Blair, *Overview of Licensing and Technology Transfer,* 8 N.C. J. INT'L L. & COM. REG. 167, 173 (1983)).

75. *See U.S. Software Protection, supra* note 32, at 689 (construing UNCTAD Code Ch. 1.4, U.N. Doc. TD/CODE TOT/41, app. C (1983)).

76. *See id.*

77. Normative Act No. 15 of Sept. 11, 1975, art. II, *translated in* Daniel, *Licensing in Brazil,* 74 PAT. & TRADEMARK REV. 147, 149 (1976) [hereinafter Normative Act No. 15]. *See also* Comment, *Proprietary Protection of Computer Software in the United States and Brazil,* 19 TEX. INT'L L.J. 643, 661 (1984)(authored by J. Arnold Aguilar).

78. Normative Act No. 17 of May 11, 1976, sec. 15.5, *translated in* Daniel, *The Legal Ins and Outs of Technology Transfer,* 57 BRAZILIAN BUS. 17 (Nov. 1977). *See also* Comment, *supra* note 77, at 662.

which the SEI consistently uses as a device to reject requests for the importation of foreign computers and components on the ground that similar technology is already available in Brazil.[79] Thus, for example, if an application for software importation is considered closed or is denied by the SEI as being similar to pre-existing Brazilian software, then that software technology is considered to be "within the public domain" and should become "freely available" to all Brazilians under Brazilian technology transfer policy.

Much of the lively debate in Brazil and abroad concerns itself with the techno-legal adaptation of the traditional legal systems of Industrial Property (Patent) Law and Copyright which will be necessary in order to protect a technological work classified by proposed draft legislation as "a veritable abstract industrial creation."[80] Consequently, patent law may be an undesirable form of protection for computer software in Brazil for at least two reasons. First, under Brazilian policy, the INPI requires that any patent license agreement must provide "all the formulas, specifications, drawings and other information, and all the data needed to achieve the object of the patent."[81] Second, Brazil regards software imports as nonpatentable technology transfers. Patents are not applied to software because it is technically impossible to divulge software technology and, simultaneously, to protect its proprietary rights.[82]

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79. "National instruments of analogous technology shall be considered similar to imported digital technology when intended for the same use." Rosenn, *supra* note 53, at 344 (construing SEI, Normative Act No. 14 of Mar. 18, 1981, art. 1).

80. *See* UNCLASSIFIED U.S. COMM. DEP'T DOC., *Translation of Draft Bill-Rules on Software Rights and Other Provisions* [hereinafter cited as *Draft Bill*] (on file at the offices of the *University of Miami Inter-American Law Review*).

81. Normative Act No. 15, *supra* note 77, sec. I-2.5.1(c). *See also* Comment, *supra* note 77, at 663.

82. *See supra* note 8, at 105. Normative Act No. 15 indicates that it may be possible to protect software ideas and technological know-how through an agreement for furnishing industrial technology. Normative Act No. 15, *supra* note 77, sec. I-4.1. U.S. suppliers of technology believe that know-how and trade secrets should be recognized as proprietary technology and that the appropriate method of making this technology available to others is through licensing agreements. In general, though, developing countries such as Brazil prefer transfers of technological know-how or trade secrets rather than the licensing of patented technology. *See* Comment, *supra* note 77, at 664. Furthermore, "Brazil does not classify know-how as industrial property because it feels such classification, and the incumbent licensing rights, would benefit only developed nations. As a result, the term 'industrial property' is not expressly defined in Brazil's Industrial Property Code, Normative Acts, or in the law creating the INPI itself." *See* Comment, *supra* note 77, at 664. In addition, technical-industrial cooperation agreements, when allowed, are closely guarded as to what will be permitted and "may not refer, even implicitly, to any industrial property rights." Rosenn, *supra* note 53, at 326.

Thus, in Brazil the level of protection available to suppliers of technology is limited either to technological information registered under the strict provisions of the Industrial Property Code of the INPI, or an unregistered know-how, which is protected only to the extent that it is held in secrecy.

Because know-how is protected only as long as it is kept secret, secrecy is clearly the most important element for U.S. investors to consider in any transfer agreement. Disclosure of the type of information required to meet Brazilian specifications for patent license protection would seriously jeopardize that secrecy. Furthermore, under Brazilian law neither actions for injunction nor specific performance are available to ensure that any violations will immediately cease.[83] For these reasons and others, many U.S. investors are reluctant to invest in Brazil. Investors need assurance that profits derived from utilization of their know-how will be remitted and that the know-how itself will be protected from misappropriation.[84] Unfortunately, in Brazil, because the technology is not patented, it must be sold to the recipient of the technology—an unacceptable transfer of the U.S. supplier's proprietary rights.[85]

Despite the inability to license technological know-how, a limited degree of protection for U.S. software suppliers is still possible, because the INPI does permit the insertion of a use-restriction clause in a contract for the sale of technology. The only protection afforded by a use-restriction clause, however, is an action in contract for violation of a clause prohibiting the Brazilian party's disclosure or unauthorized use of the know-how during the term of the contract.[86] Other alternatives include an action for unfair competition if the information was obtained or used improperly, or a criminal action for theft or industrial espionage.[87]

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83. *See* Comment, *supra* note 77, at 667. *See also* A. WISE, TRADE SECRETS AND KNOW-HOW THROUGHOUT THE WORLD 1-204 (1976).

84. *See* Comment, *supra* note 77, at 665.

85. *Id.* Brazil's attitude toward protection for technological know-how is further complicated by the fact that trade secret, or know-how, protection may be the only form which adequately protects the contents or ideas embodied in a piece of software. *Id.* at 653.

86. *See* WISE, *supra* note 83. *See also* Comment, *supra* note 77, at 665.

87. *See* Comment, *supra* note 77, at 667 (citing Nattier, *supra* note 38, at 187). Brazil's criminal statutes protect against a breach of duty owed to an employer and guard against the divulgence of industrial and commercial trade secrets by employees, former employees, and possible others. The law requires that criminal intent, not mere negligence, must be shown. The penalty is imprisonment for three months to one year or payment of a "forty-day" fine. *See* WISE, *supra* note 83, at I-31, I-32.

A third problem arising in relation to software protection concerns Normative Act No. 22. This Act stipulates that registration of computer software, which is a precondition to the recording at the INPI of acts or agreements involving computer software, is only valid for two years with a possibility of renewal.[88] Furthermore, none of the Act's provisions discusses the validity of a software transfer agreement beyond the expiration of this two year registration period. As one commentator points out, this short time limitation increases the risk that software will lose all protection, not only U.S. protection, before it becomes obsolete.[89]

For purposes of registration, Normative Act No. 22 separates computer programs into three categories:

> 1) Programs developed in Brazil by natural persons resident or domiciled in Brazil, or persons incorporated in Brazil under the permanent and sole control of persons resident and domiciled in Brazil;
> 2) Programs developed abroad that are of interest to Brazil and that have technology and rights of economic exploitation, as well as subsequent updating and maintenance services, have been transferred to specialized national companies capable of carrying out those services with their own Brazilian personnel and of developing new programs or services; and
> 3) All other programs.[90]

Registration and importation of information services or computer programs in the third category is not permitted where the SEI determines that the service can be provided domestically. Nor will registration be allowed upon a determination that either a national [Brazilian] alternative is available or that a program registered under the second category is available. Finally, no registration is permitted if the possibility of development of similar programs exists in Brazil.[91]

Many U.S. software exporters are reluctant to do business in Brazil due to the Normative Acts and registration requirements.[92] Under the Paris Copyright Convention, "published works of nationals of any Contracting State and works first published in that

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88. Normative Act No. 22, *supra* note 38, art. 6.
89. *See U.S. Software Protection, supra* note 32, at 691.
90. Normative Act No. 22, *supra* note 38, art. 3. *See also* Comment, *supra* note 77, at 670.
91. Normative Act No. 22, *supra* note 38, art. 4.
92. *See U.S. Software Protection, supra* note 32, at 691.

state shall enjoy in each other Contracting State the same protection as that other State accords to works of its nationals first published in its own territory, as well as the protection specially granted by this Convention."[93] Although Brazil and the United States have both signed the Paris Convention, computer programs created in the United States or by nationals do not automatically receive the same treatment as those created by Brazilian nationals. One reason for this unequal treatment is the broad definition of public domain in Normative Act No. 17. For example:

> 1) It is no infringement of Brazilian copyright law to reproduce passages or excerpts from published works and include them, or short compositions in their entirety, in another work if the latter work is of a scientific character and the source and author of the excerpted portions are indicated.
> 2) Reproducing extracts from published works does not infringe Brazilian copyright law as long as the reproduction is for an educational or scientific purpose.[94]

Proposed draft legislation dealing specifically with copyright protection of computer software produced much infighting among government officials over what Brazil could bargain for regarding the reservation of its informatics market during Brazil's meeting with U.S. Trade Representative Clayton Yeutter December 12-13, 1986 in Brussels.[95] As a result, a provision that would have allowed the establishment of consortiums by foreign and Brazilian national firms for "the development, production, and merchandizing of software" was withdrawn at the last minute before the Brazilian Congress recessed.[96] Examination of this proposed copyright legislation is the subject of subsequent sections.

III. REMEDIES

Foreign firms are not waiting passively for Brazil to change its

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93. Universal Copyright Convention as Revised at Paris, 1971, art. II. sec. 1, 25 U.S.T. 1341, T.I.A.S. No. 7868, 943 U.N.T.S. 178 [hereinafter cited as Universal Copyright Convention].

94. WORLD INTELLECTUAL PROPERTY ORGANIZATION (WIPO), PUB. NO. 603(E), *Brazil*, COPYRIGHT LAW SURVEY 1,2 (1979) [hereinafter cited as WIPO, COPYRIGHT LAW SURVEY] (construing law No. 5,988 of Dec. 14, 1973, arts. 49-51). *See also* Comment, *supra* note 77, at 671.

95. *See Draft Bill, supra* note 80; *Brazil Proposes to Provide 25-Year Term of Copyright Protection for Software,* PAT. TRADEMARK & COPYRIGHT J. (BNA), Dec. 11, 1986, at 118 [hereinafter *Brazil Proposes*].

