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AN OVERVIEW OF SOME LEGAL ASPECTS OF ELECTRONIC
COMMERCE IN BRAZIL, INTERNATIONAL TRENDS AND AN
APPROACH TO THE BRAZILIAN TAX ON COMMUNICATION
SERVICES.

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ABSTRACT

There are a great deal of interesting questions and matters that arise from the new Information and Communications Technology. E-commerce, for example, raises many issues regarding the application of existing regulations and issues, such as tax law, commercial codes and consumer protection laws. The existing Brazilian legal framework does not adequately provide for E-commerce because it is centered basically on a paper-based system, as happens in many countries.

Instead of trying to produce a highly detailed and thorough paper about just one limited area in this field of inquiry, we decided not to restrict it to an individual matter. Many of the subjects discussed herein could be the theme of an individual, more-detailed paper. We are interested in commenting on a variety of subjects related to E-commerce, some of them in more detail and others, just superficially. Nevertheless, no comment will be included in this paper on existing criminal law issues or on legislative activity concerning this subject.

We divided this paper into two parts. In the first one, we will give a general idea of the development of Internet services in Brazil and we will review recent developments affecting E-commerce. We will look at trends in various international organizations, including UNCITRAL, OECD, WTO, EU and ICC, as well as some initiatives in Brazil. We will refer also to the concept of E-commerce and its various forms.

In the second part, we will start by introducing the Brazilian national tax system. We will draw attention to the authority of the states and the Federal District to institute taxes on communications services, what is provided for in Article 155 (II) of Brazil's Federal Constitution. Such taxes seem to be closely related to the Internet. In order to accomplish this task, we will use the Matrix Norm of Tax Incidence's theory that is Professor Paulo de Barros Carvalho's proposal to explain the structure of any tax.

As there is no consensus among Brazilian legal scholars about the incidence of taxation on communications services as related to the Internet, we will analyze briefly the reasons for that difference of opinion and some of the understandings on the subject.

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PART 1

An Overview of Some Legal Aspects of E-Commerce in Brazil and International Trends

1 - TELEMATICS

The term *telematics* refers to “the use of computers to receive, store and distribute information or training materials at a distance over a telecommunications system,”¹ or in a more general way to “the combination of telecommunications and information processing.”²

1.1 - THE MINITEL

It is interesting to mention that the *Minitel*, a videotext terminal linked to the French *Télétext* network, was the first instrument that combined a computer with a telephone and, as such, it became dominant in its field from the middle of the 1980s. It led the world in opening up E-commerce to consumers. The *Télétext* system enabled firms to develop their own servers and bulletin boards, as well as to use them for in-house, external, and business communications. In addition, for the servers and bulletin boards improved relations with customers and suppliers, which enabled a modest boom of retail sales of services, and to a lesser extent, products in France. A relevant point is that this system ensures confidentiality of data because it is a closed network; *i. e.*, not accessible from the outside or by access codes or passwords. The *Minitel* was the most sophisticated data transmission system available until the advent of browsing systems developed for the Internet in the early 1990s. Users of the service are charged not only for calls from their *Minitels* to the server, but also for the services they use at various rates. Billing is included with invoices for telephone

¹< <http://www.ilt.bris.ac.uk/mru/telematics/contents.htm>>

² Hi-Tech Dictionary, <<http://www.computeruser.com/resources/dictionary/index.html>>

service and France *Télécom* collects all payments and turns over portions to service providers.³

1.2 - THE INTERNET

Born in the mid-1960s, the Internet was developed to connect a US Defense Department network called the Advanced Research Projects Agency Network (ARPANET)⁴ and various radio and satellite networks. It is interesting to point out that the ARPANET itself was an experimental project that had been developed to support military research, and it linked universities and high-tech defense department contractors. It was specifically aimed to research on how to build a network that could withstand partial outages, for instance, a bomb attack, and still operate. In the mid-1980s, the National Science Foundation (NSF) created a handful of supercomputer centers to help researchers. Out of this effort the NSFNET – a backbone connecting together a group of regional networks – was designed to provide connectivity for a wide variety of research and educational uses. By 1991, the US government decided to stop funding ARPANET and NSFNET; Various commercial entities then took over responsibility for running the Internet, connecting to the NSFNET backbone through the Commercial Internet eXchange (CIX) association. Finally, in 1995, the NSFNET backbone was decommissioned, paving the way for a new Internet architecture including several priority network access points (NAP's) connected by very high bandwidth. These NAP's are known as the *official* locations in the United States where service providers are able to interconnect.⁵

1.3 - THE INTERNET II

³ OECD, DSTI, *France's Experience with the Minitel: Lessons for Electronic Commerce over the Internet*, 1998, pp. 10-11. <<http://www.oecd.org/dsti/sti/it/ec/index.htm>>

⁴ For more information about the ARPANET, see *History of ARPANET* available at <<http://www.dei.isep.ipp.pt/docs/arpa-Contents.html>>

⁵ Doernberg, Richard L. and Hinnekens, Luc. *Electronic Commerce and International Taxation*. International Fiscal Association. (The Hague: Kluwer Law International, 1999), pp. 58-9.

The Internet II, *ultranet*, or *meganet* is said to be the offspring of the Internet that will be what the Internet was supposed to be. The difference is that the former will be sleeker, smarter, and more agile and responsive than the latter. Some of its main characteristics is that it will come in the form of universal broadband access, unlimited network server availability, global virtual malls, as well as real-time enterprise computing. This Great Global Grid will be primarily a visual medium.⁶

2 - THE INTERNET IN BRAZIL

2.1 - THE EVOLUTION OF INTERNET SERVICE IN BRAZIL

The development of Internet in Brazil began at the end of the 1980s, beginning with the pioneering efforts of some academic institutions and Non Governmental Organizations (NGOs). Because of ongoing and determined federal government support for the Internet in the country, it took off. Involved Brazilian organizations included the Ministry of Science and Technology (MST), and several state governments, such as those of São Paulo, Rio Grande do Sul, Rio de Janeiro, and others. Soon after, as a platform for the private sector to expand business, the Brazilian Internet gained great impetus.⁷

A first version of Internet services - with points in 21 states of the country - was implemented by the National Research Network (*Rede Nacional de Pesquisa - RNP*) between 1991 and 1993, at a slow rate of speed. Between 1995 and 1996, these services were updated for faster speeds. Concurrently, beginning in June of 1995, a federal government decision defined general rules to expand the availability of Internet services in Brazil to anyone interested.⁸

⁶ "Internet II: Rebooting America. Getting real and getting it right", in *ForbesASAP*, September 10, 2001, p. 45, 48

⁷ *Information Society in Brazil, Green Book*. Tadao Takashi, coordinator. Ministry of Science and Technology, Abridged English version, 2000, p. 27.

⁸ *Ibidem*, p. 67.

In Brazil, the number of Internet users was estimated at 300,000 in 1996, a figure that grew to five million by 2000. As a result of cheaper computer equipment and greater supply of telephone lines, the latest projections see the number of users doubling between now and 2002.⁹

2.2 - INCREASE OF INTERNET HOSTS IN BRAZIL

The Brazilian Internet began in 1989 as an academic network, and today disposes of 876,596 hosts, ranking 11th in the world in volume of hosts, 3rd in the Americas, and 1st in South America, as demonstrated by the table below:

Rank according to the Number of Hosts	January 2001 876,596	July 2000 662,910	July 1999 310,138	July 1998 163,890
In the world	11 th	12 th	14 th	18 th
In the Americas	3 rd	3 rd	3 rd	3 rd
In South America	1 st	1 st	1 st	1 st

Source: Internet Software Consortium (<<http://www.isc.org/>>)

2.3 – E-COMMERCE IN BRAZIL

About US\$450 million worth of transactions were carried out electronically in Brazil during 1999, mostly of the business-to-business (B2B) variety; this accounted for 88% of all electronic business in Latin America. E-commerce in Brazil is expected to grow to US\$3.2 billion by 2003. In 1999, almost 90% of all E-commerce transactions in Brazil were carried out by 'old economy' firms, 42% of them belonging to the financial sector. Books, CDs, computers and accessories, and tourism services are the most widely sold products in virtual stores.¹⁰

⁹ FTAA-Joint Government-Private Sector Committee of Experts on Electronic Commerce. *Second Report with Recommendations to Ministers*, 2001, p. 16. <http://www.ftaa-alca.org/scomm_e.asp>

¹⁰ *Ibidem*, p. 16.

E-Procurement emerged as a means of connecting government buyers and suppliers. The Unified System of Registration of Suppliers (SICAF) is an online data bank created by the Ministry of Planning, Budget and Administration to simplify the registration of suppliers to the federal government. Its purpose is to register and partially qualify natural persons and legal entities to participate in public bids held by any public entity.

ComprasNet is an online system created by the Ministry of Planning to give access to all federal government tenders, as well as other services and facilities such as: (i) consultation online of all items that make up the bid and quantities; (ii) download of all bid notices in progress; (iii) preferential lists of information concerning bids by material and/or service location; (iv) guides for buying options; (v) follow-up on the status of suppliers registered with SICAF; and (vi) download of lines of material and service supply.¹¹

The state of São Paulo also has a similar system called *Bolsa Eletrônica de Compras – BEC*¹²

These initiatives aim to enhance the transparency of procurement and business opportunities for companies.

2.4 - THE INFORMATION SOCIETY PROGRAM IN BRAZIL¹³

Though all nations are moving, voluntarily or involuntarily, in the direction of an information society, it's up to each one of them to find their own route and establish their own priorities.

¹¹ See <<http://www.comprasnet.gov.br/index1.htm>>

¹² See <<http://www.bec.sp.gov.br/BECc001.asp>>

¹³ *Information Society in Brazil, Green Book*. Tadao Takashi, coordinator. Ministry of Science and Technology, Abridged English version, 2000, p. 28-34.

In August 1999, the Information Society Program Implementation Group (SOCINFO) was set up under the aegis of the Ministry of Science and Technology in response to a proposal made by the National Science and Technology Council. The President of Brazil, through Executive Decree No. 3,294/99, launched the Program in December of 1999.

The goal of the Information Society Program is to integrate, coordinate, and foster actions for the utilization of Information and Communications Technology, in order to contribute to the social inclusion of all Brazilians in the new society, and to help the country's economy secure the necessary conditions to compete on the global market. The Program envisages action by federal, state, and municipal governments in conjunction with relevant social sectors, and seeks to ensure the viability of a new stage of Internet development and applications in Brazil.

For this purpose, the program will unfold along the following broad lines of action, each of them translated into a series of concrete actions, with specific planning, budgeting, execution and monitoring: market, employment and opportunities; universalization of services for citizens; education in the information society; contents and cultural identity; government at everyone's reach; research and development, key-technologies and applications; and advanced infrastructure and new services. To achieve this purpose, the program was divided into an implementation phase and an execution phase.

The implementation phase, throughout 2000, included:

- The elaboration of an initial detailed proposal of the Program, accomplished in September in the so-called Green Book;
- An ample and widespread process to consult civil society;
- The consolidation, in a White Book, of a conclusive plan for the Program, including the ideas and suggestions collected from the public during the phase that the Green Book was under public scrutiny.

The execution phase, during the period of 2001 to 2003, will encompass:

- A taking off phase (up to June of 2001), in which the main initial actions foreseen in the Program were put into action through the contracting of necessary services, the publishing of edicts with bidding rules, the establishment of partnerships, etc.;
- A program in progress phase (from July of 2001 to June of 2003), with the initiation of new actions and the monitoring of those underway;
- A consolidation phase (from July to December of 2003), at which time a general evaluation of the Program's progress will be carried out and a series of proposals will be prepared for 2004 onwards, in light of the results achieved.

Concerning budget and financial resources for the 2000-2003 period, the program will receive funds directly allocated in the federal government's 4-year development plan - the Governmental Plan (*Plano Pluriannua*) - for the Ministry of Science and Technology in the amount of R\$ 3.4 billion, which includes grants, lines of credit, and fiscal incentives. Of this amount, only 15% will come from the National Treasury. A significant part of this funding should come from the private business sector, through mechanisms of incentive, made possible through the Law of Computer Technology (*Lei de Informática*), among others. The funds initially allocated to the Program should serve as catalysts and inducers of investment by the various sectors involved.¹⁴

2.5 - THE MANAGEMENT OF INTERNET IN BRAZIL

In a Joint Note of May 1995, the Communications Ministry (CM) and Ministry of Science and Technology (MST) affirmed that, in order for society to effectively participate in decisions involving the institution, management and use of Internet

¹⁴ Further details on the Information Society Program can be found at <www.socinfo.org.br>

an Internet Managing Committee would be set up. This note was publicly announced to provide the following clarifications:

- a) The government considers it of strategic importance to the country to make Internet available to all society, with a view to Brazil's entry into the Information Age;
- b) The provision of Internet commercial services to the public in general shall preferably be conducted by private enterprise;
- c) The government will stimulate the creation of private Internet service providers in the country, of different sizes, supplying a wide range of options and facilities, with the aim of meeting the needs of various segments of society;
- d) The participation of public companies and agencies in the provision of Internet services shall take place in a complementary manner to the participation of private enterprise, and will be limited to situations where the presence of the public sector is required to stimulate or induce the emergence of providers and users;
- e) Various independent Internet backbones may exist in the country, of either national scope or otherwise, under the responsibility of various entities, including private enterprise;
- f) Access and information providers are allowed to select the backbone to which they will connect, and end users will be free to choose the access or information provider through which they will have access to the Internet;
- g) The prices related to the use of Internet services will be established by the provider, in accordance with the characteristics of the services supplied thereby; and
- h) For its connection to the access or information provider to which it is associated, the end user will pay fees regularly practiced for the utilization of the corresponding telecommunications.

2.6 – THE INTERNET MANAGEMENT COMMITTEE

The State Ministries of Communications and Science and Technology, in exercising the prerogatives conferred on them by Article 87, sole paragraph, item II¹⁵ of the Federal Constitution, in a joint initiative, resolved to create the Brazilian Internet Management Committee, by means of Inter-Ministerial Ordinance No. 147 of May 31, 1995. The objective of the resolution was to organize and supervise the basic functions of the infrastructure needed for Internet services in Brazil, as well as to plan and steer its evolution in the future, and weigh the interests of the public sector, private sector, and the country's scientific and technological priorities in a just manner.

It can be said that the Management Committee is Brazil's version of the International Corporation for Assigned Names and Numbers (ICANN), a supranational organization created in 1998 to manage and oversee basic operational functions of the worldwide Internet.¹⁶

The following functions were assigned to the Management Committee:

- a) Supervise Internet service supply in the country;
- b) Establish recommendations related to: the network institution and interconnection strategy, analysis and selection of technological options, and the functional roles of companies and educational, research and development institutions (IEPD);
- c) Issue an opinion on the applicability of the special telecommunications tariff in the dedicated line circuits, requested by qualified IEPDs;
- d) Recommend standards, technical and operating procedures and a user code of ethics for all Internet services in Brazil;
- e) Coordinate the assignment of IP (Internet Protocol) addresses and the registration of domain names;

¹⁵ Article 87. *The Ministers of State shall be chosen from among Brazilians over twenty-one years of age and in possession of their political rights. Sole paragraph - The Minister of State, in addition to other duties established in this Constitution and in the law, has the power to: (...) II - issue instructions for the enforcement of laws, decrees and regulations; (...)*

¹⁶ *Information Society in Brazil, Green Book*. Tadao Takashi, coordinator. Ministry of Science and Technology, Abridged English version, 2000, Annex IV, p. 71.

- f) Recommend network management operating procedures;
- g) Collect, organize, and disseminate information on Internet service in Brazil;
- h) Resolve any issues forwarded to it.

The Management Committee (MC) currently has representatives from the Ministry of Science and Technology (MCT) that coordinates it; the Communications Ministry (MC); the Development Industry and Foreign Trade Ministry; National Scientific and Technological Development Council (CNPq); National Telecommunication Agency (ANATEL); Infrastructure and Telecommunication Providers; Internet Access and Service Providers; the Information Technology and Software Industry; the Academic Community; Business Community; Internet Service User Community and the Educational and Cultural Communities.

2.7 - DIGITAL CERTIFICATION IN BRAZIL – THE BRAZILIAN PUBLIC KEY INFRASTRUCTURE (BPKI)

The new Provisional Measure (PM)¹⁷ No. 2,200 of June 28, 2001, has instituted the Brazilian Public Key Infrastructure (BPKI) to guarantee the authenticity, integrity, and juridical validity of documents in electronic form, the support applications and the qualified applications that use digital certificates, as well as the accomplishment of safe electronic transactions. The PM was reedited on July 27, 2001, and was numbered 2,200-1. It had been substantially modified. Notwithstanding the acts practiced in accordance to the previous PM have been validated.

The BPKI, whose organization will be defined later in the regulation, will include a Managing Policy Authority, and a chain of certifying authorities headed by a Root Certifying Authority (Root CA), and composed of the Certifying Authorities (CA) and Registration Authorities (RA).

The function of the Managing Policy Authority will be determined for the BPKI Managing Committee, which is linked to the Civil House of the Presidency of the Republic and composed of twelve members, five being representatives of the civil society, belonging to interested sectors of it as designated by the President of the Republic, and seven representatives of the following agencies, indicated by its title-holders: (i) Ministry of the Justice; (ii) Treasury Department; (iii) Ministry of the Development, Industry and External Trade; (iv) Ministry of the Planning, Budget and Administration; (v) Ministry of Science and Technology; (vi) Civil House of the Presidency of the Republic; and (vii) Cabinet of the Institutional Safety of the Presidency of the Republic.

The BPKI Management Committee has the following responsibilities:

I - to adopt the necessary measures and to coordinate the implementation and the functioning of the BPKI;

II - to establish the policy, the criteria and the norms for licensing of the CA, of the RA and of the others vendors of support services to BPKI, in all levels of the certification chain;

III - to establish the certification policy and the operational rules of CA Root;

IV - to homologate, to audit, and to inspect the Root CA and its service renders;

V - to establish guidelines and technical norms for the formulation of certificates' policy and operational rules for the CA and for the RA, as well as to define the certification chain's levels;

¹⁷ Pursuant to article 62 of the Federal Constitution, provisional measures, with the force of law, may be adopted by the President of the Republic in important and urgent cases. They also have to be submitted to the National Congress immediately.

VI - to approve certificates' policies and operational rules, to license and to authorize the operation of the CA and of the RA, as well as to authorize the CA Root to emit the correspondent certificate;

VII - to identify and to evaluate the external PKI policy, to negotiate and to approve bilateral certification treaties, crossed certification, interoperability rules and other forms of international cooperation, as well as to certify its compatibility with BPKI whenever necessary, observing the rules provided in international treaties, agreements, or deeds;

VIII - to update, to adjust, and to revise the procedures and the practices established for BPKI, to guarantee its compatibility and to promote the technological updating of the system and its conformity with the safety policy.

The Root CA is the first authority of the certification chain and the executive of the Certificates' Policies as well as the technical and operational norms approved for the Managing Committee of BPKI. It has the authority to issue, to emit, to distribute, to revoke, and to manage the CA's certificates of level immediately subsequent to itself, to manage the list of emitted, revoked, and expired certificates, and to execute activities of inspection and audit of the CA and of the RA as well as of the renders of service enabled in PKI, in conformity with the guidelines established by BPKI Managing Committee. The Root CA is hindered to emit certificates for the final user.

The Main Certifying Authority is the National Institute of Information Technology, a Ministry of Science and Technology agency that was appointed as the Root CA of BPKI.

The CAs are entities authorized to emit digital certificates linking a pair of cryptographic keys to its respective title-holder. It has the ability to issue, emit, distribute, revoke and manage the certificates as well as to make available to its

users lists of revoked certificates and other pertinent information, in addition to maintain the registration of its operations.

The pair of cryptographic keys will always be generated by its own title-holder, and his/her private key signature will be of his/her exclusive control, use, and knowledge.

The RAs, entities operationally linked to certain CA, are in charge of identifying and registering users in their presence, directing solicitations of certificates to the CA, and maintaining registrations of its operations.

Observed the criteria that will be established for the BPKI Management Committee, public agencies and public entities, as well as legal entities can be licensed as CAs and RAs.

The CAs are forbidden to emit certificates at different levels than that immediately subsequent to themselves, except in cases of lateral or crossed agreements of certification, previously approved for the BPKI Managing Committee.

The electronic documents referred to in this provisional measure are considered public or private documents, for any legal aim, and nobody will be forced to use electronic documents or any electronic means in their private juridical relationships either with public entities or agencies.

The declarations made through the use of electronic documents, produced with the use of the certification process provided by BPKI, are presumed true in relation to the signatories, in accordance to Art. 131 of the Law No. 3,071 of January 1, 1916 - the Brazilian Civil Code.

The provisions of this Provisional Measure do not hinder the use of other means of proof of authorship and integrity of documents in electronic form, including

those that use certificates that have not been emitted by BPKI, since they may be admitted if the parts, or the opposing person accepts them.

2.8 - THE PUBLIC CONSULTATION OF BPKI DOCUMENTS ¹⁸

The executive secretary of the BPKI Management Committee placed for public consultation a series of documents ¹⁹ that serve as support for its transformation to a digital certification regulatory agency. The documents were open to suggestions and alterations from July 4 to July 30, 2001, so as to allow that government, society, and private initiative to work together on such an important matter.

The documentation is intended to regulate the activities of BPKI and creates rigid rules of inspection for companies acting in the digital certification market that want to receive a certificate of conformity from that agency.

These documents concern different matters, such as the Reference Terms of the Management Committee, the CA Root's Declaration of Operational Rules, the Safety Policy, the Digital Signature Certification and Confidentiality Policies in the levels 1, 2, 3 and 4 of BPKI.

The levels of safety for digital signatures and confidentiality of the certificates are the following:

- Level 1 - high level of safety;
- Level 2 - medium level of safety;
- Level 3 - basic level of safety;
- Level 4 - ordinary level of safety;

¹⁸ Revista Consultor Jurídico, *Certificação digital*, July 5, 2001. <<http://cf6.uol.com.br/consultor/view.cfm?numero=5748&ad=c>>

¹⁹ The referred documents are available at the following sites: <www.governoeletronico.gov.br> or <www.planalto.gov.br> (legislation).

The National Institute of Information Technology will be the Root CA, and it will be in charge of expediting the BPKI's conformity with the certificates of the companies integrating the system.

Technicians of the electronic government allege that they did not create a market reservation when authorizing for an agency linked to the Ministry of Science and Technology the competence of being the Root Certifying Authority. They say that nobody will be forced to have the certificate emitted by BPKI, and that the current certifying companies can stay in the market without placing their services under the audit of BPKI. The certificates that do not have an accreditation from BPKI will be restricted to its current market, since they take the risk of not being recognized by those that underwent the new regulatory agency.

In addition, the representative of BPKI guarantees that the bill of laws that were submitted to the National Congress do not conflict with the provisional measure No. 2,200 of 2001, that created the new infrastructure of public keys. Last, it was asseverated that there are no bills of law in the National Congress dealing with the infrastructure organization. The proposed bills of law themselves lack an infrastructure and they attribute the task to a regulatory agency.

2.9 - CONSUMER PROTECTION FOR E-COMMERCE

The *open* nature of the Internet, which enables the connection of many different networks world-wide, technically makes it possible for consumers and merchants anywhere to conduct commercial transactions, even without having personal contact with each other.

Thus, this inherently international nature of the global network environment challenges the abilities of each country or jurisdiction to adequately address issues related to consumer protection in the context of B2C E-commerce transactions. This is mainly because there may be countries in which there are no specific consumer protection laws, while in others they may exist and must

be respected inside the country's jurisdiction. Notwithstanding, even the existence of such national laws do not seem to effectively protect the consumers because it can be difficult for the national consumer protection law to reach a vendor whose establishment is not situated inside the country's territory. For this reason, any country-isolated initiative in such a field will not be efficient enough to guarantee the desired consumer protection.

Therefore, the elimination of some of the uncertainties that both consumers and businesses encounter when buying and selling online must be a priority to increase the trust between the parties involved and to enable the development of E-commerce in a global scale.

In the given context, the importance of the OECD's Council initiative of approving the *Guidelines for Consumer Protection in the Context of Electronic Commerce*,²⁰ becomes clear since it assists governments, businesses, and consumer representatives to develop and implement online consumer protection mechanisms without erecting barriers to trade. The guidelines reflect existing legal protection available to consumers in more traditional forms of commerce; encourage private sector initiatives that include participation by consumer representatives; and emphasize the need for cooperation among governments, businesses, and consumers. Their aim is to encourage fair business, advertising and marketing practices; clear information about an online business's identity, the goods or services it offers and the terms and conditions of any transaction; a transparent process for the confirmation of transactions; secure payment mechanisms; fair, timely and affordable dispute resolution and redress; privacy protection; and consumer and business education.

Another important initiative to increase the reliance on the integrity of E-commerce is the adoption of codes of conduct, such as the *Code of Online Business Practices*, the Better Business Bureau (BBB) and BBBOOnline guidelines that are designed to guide ethical *business to customer* conduct in E-

²⁰ <http://www.oecd.org/dsti/sti/it/consumer/prod/CPGuidelines_final.pdf>

commerce. These guidelines represent sound online advertising and selling practices that BBB and BBBOnline believe will boost customer trust and confidence in online commerce.²¹

In Brazil, Law No. 8,078 of September 11, 1990, named the Consumer Defense Code (CDC), provides consumer protection.

Christian Roschmann, Emiliania Carvalho and Filipe Brickmann Areno state that the transactions between vendors and consumers created by E-commerce are considered consumption relationships, which are entirely subject to the provisions of the CDC. Thus the law chosen by the parties to govern the terms of a contract shall have no force in Brazil whether it restricts or denies rights assured to the consumer by the CDC.²²

The CDC recognizes the economic superiority usually observed in the relations to suppliers of products or services and envisages providing consumers with efficient mechanisms of protection. For that reason, its Article 4 set forth a national consumer relations policy, based on the following principles: recognition of the vulnerability of the consumer in the consumer market; consumer protection governmental action; compromise between the need for consumer protection and economic and technological development of domestic companies and institutions; incentives for the creation of product and service quality control mechanisms; restriction of abusive practices in the consumer market including those regarding unfair competition among others.

In order to determine the principal area of application of the CDC, provisions to consumer relations, the definitions of *consumer* and *supplier* are provided. Consumer is “the natural person or legal entity that buys or uses product or

²¹ BBBOnline Code of Online Business Practices, released 24 October 2000, <<http://www.bbbonline.org/code/code.asp>>

²² *Aspectos jurídicos do e-commerce*, in E-Commerce no Brasil, oportunidades de negócios no maior mercado su-ameriano, Coordenação e edição Thomas Timm e Lars Grabenschröer, São Paulo: Câmara de Comércio e Indústria Brasil-Alemanha São Paulo, 2001, p. 114.

service as the final user,” and the broad definition of supplier is “the natural person or legal entity, of private or public law, domestic or foreign, as well as the depersonalized entity, who engages in the activities of production, assembly, creation, construction, transformation, importation, exportation, distribution or commercialization of products or services.”

As required by Art. 30 and 31 of the CDC, every information or publicity, concerning any product or service offered by whatever means of communication, thus including a website, must be precise and shall contain the offer and presentation of products and/or services offered, and provide correct, clear, accurate and conspicuous information, in Portuguese language, concerning characteristics, qualities, quantity, composition, price, warranty, validity terms and origin of them, among other information.

Some other of the important rules embodied in the CDC are²³:

Reversal of the burden of proof: upon the criteria of the courts whenever the consumer is deemed the weaker party, or his allegations seem reasonable, the courts may invert the burden of proof, transferring to the supplier the proof that the facts alleged by consumer did not occur, or occurred differently than claimed;

Strict liability of the supplier: consisting in the liability of the product or service supplier for the repair of the damages inflicted to consumers by the product or service provided, regardless of fault;

Subsidiary liability of the merchant: consisting in the possibility of holding the merchant directly liable whenever the identification of the product supplier is not possible; whenever the product is sold without

²³ Durval de Noronha Goyos Júnior, coordinator. *Legal guide: business in Brazil*, 4. ed. São Paulo: Ob servador Legal, 2000, pp. 155-7.

precise identification of the supplier; or whenever the merchant does not keep perishable products adequately stored;

Disregard of legal entity: consisting in the possibility of holding the administrators and shareholders directly responsible by ignoring the legal personality of the relevant company, whenever damages are caused due to abuse of rights, illicit acts or facts, or violation of the bylaws of the company whose legal entity may be disregarded;

Contractual protection: consisting in the prohibition and restriction of various clauses and contractual practices considered to be abusive and deemed null and void by the CDC;

Access to data banks: consisting in granting access to consumers to data banks maintained by companies for the purpose of analyzing and eventually revising their personal data;

Broad liability for infractions: consisting in administrative and criminal liability for determined infractions as foreseen in the CDC, without prejudice to applicable civil liability; and

Collective consumer defense: to be promoted concurrently by the Public Ministry, Federative Government, the States, Federal District and Municipalities, as well as by public consumer defense agencies and civil associations for consumer defense. The protective measures adopted by such entities include steep fines and indemnities against suppliers that do not comply with the norms set forth in the CDC.

3 - THE DIGITAL DIVIDE

The so-called *digital divide* “refers to the gap between individuals, households, businesses and geographic areas at different socioeconomic levels with regard

both to their opportunities to access information and communication technologies (ICTs) and to their use of the Internet for a wide variety of activities. The digital divide reflects various differences among and within countries.”²⁴

As a result of the possibility of accessing or not the new ICT, there is a potential risk that a digital divide will emerge, reinforcing existing income and wealth inequalities not only within, but also between countries.

Access to basic telecommunications infrastructures is fundamental to any consideration of the issue, as it precedes and is more widely available than access to and use of the Internet.

3.1 - OBSTACLES TO OVERCOMING THE DIGITAL DIVIDE IN BRAZIL

In the Internet age, the government needs not only to promote universal access and greater use of electronic media, in order to make its administration more efficient and transparent at all levels, but also to provide and support the creation and maintenance of equitable universal services for citizens.

In spite of the fact that the government is trying to find effective ways to bring Internet access to all Brazilians, there are still many obstacles to be overcome in order to bridge the digital divide. Pedro Farias, Deputy Executive-Secretary of Brazilian's Ministry of Planning, Budget and Management, has pointed out some of the main problems:

In Brazil, the total number of telephone lines is about 62 million, of which 39 million are fixed line and 23 million are mobile phones. Despite the great increase of phone access in the past few years, since privatization of the sector, individual services still reach only 39% of the population.

²⁴ OECD, *Understanding the Digital Divide*, 2001, p. 5.

Thus, low line access remains a limiting factor for Internet expansion, both for individual users and service providers. Moreover, the high costs of conventional telephone services represent another barrier to Internet access. Connections between local and international backbones are very expensive. In addition, Internet access providers do not offer local-line Internet connection in many small towns, concentrating their services in the larger cities.

The price of hardware represents another difficulty for the expansion of Internet use, especially in those regions where income per capita remains very low. This structural limitation is worsened by the lack of low-cost financing and by the absence of simple hardware at lower prices. Furthermore, the lack of training and familiarity with new technologies and the prevalence of English-language content on the Internet confine accessibility to a very small percentage of the population.

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3.2 - ACHIEVEMENT OF DIGITAL INCLUSION

Since the precondition to the potential development of E-commerce is an adequate and affordable telecommunications infrastructure the government had to face the fact that there are still segments of the society that have no ready access to the telecommunications infrastructure, and therefore, to the Internet.

Nevertheless, there are initiatives in the country to try to achieve digital inclusion, such as the challenging target of offering all federal services through the Internet until 2002, and to achieve that aim, points of presence to provide free access to the services delivered through the Internet has been installed. The main areas of access points are education, health, social security, labor and public security. By the end of 2001, the smallest villages, located on the border areas and all the

Federal government field offices all over the country are expected to have at least one electronic point of presence.

There are also many initiatives on the state level concerning e-government, in order to make the public administration more efficient and transparent so that the creation and maintenance of equitable universal services for citizens may be offered.

Concerning financial resources needed for the extension of telecommunication services, new tax contributions have been instituted.

Law No. 9,998 of August 17, 2000 and Law No. 10,052, of November 28, 2000, created the Fund for Universalization of Telecommunication Services (Fust) and the Fund for the Technological Development of Telecommunications (Funttel), respectively. Decree No. 3,624 of October 5, 2000 further regulated Fust, and Decree No. 3,737 of January 30, 2001 further regulated the Funttel.

The Fust aims at providing resources to cover a portion of the costs associated with the universalization of telecommunication services, required under telecommunication laws and regulations, that can not be recovered by means of the efficient exploitation of the service.

The Art. 81, II of the Law No. 9,472 of July 16, 1997 provides that the complementary resources destined to cover the part of the cost attributable exclusively to the achievement of the telecommunications service providers' obligations of universalization, that can not be recovered by the efficient exploitation of the service, can be originating from a fund specifically constituted for this purpose, for which will contribute the renders of telecommunications service be in the public or private regimes.

²⁵ Brazilian's Ministry of Planning, Budget and Management, Executive Secretariat. *Electronic Government: The Brazilian Policy*. Pedro Farias, Deputy Executive-Secretary. Document presented in III Global Forum –

The Funttel, in turn, aims at fostering technological innovation and the training of human resources, as well as to create job opportunities and aid small and medium companies in their efforts to secure capital investments.

From January 2, 2001, telecommunication service providers have been required to contribute 1% of their operational gross revenues resulting from their telecommunication service activities to the Fust, net of applicable taxes such as ICMS²⁶, PIS²⁷ and COFINS²⁸. Likewise, said companies will also be required, to contribute 0.5 % of their gross revenues to the Funttel, net of applicable taxes.

4 - E-COMMERCE DEFINITION

There is no international uniform definition of E-commerce. In order to have an idea of the understandings about the term E-commerce, we will quote some of its definition:

The term 'electronic commerce' refers to the use of computer networks to facilitate transactions involving the productions, distribution, sale, and delivery of goods and services in the marketplace. While many people associate electronic commerce with the buying and selling of information, goods, and services over computer networks, the components of electronic commerce are more robust. Not only can electronic commerce embrace the streamlining of the relationship between consumers and business, it also embraces more efficient business processes within a firm and inter-firm.

Applications of electronic commerce are many and varied. They include the paperless exchange of business information from business

Fostering Democracy and Development Through E-Government, Naples, Italy, 12-15 March, 2001.

²⁶ Acronym from tax on transactions relating to the circulation of goods and to the rendering of interstate and intermunicipal transportation services and services of communication.

²⁷ PIS – Social Integration Program, is a contribution, at a rate of 0,65 % of gross receipts from sales, that is applied to all private commercial undertakings, in order to support social programs.

computer to business computer using electronic data interchange (EDI) technology, electronic mail (email), electronic bulletin boards and conferencing software, electronic funds transfers, and many other technologies, in addition, the term 'electronic commerce' includes an on-line approach to conducting business with customers including advertising, making order entry and processing, payment, and customer support.²⁹

The Italian Ministry of Industry, Commerce and Craftsmanship defines E-commerce, in a generic way, as "every initiative to support the commercial activity of a firm that is developed on the Internet."³⁰

The UK's Department of Trade and Industry has proposed this working definition to the OECD:

Using an electronic network to simplify and speed up all stages of the business process, from design and making to buying, selling and delivery E-commerce is the exchange of information across electronic networks, at any stage in the supply chain, whether within an organization, between business, between business and consumers, or between the public and private sectors, whether paid or unpaid.³¹

The European Commission (EC) has defined E-Commerce as: "Any service normally provided for remuneration, at a distance, by electronic means and at the individual request of a recipient of services" (forming part of the *information*

²⁸ COFINS is a Social Contribution on Invoicing aimed to help the Social Security Program, through a monthly taxation of 3 % on the gross receipts from sales and the rendering of services.

²⁹ Doernberg, Richard L. and Hinnekens, Luc. *Electronic Commerce and International Taxation*. International Fiscal Association. (The Hague: Kluwer Law International, 1999), p. 45.

³⁰ Ministero dell'Industria del Commercio e dell'Artigianato dell'Italia. *Guida al commercio elettronico*, Seconda Edizione, Novembre, 1999, p. 17.

³¹ UK Inland Revenue. *Electronic Commerce: The UK's Taxation Agenda*, p. 13.

society services as defined in the EU Directive 98/48/EC on *Transparency* dated 20 July 1998).³²

The World Trade Organization (WTO) has defined E-Commerce as: “the production, distribution, marketing, sale or delivery of goods and services by electronic means” (WTO Declaration on Electronic Commerce dated 25 September 1998).³³

Although each definition can be simpler or more complex, they comprise many different transactions that were just made possible because of the development of the Internet phenomenon in a global scale. E-commerce comprises all kind of electronic exchange relating to business, such as transactions or information flows related to products and services. Identified the essential qualities of E-commerce, it is possible to conclude that it includes relations between different companies, between companies and government agencies, and between companies and individuals, *i.e.*, consumers using a variety of transmission forms such as telephone, television, computer networks, *Minitel* and the Internet.

4.1 - B2B, B2C, B2E and C2B

Baker and McKenzie explain that various categories of participants in E-Commerce Transactions have been identified by market analysts: (i) Business-to-Business (B2B); (ii) Business-to-Consumer (B2C) embracing normal retail activity on the web; (iii) Business-to-Employee (B2E), and recently also (iv) Consumer-to-Business (C2B) relationships referring, in particular, to websites channeling group buying, public procurement procedures, and tenders, etc. They also state that the distinction between these different groups is particularly

³² *Apud* Baker & Mc Kenzie web site. *Doing E-Commerce in Europe*, p. 3. <<http://www.bakerinfo.com/ecommerce/>>

³³ *Ibidem*, p. 3.

important where consumers are involved because it raises specific legal issues concerning not only consumer but also data protection.³⁴

While nearly all sources indicate that B2B E-commerce dominates the market, most existing analysis and available data focus on the B2C segment.³⁵ The main reason for the rapid development of the B2B segment of E-commerce is its significant impact on costs associated with inventories, sales execution, procurement and distribution, and with intangibles like banking, what reflects in the efficiency and productivity of the enterprise.³⁶ It also involves large firms setting up online exchanges to buy industrial inputs, such as steel, chemicals, or car components.