96. *Brazil Proposes, supra* note 95, at 118-19.

informatics market reserve policy. Some firms are entering into joint venture with Brazilian-owned firms in order to stay "in the running" for the substantial profits which stand to be made in the growing domestic market. Others, however, have fallen victim to forced sales.[97] But once a foreign firm has "taken the plunge" and decided to stay and grow with the market, it faces the very difficult problem of deciding how to structure a joint venture with the selected Brazilian partner and protect its technology, notably its software, at the same time.[98]

The first major joint venture is currently being arranged between IBM and Gerdau, a Brazilian steel company with little experience in informatics.[99] The two companies will work together in data-processing services only; equity will be 70% held by the Brazilian partner, with IBM providing technology and 30% of the equity.[100] The association between IBM and Gerdau is a typical one following the rules approved by the SEI, but joint venture approval by the SEI is not always guaranteed.[101] Some Brazilian observers report that permission for joint venture has been denied, in some cases, because of the parent firm's expectation of "continued technological dependence." In essence, this was seen by Brazil as merely allowing takeover of local Brazilian firms by multinational corporations (MNCs).[102] The projection by MNC executives is that, while the SEI probably will not approve joint ventures "en masse," associations probably will be authorized one-by-one over the next two or three years, because joint ventures have already "been accepted in principle."[103] Now, what can be done about protection for foreign technology in cases where a joint venture is approved?

A.   Background of Brazil's Proposed Copyright Bill

In 1986, it was revealed that Brazil was attempting to formulate legislation which would give protection similar to that of a

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97. Bus. Lat. Am., Oct. 27, 1986, at 330. Initially, joint ventures were prohibited by the Informatics legislation. *See supra* note 23. *See also* Recent Development, *supra* note 16, at 637. This is one area where Brazil has recently relaxed its strict Informatics policies.
98. *Id.*
99. *Id.*
100. *Id.* at 331.
101. *See id.* at 334.
102. *Id.*
103. *Id.*

copyright to creators of computer software for a period of six to
eight years.[104] The decision by CONIN to apply copyright law to
software may reveal a firm governmental position in that it was
supported unanimously by the government ministers, who are
members of the Council (CONIN).[105] A representative of the Bra-
zilian Informatics Movement (MBI) revealed, at a meeting held in
Brazil in August 1986, that an outline of possible approaches to
software protection was discussed. The three forms of protection
considered were: copyright, patent, and a sui generis approach.[106]

In 1984, a law professor who served on the committee which
developed the proposed informatics legislation revealed that Bra-
zil's intention at that time was to treat computer software more as
an industrial product in the framework of patent law, rather than
as a work of literature or art covered by copyright.[107] After a vote,
the government ministers were unanimously supportive of a copy-
right approach.[108]

Presently, Brazilian copyright law provides protection for in-
tellectual creations, regardless of their form of expression, during
the life of the author plus sixty years,[109] but it does not cover com-
puter software. In general, the rights of a Brazilian author extend
to any form of use, such as publication, translation or adapta-
tion.[110] Two copies of the work must be deposited at the National
Library, the National Music Institute, or the National School of
Fine Arts of the Federal District, according to the nature of the
work sought to be protected. Computer programs pose a difficult
preliminary problem in this respect, because a program does not fit
easily into any of these categories.[111]

The new CONIN copyright proposal envisions extending copy-
right protection to computer software, recommending a period not
to exceed twenty-five years.[112] If passed, the new legislation will
not maintain the lifetime protection presently provided other form

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104. *See supra* note 69, at 1, col. 6.
105. *Id.* at 13, col. 1.
106. *Id.*
107. *See supra* note 18, at 321 (statement by Kleber Avila-Pereira).
108. *See supra* note 69, at 13, col. 1.
109. CIVIL CODE OF THE UNITED STATES OF BRAZIL, bk. II, tit. II, Ch. VI, art. 649, sec. 1
(1958) [hereinafter CIVIL CODE OF BRAZIL].
110. WIPO COPYRIGHT LAW SURVEY, *supra* note 94, arts. 29-47.
111. *See* Comment, *supra* note 77, at 669 (construing CIVIL CODE OF BRAZIL, *supra* note
109, art. 673).
112. *See supra* note 69.

copyright.[113] One reason for this limitation period is that the useful life of computer software is very short.[114] This short software life is enhanced by the continuing advances made in computer hardware. For example, smaller computer "chips" can handle larger quantities of data and information in shorter intervals of time. Subsequently, new state-of-the-art computer software is necessary to support the ongoing hardware improvements. Accordingly, the period of legal protection afforded by the new tax law will probably be fixed at six to eight years, not the full twenty-five years recommended by CONIN.[115] The new copyright law will be based upon both the decisions of CONIN and a Congressional Draft Bill presented by Senator Vergilio Tavora.[116]

The bill proposed by Senator Tavora is the one currently before the Brazilian Congress on the subject of software. It suggests a specific "mixed" approach to software protection, based on copyright and industrial property law and would give protection to computer software for fifteen years from the date of its registration.[117] If passed, this legislation would be a major improvement for protecting software suppliers. Presently, Normative Act No. 22 stipulates that registration of computer software is valid for only two years and provides only a possibility of renewal.[118]

'Senator Tavora insists that legal protection of computer software, solely under copyright law, is inappropriate because a computer program is a technical means achieving a result and should not be confused with artistic, literary, and scientific works which identify the expressions of their creator's personality and have value and significance in themselves.[119] As to the application of industrial property law, Senator Tavora states that computer software cannot always be considered solely as an "invention."[120] Thus, neither this form alone nor pure copyright protection is adequate for protecting computer software.

According to the proposed bill, software legislation should

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113. *Id.* at 13, col. 3.
114. *Id.* Software technology is perpetually progressing and better more efficient software is constantly being developed.
115. *Id.*
116. *Id.* at col. 4. *See also Draft Bill, supra* note 80.
117. *See supra* note 69, at 13, col. 3.
118. *See* Normative Act No. 22, *supra* note 38, art. 6.
119. *See supra* note 69, at 13, col. 4-5. *See also Draft Bill, supra* note 80 (*Justification* section).
120. *Id. See also Draft Bill, supra* note 80 (*Justification*).

contemplate certain principles which include:

>1) remuneration of material and intellectual investment;
>2) equal protection of software, domestic and foreign, a distinction only imperative for the marketing of software in Brazil;
>3) a performance guarantee to the user;
>4) a time limitation on software rights for producers; and
>5) compatibility of rules for software protection with those applicable to commercialization of technology in general, particularly exchange and tax interests.[121]

An examination of the main points of the proposed bill, with these principles in mind, may serve to illuminate areas which could still present problems for multinational software producers in Brazil.

B. Overview of Brazil's Copyright Draft Bill

The Brazilian copyright bill, if passed, will become the legal instrument for establishing rights relative to computer software because the system legalized specifically rules out any other form of software protection.[122] A restatement of some of the main features of the bill includes the following provisions:

>1. The rights conferred apply equally to foreigners domiciled abroad, provided they can prove their country grants rights to Brazilians of equivalent scope and duration [Ch. I, art. 2].
>2. The software producer maintains exclusive rights in the use or authorization of use of the program, including the right to make versions or derived programs [Ch. II, art. 4]. The rights in a derived program which may come to be produced by an authorized third party, shall belong to the third party.[123]
>3. To enhance the possibility of registration, all documents authenticated by the SEI shall be given over to SEI [Ch. III, art. 12]. These include: (a) the source code; (b) internal specifications; (c) description of the program; (d) a user's manual; (e) specifications describing the relations between the characters in the program; and (f) a declaration by the petitioner/producer describing the nature of the software. These are necessary to permit making full use of the program once it becomes public

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121. *See supra* note 69, at col. 5-6. *See also Draft Bill, supra* note 80 *(Justification)*.

122. *Draft Bill, supra* note 80, art. 1.

123. The actual phrase in the translation of the Draft Bill reads ". . . the rights in a derived program which may come to be produced by an authorized third party shall be his and he shall make use of them autonomously" (emphasis added) [Ch. II, art. 5]. Article 4, however, awards the software producer exclusive rights to authorize third parties "to exhibit, store or market software and its versions." [Ch. II, art. 4]. *Draft Bill, supra,* note 80.

property [Ch. III, art. 14].

4. Once registered, computer program rights are assured to the producer for fifteen years from the date of entry of the request for registration. Entertainment software, however, is protected for two years. All computer programs and their versions shall become public property, and technical documentation on file shall be made available to interested parties when: (a) the copyright term expires, or (b) registration has been denied or cancelled [Ch. IV, art 23].

5. Supplementary technical service to the software shall be guaranteed to the user during the period of valid registration [Ch. V, art. 27].

6. The producer of the software may make use of cryptographics or any other resources aimed at impeding or hindering reproduction or non-authorized use of the software [Ch. V, art. 28].[124]

7. (a) The software producer may not deny authorization to interested third parties for generating a derived program if CONIN declares it to be of relevant economic and social interest in the application for which it is intended [Ch. VI, art. 31], or for the production of a derived program if it is intended for use in automatic information processing machines manufactured or used in Brazil [Ch. VI, art. 32]. (b) If the software producer does not agree to the authorization, the matter shall be submitted to CONIN to mediate between the parties and stipulate the amount deemed to be adequate remuneration. A commission of three members of CONIN shall establish the just value of the authorization. If the software producer does not agree to the value determined, he may appeal that valuation as long as his appeal to the judiciary does not impede the immediate use of the software [Ch. VI, art 33].[125]

8. The Federal Government of Brazil may proceed to effect the expropriation of the software when it is in the public interest to do so [Ch. VI, art. 34].

9. (a) A description of penalties for violation of any rights relating to software that may be conferred by the Draft Bill [Ch.

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124. In the case of Apple Computer, Inc. v. Franklin Computer Corp., this method of protection was actually used to protect Apple's computer programs from misappropriation by competitors. The systems programmer, Jim Huston, actually embedded his name in one of Apple's programs (Master Create), and had embedded the word "Applesoft" in another program. These served unquestionably to identify these programs which had been misappropriated by Franklin. Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240, 1245 (3d Cir. 1983), cert dismissed, 464 U.S. 1033 (1984) [hereinafter Apple-Franklin].