4.2 - INDIRECT AND DIRECT E-COMMERCE TRANSACTIONS

Any E-commerce transaction can be described as either an *Indirect E-Commerce Transaction* or as a *Direct E-Commerce Transaction*.

An 'Indirect E-Commerce Transaction' is where a Vendor and a Buyer conclude a contract via the Internet, but perform their contractual obligations (for example, the delivery of the goods and/or the performance of the services, and payment of the purchase price) by means other than through the Internet (i.e., 'off-line'). The purchase of tangible goods will, therefore, always constitute an Indirect E-Commerce Transaction.³⁷

As a consequence of that definition, the supply of tangible goods in connection with the delivery of a service will also constitute an Indirect E-Commerce Transaction.

³⁴ *Ibidem*, p. 4.

³⁵ For more details in the various areas of concern regarding ecommerce between businesses and consumers see the OECD report on *Business-to-Consumer Electronic Commerce Survey of Status and Issues*, available at <<http://www.oecd.org/dsti/sti/it/ec/index.htm>>

³⁶ OECD's report on *The Economic and Social Impacts of Electronic Commerce: Preliminary Findings and Research Agenda*, Feb - 1999. <<http://www.oecd.org/dsti/sti/it/ec/index.htm>>

A 'Direct E-Commerce Transaction' is where a Vendor and a Buyer not only conclude the contract, but also perform all their contractual obligations via the Internet, i.e., 'on-line'. Such a Direct E-Commerce Transaction is only possible if the goods purchased are intangible or the services are performed exclusively through the Internet or by other electronic means.³⁸

The following transactions will constitute a Direct E-Commerce Transaction: the purchase of software, films, music or information (such as the contents of a book) that is downloaded to the Buyer's computer via the Internet.

The EC Commission defines Indirect E-commerce as "the electronic ordering of tangible goods, which must be physically delivered using traditional channels such as postal services or commercial couriers"; and direct E-commerce as "the online ordering, payment and delivery of intangible goods and services such as computer software, entertainment content or information services on a global scale."³⁹

4.3 - HOW DOES TECHNOLOGY ENABLE E-COMMERCE TRANSACTIONS?

Baker & Mc Kenzie explain that the Internet technology enables B2B, B2C and C2B E-Commerce Transactions, in particular with regard to:

- (i) the safe exchange of contractual information between the Vendor and the Buyer (including the proper registration and subsequent protection of data provided by a Buyer when registering at a Vendor's website, encryption and digital signatures);

³⁷ Baker & Mc Kenzie web site. *Doing E-Commerce in Europe*, p. 5.

³⁸ *Ibidem*, p. 5.

(ii) the safe and reliable download of technology in the case of Direct E-Commerce Transactions;

(iii) the security of the Buyer's payment; and

(iv) the availability of sufficient and easily accessible technology for alternative dispute resolution via electronic means.⁴⁰

4.4 - DEFINITION OF THE VARIOUS TYPICAL E-COMMERCE TRANSACTIONS

The annex 2 of the report on *Tax Treaty Characterization Issues Arising From E-Commerce* by the Technical Advisory Group (TAG) on Treaty Characterization of Electronic Commerce Payments of the OECD⁴¹ identified various categories of typical E-commerce transactions. The general mandate of the TAG was "to examine the characterisation of various types of E-commerce payments under tax conventions with a view to providing the necessary clarifications in the Commentary."

We will take profit of that work to list the definitions of the diverse species of transactions that may be characterized as E-commerce transactions by reason of the inclusion of them in the concept of E-commerce, aforesaid presented.

We believe that the understanding of the general concept of E-commerce along with the definition of its typical transactions will give us a good idea of the economic potential of the new technology. It will allow also a later analyses of the tax incidence concerning these diverse categories of transactions, in

³⁹ *A European Initiative in Electronic Commerce*, Com (97) 157, *apud*, Doernberg, Richard L. and Hinnekens, Luc. *Electronic Commerce and International Taxation*. International Fiscal Association. (The Hague: Kluwer Law International, 1999), p. 245.

⁴⁰ Baker & Mc Kenzie web site. *Doing E-Commerce in Europe*, p. 6.

⁴¹ OECD Committee on Fiscal Affairs. *Tax Treaty Characterization Issues Arising From E-Commerce*, Report to Working Party No. 1, by the Technical Advisory Group on Treaty Characterization of Electronic Commerce Payments, 1 February 2001.

accordance with the Brazilian National Tax System, particularly the states' tax on communications services.

Category 1: Electronic order processing of tangible products:

The customer selects an item from an online catalogue of tangible goods and orders the item electronically directly from a commercial provider. There is no separate charge to the customer for using the online catalogue. The product is physically delivered to the customer by a common carrier.

Category 2: Electronic ordering and downloading of digital products: The customer selects an item from an online catalogue of software or other digital products and orders the product electronically directly from a commercial provider. There is no separate charge to the customer for using the online catalogue. The digital product is downloaded onto the customer's hard disk or other non-temporary media.

Category 3: Electronic ordering and downloading of digital products for purposes of commercial exploitation of the copyright: The customer selects an item from an online catalogue of software or other digital products and orders the product electronically directly from a commercial provider. There is no separate charge to the customer for using the online catalogue. The digital product is downloaded into the customer's hard disk or other non-temporary media. The customer acquires the right to commercially exploit the copyright in the digital product (e.g. a book publisher acquires a copyrighted picture to be included on the cover of a book that it is producing).

Category 4: Updates and add-ons: The provider of software or other digital product agrees to provide the customer with updates and

add-ons to the digital product. There is no agreement to produce updates or add-ons specifically for a given customer.

Category 5: Limited duration software and other digital information licenses: The customer receives the right to use software or other digital products for a period of time that is less than the useful life of the product. The product is either downloaded electronically or delivered on a tangible medium such as a CD. All copies of the digital product are deleted or become unusable upon termination of the license.

Category 6: Single-use software or other digital product : The customer receives the right to use software or other digital products one time. The product may be either downloaded or used remotely (e.g. use of software stored on a remote server). The customer does not receive the right to make copies of the digital product other than as required to use the digital product for its intended use.

Category 7: Application Hosting - Separate License: A user has a perpetual license to use a software product. The user enters into a contract with a host entity whereby the host entity loads the software copy on servers owned and operated by the host. The host provides technical support to protect against failures of the system. The user can access, execute and operate the software application remotely. The application is executed either at a customer's computer after it is downloaded into RAM or remotely on the host's server. This type of arrangement could apply, for example, for financial management, inventory control, human resource management or other enterprise resource management software applications.

Category 8: Application Hosting - Bundled Contract: For a single, bundled fee, the user enters into a contract whereby the provider, who is also the copyright owner, allows access to one or more software

applications, hosts the software applications on a server owned and operated by the host, and provides technical support for the hardware and software. The user can access, execute and operate the software application remotely. The application is executed either at a customer's computer after it is downloaded into RAM or remotely on the host's server. The contract is renewable annually for an additional fee.

Category 9: Application Service Provider ("ASP"): The provider obtains a license to use a software application in the provider's business of being an application service provider. The provider makes available to the customer access to a software application hosted on computer servers owned and operated by the provider. The software automates a particular back-office business function for the customer. For example, the software might automate sourcing, ordering, payment, and delivery of goods or services used in the customer's business, such as office supplies or travel arrangements. The provider does not provide the goods or services. It merely provides the customer with the means to automate and manage its interaction with third-party providers of these goods and services. The customer has no right to copy the software or to use the software other than on the provider's server, and does not have possession or control of a software copy.

Category 10: ASP License Fees: In the example above, the ASP pays the provider of the software application a fee which is a percentage of the revenue collected from customers. The contract is for a one-year term.

Category 11: Web site hosting: The provider offers space on its server to host web sites. The provider obtains no rights in the copyrights created by the developer of the web site content. The owner of the copyrighted material on the site may remotely manipulate the site,

including modifying the content on the site. The provider is compensated by a fee based on the passage of time.

Category 12: Software maintenance: Software maintenance contracts typically bundle software updates together with technical support. A single annual fee is charged for both updates and technical support. In most cases, the principal object of the contract is the software updates.

Category 13: Data warehousing: The customer stores its computer data on computer servers owned and operated by the provider. The customer can access, upload, retrieve and manipulate data remotely. No software is licensed to the customer under this transaction. An example would be a retailer who stores its inventory records on the provider's hardware and persons on the customer's order desk remotely access this information to allow them to determine whether orders could be filled from current stock.

Category 14: Customer support over a computer network: The provider provides the customer with online technical support, including installation advice and trouble-shooting information. This support can take the form of online technical documentation, a trouble-shooting database, and communications (e.g. by e-mail) with human technicians.

Category 15: Data retrieval: The provider makes a repository of information available for customers to search and retrieve. The principal value to customers is the ability to search and extract a specific item of data from amongst a vast collection of widely available data.

Category 16: Delivery of exclusive or other high-value data: As in the previous example, the provider makes a repository of information available to customers. In this case, however, the data is of

greater value to the customer than the means of finding and retrieving it. The provider adds significant value in terms of content (e.g. by adding analysis of raw data) but the resulting product is not prepared for a specific customer and no obligation to keep its contents confidential is imposed on customers. Examples of such products might include special industry or investment reports. Such reports are either sent electronically to subscribers or are made available for purchase and download from an online catalogue or index.

Category 17: Advertising: Advertisers pay to have their advertisements disseminated to users of a given web site. So-called “banner ads” are small graphic images embedded in a web page, which when clicked by the user will load the web page specified by the advertiser. Advertising rates are most commonly specified in terms of a cost per thousand “impressions” (number of times the ad is displayed to a user), though rates might also be based on the number of “click-throughs” (number of times the ad is clicked by a user).

Category 18: Electronic access to professional advice (e.g. consultancy): A consultant, lawyer, doctor or other professional service provider advises customers through email, video conferencing, or other remote means of communication.

Category 19: Technical information: The customer is provided with undivulged technical information concerning a product or process (e.g. narrative description and diagrams of a secret manufacturing process).

Category 20: Information delivery: The provider electronically delivers data to subscribers periodically in accordance with their personal preferences. The principal value to customers is the

convenience of receiving widely available information in a custom-packaged format tailored to their specific needs.

Category 21: Access to an interactive web site: The provider makes available to subscribers a web site featuring digital content, including information, music, video, games, and activities (whether or not developed or owned by the provider). Subscribers pay a fixed periodic fee for access to the site. The principal value of the site to subscribers is interacting with the site while online as opposed to getting a product or services from the site.

Category 22: Online shopping portals: A web site operator hosts electronic catalogues of multiple merchants on its computer servers. Users of the web site can select products from these catalogues and place orders online. The web site operator has no contractual relationship with shoppers. It merely transmits orders to the merchants, who are responsible for accepting and fulfilling orders. The merchants pay the web site operator a commission equal to a percentage of the orders placed through the site.

Category 23: Online auctions: The provider displays many items for purchase by auction. The user purchases the items directly from the owner of the items, rather than from the enterprise operating the site. The vendor compensates the provider with a percentage of the sales price or a flat fee.

Category 24: Sales referral programs: An online provider pays a sales commission to the operator of a web site that refers sales leads to the provider. The web site operator will list one or more of the provider's products on the operator's web site. If a user clicks on one of these products, the user will retrieve a web page from the provider's site from which the product can be purchased. When the link on the operator's

web page is used, the provider can identify the source of the sales lead and will pay the operator a percentage commission if the user buys the product.

Category 25: Content acquisition transactions: A web site operator pays various content providers for news stories, information, and other online content in order to attract users to the site. Alternatively, the web site operator might hire a content provider to create new content specifically for the web site.

Category 26: Streamed (real time) web based broadcasting: The user accesses a content database of copyrighted audio and/or visual material. The broadcaster receives subscription or advertising revenues.

Category 27: Carriage fees: A content provider pays a particular web site or network operator in order to have its content displayed by the web site or network operator.

Category 28: Subscription to a web site allowing the downloading of digital products: The provider makes available to subscribers a web site featuring copyrighted digital content (e.g. music). Subscribers pay a fixed periodic fee for access to the site. Unlike category 21, the principal value of the site to subscribers is the possibility to download these digital products.

5 - LEGAL BARRIERS AND POLICY CONSIDERATIONS FOR E-COMMERCE

E-commerce transactions depend upon a wide array of an adequate legal or regulatory framework such as the enforceability of electronic contracts.

As happens in many countries, the Brazilian existing legal framework does not adequately accommodate E-commerce, because it is predominantly a paper based system. The lack of a legal framework to ensure the authenticity of electronic documents, electronic payments, etc., is a barrier to the development of E-commerce not only in the country, but also on a global scale.

The existence of clear, consistent legal standards that could bring predictability to e-documents is of a vital importance to the development of E-commerce. That is why the adapting of the civil laws of evidence to virtual trading would remove the legal obstacles to the development of such trading by explicitly recognizing the probative value of digital documents and electronic signatures.

The creation of an environment conducive to the development of E-commerce depends on a number of prerequisites, such as:⁴²

(i) a modern telecommunication infrastructure, by means of which E-commerce can take place;

(ii) a supportive information infrastructure, involving the acquisition and development of the appropriate software and other information products which contribute to the backbone of global electronic communications;

(iii) a human resource infrastructure and the education of the business community as to the benefits and potential uses of E-commerce, as well as the training of the workforce to take advantage of those benefits;

(iv) a legal and policy infrastructure which is conducive and supportive of E-commerce.

⁴² United Nations Conference on Trade and Development. Report by the UNCTD secretariat. *Legal Dimensions of Electronic Commerce*, May 4, 1999, p. 15.

A legal infrastructure for E-commerce includes different subjects, such as commercial law issues, security and authentication, privacy, intellectual property protection, customs and taxation, electronic payment systems, Internet content regulation, jurisdiction, dispute settlement mechanisms, liability and consumer protection. It is instructive to note that not only the international organizations, but also public or private sector entities that have studied E-commerce from a variety of perspectives have tended to focus on certain common principles that would be present in any favorable legal environment, as follows:

(i) Principle of the minimalist legislation: Governments should not try to over-regulate because attempts to control, restrain or channel E-commerce developments will hamper the ability of businesses to adopt those technological applications that are best for their activities, prevent innovation in terms of both technology and business implementation models, and hamper the development of the market place.

What is important in the regulation is that it would recognize that the primary objective of electronic authentication is the removal of barriers associated with traditional writing and signature requirements, enabling E-commerce, and that evidentiary presumptions in favor of electronic signature use be established based on security and trustworthiness standards.

(ii) Principle of the technology-neutral legislation: This one has to be understood as a broad principle. The law should not, through the adoption of rules peculiar to one type of technology, block innovation and preclude development of newer methods. In other words, all modes of electronic communication and authentication should be recognized and supported.

(iii) Principle of the party autonomy: In E-commerce, the parties themselves as much as possible should determine the rules and standards applicable to the business relationship between them.

The understanding of the United Nations Conference on Trade and Development (UNCTD) is that developing countries might begin structuring their legal framework by taking profit of the international experience in this field. For that, they should identify if it could be possible to act with respect to the following categories⁴³:

(i) those areas in which an international consensus has emerged on how to treat electronic commerce issues;

(ii) those areas where domestic action is absolutely necessary to foster an environment favorable to electronic commerce; and

(iii) those areas where it is possible for developing countries to resolve the legal issues in an expedited manner.

In *A Framework for Global Electronic Commerce*⁴⁴, The United States offers its view of some general principles to facilitate the growth of commerce on the Internet:

1. The private sector should lead: Though government has played a role in financing the initial development of the Internet, the expansion of the Internet and Global Information Infrastructure (GII) has been driven primarily by the private sector. For electronic commerce to flourish, the private sector must continue to lead. Innovation, expansion of services and participants, and lower prices will depend upon the Internet remaining a market-driven arena, not one that operates as a regulated industry.

⁴³ *Ibidem*, p. 16-7.

⁴⁴ <http://www.iitf.nist.gov/eleccomm/glo_comm.htm>

2. Governments should avoid undue restrictions on electronic commerce: When two parties wish to enter into an agreement to legally buy and sell products and services across the Internet, they should be able to do so with minimal government involvement or intervention. Governments should refrain from imposing new and unnecessary regulations, bureaucratic procedures, or new taxes and tariffs on commercial activities that take place via the Internet. Impeding commercial activities in these ways will limit unnecessarily the availability of, and raise the prices of, products and services to consumers the world over, and distort development of the electronic marketplace.

3. Where governmental involvement is needed, its aim should be to support and enforce a predictable, minimalist, consistent and simple legal environment for commerce: In some areas, government agreements will be necessary to facilitate electronic commerce. In these cases, governments should establish a predictable and simple legal environment based on a decentralized, contractual model of law rather than one based on top-down regulation. This harmonized legal framework should focus on protecting customers from fraudulent sales, protecting intellectual property from piracy, protecting privacy, ensuring competition, fostering disclosure and creating simple means for resolving disputes.

4. Governments should recognize the unique qualities of the Internet: All governments should recognize that the genius and explosive success of the Internet can be attributed in part to its decentralized nature and bottom-up governance. Governments also should realize that the Internet's unique structure poses significant logistical and technological challenges to current regulatory models, and should tailor their policies accordingly. Governments also should encourage the evolving industry self-regulation and support the efforts of

private sector organizations to develop mechanisms to facilitate the successful operation of the Internet.

5. Electronic commerce over the Internet should be facilitated on an international basis: While recognizing the differences in national legal systems, the legal framework supporting commercial transactions on the Internet should be governed by consistent principles regardless of the countries in which the buyer or seller reside.

In what concerns taxation, it was stressed that any taxation of internet sales should follow these principles:⁴⁵

It should neither distort nor hinder commerce. No tax system should discriminate among types of commerce, nor should it create incentives that will change the nature or location of transactions.

The system should be simple and transparent. It should be capable of capturing the overwhelming majority of appropriate revenues, be easy to implement, and minimize burdensome record keeping and costs for all parties.

The system should be able to accommodate tax systems used by the United States and their international partners today. Wherever feasible, it should be looked to existing taxation concepts and principles to achieve these goals.

6 - AUTHENTICATION AND DIGITAL SIGNATURES

As in the electronic environment, the parties involved in business usually have no face-to-face contact and may not know each other even by reputation, the employment of authentication technologies is extremely helpful, not only in the

⁴⁵ *Ibidem*, pp. 4-5.

identification of the parties, but also to provide means by which they can reliably sign documents, assent to transactions, and verify document's integrity. The role of such technologies in building user confidence in E-commerce is a point of paramount significance.

Although there is a lack of internationally acceptable consensus on the rules and guidelines governing the subject, a number of countries have recognized the importance of preparing legislation to accommodate E-commerce, and they are focusing their legal framework on the recognition of electronic signatures, digital signatures and certification authorities.⁴⁶ Developing and least developed countries have been taking profit of the international organizations' experience in this field, such as the UNCITRAL Model Law.⁴⁷

The United Nations Conference on Trade and Development's secretariat (UNCTD) prepared a study in which the importance of authentication and digital signature was stressed.⁴⁸ As the correct comprehension of this subject and the enactment of national legislation that adequately regulate these issues is so relevant to enable the development of E-commerce in a safe and predictable environment, we will now address that work. Then we will discuss the Brazilian legislative activity on this subject.