125. In addition, article 18 provides that individuals domiciled abroad shall nominate an attorney in Brazil to deal with all matters related to rights and obligations, and who shall act for him as of the date of the request for software registration [Ch. III, art. 18]. *Draft Bill, supra* note 80.

VIII, art. 36]. (b) Regardless of criminal action, the party harmed may "enter an action to prohibit the infractor from practicing the incriminating act." This action can be accumulated with an action for losses and damages resulting from the infraction [Ch. IX, art. 40].[129] (c) An action for voiding the registration is a defense action and can be entered at any time.[127]
10. Those having title to rights in operating system or support system software are compelled to disclose information on their functional and data interfaces "to a degree sufficient to permit use of such programs in relation with others produced by third parties" [Ch. XI, art. 52].[128]

Senator Tavora's copyright bill has already been approved by the Committee on Law and the Constitution and, in August 1986, was under examination by the Committee on National Security.[129]

Miguel Teixeira, ex-subsecretary of the SEI, agrees with Senator Tavora that pure copyright protection is inappropriate for computer software. In his view, the fundamental differences between art and the utilitarian nature of software should be recognized.[130] Furthermore, Teixeira believes that the constraints of copyright protection may operate to make the software user overly dependent upon the software manufacturer and prevent improvements in software programs.[131] Legislation using a modified copyright approach is considered to be a convenient way "to please the United States" as well as to provide an incentive for the software industry to eliminate the "pirates" from the market.[132] Teixeira stresses that, depending upon the extent of the modifications, adoption of a modified copyright approach in the software area in fact amounts to the adoption of a sui generis approach to software protection.[133] In addition, Teixeira predicts that it is most probable that a pro-

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126. The following fall under a two-year statute of limitations: rights of the producer [art. 4]; rights of the user in derived programs [art. 5]; duty to update software [art. 25]; duty to provide supplementary service to software [art. 27]; and duty to provide technical quality software [art. 29]. *Id.*

127. Any interested party or the Federation may enter an action to nullify registration during its term of validity [Ch. X, art. 44]. Also recall that "computer programs and their versions become public property and the technical documentation on file shall be made available for inspection by interested parties when: b) the registration was denied or . . . cancelled." [Ch. IV, art. 23]. *Id.*

128. *Draft Bill, supra* note 80.

129. *See supra* note 69, at 13, col. 4.

130. *Id.* at col. 1.

131. *Id.* at col. 2.

132. *Id.*

133. *Id.* at col. 1.

tection period of twenty-five years will be adopted "for political reasons," since all countries adopting copyright for computer software are adopting that amount of time as a standard.[134]

In the opinion of Ercole Carpentieri, Vice President of the Brazil-United States Chamber of Commerce in Sao Paulo, CONIN's approval of copyright for protection of computer software shows that Brazil "has opted for a practical path, leaving aside emotionalism and seeking an understanding in a discrete manner."[135] Carpentieri points out that the Brazilian ambassador had already promised the adoption of the copyright criteria to the U.S. government during discussions of informatics in Paris in early July 1986.[136]

Although CONIN's decision was well-received in the United States, it was not so well-received in the Brazilian Congress. The few Brazilian Congressmen who expressed their opinion "repudiated the adoption of copyright law, considered by all as a Brazilian capitulation in the face of U.S. pressure."[137] One congresswoman commented publicly that Congress had already decided that computer hardware would be developed using Brazilian domestic technology; to be consistent with that policy, Brazil must give incentives and protection to its own software as well as to that of foreign firms.[138] She admitted that she found it inconceivable that, by a single action, the spirit of the Informatics law might be altered.[139]

On September 19, 1986, in the wake of such criticisms, *Business Latin America* reported that "CONIN had essentially undone its earlier ruling granting substantial copyright protection to software developed by international firms, by attaching so many conditions that the protection previously granted had been rendered meaningless."[140] Although the original ruling technically still holds, it is believed that CONIN qualified certain areas of its first ruling because of tremendous pressures exerted by local computer companies in Brazil, by SEI, and by INPI.[141] Two areas of concern

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134. *Id.*
135. *Id.* at col. 3-4.
136. *Id.*
137. *Id.* at col. 1.
138. Statement by Congresswoman Cristina Tavares quoted in the Brazilian newspaper, Gazeta Mercantil. *Id.*
139. *Id.*
140. Bus. Lat. Am., Sept. 29, 1986, at 304.
141. *Id.* Indeed, on December 9, 1986, President Jose Sarney received the final executive draft of the government's proposed new software law. The draft legislation provided the

are:

> 1) Foreign-owned firms will be allowed to market only software
> developed by their own parent companies and intended for com-
> puters which are not made in Brazil and for which no local pro-
> duction plans exist. (Under this provision, essentially only lo-
> cally-owned firms may sell software for personal computers);
> and
> 2) All software (not just that sold to public entities) will now be
> required to be registered with SEI.[142]

For the time being, the only hope is the chance that the next Con-
gress will overturn the current rulings.[143]

IV. ANALYSIS OF BRAZIL'S OPTIONS

A. *Socio-Cultural and Economic Aspects of Informatics*

In redefining the relations between the big industrialized
countries an the Third World, there are two views of the develop-
ments. The first may be stated as follows: "[S]himmering and
gleaming in front of the 'miserable masses of the Third World,' the
personal computer will supposedly, 'enable them to pass directly
from the neolithic age to the post-industrial society.' "[144] The other
view, with which the first may be compared, would hold:

> For all these prophets who pay no attention to history or to so-
> cial conditions and propose a "Marshall Plan for computers,"
> without the slightest concern for the symbolic aspect of this
> "Marshall Plan" which, if it enabled the post-war reconstruction
> of Europe, also delivered it, trussed and bound, to the United
> States, not that of Hemingway or Dalton Trumbo, but that of
> McCarthy and Rockefeller, we are henceforth on the threshold

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expected 25-year term of copyright protection for both foreign and Brazilian-made software
and established fines and jail sentences of up to two years for copyright violations. However,
a provision that would have allowed the establishment of consortiums between foreign and
Brazilian firms, was eliminated. Renato Archer, Brazilian Minister of Science and Technol-
ogy commented that he personally decided to omit the concession provision from the draft
bill because it "could give the impression that we were establishing [more flexible] regula-
tions for Article 12 of the informatics law." *See supra* note 95. Article 12 sets out guidelines
for the establishment of Brazilian firms producing goods protected by the market reserve
provisions for the industry. *See Informatics Law, supra* note 19, art. 12.

   142. *See supra* note 140.

   143. *Id.*

   144. FREEDOM OF CHOICE, *supra* note 11, at 12 (citing *Le Nouvel Observateur* 64 (1982),
conversation with J.J. Servan-Schreiber June 5, 1965).

of the "superstruggle of tomorrow."[145]

The above quotations, at first, seem diametrically opposed to one another. The first, a remark by a French diplomat and noted author, seems to be unbridled optimism. He sees the transfer of knowledge as the panacea and the outline of a promising future for the whole of humanity. The second, a comment on the views of another noted author, seems more sobering. Which is closer to reality? Or are they both reality? It is probably not an over-generalization to report that, today, very few studies on the subject of information technology "take into account the role played by communications systems in the sociocultural development of a nation."[146] In order to understand the role played by communication and information technology within a developing nation such as Brazil, it is necessary to know something of that nation's history.[147]

Even though all communication systems, such as radio, television, free press and data processing, are not of equal importance in each country, it is predicted that the integrative nature of computer technology as a new pacesetter will reorganize all the segments of the communication industry into a new hierarchy.[148] One commentator has stated that "[c]ountries are no longer defined in terms of the place they occupy on maps, but in terms of the interrelations maintained by the different elements of the transnational complex."[149] One aspect of that interrelationship is the extent to which a nation such as Brazil is seen as being dependent upon foreign technology. In a presentation to the Fourth Conference of Latin American Computer Authorities (CALAI) the Brazilian representative summarized this interrelationship:

> Brazil, like many Latin American countries, entered the computer industry as a consumer of imported goods and services, whereas the central countries, particularly the United States, had already sufficiently developed their own markets and were seeking to conquer new markets owing to the opening up of new commercial frontiers in this sector. We learned how to handle the computer through courses, offered principally by hardware manufacturers who were both distributors and suppliers of

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145. FREEDOM OF CHOICE, *supra* note 11, at 13 (commenting on statements and ideas of Alvin Toffler presented in A. TOFFLER, THE THIRD WAVE 436 (1980)).

146. FREEDOM OF CHOICE, *supra* note 11, at 41.

147. *Id.* at 44.

148. *Id.* at 45.

149. *Id.* at 46.

material, owners of technology, and responsible for the training
of specialized labor. . . .