The use of traditional paper-based documentation is linked with some specific concepts such as writing, and signatures. However, the absence of a paper document and a handwritten signature makes it difficult to distinguish the original message from a copy. Thus, the distinction between an original and a copy is an artificial one in the electronic environment. "If a message is transmitted from one

⁴⁶ For a country-by-country comparison table of enacted legislation on electronic and digital signature definitions see <<http://www.bmck.com/ecommerce/countrycomp.htm>> and for an American state-by-state Uniform Electronic Transactions Act (UETA) comparison table see <<http://www.bmck.com/ecommerce/uetacom.htm>> (As of July 18, 2001: 37 states have enacted UETA)

⁴⁷ To have an idea of the current work of developing and least developed countries on legal framework on e-commerce, digital signatures, e-certification, e-transactions, CAs and RAs in the Americas Region, Asia and Pacific Region, African Region, Europe and Commonwealth of Independent States Region, visit <<http://www.itu.int/ECDC/activities/legalframeworks/legalrequirements26feb01.pdf>>

⁴⁸ United Nations Conference on Trade and Development. Study prepared by the UNCTD secretariat. *Electronic Commerce: Legal Considerations*, 1998, pp. 20-4.

computer to another, the bit string which might be called the original, and the one which is the copy cannot be distinguished.”⁴⁹

Information security and message authenticity are essential in an electronic environment, because electronic messages can be easily intercepted and altered without detection, the validity of documents can be denied, personal data can be illicitly collected. These possibilities increase the risk of fraud. The need for some form of security procedure is even more pressing in the context of open network communication systems such as the Internet. In a closed network, where mutual trust already exist, contractual relationships and the system's security procedures provide assurance as to the identity of the trading partners or the integrity of the information. Such mechanisms are insufficient or irrelevant in relation to a public infrastructure such as the Internet, where a transaction takes place between complete strangers from different parts of the world. Thus the increased use of open communication networks will also mean increased risk of fraud and unauthorized access.⁵⁰

Nowadays, cryptographic technologies are widely recognized as the essential tool for security and trust in electronic communication. There are two important applications of cryptography: digital signatures and encryption. Digital signatures can help to prove the origin of data (authentication) and verify whether data has been altered (integrity). Encryption can help keeping data and communication confidential.

The existence of reliable security mechanisms is therefore crucial for the development of a trustworthy electronic environment. Various techniques, such as ‘digital signature’ techniques and other forms of electronic signatures (any electronic symbols, characters or similar

⁴⁹ TEDIS, Phase II, *Report on Authentication, Storage and Use of Codes in EDI Messages*, vol. 1, p. 10, *apud* UNCTD, *Electronic Commerce: Legal Considerations*, p. 39.

⁵⁰ *Ibidem*, p. 20.

means), are currently used, or being developed, to perform the functions of handwritten signatures in an electronic environment.⁵¹

What is of paramount importance in the electronic environment is that a data message, which has been created by a particular person, has not been altered, *i.e.*, it has to keep its integrity and authenticity. Digital signatures allow the recipient to verify the *authenticity* and the origin of the data as well as its *integrity* and the fact that data has remained unaltered since its creation.

The creation of a legal regime governing such signatures is considered to be a key to the growth of electronic commerce, including transferability of rights in goods through electronic means of communication.

There are various ways of signing a document electronically. Electronic signatures based on 'public-key cryptography' or 'dual-key cryptography' are known as digital signatures. They employ an algorithm using two different but mathematically related keys. The so-called private key is used only by the signer to create a digital signature, and the public key can verify the digital signatures created by the private key. While the private key is known only to the signer and must be kept secret, the public key must be available to those who need to verify the signer's digital signature. Although the public and private keys are mathematically related keys, it is not possible to discover the private key by knowing a given public key. The public key can therefore be publicized, for example through a public directory, without the risk of disclosure of the private key and its use to forge digital signatures.⁵²

Through the process of verification, the recipient of a digitally signed message can accurately establish that the digital signature was

⁵¹ *Ibidem*, p. 21.

⁵² *Ibidem*, p. 21.

created by the signer's private key corresponding to the public key, and that the message has not been altered since it was digitally signed. To verify a digital signature, there is a need to have access to the signer's public key and an assurance that it corresponds to the signer's private key.

The verification process, however, does not necessarily establish the identity of the owner of the public key. The recipient of a data message will also need to know with a degree of certainty that the sender is in fact the person he claims to be. A public and private key pair being simply a pair of numbers, a reliable mechanism is necessary to link a particular person or entity with the key pair. This is done through the use of trusted third parties, or what is often referred to as 'certification authorities'. Certification authorities play a crucial role in ensuring acceptability and legal recognition of digital signatures. Therefore, the legal basis for their operation, including their duties and responsibilities, is invariably addressed in recent national laws on digital signatures.

To associate a key pair with a prospective signer, a certification authority issues a certificate, an electronic record which lists a public key as well as other details and confirms that the prospective signer identified in the certificate holds the corresponding private key. The main function of a certificate is to bind a key pair with a particular subscriber. A recipient of the certificate can use the public key listed in it to verify that the digital signature was created with the corresponding private key, and that the message has not been changed since it was digitally signed. The certificate must be digitally signed by the certification authority, whose signature can also be signed by another certification authority, and that certificate can in turn be verified until the authenticity of the certificate is assured.

A certificate issued by a certification authority can include information on the identity of the signer and of the certification authority issuing it, the signer's public key, the date of expiry of the certificate, and limits of liability or other information, depending on the purpose and type of transactions for which the key is to be used. A certificate may be invalidated because of misrepresentation of material facts, such as the identity of the signer. Also, it may be suspended or revoked by the certification authority if the private key is 'compromised' for example as a result of the signer's loss of control of the private key.⁵³

Digital signatures are recognized as providing a solution to questions of authentication and integrity of electronic messages, particularly in the context of transactions conducted through open network systems where parties are total strangers and have no prior contractual relationships. However, wider use of digital signatures requires adaptation in national legal frameworks so as to enable such technologies to achieve the intended objective of providing a truly reliable and trustworthy electronic environment. There is a need for a legal infrastructure setting out all the relevant rules and regulations pertaining to digital signatures, certification authorities and related issues, including the legal effect of such signatures, the rights and duties of the parties, certification authorities, their liability to those who rely in good faith on the certificates they issue, criteria to be fulfilled by certification authorities and whether they should be government-controlled, accredited, licensed or freely operated commercial entities, and international recognition of certificates.

The establishment of certain requirements for operation of certification authorities through a licensing mechanism or governmental authorization is considered necessary for promoting confidence in, and greater use of, digital signatures. Indeed, some recent national laws and

⁵³ *Ibidem*, p. 22.

draft legislation set out criteria for public authorization or licensing of certification authorities. In debating the subject the UNCITRAL Working Group adopted a dual approach of accommodating both publicly licensed and non-licensed certification authorities within the future uniform rules. It was considered, however, that the difference between the two situations would be the legal effect given to digital signatures in one or the other case.⁵⁴

7 - BRAZILIAN LEGISLATIVE ACTIVITY ABOUT E-COMMERCE

In Brazil there have been no specific laws on E-commerce until now, though there is intense legislative activity in this field, with a number of bills of varied scope and approach currently before the National Congress⁵⁵.

Pursuant to Art. 59, sole paragraph, of the Federal Constitution, the supplementary law No. 95 of February 1998, provide for the preparation, drafting, amendment and consolidation of laws. One of the broad principles incorporated in this supplementary law is that the same subject shall not be ruled for more than one law, except when the subsequent law be aimed to complement the basic considered law, entailing to it for expressed remission.

Therefore, the National Congress will have the challenge of analyzing all the bill of laws on this subject, and obey this important principle in order to enact a law that allows the development of E-commerce in the country as well as in a global scale.

We will only refer to the main bill of laws that have been submitted to the National Congress.

7.1 - THE BILL OF LAW No. 1,589 of 1999.

⁵⁴ *Ibidem*, p. 22-3.

The Model Law on E-Commerce drawn up by the United Nations Commission on International Trade Law (UNCITRAL) served as a benchmark for this bill.

This bill of law was presented by the Representative Luciano Pizzato, and refers to the draft bill of law of the Brazilian Bar Association (OAB – Ordem dos Advogados do Brasil), which is, at the moment, the most comprehensive on the subject. It does not seek to specify definitions, but rather, it attempts to complete the existing Brazilian legislation, seeking to regulate what is different, that is, the manner of contracting.

This bill of law is divided into Headings encompassing E-Commerce, E-Documents, E-Certificates, Certification Entities, Competent Authorities, Administrative Sanctions and Criminal Sanctions.

Ricardo Barreto Ferreira da Silva, Katia Madeira Kliauga, Valéria Paulino Korte, among others, summarized this bill of law and singled out its main points.⁵⁶

Electronic Contracting – The bill requires that the supply of goods and services be conducted in a certifiably secure environment, and that the electronic systems of the supplier transmit an automatic electronic reply with the transcription of the message transmitted and confirmation of its receipt. Furthermore, it requires that the spam be easily recognized as such, without the necessity of the awareness of its content for its purpose.

Consumer Protection and Defense Laws – Electronic commerce is subjected to all consumer protection and defense laws. Consumers may use the same channel adopted in the contracting to serve notice

⁵⁵ To see all bill of laws that have been submitted to the National Congress, search for the argument “internet” in the site <<http://www.senado.gov.br/sicon/MATE.htm>>

⁵⁶ *Electronic Commerce Legal Issues*, presented at The Global Digital Exposition, Washington D.C., April 13-14, 2000.

and extrajudicial notifications and the supplier shall provide a specific area on its website for such purposes. The supplier's system shall issue an automatic electronic reply to these communications, transcribing them with the date and acknowledgement of its receipt. Moreover, a series of prior information from the supplier shall be made available to the consumer in order to conduct the contracting.

Legal Force of the Electronic Documents – In order for the electronic document to be considered original it shall be signed by its author by means of public key encryption, provided that this signature is: i) unique and exclusive to the signed document; ii) verifiable; iii) generated under the exclusive control of the signatory; iv) does not permit alteration of the document; and v) is done during the validity of the keys.

Falsity of Electronic Documents – Electronic documents signed with keys fraudulently generated in the name of another person are considered false, and the burden of proof shall lie with: i) the party producing the document, as to the authenticity of the public key and as to the security of the cryptograph used and; ii) the party contrary to the party that produced the document, when the appropriation and use of the key by a third party or revocation or suspension of the keys are alleged.

Private Electronic Certificates – The services rendered by private certification entities are of commercial nature, and are not to be mistaken with the activity of electronic certification to be rendered by the notary office, which will certify the authenticity of public keys. Certification of public keys conducted by individual is considered a declaration of the latter to the effect that the certified public key belongs to the holder indicated and does not generate the assumption of authenticity before third parties.

Electronic Certifications by Notary Publics – Certification of public keys conducted by a notary public will generate the assumption of authenticity before third parties. The certificate of public keys shall contain at least: i) identification and digital signature of the notary public; ii) the issuance date; iii) identification of the public key and its holder; iv) elements permitting identification of the cryptograph system used; and v) the name of the holder and representation power of whomsoever requested the key, in the case of a legal entity.

The electronic keys may be revoked by the notary public at the request of the holder, ex-officio or by determination of the Judiciary Branch. The revocation shall contain indication of the date on which it will be applied. The notary public shall also maintain an information service, in real time and via electronic access, on the keys certified thereby.

Private Electronic Certifications – The private certifications identify the persons requesting certificates, maintaining the identification documents of the applicant (natural person or legal entity) in an electronic or physical record. The notary public shall deliver to the applicant adequate information on the operation of the public and private keys, their validity and limitations and the security procedures.

The entity will issue a signature key certificate, and the public key will be maintained accessible to all interested parties, by means of connection by telecommunications instruments, except in the case of the express request of its holder.

For the generation and storage of the signature keys, and the generation of the verification of digital signatures, the certification entity shall use secure technical components, that work in a reliable manner for detecting falsifications of digital signatures and of the content of electronic documents and that impede the non-authorized use of keys.

Electronic Authentication – The digital signature of the notary public posted on the electronic copy of an original physical document has authentication value, and shall contain: i) the names of those who posted the digital signature on the physical document; ii) the indicators of the public keys used and the respective certifications; iii) the date of the signatures; iv) a declaration that the printed copy conforms with the electronic original; and v) date and signature of the notary public.

Electronic Registration – The Registry of Deeds and Documents is authorized to conduct the transcription and registration of private electronic documents and the Judiciary Branch may authorize the use of electronic documents in other notary activities.

Incumbencies of the Judiciary Branch – It is incumbent upon the Judiciary Branch to authorize the notary publics to perform electronic certification activities, regulating the practice of these activities, supervising the fulfillment of applicable laws and rules and imposing the appropriate administrative penalties, notwithstanding the civil and criminal liabilities.

Incumbencies of the Ministry of Science and Technology (MCT) – Among the incumbencies of the MCT are the issuance of certificates for keys to be used by notary publics to execute certifications, and the regulation of the technical aspects of the practice of the electronic certification activity.

Administrative and Criminal Sanctions – The sanctions for administrative violations, perpetrated by notary publics, include fines ranging from R\$ 10,000.00 (ten thousand reais) to R\$ 1,000,000.00 (one million reais), up to the cancellation of the registration's operating license, which shall be applied by the Judiciary Branch. The criminal sanctions

are those established in the Brazilian Penal Code for the crimes related to public registration.

7.2 - THE SENATE'S BILL OF LAW No. 672 of 1999

This bill of law, from Senator Lúcio Alcântara, regulates the E-commerce in the whole national territory and is applied for any type of information in the form of electronic message used in the context of commercial activities. The relative dispositions of the Civil Code are applied subsidiarily to the matter object of this bill of law in what they do not thwart it. The following points may be singled out:

Matters relative to subjects governed by this bill of law that are not expressly set forth in it will be solved in conformity, among others, with the following general principles in which the bill of law is inspired: (i) to facilitate the internal and external E-commerce; (ii) to validate the operations made through the new technologies of information; (iii) to foment and stimulate the application of new information's technologies; (iv) to promote the uniformity of the applicable law to the matter; and (v) to support the new commercial practices.

When a law determines that information should be presented in writing, this requirement will be considered filled out by an electronic message if the information contained in it is accessible for subsequent consultation.

In the case of a law that demands a person's signature, this requirement will be considered filled out by an electronic message since some method to identify the person and to indicate its approval for the information contained in the message is used. The used method should be reliable and appropriate for the purposes for which the message being generated or communicated, taking into consideration all the circumstances of the case including any agreement of the parts in respect to it.

When the law establishes that an information be presented or conserved in its original form, this requirement will be considered filled out by an electronic message provided that: (i) there is trustworthy warranty of preservation of the integrity of the information since the moment of its generation in its final form as an electronic message or in another way; and (ii) the information be accessible to the person to which it should be presented.

For the purposes of the aforementioned item (i) the information is presumed to have integrity if it has been kept completed and unaltered, except for the addition of any endorsement of the parts or other change that would occur in the normal course of the communication, storage and exhibition. The degree of reliability requested will be determined to the light of the aim for which the information be generated, as well as of all the circumstances of the case.

In the celebration of a contract, its offer and acceptance may be expressed by electronic messages. In the relationships between the originator and the addressee, it will be recognized validity or effectiveness to a declaration of intent or to any other declaration done through an electronic message.

In the relationships among the parts that generate, send, receive, store or, in any other way, process electronic messages, the rules of the specific chapter of the bill of law can be altered by common agreement among them.

Concerning the notice of receipt, the originator and addressee shall conventionalize that the latter inform receipt of the electronic message. In the absence of this agreement the addressee may notify the originator of receipt by means of any communication media or appropriate act for such.

The sending of an electronic message will occur when it enters an information system beyond the originator's control, and the time of receipt will be determined as when the message enters the information system of the addressee, when it is retrieved, or when sent to an information system different to that designated.

As to the place of sending and receipt, these will be considered those of the originator's and addressee's establishment, respectively.

7.3 - THE SENATE'S BILL OF LAW No. 151 OF 2001

This Bill of Law requires Internet Service Providers (ISPs) not only to obtain complete personal information from their users, but also to keep records about all Internet connections for a period of three years in order to disclose information about a connection if required by a judicial order. In addition, telecommunications companies will only be allowed to make available telecom infrastructure to those ISPs that show their capability to comply with such rules.

8 - CRITIQUE TO THE BILL OF LAW No. 1,589 OF 1999

According to the bill of law justification, in the public key structure discipline there should be the existence of a certifier authority, or certifying entity, which has the authority to certify the ownership of the public key, giving credibility to the digital signature and to the electronic document.

In the discipline of these entities, it was necessary to consider the provision of Art. 236 of the Federal Constitution that provides on the notary and registration services exercised in private character but in accordance to public power delegation. The Article 1 of the law No. 8,935 of November 18, 1994 further regulated referred constitutional rule—as well as those destined to guarantee the publicity, authenticity, assurance and effectiveness of juridical acts—exactly what the certification aims regarding to the signature and to the electronic document.

Therefore, the certification activity was divided into two distinct groups with different effectiveness: i) the private entities electronic certificates, of commercial character, and essentially private; and ii) the notary publics electronic certificates, of public character, which generate authenticity presumption of the document or of the electronic signature.

According to the bill justification, this distinct discipline would legitimate the private entities certification performance that despite the fact of being important have no full faith and credit, which was restricted just to the notary publics' certifications.

We cannot agree with the aforesaid argument to justify the distinction. Contrarily to the fundament adopted in it, the activities, the powers, the duties and the notary publics' acts extension are not discriminated in the Federal Constitution. Ordinary law shall regulate such subjects and the specification of the appropriated attributions, as well as the juridical force that shall be given to the acts practiced by the notary publics.

Pursuant to Art. 236, 1 of the Federal Constitution, "Notary and registration services shall be exercised by private entities by Government delegation and the law shall regulate the activities, discipline the civil and criminal liability of notaries, registrars and their officials and define the supervision of their acts by the Judicial Power."

Article 1 of the law No. 8,935/94, provides that "Notary and registration services are the ones of technical and administrative organization destined to guarantee the juridical acts publicity, authenticity, assurance and effectiveness" and its Art. 7 provides that "The following matters are in the exclusive competence of the notary publics: I - to register public deeds and proxies; II - to register public testaments and to approve the closed ones; III - to register notarial records; IV - to notarize a signature by comparison; and V - to authenticate copies."

As can be observed, the Federal Constitution has not set forth the whole matter by itself. The legal force of the notary publics acts is a consequence of the ordinary law, which defines the notary publics' powers and duties, as well as the power of those who are able to certify the authenticity, the assurance and the effectiveness of the juridical acts. We can realize that the Brazilian constituents

of 1988 opted for not to constitutionalize the activities of the notary publics, leaving this task for the ordinary legislator. Moreover, if the Federal Constitution provided it the reason is that an open system would be easier to adapted to the future needs of the changing society of ours. Thus, the ideology adopted constitutionally is exactly in the sense of not constitutionalizing the notarial function, relegating to the ordinary legislator the possibility of regulating its activity, reducing or modifying its competence according to the interests and the needs of the nation, and not of the notary publics themselves.