The function of the knowledge disseminated was to broaden
the market and was limited to the technology of using computer
resources which became veritable black boxes.[150]

This view is echoed by one Brazilian scientist, who describes the
relationship between Brazil's scientists and the Medical Literature
and Retrieval System (MEDLARS) data bank network as a
"pseudo-transfer of technology."[151] In view of the fact that the five
million pieces of data in the MEDLARS system reside in the U.S.
National Library of Medicine,[152] this scientist describes a total de-
pendence upon the innovations produced overseas which reduces
the transfer of this technology to "the acquisition of a black
box."[153] In her view, constant research and development must be
conducted within Brazil before it will be able to negotiate with and
contribute to the outside world.[154]

In order to evaluate the effectiveness of research and develop-
ment efforts, various proposals have been made for measuring the
development of the computer industry in Latin American coun-
tries. Researchers from IBM and Mitsubishi have established a
classification system which names seven different stages through
which each developing country must pass. Each of those seven
stages is defined by eight key variables.[155] But as one Chilean spe-
cialist pointed out, these types of classifications "often rest on out-
dated data."[156] Commenting on computer development in his own
country, this specialist felt that it was obvious that Chile had gone
beyond the particular phase in which they were classed and, in ad-
dition, that there was another intermediary stage that had not
been included in the model.[157]

Massachussetts Institute of Technology (MIT) has developed

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150. *Id.* at 71.
151. *Id.* at 131.
152. *Id.* at 121-22.
153. *Id.* at 131.
154. *Id.* at 132.
155. *Id.* at 69. The eight variables are: number and size of computers, state of teaching
of data processing, applications of the computer, government use of computers, share of
technology held by nationals, official policy towards computers, international assistance in
computer technology, existence of professional data processing groups, and user associa-
tions. *Id.*
156. *Id.* (citing Pino, *Nival nacional de desarrollo de law computacion, Informatica,*
July 1980, at 17).
157. *Id.* at 69-70.

its own descriptive model in its attempts to establish a potential index of the development of the computer industry in Latin America. MIT's Computer Industry Development Potential (CIDP) is composed of eleven weighted variables grouped under three headings.[158] According to the results obtained using this model, the most advanced stage is equivalent to 65 points on the CIDP index (out of a total of 100 points). In 1976, Brazil, Latin America's most advanced country, amassed a total of only 52 points,[159] which may be an accurate indicator of the fact that Brazil invests very little of its GNP in research and development. This may be illustrated by a remark made by a noted Brazilian researcher comparing Brazilian electronics research laboratories to those of IBM:

> If, by any chance, all the microelectronics researchers in Brazil took the same airplane to go to a seminar and this airplane crashed, the country would be left without a single researcher in this field, for their present number is no more than 200. On the other hand, no airplane in the world is sufficiently big to accommodate all the researchers of just one of IBM's laboratories, the one in New York for example.[160]

The analysis is not complete without a look at the flip side of

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158. FREEDOM OF CHOICE, *supra* note 11, at 70. *Economic variables include:* a) Gross National Product (30 pts.); b) Per Capita GNP (15 pts.); c) Growth rates of GNP and per capita GNP combined (5 pts.); d) Percent of GNP in "high technology areas" (10 pts.). *Educational variables are:* a) Literacy rate (10 pts.); b) Relative number of students enrolled in secondary school or above (5 pts.); c) Level of technical education (5 pts.). *Technological variables are:* a) Electricity generated (8 pts.); b) Number of telephones per 1000 (7 pts.); c) Number of television sets installed (2 pts.); d) Number of computers in the country (3 pts.). *Id.*

159. *Id.* Under the IBM and Mitsubishi model, the *initial* stage corresponds to initial introduction or experimentation [Haiti]; the *initial to basic* stage corresponds to the beginning use and knowledge of the technology [Honduras, Bolivia, Ecuador, and Costa Rica]; the *basic stage* is characterized by the proliferation of machines and inst llations [Peru, Chile and Cuba]; the *basic to operational stage* is marked by consideration of fundamental problems of the impact of computerized activities on the national balance of payments, government activities, and the life of firms [Venezuela, Puerto Rico]; the *operational stage* is described as a consolidation stage [Mexico, Argentina]; the *operational to advanced stage* begins with the integration of the various elements of the data processing industry into a national framework [Brazil]; and the *advanced stage,* which corresponds to the ultimate level of maturity, but which has not been reached by any Latin American country. The data in the CIDP index do not reveal the scores of any Latin American countries other than Brazil, nor do they report any more up-to-date ratings for Brazil. They do indicate, however, that IBM and Mitsubishi have devised a correlation model between their stages of data processing developments and the CIDP index. *Id.* at 69.

160. *Id.* at 136.

Brazil's fears of dependence upon overseas innovations and pseudo-transfers of technology, namely, the development of Brazil's own computer policy. Unlike the rest of Latin America, the advent of computers in Brazil has been accompanied by state-supported industrial development efforts.[161] Brazil's strategy is based on a doctrine of national security (in line with the general principles established by the military government of Brazil after the 1964 coup) and a desire for national sovereignty.[162] Brazil sees it as an absolute necessity to create a domestic computer technology sector so that it may guarantee its own independence in this field. Brazil also has a need to assure the supply of such equipment for its armed forces.[163]

The problem is a complex one for U.S. multinational corporations. IBM, for example, has been in Brazil since 1939; its first factory outside the U.S. was installed in the region of Benfica (Rio de Janeiro).[164] Even though IBM's share of the Third World scarcely exceeds five percent of its total revenue, no public or private organization has a greater total number of large computers in Latin America. Likewise, no organization has shown more interest than IBM in looking for new ways to use computers in the region and to find the necessary personnel.[165] What can be made of IBM's involvement in Latin America?

In the words of one commentator, "solving problems . . . is what characterizes the basic activity of IBM," but IBM never defines the problems it plans to resolve; it only offers its computerized solution.[166] Its computerized solution must always be supported by the necessary software, which may also be sold to other customers with the same problems. Once again, we are back to the Black Box; a Black Box that just keeps changing hands. Brazil's

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161. *Id.* at 104. Attempts have been made to construct national computer industries in other Latin American countries such as Argentina, Mexico and Cuba. In general, however, they have not succeeded in emerging into active policies motivated by consistent backing. Only Cuba, along with Brazil, has made consistent efforts to establish a basic policy with the intent of establishing a national industry. *Id.* at 104, n.5.

162. *Id.*

163. *Id.*

164. *Id.* at 136.

165. *Id.* at 137. In 1980, IBM devoted 1,277 million dollars to research and development throughout the world. The second ranking U.S. firm was Digital Equipment Corporation (DEC) with 217 million dollars, less than one fifth of IBM's total. The ten largest American computer firms had 73% of the total investments for research in this field; IBM alone was responsible for almost half of this. *Id.* at 136.

166. *Id.* at 140.

misgivings in this respect may be grasped by the following:

> The search for software, which gives a raison d'etre to the ma-
> chine . . . creates a redeployment of social connections between
> the hardware manufacturer and the individuals . . . which con-
> tribute their intellectual raw material. The search for solutions
> becomes a pious adventure of creativity extraction for the firm,
> within the limits imposed by a "final solution," over which it has
> control.[167]

It cannot come as a complete surprise that Brazil and similar developing countries want no part of this. Brazil maintains that "[p]rotection is a needed tool to bridge the dependence gap, and is to be removed gradually as indigenous capacity is able to face exogenous competition."[168] In 1980, Executive Secretary Brizida of SEI explained that the aim of the Brazilian informatics policy of control was not meant to restrain information flow but rather "to give commercial reciprocity to the exchange of information among countries."[169] Does this mean that Brazil's informatics policy may be viewed as a "bargaining chip" which may be used to exchange attenuated informatics restrictions for trade concessions? If so, there may be some recent indications that some concessions are beginning to be made.

Until recently, IBM has been unable to enter the restricted computer market in Brazil because of Brazil's reserve market policy of limiting foreign involvement in the local manufacture of computers to mainframes; the mini- and micro-computer markets are largely reserved for local Brazilian companies.[170] In order to get around those restrictions, IBM has offered to share its technology and marketing system with Brazilian companies in joint ventures and licensing arrangements;[171] recently, IBM has become the first firm approved by the SEI for a major joint venture with the Brazilian steel group, Gerdau, for data processing services.[172]

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167. *Id.*

168. Bortnick, *supra* note 55, at 340 (citing Saur, *Informatics, New Technologies and Data Regulation: A View From the Third World*, in DATA REGULATION: EUROPEAN & THIRD WORLD REALITIES 223, 224 (On Line 1978)).

169. Bortnick, *supra* note 55, at 340 (address by Joubert de Oliviera Brizida, Executive Secretary of the Brazilian Special Secretariat of Informatics, 1980 Intergovernmental Bureau for Informatics Conference on Transborder Data Flow Policies in Rome, Italy (June 23, 1980), *reprinted in* 3 TRANSNAT'L DATA REP. No. 3/4, at 33-34 (1980)).

170. Lat. Am. Reg. Rep. Brazil, May 30, 1986, at 6, col. 1.

171. *See* Seidman, *supra* note 4, at 63.

172. *See supra* note 97.

Even though political risk analysts are forecasting a "fairly stable political climate for Latin American governments" such as Brazil in 1987, this does not mean the analysts are "giving the green light to U.S. investors and exporters to put their money into Central and South America—just the opposite."[173] In February of 1987, Brazil, the developing world's largest debtor,[174] declared a moratorium, suspending interest payments on the $70 billion it owes in interest to commercial banks because "these disbursements drain their resources and keep their economies from growing."[175] Brazil is not alone,[176] but it is the most recent default. The result, according to one source, is that "the attitude among many U.S. companies is that they wish they'd never heard of the term, Latin America."[177]

B.   Playing By A New Set of Rules

The reserve market share approach is reported to have proven profitable for Brazilian computer manufacturers, but unfortunately, the cost of Brazil's experiment has been borne by the Brazilian consumer.[178] The consumer is forced to purchase outdated Brazilian technology at exorbitant prices[179] or buy computer products at a premium from the developing Brazilian "Black Market".[180] In addition to the black market in imported software, com-

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173. Resnick, *Companies Must Tread With Care*, The Miami Herald, Mar. 23, 1987 (Business/Monday), at 23, col. 1.

174. Brazil's foreign debt reached a total of $108.8 billion in February 1987, making Brazil the undisputed leader on the list of eleven Latin American countries carrying the largest debts. Mexico follows owing $101.6 billion, and Argentina in third, owing $51.0 billion, according to recent assessments by the United Nations Economic Commission for Latin America and the Caribbean. Oppenheimer, *Debtor Nations Come Up Empty*, The Miami Herald, Mar. 23, 1987 (Business/Monday), at 13, col. 1.

175. *Id.* at 14, col. 1.

176. Nicaragua, Bolivia, Peru, Brazil, and Ecuador have stopped servicing the bulk of their foreign debts. Several other countries, including Costa Rica, are paying only a portion of what they owe. Brazil says it cannot pay because of a plunge in its trade surplus. Because of Brazil's recent sizeable default, most U.S. economists and bankers are not convinced that financial measures taken in the past to contain Latin America's $382 billion foreign debt crisis are still working. *Id.* at 13, col. 1.

177. Comment by Jerry Haar, Associate Professor of International Business at Florida International University. Professor Haar went on to explain that South America's mounting debt, shrinking hard currency reserves, and weak commodity prices are making both the analysts and investors "leery," at least for the time being. Resnick, *supra* note 173.

178. Recent Development, *supra* note 16, at 630.

179. *Id.* at 632. *See also supra* note 51 and accompanying text.

180. One Brazilian firm openly admits making computers compatible with illegal international software, because it cannot compete with black market wares. *Id.* at 632-33.

ponents, and whole computers, there is widespread and blatant "pirating" of foreign technology, apparently with government approval.[181] According to one source, the Brazilian government seems "unsympathetic to the plight of the foreign companies," arguing the Brazilian companies "cannot be expected to reinvent what already exists."[182] What seems to be needed is reassurance for foreign manufacturers and software producers that their technological investment will not ultimately be swept into the stream of illicit trade in computer hardware or that their software will not be blatantly copied without any royalty payments being made.

Following close on the heels of Brazil's latest economic setback, the time seems ripe for change. Though they may not solve the complex problems facing Brazil in this area, at least five approaches may warrant consideration by foreign computer companies:

1. Prepare to wait until the ban on imports is lifted;[183]
2. File suit in cases where infringement exists;
3. Enter into user agreements with Brazilian branches using foreign software;[184]
4. Attack Brazil's market reserve policy as a violation of the General Agreement on Tariffs and Trade (GATT);[185] or
5. Offer trade concessions in the form of higher entry quotas and lower tariffs at the U.S. border in return for a more compromising form of the market reserve share policy.[186]

1. Prepare to Wait

The general consensus among U.S. companies is that Brazil's

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181. Often the equipment is advertised as the "Brazilian Version" of the foreign product. *Id.* at 633.

182. *Id.* at 633 (citing *Brazil's Prickly Computer Policy*, N.Y. Times, Apr. 20, 1984, at F12, col. 3.).

183. Recent Development, *supra* note 16, at 635. *See also* Bawer, *supra* note 70.

184. Recent Development, *supra* note 16, at 639 n.146.

185. General Agreement on Tariffs and Trade, *opened for signature* Oct. 30, 1947, 61 Stat. A3, A7, T.I.A.S. No. 1700, 55 U.N.T.S. 187. The GATT Agreement has been modified in several respects since 1947; the current version is contained in GENERAL AGREEMENT ON TARIFFS AND TRADE, IV BASIC INSTRUMENTS AND SELECTED DOCUMENTS (1969). The term GATT is also used to refer to the organization made up of the contracting parties to the General Agreement. Here, the term General Agreement is used to refer specifically to the agreement itself. Note, *Legal Problems in Expanding the Scope of GATT to Include Services*, 7 INT'L TRADE L.J. 281 (1982-83) [hereinafter *Expanding the Scope of GATT*].

186. Oppenheimer, *Playing By A New Set of Rules*, The Miami Herald, Mar. 23, 1987 (Business/Monday), at 27, col. 2.

market reserve policy will not last forever;[187] one reason may be that, as previously discussed, some firms are entering into joint ventures to avoid falling victim to forced sales.[188] Though not all joint venture proposals are approved,[189] the SEI tends to look more favorably on proposals which (1) link small manufacturers with strong financial institutions, (2) propose establishing research and development centers in Brazil, or (3) indicate a positive trade balance.[190] In view of the fact that, initially, no joint ventures between Brazilian and foreign firms were permitted,[191] the recent developments with IBM's joint venture approval may be a signal that Brazil is loosening its grip on the reserve market share.

2. File Suit for Copyright Infringement

A foreign company which decides to do more than wait until informatics restrictions are lifted could file suit in the Brazilian courts to stop the pirating of its personal computer technology.[192] IBM, for example, has routinely resorted to the Brazilian courts to file copyright infringement suits against firms it claims have illegally copied its software.[193] In choosing this course, however, the foreign company in a Brazilian court faces some rather thorny problems. First, it would appear that Brazilian appropriation of software from ideas disclosed under the SEI filing requirements would not be redressable under any existing federal statute since, in Brazil at least, software is considered a service[194] and, as such, is outside the scope of even the 1979 amendments to the Trade Act of 1974.[195]

Secondly, the foreign software producer's consent to the disclosure under the proposed copyright bill may prevent the use of the software from being classified as a "misappropriation" and

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187. Recent Development, *supra* note 16, at 636.
188. *See supra* note 97 and accompanying text.
189. *Id.* at 334.
190. Bawer, *supra* note 70.
191. *See supra* note 23.
192. Wash. Post, Aug. 29, 1984, at A21, col. 1. Recent Development, *supra* note 16, at 639.
193. Recent Development, *supra* note 16, at 639.
194. *Id.* at 637. There is an ongoing debate as to whether software is to be classified as goods or as services. *See generally* Cavanagh, *The Supply of Computer Software—Goods or Services?*, 12 AUSTR. BUS. L. REV. 195 (1984).
195. 19 U.S.C. § 2251 (b)(1) (1982). *See generally* Sandstrom, *Import Relief, Unfair Trade Practices and the Generalized System of Preferences*, 11 LAW. AM. 359 (1979).

thus an unfair method of competition in certain circumstances.[196] Under the very broad definition of public domain, as construed by Normative Act No. 17,[197] it is not an infringement of a Brazilian copyright to reproduce passages or excerpts from published works and include them in their entirety in another work if the latter is for an educational or scientific purpose.[198] When considered with certain provisions of the proposed copyright bill, it appears that authorization for generating a "derived program" from existing software would be accepted practice.[199] In reality, this may be little more than authorized appropriation, and yet it, apparently, may be practiced with impunity.

Thirdly, although a thorough discussion of the extensive choice of law problems which may arise is beyond the scope of this article, a few points noted by other commentators deserve mention. In the absence of a choice of law provision in a technology transfer agreement, governing law is usually determined by an analysis of the following contacts: the place of negotiation of the contract; the place the contract was executed; the place of performance; the place of the subject matter of the contract; and the place of the domicile, residence, nationality, incorporation and business of the parties.[200] In the event that the choice of law is contrary to a fundamental policy of the forum having the greater interest in the contract, then the governing law is usually the law applicable in the absence of an effective choice by the parties.[201] In addition, a proposal to choose U.S. law to govern a software license agreement between a U.S. company and a Brazilian company would violate fundamental Brazilian policies governing technology transfer.[202] Even with a choice of law clause valid under U.S. law, enforcement may be impossible if the foreign licensee has no other contacts with the United States; if the Brazilian courts refuse to give effect to a U.S. judgment based on that choice of law clause, then the foreign licensee actually benefits from a breach of the

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196. The *Draft Bill* provides that "all computer programs and their versions shall become public property, and technical documentation on file shall be made available to interested parties when: (a) the term expires or (b) registration was denied or cancelled." *Draft Bill, supra* note 80, Ch. IV, art. 23.

197. Daniel, *supra* note 78.

198. WIPO, COPYRIGHT LAW SURVEY, *supra* note 94.

199. *Draft Bill, supra* note 80, Ch. VI, art. 31-34.

200. RESTATEMENT (SECOND) CONFLICT OF LAWS § 188 (2) (1971).

201. *Id.* at § 187 (2) (b). *U.S. Software Protection, supra* note 32, at 702.

202. *U.S. Software Protection, supra* note 32, at 702-03.

agreement.[203]

3. Enter User Agreements

Instead of filing suit, at least one software manufacturer has approached the U.S. company's problem from a different angle. This manufacturer has secured agreements from the Brazilian branches of "over a dozen companies" to avoid illicitly-obtained pirate copies of its software programs.[204] This tactic may prove to be effective, especially when used in conjunction with a provision in the proposed copyright bill which specifically allows the software creator to make use of any "cryptographic or other resources aimed at impeding or hindering reproduction or non-authorized use of software."[205]

4. Expand the Scope of GATT

Presently, the General Agreement on Tariffs and Trade (GATT), a multilateral agreement of approximately ninety member nations[206] directed at limiting trade barriers, does not apply to transnational trade in services.[207] Since software is considered to be a service in Brazil, contracting nations are not prohibited from imposing barriers, such as Brazil's market reserve policy, to trade in those services.[208] The fundamental principles upon which GATT is based—reciprocity, mutual advantage, and nondiscrimination—should be as applicable to trade in services as they are to trade in goods.[209] Because of the growing economic importance of the services sector in international trade, the U.S. government is

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203. *Id.*

204. This is the approach of Ashton-Tate, a software manufacturer. According to Ashton-Tate lawyer, Robert Kohn, "[they] get much faster results by entering into agreements (with users) and lobbying with the government rather than going directly after the pirates." *U.S. Software Firms Try to Protect Big American Share of World Market*, Wall St. J., Apr. 18, 1985, at 34, col.3. Recent Development, *supra* note 16, at 639 n.146.

205. *Draft Bill, supra* note 80, Ch. v, art. 28. This procedure was actually used in the Apple-Franklin Case. There, not only was it shown to be "almost impossible for so many lines of code" to be identically written by an independent programmer, but the Apple systems programmer, James Huston, had embedded his names within one of his programs (Master Create), and had embedded the word "Applesoft" in another. Both appeared on the pirated Franklin master disk. Apple-Franklin, supra note 124, at 1245.

206. Seidman, *supra* note 4, at 52.

207. *Expanding the Scope of GATT, supra* note 184.

208. Seidman, *supra* note 4, at 52.

209. *Expanding the Scope of GATT, supra* note 184, at 288.

presently seeking the expansion of the scope of GATT to include trade in services.[210] The most significant obstacle to extending GATT to services is that the language of the General Agreement refers throughout to goods and to specific concepts that relate to goods;[211] however, nothing in the language of the General Agreement expressly excludes services.[212]

In November 1985, GATT member nations agreed to convene a preparatory committee to "chart the course of a new round of world trade talks" scheduled for the fall of 1987.[213] The contracting parties met in Punta del Este, Uruguay, September 15-20, 1986 where they proposed adoption of the Ministerial Declaration on the Uruguay Round of the GATT Multilateral Trade Negotiations on goods and services (The Uruguay Round).[214] The Multilateral Trade Negotiations (MTNs) will be concluded within four years and involve two subsidiary negotiating groups. Part I will relate to negotiations on trade in goods;[215] Part II will relate to negotiations on trade in services.[216] From this, it would appear that

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210. *Id.* at 285. Nations supporting the United States' efforts toward expansion in 1982 included Great Britain, Germany, Sweden, and to a lesser extent, Switzerland, Netherlands, Norway, Finland, Canada, Japan and Australia. Nations opposed were France, Italy and most of the developing countries, especially India and Brazil. Seidman, *supra* note 4, at 53.