For all the aforementioned reasons, it seems to me that there are no constitutional trammels so that a new modern law would partially revoke the Law No. 8,935/94 modifying the current rules that govern the notarial services in order to allow the implementing of a free competition system in the digital certification market. Such posture would be much more tuned with the constitutional principles of "the social values of labor and of the free enterprise" of Article 1, IV and the economic order's free competition principle of Art. 170, IV of the Federal Constitution.

The dualistic system introduced in the bill of law cannot be seen as if it was the only legal viable way of digital certification. As there is no impediment in the Federal Constitution, a ordinary law can establish a specific regime for the digital certifications. The free competition has been elected as the able instrument to guarantee not only efficiency and equality, but also the minimum quality expected from the products and services offered in the national market.

Regis Magalhães Soares de Queiroz states that this activity must not be restricted to any specific professional class, be it notary publics, be it computer science companies, or any other group. He thinks that the bill would have been much better had it established a free digital certification system, fomenting a competitive market where several proficient companies would be able to render different forms of certification service in conditions of equality, and according to the need of the consumers. The certificate emitted for these companies would

have the same legal validity, being apt to guarantee the authenticity and assurance of the digital signatures, enabling the effectiveness of the juridical electronic acts signed by this method.⁵⁷

He also asseverates that a system based in the free competition would allow, for example, the creation of differentiated systems in which particular certifiers entities, as well as public administration certifiers and private certifiers would coexist, each one of them operating in its own certification's market spectrum.⁵⁸

Then, he gives examples of the activities that would be performed for each one of these certifiers:

The particular certifiers would have no authorization to supply certification service to the consuming market in general. Its performance should be restricted to a specific group. Its certificates would only have legal force for the interests of its specific group, according to the rules to be established by the interested parts themselves. The authority of this certifier entity would be restricted just to the limited scope of certain persons linked by specific contractual agreements and only in what concerned their own business.

The public administration certifiers would work in the same way as the particular certifiers, but its scope of action would be only the Public Administration. A public entity would be assigned to certifying the digital signatures of the public servants who had administrative authorization for the accomplishment of internal or external business, by digital means, on behalf of the Public Power. This certification—contrarily to that of the particular certifiers—would be assured full faith and credit, as well as legal force to guarantee authenticity, assurance and effectiveness of the public electronic documents signed by the authorized public server.

⁵⁷ *Assinatura Digital e o Tabela Virtual, in Direito e Internet – aspectos jurídicos relevantes*. Coordinators, Newton de Lucca and Adalberto Simão Filho. Bauru, SP: Edipro, 2001, p. 413-4.

⁵⁸ *Ibidem*, pp. 414-5.

Finally, the private certifiers would be authorized to render services to the consuming public in general, and its certificates would be assured full faith and credit, as well as legal force to guarantee the authenticity, assurance and effectiveness of any documents signed electronically.

In this way, the digital certification system would be broader and more adequate to the E-commerce having the advantage of not staying restricted to the notary publics area of authority only, as well as of not creating a market reserve in favor of any economic class, which seems much more democratic. What is more, nobody would be forced to resort to the paid services, rendered by the opened certifiers.

Newton De Lucca also is against the bill and its justification that tries to explain the necessity of a market's reserve to the notary publics.⁵⁹

9 - INTERNATIONAL ORGANIZATIONS ENGAGED IN THE DEVELOPMENT OF COMMON LEGAL STANDARDS FOR E-COMMERCE

Of the international organizations, the most active bodies engaged in the development of common legal standards for E-Commerce are the World Trade Organization (WTO), the United Nations Commission on International Trade Law (UNCITRAL), the International Chamber of Commerce (ICC), and the Organization of Economic Co-operation and Development (OECD).⁶⁰

9.1 - THE INTERNATIONAL CHAMBER OF COMMERCE (ICC) GUIDEC⁶¹

⁵⁹ *Títulos e Contratos Eletrônicos, idem*, p. 51.

⁶⁰ Baker & Mc Kenzie web site. *Doing E-Commerce in Europe*, p. 11. <<http://www.bakerinfo.com/ecommerce/>>

⁶¹ International Chamber of Commerce. *General Usage in International Digitally Ensured Commerce*. <<http://www.iccwbo.org/home/guidec/guidec.asp>>

Issued on November 6, 1997 by the International Chamber of Commerce, the General Usage in International Digitally Ensured Commerce (GUIDEC) aims to draw together the key elements involved in E-commerce, to serve as an indicator of terms and an exposition of the general background to the issue. It also addresses one of the key problems in talking about electronically signed messages in that they are not signed physically, but require the intervention of an electronic medium. This in turn alters the function of the signer, and introduces problems which a physical signature does not cause, most especially the possibility of use of the medium by a third party. The GUIDEC, therefore, adopts a specific term "ensure", to describe what is elsewhere called a "digital signature" or "authentication", in an attempt to remove the element of ambiguity inherent to other terms employed. It also refers to a trusted third party as a "certifier".

As the GUIDEC guidelines are supposed to be update along with the growth of technology, it is considered a living document.

The GUIDEC incorporated some of the basic concepts of the UNCITRAL Model Law on E-Commerce and of the American Bar Association's Digital Signature Guidelines.

The GUIDEC contents are: (i) Background; (ii) The Advent of Commercial Electronic Transactions; (iii) Electronic Transactions and Information Security; (iv) Existing Law and Electronic Transactions; (v) International Legal Approaches; (vi) Glossary of Terms; (vii) Ensuring a message; and (vii) Certification.

Although the GUIDEC is intended to serve as a foundation document in the application of digitally ensured E-Commerce, it is freely acknowledged that it was not intended to have addressed all of the issues at once. The whole field of E-Commerce is evolving at a rapid rate, and it is necessary that the concepts and definitions inherent thereto also evolve at an equivalent pace.

9.2 - THE WORLD TRADE ORGANIZATION (WTO) PROGRAMME ON E-COMMERCE ⁶²

The WTO 'Declaration on Global Electronic Commerce' which was made at the second session of the Ministerial Conference on 25 May 1998 ('WTO Declaration'), emphasises the need for all trade-related issues in relation to global E-Commerce to be examined. In order to achieve this, the General Council of the WTO has decided to create a work programme to examine global E-Commerce and to report on the progress of the programme.

The General Council of the WTO set out the terms of the work programme on 25 September 1998. The work programme is intended to focus on the treatment of E-Commerce within the legal framework of the General Agreement on Trade in Services ('GATS'). In addition, the principle of most favoured nation, the doctrine of transparency (of national laws, regulations, and internal agreements applied to E-Commerce), the prevalence of limited domestic regulation, competition law issues, protection of privacy, fraud protection and customs duties will all also be included in the work programme.

In light of the enormous economic potential of Direct E-Commerce Transactions, the work programme is also committed to the protection of existing intellectual property rights and the further development of intellectual property rights under the World Intellectual Property Organisation ('WIPO') and the Agreement on Trade-Related Aspects of Intellectual Property Rights ('TRIPs').

Tax Moratorium

⁶² Baker & McKenzie web site. *Doing E-Commerce in Europe*, pp. 29-30. <<http://www.bakerinfo.com/ecommerce/>>

The WTO Declaration states that the Members of the WTO will continue their current practice of not imposing customs duties or other new taxes on electronic transmissions ('Tax Moratorium of Members'). However, recent tax law initiatives of the United States and of the EU have called this Tax Moratorium into question. In this context, the EU has initiated discussions on an extension of value added taxation on Direct E-Commerce Transactions from abroad into the EU.

9.3 - THE UNITED NATIONS COMMISSION ON INTERNATIONAL TRADE LAW (UNCITRAL) MODEL LAW ON ELECTRONIC COMMERCE ⁶³

The UNCITRAL Model Law on E-Commerce—referred to as *the Model Law*—is a very helpful tool to serve as a benchmark for States wishing to modernize their own legislation.

The Model Law is divided into two parts. Part one (Electronic commerce in general) is divided in three chapters: (i) Electronic commerce in general; (ii) Application of legal requirements to data message; and (iii) Communication of data messages. Part two (electronic commerce in specific areas) has only one chapter: carriage of goods.

The Model Law has a guide to its enactment, which is intended to explain why the provisions in it have been included as essential basic features of a statutory device designed to achieve its objectives. The guide give us relevant information about the Model Law, such as its objectives, scope, structure, framework and its *functional-equivalent* approach.

⁶³ United Nations Commission on International Trade Law (UNCITRAL). *Model Law on Electronic Commerce with Guide to Enactment*, 1996, with additional article 5 bis as adopted in 1998. <<http://www.un.org/>>

Once the communication of legally significant information in the form of paperless messages, such as electronic mail and electronic data interchange (EDI) may be hindered by legal obstacles to the use of such messages, or by uncertainty as to their legal effect or validity, the Model Law intends to offer national legislators a set of internationally acceptable rules as to how a number of such legal obstacles may be removed, and how a more secure legal environment may be created for what has become known as E-commerce.

As the Model Law is a *framework* law, intended to provide essential procedures and principles for facilitating the use of modern techniques for recording and communicating information in various types of circumstances, it is supposed to be supplemented by technical regulations.

The Model Law recognizes that legal requirements prescribing the use of traditional paper-based documentation constitute the main obstacle to the development of modern means of communication. That is why in its preparation, consideration was given to the possibility of dealing with impediments to the use of E-commerce posed by such requirements in national laws by way of an extension of the scope of such notions as *writing*, *signature* and *original*, with a view to encompassing computer-based techniques. For this reason, it relies on the *functional equivalent approach*, which is based on an analysis of the purposes and functions of the traditional paper-based requirement with a view to determining how those purposes or functions could be fulfilled through E-commerce techniques.

A very important point is that the Model Law does not attempt to define a computer-based equivalent to any kind of paper document. Instead, it singles out basic functions of paper-based form requirements, with a view to providing criteria which, once they are met by data messages, enable such data messages to enjoy the same level of legal recognition as corresponding paper documents performing the same function.

9.4 - UNCITRAL MODEL LAW ON ELECTRONIC SIGNATURES ⁶⁴

UNCITRAL has finalized and approved their Model Law on Electronic Signatures, whose sphere of application is where electronic signatures are used in the context of commercial activities. The model law does not override any rule of law intended for the protection of consumers.

Its purpose is to enable world uniform legislative provisions to establish the basic rules of electronic authentication techniques and the legal effect that may result from the use of such modern techniques (which may be referred to generally as *electronic signatures*), which is inherently an international phenomenon, where legal harmony as well as technical interoperability is a desirable objective.

The *new Model Law*, as it is referred to, is composed of 12 Articles, which are: Article 1. Sphere of application; Article 2. Definitions; Article 3. Equal treatment of signature technologies; Article 4. Interpretation; Article 5. Variation by agreement; Article 6. Compliance with a requirement for a signature; Article 7. Satisfaction of Article 6; Article 8. Conduct of the signatory; Article 9. Conduct of the certification service provider; Article 10. Trustworthiness; and Article 11. Conduct of the relying party.

In preparing the new Model Law, the UNCITRAL took into account that it would be a more effective tool for States modernizing their legislation if background and explanatory information were provided mainly considering that some States may have limited familiarity with the type of communication techniques considered in it. Therefore, the new Model Law is accompanied by a guide to enactment, which is also intended to assist any user of the text, such as executive branches of governments, legislators, judges, arbitrators, practitioners, academics, etc.

Electronic signature is defined as “data in electronic form in, affixed to, or logically associated with, a data message, which may be used to identify the signatory in

⁶⁴ Available at <<http://www.uncitral.org/en-index.htm>>

relation to the data message and indicate the signatory's approval of the information contained in the data message" and equal treatment is to be attributed to any signature technologies.

It is interesting to point out that a flexible approach has been adopted concerning the validity of the new Model Law, so that its provision may be derogated from or their effect may be varied by agreement, unless that agreement would not be valid or effective under applicable law.

9.5 - THE EUROPEAN UNION (EU) AND E-COMMERCE

The extensive legal framework already created by the EU addressing various issues in relation to *information society services* and, in particular, their relevance to E-Commerce, include issues addressed in the E-Commerce Directive, the Electronic Signatures Directive, the Distance Selling Directive and the Proposed Copyright Directive. The E-Commerce Directive is a very important one, but it is not intended to cover all aspects of E-commerce. It is aimed to supplement those parts of the existing European legal framework relating to *information society services* within the meaning of the Transparency Directive 98/34/EC of June 22, 1998.⁶⁵

The objective of the E-Commerce Directive is to create a legal framework to ensure that Information Society services benefit from the Internal Market principles of free movement of services and freedom of establishment and can be provided throughout the European Union if they comply with the law in their home Member State.

In accordance with the principle of proportionality, it establishes specific harmonized rules only where strictly necessary to ensure that businesses and citizens can supply and receive Information Society services throughout the EU,

⁶⁵ Baker & Mc Kenzie, *op. cit.* p. 15.

irrespective of frontiers. These areas include definition of where operators are established, transparency obligations for operators, transparency requirements for commercial communications, conclusion and validity of electronic contracts, liability of Internet intermediaries, on-line dispute settlement and the role of national authorities. In other areas the Directive builds on existing EU instruments that provide for harmonization or mutual recognition of national laws. It applies only to service providers established within the EU and not those established outside. However, the Directive takes particular care to avoid incompatibility and inconsistency with legal developments in other parts of the world so as to avoid obstacles to global E-commerce.⁶⁶

The Directive covers all Information Society services, both business to business and business to consumer, and services provided free of charge to the recipient. However, it does not aim to establish rules on fiscal obligations nor does it preempt the drawing up of Community instruments concerning fiscal aspects of E-commerce.

9.6 - ORGANIZATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (OECD) – THE TAXATION FRAMEWORK CONDITIONS

The OECD has been taking forward the tax issues raised by E-commerce. Achieving an international consensus on the tax treatment of E-commerce is an important part of the work that has been done by OCDE.

In November 1997, the OECD held an international conference in Turku, Finland at which government and business representatives from around the world met to review and debate OECD work on the impact of E-commerce on business. The OECD was mandated to prepare a framework for the taxation of E-commerce and an undertaking was given to engage the business sector in a series of working dialogues on the issues.

⁶⁶ European Union. *Electronic commerce: Commission welcomes final adoption of legal framework Directive, 2000*. <http://europa.eu.int/comm/internal_market/en/media/infos/index.htm>

The Taxation Framework Conditions were adopted by the Committee on Fiscal Affairs (CFA) in June 1998 and were welcomed by Ministers at a Ministerial-level Conference on E-commerce held in Ottawa in October 1998. The key conclusion: the taxation principles that guide governments in relation to conventional commerce should also guide them in relation to E-commerce. The Committee believes that at this stage of development of the technological and commercial environment, existing taxation principles can implement these principles.

The framework for taxation of E-commerce addresses four areas: (i) tax treaties; (ii) consumption taxes; (iii) tax administration; and (iv) taxpayer service.

In the tax treaty area, the framework provides that the present international norms are capable of being applied to E-commerce, but that some clarifications should be given as to how these norms, and in particular the Model Tax Convention, applies.

In the consumption tax area, the framework provides that taxation should occur in the jurisdiction where consumption takes place, and that the supply of digitized products should not be treated as a supply of goods.

In the tax administration area, the information reporting requirements and tax collection procedures being developed must be neutral and fair, so that the level and standard is comparable to what is required for traditional commerce (although different means may be necessary to achieve those requirements). And a number of options have been identified for using the new technologies to improve taxpayer service.

A number of broad widely accepted general principles applying to taxation of E-commerce were agreed upon:⁶⁷

⁶⁷ OECD (1998), *Electronic Commerce: Taxation Framework Conditions*.

Neutrality: Taxation should seek to be neutral and equitable between forms of electronic commerce and between conventional and electronic forms of commerce. Business decisions should be motivated by economic rather than tax considerations. Taxpayers in similar situations carrying out similar transactions should be subject to similar levels of taxation.

Efficiency: Compliance costs for taxpayers and administrative costs for the tax authorities should be minimized as far as possible.

Certainty and Simplicity: The tax rules should be clear and simple to understand so that taxpayers can anticipate the tax consequences in advance of a transaction, including knowing when, where and how the tax is to be accounted.

Effectiveness and Fairness: Taxation should produce the right amount of tax at the right time. The potential for tax evasion and avoidance should be minimized while keeping counter-acting measures proportionate to the risks involved.

Flexibility: The systems for the taxation of electronic commerce should be flexible and dynamic to ensure that they keep pace with technological and commercial developments.

In order to implement these broad principles, the CFA has been able to reach conclusions on the elements of a taxation framework that will incorporate these principles:

Taxpayer service: Revenue authorities should make use of the available technology and harness commercial developments in their tax system to continuously improve taxpayer service.

Tax administration, identification and information needs: Revenue authorities should maintain their ability to secure access to reliable and verifiable information in order to identify taxpayers and obtain the information necessary to administer their tax system.

Tax collection and control: (i) Countries should ensure that appropriate systems are in place to control and collect taxes; (ii) International mechanisms for assistance in the collection of tax should be developed, including proposals for an insert of language in the OECD Model Tax Convention.

Consumption taxes: (i) Rules for the consumption taxation of cross-border trade should result in taxation in the jurisdiction where consumption takes place and an international consensus should be sought on the circumstances under which supplies are held to be consumed in a jurisdiction; (ii) For the purpose of consumption taxes, the supply of digitized products should not be treated as a supply of goods; (iii) Where business and other organizations within a country acquire services and intangible property from suppliers outside the country, countries should examine the use of reverse charge, self-assessment or other equivalent mechanisms where this would give immediate protection of their revenue base and of the competitiveness of domestic suppliers. (iv) Countries should ensure that appropriate systems are developed in co-operation with the WCO and in consultation with carriers and other interested parties to collect tax on the importation of physical goods, and that such systems do not unduly impede revenue collection and the efficient delivery of products to consumers.

International tax arrangements and co-operation: While the OECD believes that the principles which underlie the international norms that it

has developed in the area of tax treaties and transfer pricing (through the Model Tax Convention and the Transfer Pricing Guidelines) are capable of being applied to electronic commerce, there should be a clarification of how the Model Tax Convention applies with respect to some aspects of electronic commerce.

9.7 - FREE TRADE AREA OF AMERICAS JOINT GOVERNMENT PRIVATE SECTOR COMMITTEE OF EXPERTS ON ELECTRONIC COMMERCE RECOMENDATIONS ON CERTIFICATION AND ON AUTHENTICATION

The FTAA Joint Government Private Sector Committee of Experts on Electronic Commerce made recommendations to ministers on how to increase and broaden the benefits of E-commerce and, in particular, how such subjects should be dealt with in the context of the FTAA negotiations. Concerning certification and authentication, it was asseverated that governments should:⁶⁸

Take steps to identify and remove legal barriers that hinder the recognition of electronic transactions, including recognizing the legal validity of electronic signatures and documents, taking into consideration the enabling provisions of the 1996 UNCITRAL Model Law on Electronic Commerce.

Make efforts to ensure that their electronic signature legislation is technology-neutral.

Ensure the legal validity of electronic records and evidence for use in court and other official proceedings, independently of the authentication and certification technology used.

Afford parties to a B2B transaction the freedom to determine by private law agreement the appropriate technological and business methods of

⁶⁸ *Ibidem*, p. 11-12.

authentication and give the parties' agreement legal effect, including possible means for resolving disputes, without prejudice to applicable public policies.

Recognize the importance that the private sector must play in the development and deployment of authentication and certification technologies, and promote the participation of all relevant social sectors in the process of formulation of policies and laws in this area.

Make efforts to ensure that laws and regulations do not discriminate against electronic authentication methods, or against national or foreign providers of authentication services, and do not erect barriers to the provision of authentication services by any of them.

Work with the private sector to encourage the development and deployment of authentication systems that provide adequate protection against fraud and identity theft, are consistent with respecting individuals' personal privacy, and do not impede use by creating barriers.

9.8 - THE UNITED STATES EXPERIENCE IN AUTHENTICATION AND ELECTRONIC SIGNATURES

In the United States, the evolution of the laws demonstrates the importance of technology-neutral legislation that respects private parties' freedom of contract and does not mandate licensing of CAs. The American experience began in 1995 when the state of Utah enacted the first technology-specific law in the world that gave legal effect only to digital signatures and required certification entities to be licensed. Despite the fact of having pioneered the legal activity in this field of inquiry, this law was not used as a model because of its burdensome requirements on both authentication and licensing. Thus, other U.S. states, did not follow the same principles embodied in Utah's model, but developed their own, often quite different legal rules.

The divergence of approaches, and the threat of inconsistency among the laws of the 50 U.S. states, led the National Conference of Commissioners on Uniform State Laws in 1999 to develop the Uniform Electronic Transactions Act (UETA). UETA gives legal effect to electronic signatures and documents, but it does not favor any particular technology, nor does it provide for the licensing of certification entities. The same concern about divergent approaches caused the U.S. Congress, in June 2000, to enact the Electronic Signatures in Global and National Commerce Act (E-SIGN). Like UETA, E-SIGN provides for legal recognition of electronic signatures and documents, and does not extend presumptions or other legal benefits to one specific authentication technology. Moreover, E-SIGN preempts state laws on electronic transactions, other than UETA, unless they are consistent with the legal rules prescribed in E-SIGN. Thus, state laws are now superseded to the extent that they give benefits to a particular technology. Both statutes also importantly respect party autonomy and give recognition to the acts of electronic agents. In addition, neither E-SIGN nor UETA provide for the licensing or accreditation of certification service providers.⁶⁹

9.9 - THE UNITED STATES INTERNET TAX FREEDOM ACT

In the United States of America, Congress passed the Internet Tax Freedom Act in 1998, which prohibited multiple and discriminatory taxes on the Internet and effectively prohibited sales tax on E-commerce that crosses state lines until 2001. In May 2000, the House extended the moratorium for five years, to 2006. The issues remains contentious, with some influential industry representatives advocating sales tax.⁷⁰

⁶⁹ FTAA-Joint Government-Private Sector Committee of Experts on Electronic Commerce. *Second Report with Recommendations to Ministers*, 2001, p. 34.

⁷⁰ OECD Development Centre, *E-Commerce for Development: prospects and policy issues*, 2000, footnote 40, p. 15. <<http://www.oecd.org/dev/ENGLISH/NEW/documents/tokyo2.pdf>>

PART 2

An Approach to the Brazilian National Tax System and to the Tax on Communication Services

1 - AN OVERVIEW OF THE BRAZILIAN NATIONAL TAX SYSTEM

Both, indirect and direct E-commerce transactions may be subject to the incidence of the existing taxes, which may be in the competence of the federal government, the states, the Federal District and the municipalities.

To enable a general vision of the existing taxes, which may be levied in such transactions, we will focus now on the Brazilian National Tax System that was established by the Constitutional text promulgated on October 5, 1988, which has been in force since March 1, 1989.

As I think that the states' tax on communications services must be levied in some services closely related to the Internet, this subject will be approached in a more detailed way in order to demonstrate the reasons for this conclusion.

To begin with, upon the promulgation of the 1988 Constitution, the federal government, the states, the Federal District and the municipalities may issue the laws which are necessary for the application of the national tax system established therein. However, since the new national tax system is in force, the application of the preceding legislation shall be ensured in that it is not incompatible with the new system and with the legislation promulgated under the new national tax system.

A supplementary law shall:

I – provide for conflicts of competence concerning tax matters between the federal government, the states, the Federal District and the municipalities;

II – regulate the constitutional limitations on the power to tax;

III – establish general rules concerning tax legislation, especially with regard to:

- a) the definition of tributes and their types, as well as, regarding the taxes specified in this Constitution, the definition of the respective taxable events, assessment bases and taxpayers;
- b) tax liability, assessment, credit, limitation and laches;
- c) adequate tax treatment for the cooperative acts of cooperative associations.

The Federal Constitution uses the term “tribute”, that is the class in which are included the following species: taxes, fees and benefit charges. For this reason the Brazilian legal scholars always refer to the term tribute when they want to talk about any exacted or enforced payment or contribution, in general.

The Law No. 5,172, of October 25, 1966, was published in the *Official Journal of the Federal Government* of October 27, 1966. For force of Article 7 of the Supplementary Act 36, of March 13, 1967, the law No. 5,172/66 and its subsequent alterations became known as National Tax Code. At the time that the referred law was published, the Constitution of 1946 was in force and it did not make distinction between ordinary laws and supplementary laws⁷¹. The Law No. 5,172/66 was based in the Article 5, XV, “b” of that Constitution. The constitution of 1967 and its amendment No. 1 said that "supplementary law will establish general norms of tax law." As the Law No. 5,172/66 had been approved as ordinary law, the problem of your survival was raised after the promulgation of

⁷¹ The initiative of supplementary and ordinary laws is within the competence of any member or committee of the Chamber of Deputies and Federal Senate or National Congress, the President of the Republic, the Supreme Federal Court, the Superior Courts, the Attorney General of the Republic and citizens, in the cases provided for in the Federal Constitution. However, the supplementary law is a species of ordinary law that is destined to complete the non-executory provisions of the Constitution. There shall be no delegation of matters reserved for supplementary laws and absolute majority should approve it.

the Constitution of 1967. As that law applied to issues that became of competence of supplementary law, it acquired the effectiveness of a supplementary law for the fact of disposing exclusively on matter reserved to that type of legislative act. That is why its application shall be ensured on the terms of the Article 34, paragraph 5, of the Temporary Constitutional Provisions Act, of the 1988 Federal Constitution, which disposes that since the new national tax system is in force, the application of the preceding legislation shall be ensured in a manner that it is not incompatible with the new system and with the legislation promulgated under the new national tax system.

The federal government, the states, the Federal District and the municipalities may raise revenue through the institution of:

- i) taxes;
- ii) fees, by virtue of the exercise of police power or for the effective or potential use of specific and divisible public services, rendered to the taxpayer or made available to him;
- iii) benefit charges, resulting from public works.

The Constitutional discrimination of incomes is the definition of exclusive tax authority of the federal government, the states, the Federal District and the municipalities, stipulated in the Constitution to avoid conflicts among them. The federal taxes are enumerated in Article 153; the state and Federal District taxes in Article 155; and the municipal taxes in Article 156:

Article 153. The federal government shall have the power to institute taxes on:

I – importation of foreign products;

II – exportation to other countries of national or nationalized products;

III – income and earnings of any nature;

IV – industrialized products;

V – credit, foreign exchange and insurance transactions, or transactions relating to bonds or securities;

VI – rural property;

VII – large fortunes, under the terms of a supplementary law.

Article 155. The states and the Federal District shall have the competence to institute taxes on:

I – inherited estates and donation of any property or rights;

II – transactions relating to the circulation of goods and to the rendering of interstate and intermunicipal transportation services and services of communication, even when such transactions and renderings begin abroad;

III – ownership of automotive vehicles.

Article 156. The municipalities shall have the competence to institute taxes on:

I – urban buildings and urban land property;

II – inter vivos transfer, on any account, by onerous acts, of real property, by nature or physical accession, and of real rights to property, except for real security, as well as the assignment of rights to the purchase thereof;

III – services of any nature not included in Article 155, II, as defined in a supplementary law.

It is also important to point out that in accordance with the Article 149 of the Federal Constitution, “The federal government shall have the exclusive competence to institute social contributions regarding intervention in the economic order and the interest of categories of employees or employers, as an instrument of its activity in the respective areas”, and its sole paragraph provides that “The states, the Federal District and the municipalities may institute a

contribution payable by their employees to fund social security and assistance systems for the benefit of the latter.”

The social contributions, or special contributions, are autonomous tax species. They are also known as para-fiscal contributions because this quality enables the competent power to transfer the amount levied as social contribution for application in the budget of the public or legal entity that shall benefit from it. These contributions are collected by the entities that will benefit directly from it, such as the Social Welfare Institute, funds for workers' assistance and warranty, among others. They characterize the parallel finance to the common annual budgets.

2 - THE LANGUAGE OF THE LEGISLATOR AND OF THE JURIST ⁷²

The language of the legislator is a technical language, which means to say that it is composed of the natural speech, but it takes advantage considerably of many words and expressions pertinent to the domain of scientific communications. The members of the Legislative Houses, in countries that lean towards a democratic system of government, represent several sections of the society. Some are medical, others are bankers, industrialists, farmers, engineers, lawyers, dentists, merchants, workers, what brings on a strong heterogeneity character, peculiar to the representative regimes. Such a situation allows us to understand the reason why the text of the laws often contain mistakes, improprieties, non-technicalities, deficiencies and ambiguities.

However, while it is possible to affirm that the legislator expresses himself in a free language, which contains (here and there) scientific symbols, the same no longer happens with the scientist of the law's speech. This language, not only is technical, but also scientific, in the measure that the descriptive propositions that he issues come loaded with the harmony of the systems presided by the

⁷² Paulo de Barros Carvalho. *Curso de Direito Tributário*, 12. ed. (São Paulo: Saraiva, 1999), pp. 4-6.

classical logic. The units of the group are arranged and assigned according to criteria that observe, strictly, the logical principles of the identity, of the no-contradiction and of the excluded third, which are three formal impositions of thought, as it regards the propositions of the classical logic.

It is important to bear in mind that even the employment of technical terms and the scientific way in which the jurist expresses himself does not overcome certain difficulties of the specialized vocabulary, such as the ambiguities and the vagueness of the idea being expressed. These problems will only be solved at the expense of deep semantic efforts.

3 - UNDERSTANDING THE MEANING AND THE REACH OF THE TERM *NORM*

Kelsen states that “‘Norm’ is the meaning of an act by which a certain behavior is commanded, permitted, or authorized.”⁷³ By *norm* he means that something ought to be or ought to happen, mainly that a person ought to behave in a specific way. The use of *ought* has a specific meaning in Kelsen’s theory.

If an individual by his acts expresses a will directed at a certain behavior of another, that is to say, if he commands, permits, or authorizes such behavior – then the meaning of his acts cannot be described by the statement that the other individual will (future tense) behave in that way, but only that he ought to behave in that way. The individual who commands, permits, or authorizes wills; the man to whom the command, permission, or authorization is directed ought to. The word ‘ought’ is used here in a broader than the usual sense.⁷⁴

In such way, the word *ought* is intended to express the normative meaning of an act directed towards an individual behavior and the use of *ought* according to his

⁷³ Hans Kelsen. *Pure Theory of Law*. Translation from the Second (Revised and Enlarged) German Edition by Max Knight, University of California Press, Berkeley and Los Angeles: 1967, p. 5.

approach also includes the meaning of *may* and *can*. The command described by a norm is that *something ought to be*, despite the will of the person who is obliged to the legal behavior.

Kelsen also explains that there is a figurative mode of speech when laws are described as *commands* or expressions of the *will* of the legislator, and when the legal order as such is said to be the *command* or *will* of the State:

As usual, an analogy is responsible for the figurative statement. The situation when a rule of law 'stipulates', 'provides for' or 'prescribes' a certain human conduct is in fact quite similar to the situation when one individual wants another individual to behave in such-and-such a way and expresses this will in the form of a command. The only difference is that when we say that a certain human conduct is 'stipulated', 'provided for', or 'prescribed' by a rule of law, we are employing an abstraction which eliminates the psychological act of will which is expressed by a command. If the rule of law is command, it is, so to speak, a de-personalized command, a command which does not imply a 'will' in a psychological sense of the term. The conduct prescribed by the rule of law is 'demanded' without any human being having to 'will' it in a psychological sense. This is expressed by the statement that one 'shall', one 'ought' to observe the conduct prescribed by a law. A 'norm' is a rule expressing the fact that somebody ought to act in a certain way, without implying that anybody really 'wants' the person to act that way.⁷⁵

4 - THE TEXT OF THE POSITIVE LAW AND THE JURIDICAL NORM ⁷⁶

⁷⁴ *Ibidem*, p. 5.

⁷⁵ Hans Kelsen. *General Theory of Law and State*. University of California Press, Berkeley and Los Angeles: 1967. Translated by Anders Wedberg, Cambridge, Massachusetts, Harvard University Press, 1949, p. 35.

⁷⁶ Paulo de Barros Carvalho. *Op. Cit.*, pp. 8-9.

“The meaning of a word is its use in language”⁷⁷, however, the meaning of a legal word is its use inside the legal system according to which this word has to be interpreted.

The juridical norm is the significance that we obtain starting from the reading of the texts of the positive law. It is treated as something that is produced in our mind, as a result of the perception of the external world and captured by the senses. I see the linguistic symbols marked in the paper, I also hear the oral message that is driven at me by the originator of the order. That act of sensory comprehension combined with the individual's associated ideas or notions forms a judgement, which is finally manifested as a proposition.

The juridical norm is exactly the judgement (or thought) that the reading of the text provokes in our spirit. That is enough to alert us that a single text can hold different significances, dependent upon the several notions that the cognoscente person has of the terms used by the legislator.

If we think that the juridical norm is a conditional hypothetical judgement (if the fact “X” happens, then it should be the consequence of “Y”), formed by several notions, one can conclude that only one text (of law, for instance) will not always be enough to transmit the existential integrity of a juridical norm. Sometimes, the contents of such rules of conduct can be defined in one or more ways, but still not contain sufficient information for the interpretation of the judgement. In this case, when one tries to enunciate it orally, expressing the correspondent proposition, one might find it incomplete, so there would be the need to consult other texts of law in vigor. However, it is not enough to isolate the indispensable terms of the composition of the logical judgement. Once that is accomplished, the jurist should examine the great principles that emerge from the totality of the system and, with them, look for the normative interpretation. The meaning of a particular law will become clear in that the terms of the judgement are understood in conformity with the general principles that illuminate the juridical

⁷⁷ Ludwig Wittgenstein, *Philosophical Investigations*, 1953, *apud*, Bryan Magee, *The History of Philosophy*. (London: Dorling Kindersley, 1998), p. 205.

order. In this way, an understanding of the differences between the positive laws and the juridical norm is important. An appropriate understanding of the hermeneutic work is extremely useful for the scientist of the law. The jurist, who is expert in the fundamental juridical notions, as well as in the possible ways of combining them, will know, as a matter of fact, to interpret what he reads, in light of the great principles, properly interpreting and producing the significances (juridical norm) of the legislated message.

5 - THE MATRIX NORM OF TAX INCIDENCE'S LOGICAL STRUCTURE: I) HYPOTHESIS; AND II) CONSEQUENT ⁷⁸

In conformity with the Brazilian National Tax System, the federal government, the states, the Federal District and the municipalities may raise revenue through the institution of the following: (i) taxes; (ii) fees, by virtue of the exercise of police power or for the effective or potential use of specific and divisible public services, rendered to the taxpayer or made available to him; and (iii) benefit charges, resulting from public works.⁷⁹

We will now approach the study of the matrix norm of tax incidence of the Professor Paulo de Barros Carvalho and his method that makes it possible to structure the hypothesis and the consequent of the tax juridical norm. His method gives to any interpreter of the tax law instruments which will enable him to correctly comprehend of the circumstances that surround the taxable event. Naturally, this language is inserted into the vocabulary of the science of the law.

For Paulo de Barros Carvalho, juridical norm, in a strict or narrow sense, is that which marks the nucleus of the tax, that is to say, the main rule of fiscal incidence, and the juridical norm, in a wide sense, refers to all the other tax rules, for instance, the rules that stipulate administrative liability.

⁷⁸ Paulo de Barros Carvalho. *Op. Cit.*, pp. 235-9.

⁷⁹ Federal Constitution, article 145.

Once the tax rule in a strict sense is the one that defines the fiscal incidence, its construction is the scientist of the law's work. We are talking about a kind of structure that presents itself as a conditional, hypothetical judgement. There will be a hypothesis, supposition or antecedent, which will be directly connected with a commandment or a consequent. The associative form that characterizes the juridical-rule imputation is this: it shall be. For the obtainment of the matrix norm, it is necessary to isolate the propositions in it, as parts of its syntactic structure.

According to this structure, the hypothesis shall describe a fact, while the consequent shall prescribe the juridical relationship (tax obligation) that will be established as soon as the event cogitated in the supposition takes place.

The hypothesis or antecedent mentions a condition and the consequent specifies the juridical effects that will always follow the occurrence of the antecedent. The first designates the normative antecedent, and the second indicates what will be the consequences of the realization of that hypothesis.

The laws do not usually organize juridical rules in an easily understandable way. On the contrary, the precepts are dispersed through out the body of the statute, making it difficult for the interpreter to properly interpret the law. To do so, he must (i) isolate the data, (ii) reassemble it, and (iii) pinpoint the core of the law. The matrix norm of incidence makes it possible for us to determine easily the juridical norm of each one of the Constitutional taxes.

When we analyze the hypothesis and the consequent of the matrix norm of tax incidence, we will find references to existing criteria, aspects, elements or indicative data. In the hypothesis, we will find a material criterion (a person's behavior), conditioned in time (temporal criterion) and in space (spatial criterion). In the consequence, we will come across a personal criterion (active side and passive side) and a quantitative criterion (assessment base and rate).

The conjunction of the aforementioned data offer us the possibility of exhibiting the logical-structural nucleus of the matrix norm of tax incidence.

5.1 - THE CRITERIA OF THE HYPOTHESIS: MATERIAL, SPATIAL AND TEMPORAL ⁸⁰

The hypothesis is built by the will of the legislator, who will look for the facts that he wants to discipline in social reality, qualifying them through the rule as juridical facts. In other words, the juridical facts are situations that have been regulated by the legislator through the law, by means of any written or positive rule or collection of rules prescribed under the authority of the state. Therefore, the juridical concepts transmitted in the hypothesis are not subject to the truth-values or falsehood, like the descriptive propositions that the scientists emit. The hypothesis of the juridical rule is valid or not valid, as well as its corresponding consequences.

MATERIAL CRITERION - in this criterion there is reference to the behavior of natural persons or legal entities, which is conditioned by circumstances of space and time (spatial and temporal criteria). As we want to analyze this criterion particularly, we will dissociate it from the conditional criteria of space and time by abstraction. As we are treating with logical entities, it is possible to make this abstraction. Our objective is to see the material criterion alone as if it would be possible to dissociate it from the coordinates of space and time. Linguistically, a person's behavior can be represented by a verb and its complement. There must be the obligatory presence of a complement.

A person's behavior must be delimited by spatial and temporal conditions, so that the typical characteristics are perfect and finished as the normative description of a fact.

⁸⁰ Paulo de Barros Carvalho. *Op. Cit.*, pp. 249-60.