211. *Expanding the Scope of GATT, supra* note 185, at 291.

212. *Id.*

213. Seidman, *supra* note 4, at 53.

214. General Agreement on Tariffs and Trade: Ministerial Declaration on the Uruguay Round of Multilateral Trade Negotiations, *done* Sept. 20, 1986, 25 I.L.M. 1623 (1986).

215. The Ministerial Declaration for Part I contains the following statement of purpose:
   The Contracting Parties meeting at Ministerial level
   Determined to halt and reverse protectionism and to remove distortions to trade
   Determined also to preserve the basic principles and to further the objectives of the GATT
   Determined also to develop a more open, viable and durable multilateral trading system
   Convinced that such action would promote growth and development
   Mindful of the negative effects of prolonged financial and monetary instability in the world economy, the indebtedness of a large number of less-developed contracting parties, and considering the linkage between trade, money, finance and development
   Decide to enter into Multilateral Trade Negotiations on trade in goods within the framework and under the aegis of the General Agreement on Tariffs and Trade.
Statement by the Chairman, Id. at 1624.

216. The Ministers also decided as part of the MTN to launch negotiations on trade in services. Part II of the statement of purpose established that:
   Negotiations in this area shall aim to establish a multilateral framework of Principles and rules for trade in services, including elaboration of possible disciplines for individual sectors, with a view to expansion of such trade. . . . Such frame-

plans to expand the scope of the GATT General Agreement are under way. If negotiations are fruitful, this may prove to be at least one attractive approach for attacking Brazil's market reserve policy.

5.   Offer Trade Concessions

Although national security concerns originally justified Brazilian protectionism in the informatics area, it is reported that economic concerns ultimately "spurred the passage of the informatics law."[217] In view of the recent economic setbacks in Brazil, it may again be appropriate to reevaluate the strict market reserve policy in an economic light. Until February 1987, Brazil was looked upon by international bankers as a "model debtor nation."[218] Only one year before, Brazilian officials had been bragging that Brazil, Latin America's largest country, had "entered an era of zero inflation" and that their price-freezing Cruzado Plan had brought thousands of new consumers into the market, spurring a demand that "kept industry humming at record levels."[219] When the Cruzado Plan was introduced it was extremely well-received, and the popularity of Brazilian President Jose Sarney increased enormously,[220] but economists now insist that the Plan was never fully implemented.[221] The significant salary increases, combined with the Plan's frozen prices, produced explosive demand and concomitant widespread shortages that hurt Brazil's trade balance. This policy ultimately caused a drop in the country's reserves and threatened its ability to service its debt.[222] Brazil attempted to take the necessary therapeutic measures by unfreezing prices, but ultimately, the

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work shall respect the policy objectives of national laws and regulations applying to services and shall take into account the work of relevant international organizations.

GATT procedures and practices shall apply to these negotiations.
Statement by the Chairman, Id at 1627.

217. Recent Development, *supra* note 16, at 622.

218. Whitefield, *The Politicians Have Run Out of Miracles,* The Miami Herald, Mar. 23, 1987 (Business/Monday), at 41, Col.1.

219. *Id.*

220. *Id.* at col. 3.

221. *Id.* Brazilian economist, Lara Resende, explained that "[t]he Cruzado Plan shouldn't have been a stabilization program. Unfortunately it was never fully implemented. What was done was simply a freezing of prices. After this, various fiscal and monetary measures were supposed to be taken. The government never implemented the orthodox part of the plan." *Id.* at 41-2.

222. *Id.* at 41, col. 3.

Cruzado Plan was "scrapped."[223]

Contemporaneous with Brazil's economic woes, the U.S., pressed by groups such as California Flower Growers, implemented new trade policies of its own, establishing lower entry quotes and higher tariffs at the U.S. border for many Latin American imports.[224] According to reports, most U.S. government officials and legislators agree that Congress will pass a major trade bill in 1988 aimed at narrowing the $170 billion U.S. trade deficit.[225] Among proposals currently being considered in both houses, one version provides that "certain Brazilian imports would be subject to a 25 percent import duty unless [Brazil] reduces its trade surplus with the United States and reduces its import restrictions on U.S. goods and services" (emphasis added).[226] Reportedly, Brazilian exports of steel, textile goods, shoes, and corned beef would be likely targets.[227]

With Brazil in the throes of rising inflation, it seems likely that Brazil may be more receptive to suggestions for workable compromises with an eye toward attracting investors and soothing international banks. It is felt by some that the key to reducing the burden of foreign debt lies in "freeing private citizens from stifling rules and taxes and giving them the opportunity to attract capital, produce goods and services, and stimulate economic growth."[228] This is not meant to be a "quick fix" nor is it intended to be an "overnight solution," but it is probably the only solution that will

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223. *Id.*

224. In early February 1987, the U.S. government raised the entry duties for most Colombian flowers by 40 percent. The California growers, who requested the increase, complained that they were "being driven out of the business by Colombian firms subsidized by the Colombian government." Colombia is not alone. Dominican Republic sugar growers, Ecuadorean shrimp farmers, and Brazilian orange juice makers, among others, are "up in arms over what they say are growing obstacles to export their goods to the U.S. market." Oppenheimer, *supra* note 186, at col. 1.

225. Brazil, alone, is not being singled out. One version of the proposals being considered specifically mentions Japan, South Korea, and Brazil and is aimed at imposing new tariffs on "selected imports from [several] countries that are running excessive trade surpluses with the United States." *Id.*

226. *Id.*

227. *Id.*

228. Baker, *U.S. Plan to Cut Latin Bank Debt Making Progress,* The Miami Herald, Mar. 23, 1987 (Business/Monday), at 51, col. L According to Treasury Secretary, James A. Baker III, "across-the-board debt forgiveness would ultimately damage the global economy. . . ." Using this approach, commercial banks would "take losses that might weaken confidence in worldwide financial stability" and also "frighten investors from productive ventures." *Id.* at col. 2.

work in the long run.[229] According to the views of one international business authority:

> . . . many Latin American nations have developed world-class industries, yet are "playing the Third World card" when asked by the U.S. government to stop subsidizing their exports or to open their markets to U.S. goods [and services].
>
> For too long, countries like Mexico, Brazil and Argentina have prided themselves on being newly industrialized countries, ... It's about time that they begin playing by the big guys' rules.[230]

U.S. banks probably realized that they will have to make concessions in order to find flexible alternative methods to solve Latin American economic growth needs;[231] the other side of the coin is that Brazil, too, must seriously consider making concessions in the area of a more compromising market reserve policy. Brazil is truly "at the crossroads."[232] Some questions must soon be asked; some choices may no longer be avoided.

V. CONCLUSION

In the final analysis, the GATT Multilateral Treaty Negotiations may provide the best opportunity for opening up Brazil's trade policies where computer software and services are concerned. If the U.S. hopes to make any great strides toward development of trade agreements in the information services sector, bilateral trade agreements between the U.S. and Brazil may be no substitute for the multilateral GATT. From the point of view of other potential participants in any agreements reached regarding computers and software services, third parties would probably not merely accede to rules negotiated by the U.S. and Brazil, but would want to participate in the rule formulation process themselves.[233]

GATT negotiations in the area of trade in services may be complicated by the fact that valuation of these services may not be easy.[234] Software is something incorporated in the computer hard-

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229. *Id* at col. 1.
230. Oppenheimer, *supra* note 186. at 29. col. 1 (quoting Jerry Haar, Florida International University professor of international business).
231. Oppenheimer, *supra* note 174, at 14, col. 2.
232. Resnick, *supra* note 173, at 23, col. 2.
233. *See supra* note 8, at 98.
234. *Id.* at 35.

ware itself; in these instances, the value of this type of software can only be estimated.[235] If software is transported internationally on disks or magnetic tape, tariffs will, presumably, be charged according to the value of the physical medium, which only "contains" the software but is not related to the value of the software itself.[236]

Another area of possible complication in the continuing GATT discussions concerns the "safeguards" issue.[237] This area focuses on conditions and criteria to be applied to the subject of traded services. For example, any agreements reached should specify "the circumstances under which action could be taken by one country to limit imports of traded services from another, how long such measures may last, whether compensation should be paid, and what procedures should be established for consultation."[238]

Even though the GATT General Agreement was originally developed to regulate trade in "visible" goods,[239] rapid new developments in the services sector and the establishment of an international industry of trade in "invisible" (services) makes it all the more imperative that the GATT Multilateral Treaty Negotiations Part II succeed in establishing guidelines of mutual cooperation in the services sector for the benefit of all.

LEIGH E. THOMAS

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235. *Id.*
236. *Id.*
237. *Id.* at 121.
238. *Id.*
239. *Id.* at 93.

EDITOR'S UPDATE

BRAZIL'S INFORMATICS BARGAINING CHIP: PLAYING THE THIRD-WORLD CARD

Threats of U.S. trade sanctions were frequent after Brazil passed its 1984 "Informatics law." This law effectively barred foreign participation in large segments of the computer market.[1]

On June 30, 1987, the Brazilian Chamber of Deputies approved a government-sponsored bill granting copyright protection to both national and foreign software, appeasing what U.S. officials described as an unfair trade practice.[2] However, on September 22, 1987, Brazil's Secretariat Especial de Informatica (SEI) banned imports of U.S. software, namely Microsoft Corporation's MS-DOS program, because similar software, developed by the Brazilian company, Scopus, was already available on the domestic market.[3] Alleging that it was losing between $50-$100 million, Microsoft submitted a formal request to the U.S. government for the imposition of sanctions.[4]

On November 14, 1987, President Reagan announced that he would impose punitive tariffs covering more than $100 million worth of Brazilian imports in retaliation for Brazilian curbs on American computer and software products.[5] The announcement was significant due to the fact that this was only the second time that the U.S. has imposed trade sanctions. The first time involved semiconductors imported from Japan.[6] The sanctions were imposed in reaction to unfair trade practices and were aimed at regulations that effectively barred foreign participation in Brazil's computer market. The impetus for this action was the September denial by the Brazilian government of a license sought by six Brazilian computer hardware companies to use Microsoft's MS-DOS software system.[7]

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1. U.S. Threatens Trade Sanctions, Latin Am. Regional Rep. Brazil, Nov. 1987.
2. *Id.*
3. *Id.*
4. *Id.*
5. Farnsworth, *Reagan Imposes Punitive Tariffs Against Brazil*, N.Y. Times, Nov. 14, 1987 at 1, col. 1 [hereinafter *Reagan Imposes*].
6. Fields, *U.S. Slaps Brazil with Sanctions in Trade Dispute*, The Miami Herald, Nov. 14, 1987, at 4D, Col. 1.
7. *Reagan Imposes, supra* note 5, at 18, col. 4.