SPATIAL CRITERION - there are juridical rules that indicate expressly the places in which a fact should happen, so that it may irradiate its characteristic effects. Other rules, however, mention nothing, carrying implicit the indications that allow us to know where the obligation has been born. It is an option of the legislator. There will always be a conjunct of indications that will mark the necessary place in which that action will have to be considered as realized for the purpose of the tax rule. This criterion is important to determine the administrative tax authority.

TEMPORAL CRITERION - this criterion should be understood as the one that will offer us elements to know accurately when the fact described in the hypothesis happens. As a consequence, there will be a juridical relationship that links debtor and creditor in function of an object that is the payment of an amount due as tax. This criterion reveals the precise moment in which there will be the appearance of a subjective right for the State and of a juridical duty for the passive side. The temporal criterion determines the exact moment in which the tax obligation is born.

5.2 - THE CONSEQUENT OF THE NORM AND THE TAX JURIDICAL RELATIONSHIPS⁸¹

We will now focus on the part of the hypothetical judgement that stipulates the regulation of a conduct, prescribing rights and obligations for natural persons or legal entities involved in some way in the tax juridical relationship.

The consequent of the norm gives us criteria for the identification of the juridical entail that is born, making possible the knowledge of who is entitled to the subjective right and to whom the juridical duty was attributable. It also establishes the object of the behavior of a passive subject that satisfies at once not only the duty that had been attributed to him, but also the subjective right of its titular.

⁸¹ Paulo de Barros Carvalho. *Op. Cit.*, pp. 276-83, 292-3, 296, 319-20, 333-4.

TAX JURIDICAL RELATIONSHIPS - in the group of the rules that concern to the tax law we will find two types of relationships: i) some of them have a patrimonial aspect and consist of paying taxes; ii) the others consist of mere administrative duties. The first ones are placed in the nucleus of the rule that defines the phenomenon of the tax incidence. They are called main obligation; the second ones, adjacent to the previous, aim the control of the activities of the taxpayer that interest the tax administration. They are called instrumental or formal duties. The Tax Code calls them accessory obligation.

ACTIVE SIDE - It is the holder of the subjective right of demanding the payment of the tax. Usually but not always the active subject is the federal government, the states, the Federal District or the municipalities.

PASSIVE SIDE - It is the debtor of the tax obligation. It may be the taxpayer, or those responsible for the payment of the tax.

QUANTITATIVE CRITERION - It is the definition of the tax debt. It consists of a patrimonial value expressed in currency. It comprises the determination of the assessment base and the verification of the applicable rate. By means of a mathematical operation of multiplication between the assessment base and the rate, the value of the tax that is due by the passive subject will be obtained.

5.3 - THE MATRIX NORM OF TAX INCIDENCE – LOGICAL OUTLINE OF ITS FORMAL REPRESENTATION – EXPLANATION OF THE SYMBOLS.⁸²

Now, we will formalize the language by substituting the words with symbols that represent them. This will give us a complete idea of the matrix norm of tax incidence.

⁸² Paulo de Barros Carvalho. *Op. Cit.*, pp. 340-1.

P s = passive side or party of the taxable obligation, or debtor.

Q c = quantitative criterion of the taxable obligation - indication of the formula for the determination of the quantum of the payment.

AB = assessment base – measurable greatness of the material aspects of the taxable juridical fact.

R = rate - factor that will be multiplied by the assessment base for determining the value of the tax.

SB n = neutral *shall be* or *ought to be* - connective interproposition. A vector represents it meaning that if the hypothesis happens, the consequence shall be or ought to be.

SB i = intraproposition *shall be* or *ought to be* – It is represented by two vectors, pointing in the contrary direction. It means the debtor's obligation of accomplishing the installment, and at the same time the active subject's right to it.

5.4 - THE MATRIX NORM OF TAX INCIDENCE OF THE STATE TAX ESTABLISHED IN THE ARTICLE 155, II, OF THE FEDERAL CONSTITUTION

Concerning the tax authority to create taxes, the Federal Constitution did not create them. It has just discriminated the entities' authority so that the federal government, the states, the Federal District and the municipalities, through law, created them.⁸³

The Article 155, II, of the Federal Constitution (FC) provides that “the states and the Federal District shall have the authority to institute taxes on transactions

⁸³ Roque Antonio Carrazza. *Curso de direito constitucional tributário*, 7. ed.(São Paulo: Malheiros Editores), p. 271-272.

relating to the circulation of goods and to the rendering of interstate and intermunicipal transportation services and communication services, even when such transactions and renderings begin abroad.”

ICMS is the acronym from taxes on transactions relating to the circulation of goods and to the rendering of interstate and intermunicipal transportation services and communication services, which is usually shortened to tax on the circulation of merchandises and on services.

Clélio Chiesa states that the constituents put up under the same name ICMS different taxes and that systematization besides not being of good technique has been causing countless confusions in its application. He systemized the taxes that can be found under the acronym ICMS as follows:

- i) taxes on transactions relating to the circulation of goods;
- ii) taxes on transactions relating to the acquisition of goods imported from abroad, even in the case of goods intended for consumption or for fixed assets of the establishment;
- iii) taxes on interstate and intermunicipal transportation services; and
- iv) taxes on communication services.⁸⁴

As this paper aims to study the legal aspects of the E-commerce in Brazil, we will only focus on the *taxes on communication services*. It is important to bear in mind though that it is possible to outline the matrix norm of tax incidence for each one of the taxes that can be found under the acronym ICMS.

It was already stated *supra* that the taxes are not created by the Constitution. The creation of the taxes depends on the law.

Concerning the ICMS, what is of fundamental importance is the fact that it requires a supplementary law that shall:

⁸⁴ *ICMS – Sistema Constitucional Tributário*. (São Paulo: LTr, 1997), pp. 73-74.

- i) define its taxpayers;
- ii) provide for tax substitution;
- iii) regulate the system of tax compensation;
- iv) establish, for purpose of collection of the tax definition of the responsible establishment, the location of the transactions concerning the circulation of goods and the rendering of services;
- v) exclude from levy of the tax, in exports to other countries, services and other products other than those on transactions transferring industrialized products abroad, excluding semi-finished products as defined in a supplementary law, that are already excluded from levy of tax;
- vi) provide for the event of maintenance of a credit for services and goods remitted to another state and exported to other countries;
- vii) regulate the manner in which, through deliberation by the states and the Federal District, tax exemptions, incentives and benefits shall be granted and revoked.⁸⁵

The Supplementary Law No. 87 of September 13, 1996, in force since November 1, 1996, regulates the states and the Federal District taxes on transactions relating to the circulation of goods and to the rendering of interstate and intermunicipal transportation services and on communication services, and gives others providences⁸⁶.

⁸⁵ Article 155, paragraph 2, item XII, of the Federal Constitution.

⁸⁶ This supplementary law has been altered by the Supplementary Law No. 92, in force since December 24, 1997; by the Supplementary Law No. 99, in force since December 21, 1999; and by the Supplementary Law No. 102, in force since August 1, 2000;

The Brazilian National Tax System established by the Federal Constitution, has been in force since March 1, 1989. However, the Supplementary Law No. 87 was promulgated only in September 13, 1996, and has been in force since November 1, 1996. There is a period of time in which there was no the needed Supplementary Law demanded by the Federal Constitution.

Concerning that large interval of time it is interesting to make it clear that the article 34 of the Temporary Constitutional Provisions Act set forth that *If, within sixty days counted from the promulgation of the Constitution, the supplementary law required for the institution of the tax referred to in article 155, I, b, has not been issued, the states and the Federal District, by means of an agreement concluded in the manner set forth in Supplementary Law number 24 of January 7, 1975, shall establish the rules to regulate the matter provisionally.*

In the State of São Paulo, the ICMS was instituted by Law No. 6,374 of March 1, 1989, which was further regulated by Decree No. 45,490, of November 30, 2000⁸⁷.

Founded on the Federal Constitution and on the referred legislation, we will show the matrix norm of tax incidence of the ICMS, but only in the part that concerns the tax on communication services.

5.4.1 - H t = tax hypothesis, antecedent, normative supposition or proposition hypothesis:

I) M c = material criterion of the hypothesis - nucleus of the description of the fact:

Rendering onerous communication services, for any media, including the generation, emission, receiving, transmission, retransmission, repetition and amplification of communication of any nature, even on services rendered abroad or which rendering had initiated abroad.⁸⁸

II) S c = spatial criterion of the hypothesis- place condition:

The law has always been based on the principle of territoriality, which defines the limits of the jurisdiction and legislation of a state of the Federation. In the aforesaid condition, the spatial criterion of the hypothesis is any place in the territory of the State of São Paulo that has the constitutional authority for the

On that purpose, representatives of the 26 states of the Federation and of the Federal District gathered to accomplish an agreement to regulate temporarily this specific subject. As a result of that meeting, the Agreement No. ICM 66, was published in the Official Journal of the federal government in December 16, 1988. When the Supplementary Law No. 87/96 came into force, this agreement has been revoked.

⁸⁷ Before this new Decree, it had been further regulated by Decree No. 33,118, of March 14, 1991, that has been revoked since the new Decree is in force.

⁸⁸ Federal Constitution, article 155, II, combined with article 2, III and paragraph 1, II of the Supplementary Law 87/96.

institution of the tax, even the territory of other states of the Federation in accordance with the existing agreement among them.

III) T c = temporal criterion of the hypothesis – time condition:

The taxable event is considered to have occurred at the moment of the onerous rendering of communication services, for any media, including the generation, emission, receiving, transmission, retransmission, repetition and amplification of communication of any nature.⁸⁹

5.4.2 - Cs t = tax consequence, consequent or consequent proposition:

I) P c = personal criterion of the consequent: where we find the two sides of the obligational juridical relationship.

A s = active side or party of the taxable obligation, creditor, or claimant: the treasury of the State of São Paulo.

P s = passive side or party of the taxable obligation, or debtor: taxpayer is any natural person or legal entity that carries out the rendering of communication service, even on services which rendering had initiated abroad.⁹⁰

The burden of the payment of the tax, whose taxable event will occur later, may be imposed upon the taxpayer.⁹¹

II) Q c = quantitative criterion of the taxable obligation - indication of the formula for the determination of the quantum of the payment.

AB = assessment base - measurable greatness of the material aspects of the taxable juridical fact: the price of the communication service.⁹²

⁸⁹ Article 12, VII, of the Supplementary Law 87/96.

⁹⁰ Article 4 of the Supplementary Law 87/96.

R = rate - factor that will be multiplied by the assessment base for determining the value of the tax.

The rate for the onerous communication services inside the State of São Paulo is 25 % (percent) of the value of the services, even when such rendering begins abroad⁹³. When the services are rendered, the ICMS tax is already included in its price.

The rate of 18% (percent) is the general internal rate⁹⁴. The rate for the communication services was set up above the general internal rate. Under the Federal Senate Resolution No. 22, of May 19, 1989⁹⁵, the general interstate rate is 12%. However, when the rendering of the service is interstate to taxpayer located in a state belonging to the North, Northeast, West-Central Region, or the State of Espírito Santo, the rate will be 7% (percent). When the rendering of the service is interstate to taxpayer located in a state belonging to the South or Southeast Region, the rate will be 12% (percent).⁹⁶

The following shall be adopted for the rendering of services to end-users located in another state: (i) the interstate rate, when it is incumbent upon the recipient to pay that tax; (ii) the internal rate, when it is not incumbent upon the recipient to pay that tax.⁹⁷

6 - THE AGREEMENT No. ICMS 78 OF JULY 6, 2001

⁹¹ Federal Constitution, article 150, paragraph 7, combined with article 6 of the Supplementary Law 87/96.

⁹² Article 13, III, of the Supplementary Law 87/96.

⁹³ Article 34, § 1, 8, of the Law No. 6,374/89, as amended by the Law No. 7,646 of December 26, 1991.

⁹⁴ Article 34, I, of the Law No. 6,374/89.

⁹⁵ The Federal Constitution stipulates in its article 155, paragraph 2, IV, that A resolution of the Federal Senate, on the initiative of the President of the Republic or of one-third of the Senators, approved by the absolute majority of its members, shall establish the rates that apply to interstate and export transactions and rendering of services.

⁹⁶ Composition of the Brazilian macro regions: North region is composed by the following states: Amazonas, Acre, Rondônia, Roraima, Pará, Amapá and Tocantins. Northeast region: Bahia, Sergipe, Alagoas, Pernambuco, Paraíba, Rio Grande do Norte, Ceará, Piauí and Maranhão. West-Central region: Mato Grosso, Mato Grosso do Sul, Goiás and Distrito Federal. Southeast region: São Paulo, Rio de Janeiro, Minas Gerais and Espírito Santo. South Region: Paraná, Santa Catarina and Rio Grande do Sul.

The agreement ICMS No. 78 of July 6, 2001 authorizes the states and the Federal District to reduce the assessment basis of the ICMS in the onerous Internet access services rendered by Internet Service Providers so that the tax burden is equivalent to the rate of 5% (five percent) of the rendered service's value.

The reduction will be applied optionally by the taxpayer, in substitution to the taxation system foreseen in the state legislation, notwithstanding the taxpayer that opts for this benefit will not be allowed to use any others credits or fiscal benefits.

The agreement also authorized the states and the Federal District not to demand total or partially ICMS's fiscal debts already assessed or not, including interests and fines, related to tax already owed by taxpayers until the date that this agreement has been in force, *i.e.*, July 7, 2001. This clause, however, does not authorize the restitution or compensation of the amount of the tax already paid, and does not override the conditions provided in the legislation of each state of the Federation.

The agreement is the legal instrument by means of that the states and the Federal District shall deliberate to grant or revoke, tax exemptions, incentives and benefits, such as the tax basis assessment's reduction.

The domestic rates for transactions concerning the circulation of goods and the rendering of services may not be lower than those established for interstate transactions⁹⁸, unless otherwise determined by the states and the Federal District, under the terms of the provisions of the supplementary law No. 24 of January 7, 1975, that has regulated the manner in which through deliberation of

⁹⁷ Federal Constitution, article 155, paragraph 2, item VII, "a" and "b".

⁹⁸ See chapter 5.4.2, item II of Part II *retro*.

the states and the Federal District, tax exemptions, incentives and benefits shall be granted and revoked.

Nevertheless, the agreement itself is not enough to grant the taxpayer the right to benefit from its provisions. The states and the Federal District have to incorporate the agreement's rules in its domestic legislation so that they may be effective within its jurisdiction. The agreement shall have no effectiveness in the states that decide not to do so.

7 - OTHERS CONSTITUTIONAL PRINCIPLES APPLICABLE TO THIS TAX

The ICMS shall observe the following⁹⁹:

I – it shall be non-cumulative, and the tax due in each transaction concerning the circulation of goods or rendering of services shall be compensated by the amount charged in the previous transactions by the same or by another state or by the Federal District;

II – exemption or non-levy, except as otherwise determined in the law:

a) shall not imply credit for compensation relative to the amount due in the subsequent transactions or renderings of services;

b) shall cause the annulment of the credit for the previous transactions;

III – it may be selective, based on the essentiality of the goods or services;

8 - AN ANALYSIS OF THE MATERIAL CRITERION OF THE HYPOTHESIS OF THE MATRIX NORM OF TAX INCIDENCE

⁹⁹ Federal Constitution, article 155, paragraph 2.

What should be understood for *communication services* is the analysis that will help in the understanding of the material criterion of the matrix norm of tax incidence. Thus, I shall endeavor to explain this criterion taking into account the provisions that have been set forth in the laws.

First of all let us approach the semantic meaning of the term *communication*, as found in the dictionaries:

Communication: 1. the act or process of communicating; fact of being communicated. 2. the imparting or interchange of thoughts, opinions, or information by speech, writing, or signs. 3. Something imparted, interchanged, or transmitted. 4. a document or message imparting news, views, information, etc. 5. passage, or an opportunity or means of passage, between places. 6. communications, a. means of sending messages, orders, etc., including telephone, telegraph, radio, and television. b. routes and transportation for moving troops and supplies from a base to an area of operations.¹⁰⁰

Communication: 1. The act of communicating; transmission. 2.a. The exchange of thoughts, messages, or information, as by speech, signals, writing, or behavior. b. Interpersonal rapport. c. communications. (used with a sing. or pl. verb). The art and technique of using words effectively and with grace in imparting one's ideas. 3. Something communicated; a message. 4. communications. A means of communicating, especially: a. A system, such as mail, telephone, or television, for sending and receiving messages. b. A network of routes for sending messages and transporting troops and supplies. 5. communications. The technology employed in transmitting messages.¹⁰¹

¹⁰⁰ Random House Webster's Unabridged Dictionary, v 3.0, 1998.

¹⁰¹ The American Heritage Dictionary, third edition, version 3.6p.

It seems to me that the purpose of the term *communication services*, which is to be understood not only in its semantic meaning, as in the dictionary definitions *supra*, but also in conjunction with its definition in Article 2 (III), of the Supplementary Law No. 87/96 (item 5.4.1-I, *supra*), is to encompass any possible kind of communication. The approach used in the legislation is to provide in principle for the coverage of all factual situations where communication can be dealt with, irrespective of the medium on which such communication can be made possible.

The legislator did not want to exclude any possible form or medium of communication from the incidence of the tax law by way of a limitation in the extension of the term *communication services*.

Any exclusion of any form or medium by way of a limitation in the scope of the definition of communication services might result in direct offense to the equality before the law's principle, since some of the existing means of communication would be taxable while others would not.

Not only the term "onerous communication services, for any media" but also the term "communication of any nature" are very general and comprehensive and they seem to encompass a wide range of ways in which the communication can occur. It may be noted that, as a matter of principle, no communication technique is excluded from the scope of the tax law since future developments need to be accommodated.

That is why the term *communication services* includes the provision of cable or satellite networks as well as additional services, or *value added services* such as access to Internet and data networks. It also includes enhanced services such as e-mail or voice mail, because they have as their feature that of connecting parties even when they add to the value of the transmission by additional linkage and extra facilities, such as storage of messages.

9 – SOME LEGAL SCHOLARS' ARGUMENTS AGAINST THE TAXATION OF INTERNET SERVICES

In practice, it can be verified that to date it is not adequately clear what the correct interpretation of the legislation is in relation to the taxation of all possible relationships within the Internet environment or computer network. This new virtual communication media has been the center of discussion, between legal scholars who understand that the State Treasuries have no authority to tax these relationships, and those who think they have.

The Internet access providers defend the theory that the activities they practice are not taxable, since, in accordance with the Telecommunications Law, they render value-added service.

Those who argue that the ICMS cannot be levied on such rendering of services fund their opinion on two major arguments:

(i) Communications services are the classical telephone, telegraphic and data transmission services and the definition of telecommunications services is contained in the General Telecommunications Law¹⁰² (GTL), as set forth in its Article 60, paragraph 1, transcribed below:

Article 60 - Telecommunications service is the set of activities that permit the supply of telecommunication.

1 – Telecommunication is the transmission, emission or receiving, by wire, radio, electricity, optical media or any other electromagnetic process, of symbols, characters, signals, writings, images, sounds or information of any nature.

(...)

¹⁰² Law No. 9,472 of July 16, 1997.

The definition of value added service is contained in said Law in its Article 61 transcribed below:

Article 61 Value-added service is the activity which adds to a telecommunications service that supports it and for which it shall not be mistaken, new utilities related to the access, storage, presentation, movement or retrieval of information.