Next, on November 18, 1987, a new version of the software law was approved by the Brazilian Senate.[8] The new version was more flexible and liberal in its "similarity test" definitions than the SEI's Normative Act 22 (which guided the SEI's decision to deny Microsoft the permit to sell the MS-DOS in Brazil).[9] The two most significant changes in the measure concerned first, the criteria for granting a license to foreign-made software and second, the establishment of ad valorem duties to be paid on software developed abroad and imported for use in Brazil.[10] These two changes may be summarized as follows:

(1) The Senate's measure reduced the SEI's discretion to deny a license for software developed abroad. Under Article 10 of the Senate compromise, foreign-made software will be denied a license provided there is *similar* Brazilian software that: a) is a functional equivalent, independently and originally developed in Brazil; b) is made by a firm that is able to supply satisfactory support to the product's users; c) can be delivered to users in satisfactory time; d) meets national standards and has a higher price than the foreign brand only when the additional value of ad valorem duties are taken into account; and e) can execute substantially the same functions, considering the types of application and the characteristics of the national market.

(2) Article 17 of the Senate text says that a user of foreign software has to pay a "contribution quota" of up to 200% of the software's value for the next five years. This fee would be reduced to 150% after 1992 and then to 100% after 1997. This, in effect, meant that the Brazilian users would be paying double the international price for foreign software by 1998.

The Senate version also limited to 120 days the time the SEI would have to license or to ban foreign software. Another aspect of the measure is that it provided for penalties of six months to two years in jail, plus fines, for marketing or using any foreign software without a license.[11]

The Brazilian House of Representatives voted in early December, 1987, to adopt the Senate's version of the software law. Once

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8. *Brazilian Informatics Council Meetings May Overturn Microsoft License Denial Decision*, Int'l Trade Rep. (BNA), Nov. 25, 1987, at 1451 [hereinafter *Brazilian Informatics*].
     9. *Id.*
     10. *Id.*
     11. *Id.* at 1452.

approved, the measure was sent to President Jose Sarney to be signed.[12] President Sarney approved the software law but he used his perogative to veto portions of the legislation that would have imposed a 200% ad valorem fee on all foreign software sold in Brazil.[13] In fact, he deleted thirteen parts of the legislation, all having to do with the establishment of the contribution fee that users would have to pay to buy licensed foreign software. This veto effectively allowed greater access of foreign software to the Brazilian Market.[14] The provision approved by Congress regarding the "substantial similarity" test for licensing software in Brazil, which is more liberal than the SEI's Normative Act 22, was left unchanged.

Finally, Brazil's National Council on Informatics and Automation (CONIN), which began its meetings on November 25, 1987, ultimately reversed the SEI's September 22nd decision to deny Microsoft the right to sell its MS-DOS software in Brazil. Recently, in February, 1988, CONIN authorized the sale in Brazil of the MS-DOS program, developed by the Microsoft Corporation.[15] Reinforcing this Brazilian desire to avoid future conflict with the U.S. computer manufacturers, the Brazilian government later prohibited the commercialization of a model from a Brazilian firm, Unitron, after repeated complaints by the Apple Corporation that the Unitron model was an unauthorized clone of its own models.[16]

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12. *Government Seeks To Avert U.S. Sanctions*, Latin Am. Regional Rep. Brazil, Jan. 7, 1988, at 6, col. 1.

13. *Brazil's President Sarney Vetoes 200 Percent Ad Valorem Fee on New Software Legislation*, Int'l Trade Rep. (BNA), Jan. 6, 1988, at 18.

14. *Id.*

15. *Software Imports Authorized*, Latin Am. Regional Rep. Brazil, Feb. 11, 1988.

16. *SEI Cancels Commercial License For Brazilian Macintosh Clone*, Brazil Watch, Apr. 4-18, 1988, at 9. For background on this dispute between Apple and Unitron, see *Presidential Concern About Foreign Debt Agreement Could Nix License for Macintosh Clone*, Brazil Watch, Mar. 7-21, 1988, at 9; *Bitter Dispute Between Apple Computer, Inc. and Brazilian Clone-Maker May Have Led to Downtown Sao Paulo Kidnapping*, Brazil Watch, Sept. 7-21, 1987, at 8.

SOFTWARE PROTECTION LAW

Law nr. 7.646 of December 18, 1987.
Enacts provisions dealing with the protection of intellectual
property upon computer programs and their marketing in Bra-
zil, and enacts other provisions.

The President of the Republic makes known that the National
Congress decrees and he sanctions the following law:

TITLE I

Preliminary Provisions

ART. 1. The production and marketing of computer programs
both of foreign or local origin, are free in the Country, and the
holders of the respective rights are assured full protection, under
the conditions laid down by law.

Sole Paragraph - Computer program is the expression of an
organized set of instructions, in natural or code language, con-
tained in a physical support of any nature, for necessary use in
automatic machines for information treatment, devices, peripheral
instruments or equipment, based on digital technique, to make
them operate in determinate manner and for determinate
purposes.

ART. 2. The protection regime for intellectual property upon
computer programs is the system enacted through Law 5.988, of
December 14, 1973, with the modifications established by this law
in consideration of the particular features inherent to computer
programs.

TITLE II

Protection to Author Rights

ART. 3. Protection of rights relating to computer programs is
assured for a period of 25 (twenty-five) years, as from the release
of same in any country.

First Paragraph- The protection to the rights contemplated in
the law will not depend upon registration or enrollment with the
Special Secretariat of Informatics- SEI.

Second Paragraph- The rights conferred by this law to foreign

parties, domiciled abroad, are assured provided that the country of origin of the the program also grants to both Brazilians and foreigners domiciled in Brazil equivalent rights, both in extent and duration, to those provided for in the head of this article.

ART. 4. The computer programs may at their author's discretion be registered at an agency to be appointed by the National Copyright Council (CNDA) governed by Law nr. 5.988 of December 14, 1973 and reorganized by Decree nr. 84.252 of July 28, 1979.

First Paragraph - The owner of the author right shall submit to the agency appointed by the CNDA, upon filing the registration request, portions of the program and other data considered sufficient to characterize the independent creation and the identity of the computer program.

Second Paragraph - The creator of a program, in order to identify himself/herself as the owner of the author right, may use his/her full or abridged civil name, and even his/her initials, as provided for in article 12 of Law 5.988 of December 14, 1973.

Third Paragraph - The information upon which the registration is based is of a secret nature, and cannot be disclosed, except under court order or at the request of the owner himself/herself.

ART. 5. Except when otherwise agreed, the rights relating to computer programs developed and elaborated during the term of an agreement or of a statutory bond expressly meant for research and development, or in which the activity of the employee, servant or supplier of services is foreseen, or also, when it originates from the nature itself of the contracted job, shall belong exclusively to the employer or contractor of services.

First Paragraph - Except when otherwise agreed, the compensation for work or service rendered shall be limited to the remuneration or salary agreed upon.

Second Paragraph - The rights attached to a computer program generated without relation to the labor contract, statutory bond or services agreement, and without use of resources, technical information, materials, facilities or equipment of the employer or contractor of services, shall belong exclusively to the employee, servant or supplier of services.

ART. 6. When provided for in an agreement entered into between the parties, the rights to the technological changes and derivates will belong to the authorized person who makes same and who will exercise such rights autonomously.

ART. 7. The following acts will not constitute an offense to author rights in computer programs:

I. The reproduction of a lawfully acquired copy, provided that it is essential for the proper use of the program;

II. The partial quotation, for didactic purposes, provided the the author and the program to which the quotation refers are identified;

III. The occurrence of a likeness of a program to a pre-existing program, if such likeness results from functional features of its application, from the compliance with legal provisions or regulations or with technical rules, or from limited alternative forms for its expression;

IV. The integration of a program, its essential features being maintained, to an application or operational body, technically indispensable to the user's needs, provided the same is used solely by whomever effected such integration.

TITLE III

Enrollment

ART. 8. The previous enrollment of the program or set of programs with the Special Secretariat of Informatics (SEI) is mandatory to permit the marketing referred to in article 1 of this Law, and said Secretariat will classify same into different categories, according to whether they are developed locally or abroad, whether in an association of foreign and national companies or not, being national companies defined as set forth in article 12 of Law nr. 7.232 of October 29, 1984 and article 1 of Decree-Law nr. 2.203 of December 27, 1984.

First Paragraph - Where the protection of author rights is concerned, no differences are established among the categories referred to in the head of this article; such categories will be diversified for the following purposes: public funds financings, tax benefits, marketing and profit remittance, or payment of rights to foreign-domiciled holders thereof, as applicable.

Second Paragraph - The enrollment provided for in this article, and the approval of the acts and contracts referred to in this Law, by the Special Secretariat of Informatics, shall be conditioned for purposes of programs developed by non-Brazilian companies, to the determination of nonexistence of similar computer

programs developed in Brazil by a national company.

Third Paragraph - Further to the provisions established in the head of this Article, the enrollment referred to in this Law is a prior and essential condition to:

I. the validity and enforceability of any legal transaction relating to programs;

II. the production of tax and exchange effects, and the legitimacy of corresponding payments, credits or remittances, as the case may be, without prejudice to other requirement and conditions established by law.

ART. 9. The enrollment, for the purposes and effects contemplated in the preceding article, will be valid for a minimum period of 3 (three) years and will be automaticallly renewed, by the Special Secretariat of Informatics-SEI, subject to the provisions of the second paragraph of said article.

Sole Paragraph - Against a decision granting or denying enrollment request, an appeal may be filed, with the National Informatics and Automation Council - CONIN the provisions of the internal By-Laws of this Council being obeyed.

ART. 10. For the purposes of this Law, a computer program will be considered similar to another, when the following conditions are complied with:

a) It is functionally equivalent, considering that:

I. it must be original and independently developed.

II. it must have substantially, the same performance characteristics, considering the purpose of its application.

III. it must operate in similar equipment and in similar processing environment.

b) The national established standards are observed, whenever applicable.

c) (vetoed).

d) it executes, substantially, the same functions, considering the purpose of its application, and the characteristics of the national market.

ART. 11. The Special Secretariat of Informatics shall have a term of one hundred and twenty (120) days counted as of the date of filing of the application, to render a decision in connection with

enrollment applications.

ART. 12. Any company failing to fit under the definition of national company will have its enrollment request granted exclusively for computer programs applicable to equipment, made in Brazil or abroad, marketed in Brazil by a company fitting under such same category.

ART. 13. The enrollment of a computer program will be deemed null and void, at any time:

I. by a final judicial decision;

II. by an administrative act, whenever it is evidenced that the information submitted by the interested party to back up the application for enrollment, is not true.

ART. 14. The Special Secretariat of Informatics may charge fees for the enrollment services, according to an appropriate list of fees to be approved by the State Ministry of Science and Technology.

TITLE IV

Contribution Quota

ART. 15. The Special Fund of Informatics and Automation, governed by Law nr. 7.232 of October 29, 1984, shall be earmarked for financing of the following programs:

a) research and development of informatics and automation technology;

b) training of human resources in the informatics area;

c) furnishing of equipment to Informatics Research Centers with priority to Federal and State Universities;

d) capitalization of Technology and Informatics Centers created in accordance with the policies of the National Informatics and Automation Plan (PLANIN).

Sole Paragraph - The Special Fund of Informatics and Automation shall be formed of:

a) budget allowances;

b) contribution quotas;

c) internal or external donations.

ART. 16 (Vetoed).

ART. 17 (Vetoed).

ART. 18 (Vetoed).

ART. 19 (Vetoed).

TITLE V

Commercialization

ART. 20   (Vetoed).

ART. 21   (Vetoed).

ART. 22   (Vetoed).

ART. 23. The physical supports of the computer programs and respective packages as well as the agreements in connection thereto shall indicate in a manner clearly readable by the user, the enrollment number, (vetoed) and the technical validity term of the commercialized version.

ART. 24. During the technical validity term of the respective version, the holder of the commercialization rights of computer programs, shall be required to:

I. disclose without additional payment, the corrections of any mistakes.

II. guarantee to the respective consumers the supply of complementary technical services, for the adequate functioning of the computer program, the specifications of the program and the particulars of the consumer being considered.

ART. 25. During the technical validity term, dealt with in the preceding articles, the holder of rights over computer programs may not withdraw them from the market without fair indemnification for any damage which may be caused to third parties.

ART. 26. The holder of rights over computer programs and their commercialization, shall be responsible towards consumers for adequate technical quality, as well as for the quality of fixation or recording of the same, in their respective physical supports, and regressive legal action may be filed against the prior holders of such rights.

ART. 27. The economic exploitation of computer programs in the Country shall be governed by assignment or license agreements freely agreed upon by the parties. These agreements shall determine the responsibility for the payment of taxes and charges due

in the Country as a result thereof.

Sole Paragraph - The clauses which stipulate the following shall be null:

a) determine exclusivity;

b) limit the production, distribution and commercialization;

c) hold any of the contracting parties, harmless from any responsibility in connection with any legal action sought by third parties as a result of malfunctions, defects or violation of copyrights.

ART. 28. Except as provided for in article 12 hereof, the marketing of computer programs will be only permitted to national companies which must enter into license or assignment agreements with non-national suppliers, as provided for in this Law.

Sole Paragraph - The approval by the relevant agencies of the Executive Power, of those acts and contracts relating to marketing of computer programs of foreign origin is a prior and essential condition:

a) to permit the enrollment of the program;

b) to permit tax deductibility, subject to the rules provided for in specific legislation;

c) to allow the remittance abroad of the sums payable, in accordance with this law and other applicable legal provisions.

ART. 29. Approval and recording will only be granted to those acts or contracts, relating to foreign-origin programs, which establish a compensation to the author or assignee residing or domiciled abroad, on the basis of a fixed price per copy and associated technical documentation, which cannot exceed the international average value practiced in the distribution of the same product, and no payment calculated on the basis of production, revenue or profits earned by the assignee or user, will be permitted.

First Paragraph - Non-national companies are excluded from the permission granted in this article, but as a result of the marketing permitted by article 12 of this Law such companies will be allowed to remit foreign currency as contemplated in the provisions and according to the limitations set forth by Law nr. 4.131 of September 3, 1962 and subsequent legislation.

Second Paragraph - The regular tax purposes invoice ("Nota Fiscal") issued by the holder of the corresponding rights or his le-

gal representatives, which evidences the commercialization of computer programs of foreign origin, will be sufficient to permit the payments provided for in the head of this article.

TITLE VI

General Provisions

ART. 30. The importation or interning, as the case may be, of a single copy of a computer program destined for exclusive uses by the end-user, shall be permitted. (vetoed)

ART. 31. In the event of transfer of technology of a computer program, the recordation of the agreement by the National Institute of Industrial Property (INPI) will be mandatory, including for the purposes of payment and deductibility of the respective remuneration, and for the other effects contemplated in this Law.

Sole Paragraph - The recordation referred to in this article will be granted when no national technical capability exists, and will be conditioned to the supply by the supplier of the technology to the recipient thereof, of the full documentation, particularly of the commented source-code, descriptive memoranda functional and internal specifications, diagrams, flow-charts and other required technical data necessary for the assimilation of the technology.

ART. 32. For the purposes of calculating the amount of taxable profit subject to Income Tax, companies may deduct as operating expenses up to the double of the amount spent with the acquisition of computer programs when such companies are the first users thereof and provided that said programs are considered as being of relevant interest, the provisions of articles 15 and 19 of Law 7.232 of October 29, 1984 being observed.

First Paragraph - Concurrently, as a form of incentive,the utilization of computer programs developed in the country by private national companies shall be taken into account for purposes of granting the incentives provided for in article 13 of Law 7.232 of October 29, 1984 as well as for financing with public resources.

Second Paragraph - The entities and bodies of the direct or indirect public administration, foundations instituted or maintained by the Government, and other entities under direct or indirect control of the Government shall give preference, under same conditions, to the utilization of computer programs developed in

the country by national private companies, in accordance with the provisions of article 11 of Law 7.232 of October 29, 1984.

Third Paragraph - The participation of the State in the commercialization of computer programs shall comply with the provisions of item II of Article 2 of Law 7.232 of October 29, 1984.

ART. 33. The actions aimed at cancelling a registration or enrollment, the dockets and proceedings of which shall be kept secret, may be filed by any interested party or by the Federal Government.

ART. 34. The nullity of the registration may be alleged as a defense argument in civil or criminal suits relating to violation of copyrights on computer programs.

TITLE VII

Sanctions and Penalties

ART. 35. Infringements to copyrights in computer programs will have the following:

Penalty-confinement, from six (6) months to two (2) years, plus fine.

ART. 36 (vetoed).

ART. 37. Importation, display, or keeping in storage, for marketing purposes foreign-origin computer programs which are not enrolled, will subject the infringer to:

Penalty-confinement, from one (1) to four (4) years, plus fine.

Sole Paragraph - The provisions herein contained are not applicable for programs interned solely for demonstration purposes or market assessment in fairs or congresses, of a technical, scientific or industrial nature.

ART. 38. In the offense provided for in article 35 (vetoed) hereof, the criminal action shall be filed through a complaint, except when committed to the detriment of the Union, of a State, the Federal District, a Municipality, an autonomous agency, a public company, a partially State owned company, or a foundation under Ministry supervision.

Sole Paragraph - In the offense contemplated in article 35 of this Law, the criminal action and the preliminary search and seizure injunction will be preceded by an inspection, and the judge

may order the seizure of any copies produced or marketed in violation of copyrights, the versions and derivatives of same, in the possession of the infringer or any party displaying, keeping in storage, reproducing or marketing same.

ART. 39. Independently from criminal suit, the damaged party may file a suit to prohibit infringer from continuing to perform the infringing action, by means of a financial penalty for infringement of the order (as provided for in Article 287 of the Civil Procedure Code).

First Paragraph - The action to prevent the practice of an action may be cumulative with a suit to recover losses and damages caused by the infringement.

Second Paragraph - The civil suit filed on the basis of an infringement of rights relating to intellectual property in computer programs will be judged through secret proceedings (i.e. will not be available to review by third parties).

Third Paragraph - In civil proceedings, the injunction for search and seizure will comply with the provisions contained in the sole paragraph of article 38 hereof.

Fourth Paragraph - The judge may grant a preliminary injunction prohibiting the infringer from practicing the incriminating act, as provided for in the beginning of this article irrespective of a preparatory injunction.

Fifth Paragraph - Any party applying for and promoting the injunctions provided for in this article and in the preceding article, when acting in bad faith or merely for emulation sake, caprice or gross error, will be liable for losses and damages, as provided for in articles 16, 17 and 18 of the Civil Procedure Code.

TITLE VIII

Statute of Limitation

ART. 40. The statute of limitation to file a civil suit for offenses against author's patrimonial rights is five years.

ART. 41. The same statute of limitation is applicable to any suits claiming default under resulting obligations, such period to be counted as from the date:

a) which constitutes the final technical validity term of the marketed release of the software;

b) of expiry of the the warranty, in the case of a custom made program;

c) of the license for use of the computer program.

TITLE IX

Final Provisions

ART. 42. This Law will become effective on the date of its publication.

Sole Paragraph - The Executive Power shall issue the regulation to this Law in a one hundred and twenty (120) day term, counted as of the publication of this Law.

ART. 43. All provisions to the contrary are hereby revoked.

> Brasilia, on December 18, 1987
> 166th of Independence and 99th of the Republic
> Jose Sarney
> Luiz Henrique da Silveira
> Note: This Law was published in the Official Gazette
> ("Diario Oficial da União") on December 22, 1987.