1 – Value added service does not constitute telecommunication service and its provider is classified as a user of the telecommunications service that support it, with the rights and obligations inherent to this condition.

(...)

They argue that the services rendered by Internet access providers to their users are not classified in the telecommunications service concept set forth in Law No. 9,472/97, but rather, under the concept of value-added service, as in fact defined by the Administrative Norm No. 004/95, approved by the Ordinance No. 148 of May 31, 1995 of the Communications Ministry.

(ii) Another argument is that the provision of services conducted by Internet access providers, is not taxable by ICMS, given that, the actual provision of the telecommunications service within the Internet environment is conducted by telecommunications companies that supply access/connection to the user by means of a telephone line, and the ICMS is already levied on this provision and paid by the respective companies. The Internet access providers are simply intermediaries between the telecommunications companies and Internet users, which merely facilitate access and provide other services for the purpose of Internet connection.

Actually, these arguments are not capable of giving us an appropriated solution for the tax incidence aspect of the communication services, as set forth in the Federal Constitution and in the infraconstitutional tax legislation.

The Law No. 9,472 of July 16, 1997 does not institute the tax referred to in Article 155, II, of the Federal Constitution. It provides for the organization of the telecommunications services, the establishment of a regulatory agency and other institutional issues, in accordance with the Constitutional Amendment No. 8 of 1995 that altered the item XI and letter “a” of item XII of Article 21 of the Federal Constitution¹⁰³. Nowadays, they are in force with the following wording:

Article 21. The federal government shall have the power to:

(...)

XI - operate, directly or through authorization, concession or permission, the telecommunications services, as set forth by law, which law shall provide for the organization of the services, the establishment of a regulatory agency and other institutional issues;

XII - operate, directly or through authorization, concession or permission:

a) the services of sound broadcasting and of sound and image broadcasting;

(...)

It is important to pay attention to the fact that the Law No. 9,472/97 is not a tax law, but a law that deals with the organization of the nation, particularly that of the federal government.

¹⁰³ Original wording: *Article 21: (...) XI - operate, directly or through concession to companies with the majority of voting shares under state control, the telephone, telegraph and data transmission services as well as other public telecommunications services, provided that information services may be rendered by private legal entities through the public telecommunications network operated by the federal government; XII - operate, directly or through authorization, concession or permission: a) the services of sound broadcasting and of sound and image broadcasting as well as other telecommunications services;*

If one wants to understand correctly the taxation for such services, one should begin by interpreting the laws that instituted the tax.

The Federal Constitution gave the states of the Federation and the Federal District the authority to tax *communication services*, not telecommunications services alone. The position of some legal scholars that the Federal Constitution gives states of the Federation and the Federal District the authority to tax only telecommunication services is, in my opinion, mistaken.

The semantic meaning of telecommunications is:

Telecommunications: n. 1. Sometimes, telecommunication. (used with a sing. v.) the transmission of information, as words, sounds, or images, usually over great distances, in the form of electromagnetic signals, as by telegraph, telephone, radio, or television. 2. Sometimes, telecommunication. (used with a sing. v.) the science and technology of such communication. 3. telecommunication, a message so transmitted. – adj. 4. of or pertaining to telecommunications.¹⁰⁴

Telecommunication: n. 1. Often telecommunications. (used with a sing. verb). The science and technology of communication at a distance by electronic transmission of impulses, as by telegraph, cable, telephone, radio, or television. 2. Often telecommunications. (used with a pl. verb). The electronic systems used in transmitting messages, as by telegraph, cable, telephone, radio, or television. 3. A message so transmitted.¹⁰⁵

The term *communications* is not only more general than the term *telecommunication*, but also is applicable to a more general class of things. So

¹⁰⁴ Random House Webster's Unabridged Dictionary, v 3.0, 1998.

¹⁰⁵ The American Heritage Dictionary, third edition, version 3.6p.

when the constituents used the term *communications*, they did not want it to be restricted, in the way that it would be if we construed the meaning of *communication* to be the same as that of *telecommunication*. These terms are not synonym, and it is not possible to explain properly the meaning of them as if they were.

Marco Aurélio Greco affirms that the GLT is intended to regulate the reality of a certain area of economic activity, and to accomplish that it uses concepts that were understood to be conducive to the appropriate regulation of economic activity. It is not a tax law and it does not intend to delineate the authority to tax.¹⁰⁶

10 - INTERNET SERVICES ARE ENCOMPASSED IN THE CONSTITUTIONAL CONCEPT OF COMMUNICATION SERVICES

The term Internet (**Inter**connected **Net**works) refers to the logical connection of thousands of interconnected logical networks that link millions of computers worldwide, which include stand-alone computers and computers connected to the Internet through various networks including local area networks (LAN's), metropolitan area networks (MAN's), and wide area networks (WAN's). The information superhighway usually refers to the interconnected series of networks that provide the infrastructure for transporting information throughout the world, and its development and construction is a global phenomenon that is being undertaken by thousands of entrepreneurs who sometimes act independently and sometimes in cooperation with others in order to establish standards. There is no centralized authority in charge of this massive undertaking although government also plays an important role in this process.¹⁰⁷

The Internet exists because information can be digitized. Digitization is the process of converting information into a sequence of numbers. The converted information may be images, speech, music, diagrams, or the written word. Once

¹⁰⁶ *Internet e Direito*. Dialética: São Paulo, 2000, p. 135.

converted, the information can be sent at the speed of light throughout the world where a recipient can convert the information back into its original format or otherwise manipulate it.

It is the ability to translate data into binary numerical form (*i.e.*, bits) combined with the ability to handle very large numbers of bits that make it possible to transmit data worldwide through the Internet.

The physical network infrastructure alone, *i. e.*, the physical components that allow computers to transmit information to each other, such as computers, modems, telephone lines, satellites etc, do not provide computers the ability to communicate with each other. What makes such communication possible is the logical network infrastructure.

Three major components form the physical network infrastructure that makes the information superhighway possible: network access equipment; local on-ramps, and telecommunications networks.¹⁰⁸

The **logical structure** can be thought of as the laws that govern the movement of traffic down the network highways. Each network forming part of the Internet must be set up to provide laws concerning the upkeep of the system (*i.e.*, proper voltage levels and establishing signal paths), the types of vehicles allowed (*i.e.*, how information is transported), what can go in those vehicles (*i.e.*, how information is packaged), how the vehicles enter and leave the various highways, where those vehicles are headed (*i.e.*, destination address), how they will get there (*i.e.*, routing), how to maintain an even flow of traffic (*i.e.*, load-leveling), what happens in case of an accident along the way (*i.e.*, error control) and the means of notifying the sender that the vehicle containing the information has arrived

¹⁰⁷ Doernberg, Richard L. and Hinnekens, Luc. *Electronic Commerce and International Taxation*. International Fiscal Association. (The Hague: Kluwer Law International, 1999), p. 46-7.

¹⁰⁸ Kalakota & Whinston, *Frontiers of Electronic Commerce* 50 (1996), *apud* Doernberg, Richard L. and Hinnekens, Luc., *op. cit.*, p. 53.

safely. Moreover, networks comprising the Internet need to communicate with each other in an understandable manner.¹⁰⁹ (Emphasis added)

The transmission of data through the Internet is only possible because of the development of the logical structure, but it also needs the physical network infrastructure to make such communications possible. The physical network infrastructure alone does not make the global communications system possible.

Networks mean communication between computers, what is a highly complex and technical subject.

A switched type of link such as a telephone-call creates a dedicated connection that is established at the beginning of the call and continues for its duration. In simple words, the Internet uses a very different system of communication, whose essence is the routing system that directs data packets to computers anywhere on the network. Internet protocols are transfer protocols, and can run in combination with a variety of hardware protocols. Every computer connected to the Internet has a number (IP - or Internet protocol number), which is the *address* of that computer. The routing computers at each hub of the network know where to send the data packets by reading the IP number contained in the transfer protocol written into the header of the packet. In this sense, exchanging computer data over the Internet is very much like sending and receiving packets via the Post Office.¹¹⁰

In other words, if the aforementioned logical structure did not exist, the existence of the Internet would not be possible. So, if the Internet allows a way of communication, it can be characterized as a *communication service*, in accordance with the provision of Article 155, II, of the Federal Constitution. Questioning whether or not the Internet service provider charge for the

¹⁰⁹ Doernberg, Richard L. and Hinnekens, Luc., op. cit., p. 58.

¹¹⁰ <<http://www.ilrt.bris.ac.uk/mru/telematics/carry.htm>>

communication services it provides is the proviso that will determine if the tax shall be levied or not on such services, as we will discuss **in chapter 14 *infra***.

11 - THE AUTHORITY OF MUNICIPALITIES TO INSTITUTE THE TAX ON SERVICES OF ANY NATURE

The authority of the municipalities to institute the tax on services of any nature does not include the authority to institute any tax on communication services.

The Decree-Law No. 406 of December 31, 1968, which has been accepted by the juridical order as if it were a Supplementary Law, established the rules applicable to the tax on services of any nature. It happened because at the time in which it was edited, the National Congress was in recess and the President of the Republic had constitutional authorization to legislate on all the matters set forth in the Federal Constitution.

Pursuant to Article 8 of that Decree-Law, the tax on services of any nature could be levied on the services described in an enclosed list, the so-called Services List. That list used to have 29 items. The Supplementary Law No. 56 of December 5, 1987 amended the Services List and included different services in it. Nowadays, the new Services List is composed of 100 different kinds of services.

The interpretation of the legislation on this tax has to take into account the constitutional changes that were brought by the 1998 Federal Constitution.

According to the national tax system introduced by the Federal Constitution, the municipalities have no authority to institute taxes on transactions relating to the rendering of interstate and intermunicipal transportation services and on communication services. This is because the states and the Federal District have the authority to legislate on these matters.

Upon the promulgation of the 1988 Constitution, the federal government, the states, the Federal District, and the municipalities were allowed to issue the laws necessary for the application of the national tax system established therein. However, since the new national tax system is in force, application of the preceding legislation is only possible if it is compatible with the new system and with the legislation promulgated under the new national tax system.

As there was no publication of a new Supplementary Law, under the terms of the 1988 Constitution, the Decree-Law No. 406/68, which was amended by the Supplementary Law No. 56/87, is still in force, but not entirely as previously discussed.

Only the states of the Federation and the Federal District are allowed to institute tax on communication services, even when such transactions begin abroad.

Sérgio Pinto Martins states that since the 1998 Constitution has been in force, the states have had the exclusive authority to levying tax on the communication services. The Constitution does not make any proviso with relation to interstate and intermunicipal communication services as it does in relation to the transportation services; therefore any communication service is taxable by the states.¹¹¹

This same point of view is defended by Júlio Maria de Oliveira. He states that due to the juridical system initiated for the Federal Constitution of 1988, the municipalities have no more tax competence to create taxes on communication services because only the states and the Federal District have the exclusive authority to do so, as stated in Article 155, II, combined with the 156, III of the Fundamental Law.¹¹²

¹¹¹ Sérgio Pinto Martins. *Manual do ISS*, 2. ed. São Paulo: Malheiros Editores, 1998, p. 195.

¹¹² *Internet e Competência Tributária*. Dialética: São Paulo, 2001, p. 154-5.

Furthermore, the List of Services is limited, and considering that the service provided by the Internet access providers to their users is not expressly set forth in it, the municipalities have no legal authority to levy taxes on these services.

On the other hand, legal scholars discuss whether the taxes allowed by the following provisions from the Service List could be levied on some of the services that surround the Internet:

22 - consulting of any nature not contained in other items of this List including: organization, programming, planning, consulting, data processing, technical, financial or administrative consultancy (vetoed).

85 - Propaganda and publicity including: sales promotion, planning of campaigns or publicity systems, drawings elaboration, texts and other advertising materials (not including printing, and production).

86 - Diffusion and divulging of texts, including drawings and other publicity materials for any medium (except newspapers, radio and television).

12 - THE NATIONAL TREASURY POLICY COUNCIL (CONFAZ) UNDERSTANDING OF THE ICMS LEVY ON COMMUNICATION SERVICES

The Brazilian states and the Federal District, through the Agreement (ICMS) No. 98 of June 19, 1998, came to an understanding that the ICMS shall be levied on communication services. Amounts charged for the access, adhesion, activation, authorization, supply, subscription, and utilization of the services, as well as those related to supplementary services and additional conveniences that optimize or speed up the communication process, regardless of the name designated thereto, shall be included in the assessment base.

13 - THE FINANCE SECRETARIAT OF THE STATE OF SÃO PAULO UNDERSTANDING OF THE ICMS LEVY ON COMMUNICATION SERVICES

The Finance Secretariat of the State of São Paulo, by means of replies from its Tax Advisory Department (TAD) to certain consultations made by the taxpayers, understands that ICMS shall be levied on the services rendered by Internet access providers because it characterizes a communication service, in accordance with the Article 155, II, of the Brazilian Federal Constitution and the Article 2, III, of the Supplementary Law No. 87/96, which was further regulated by the legislation of the State of São Paulo.

The TAD denies that the municipal tax on services of any nature should be levied on the rendering of communication services.

14 - THE SUPERIOR COURT OF JUSTICE'S FIRST PANEL OF JUDGES UNDERSTANDING OF THE ICMS LEVY ON COMMUNICATION SERVICES¹¹³

The State Treasury of Paraná appealed to the Superior Court of Justice questioning the Paraná State's Tribunal of Justice ruling in Sercomtel Corporation vs. State Treasury of Paraná, that providers must not levy ICMS on the rendering of Internet access service.

The first panel of judges of the Superior Court of Justice concluded that the providers that charge for access to Internet should be taxed on ICMS. For the ministers, enabling the Internet connection by means of offering an appropriate address for the users of the Internet qualifies as rendering a communication service. This is why the ICMS should be levied. On the other hand, if the providers enable free access to the Internet, the tax should not be levied.

Sercomtel Corporation, a company of telecommunications and an Internet access provider located in the city of Londrina (Paraná State), asked the

¹¹³ <http://www.stj.gov.br/stj/noticias/detalhes_noticias.asp?seq_noticia=3917>

Finance Secretariat of the State of Paraná if they would be taxed for rendering Internet access services. According to Sercomtel's understanding, as it was not the provider of the main service for the Internet access (the physical connection), but of only an additional service, it should not pay the tax.

The State Treasury replied that Sercomtel should pay ICMS on the rendering of Internet access service. Due to this answer, Sercomtel filed a preventive writ of mandamus to avoid the collection of the tax. According to the company, the Sercomtel Internet provider was a user of the telecommunications services of another company.

The Sixth Civil Court's Division of Londrina deferred the request of the provider. The decision prohibited the State of Paraná from collecting ICMS for the rendering of Internet services from the company. The State appealed, but the local Tribunal of Justice maintained the 6th Civil Court's decision. Because of the unfavorable decision, the State appealed to the Superior Court of Justice. The state's appeal claimed that the activity of Sercomtel was, without a doubt, a taxable event and ICMS was due. According to the State's appeal, although the provider of Internet activity might be a value added service, it is still characterized as a communication service. For this reason, the levy of the ICMS on such activity is constitutional.

Mentioning several studies on the subject, minister José Delgado deferred the appeal of the State of Paraná, authorizing the collection of the tax from Sercomtel. "The relationship between the renderer of the service (provider) and its user is of business nature seeking to make possible the communication wanted. That is enough to constitute the taxable event of the ICMS" emphasized the reporting minister. And, according to the minister, "even when the provider itself needs to subcontract other companies to transmit the data via Internet (physical channels, as for instance the ones hired/leased from Brazilian Company of Telecommunication – Embratel), it does not mean that it stopped

serving as a 'messenger' in the communicational relationship between the user and the Internet". The tax is still to be collected.

In his vote, José Delgado also mentioned the understanding of the Brazilian legal scholar Paulo de Barros Carvalho when he concluded that the access provider does not just render a value added service as alleged by Sercomtel. First of all, Internet service is an integral part of the communication process; it is related to the communication process through physical channels, responsible for transferring its customer's data through the Internet, as well as for maintaining the communication between the originator (Internet) and the receiver (user) through their computers.

The collection of ICMS, however, is possible only from the providers that charge for access to the Internet. On the other hand, the free communication connection is not taxable, explained José Delgado in reference to the tax Administration's reply to Sercomtel's original inquiry. Delgado concluded that the communication that is the object of the taxation is that for which the user has to pay in order to emit, transmit or receive messages.

CONCLUSION

The Brazilian legal infrastructure was developed for a traditional paper-based environment, in which electronic systems were absent. However, the current legal system is generally applicable to the electronic environment. The existing laws create uncertainty in many aspects of E-commerce. For example, the laws require the use of *written, signed* or *original* documents due to the fact that the commonly applicable legislation, such as the Civil Code and its Introduction Law, the Commercial Code, Intellectual Property Legislation, Copyright Law, and the Consumer Defense Code were written for a paper-based environment rather than for an electronic based one.

To deal with legal frameworks that do not adequately accommodate E-commerce, following the suggestion of UNCTAD, priority should be given to those areas in E-commerce in which an international consensus has emerged and where domestic law action is necessary to foster this new way of doing business. Thus, the government has the task of adapting legal rules in order to facilitate the growth of E-commerce, and to ensure trustworthiness in and enforcement of the business realized within this environment. This will foster the competitiveness of the companies, mainly small and mediums ones. To achieve this goal, some priorities exist, such as conditions of proof, in particular digital signatures; implementation of regulation concerning encryption methods and confidentiality of data interchange; protection of individual data; introduction of protected payment systems which are fully interoperable at the international level; specification of which country's law is applicable, especially with regard to consumer protection.

Despite the fact that the Brazilian national tax system will have to be modernized to properly accommodate E-commerce transactions, some of the already existing tax rules are applicable to the new environment. For example, the tax on communications services must be levied on the Internet service providers that charge for their connection services. This conclusion derives from the study of

the matrix norm of tax incidence, which is simply a paradigm that allows the interpreter to determine the correct understanding of the norm that created the tax.

The theses against the incidence of ICMS in such transactions have not been accepted in the Superior Courts. This tax includes but is not limited to telecommunications services.

The new agreement ICMS No. 78 of 2001, which allowed the reducibility of the assessment basis, making the tax burden equivalent to the rate of 5% (five percent) of the rendered service's value, and the remitting of the previous debt of the Internet service providers possible may give the taxpayers an incentive to accept the tax.

This agreement may possibly reduce the motivation of the interpreters of the tax laws who were interested in advocating that the municipal tax on services of any nature rather than the ICMS should be levied on Internet services. The main reason for this interpretation is that the rate of the ICMS were much higher than the municipal tax before the agreement was in force.

Last but not least, the Executive Power should be careful when trying to regulate E-commerce by means of provisional measures. The successive reviews of the provisional measure No. 2,200/2001 shows that it is necessary to pay strict and close attention to details in order to avoid mistakes in the regulation of this subject. The National Congress is the branch that has the important role of passing the laws necessary to guarantee the creation of a legal infrastructure for E-commerce. However, before passing the laws that will enable the development of this environment, a broad discussion on the subject is of paramount importance so that not only the already existing E-commerce activities, but also the international experience and trends in the field of E-commerce will be taken into account.

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