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Introduction

Only a few years after the explosive advent of the internet on the global scene, Pakistan also became a part of what has become a truly global village. Every community ranging from students, academicians, businesses, the military, government to even the legal and judicial communities are now inextricably connected, networked and dependent on Cyberspace and the Internet.

Cyberspace is a term that was coined by William Gibson in his 1984 novel "Neuromancer" and is now used to describe the entire spectrum of computer networks and associated activities that take place over computers and their interconnected networks which in their largest manifestation form the internet. This 'virtual space' has no national or jurisdictional boundaries since its ether resides in and interacts with the network of hundreds of thousands if not millions of computers and users at the same time.

A legal problem

The interconnectivity and the irrelevance of geographical borders can be demonstrated where a person sitting in Karachi may be using an email service in the US from which to agree to the purchase of property in Spain that is owned by a UK business which hosts its website in Ireland. It may be that any one or all of these elements, persons, computers or actions are not in any one geographical location and they may exist or take place in multiple locations at the same time with no discernible priority. Lawrence Lessing identifies this as a problem for the traditional legal rules resulting from the unique nature of the internet and Cyberspace in "The Law of Cyberspace":

> *"The problem for law is to work out how the norms of the two communities are to apply given that the subject to whom they apply may be in both places at once"*

Traditionally, the rules of Conflict of Laws and rules for jurisdiction have been used to regulate the cross-border interaction between parties. These analyses at

best become exceedingly complicated, expensive and ineffective usually giving a result the parties may never have intended if the traditional rules were applied to their interaction over Cyberspace.

Is there a solution?

It may very well be asked whether the existence of regulation and law in this new borderless 'Wild West' is even required or possible. The answer to former is that in order to enable and facilitate interaction over and within Cyberspace the users need to feel secure and be assured of the results of their actions and interactions. Inevitably, this suggests that the parties and systems (computers) need to behave in predictable or at least reliable ways if they are to trust one another or the system. Consequently, there must exist 'rules' by which users or systems are regulated. However, the regulation of Cyberspace is not, nor can it be, effectively conceptualized or implemented in the traditional forms of regulation. Any computer techie (technical expert) will tell us that the rules by which functions are made predictable over Cyberspace are written in the computer programs ie. Computer Codes. All interaction over the internet and Cyberspace is functionally dependant upon these Codes and their overarching architecture and environment (ie. the Operating System – which in itself is a Code). Effectively each application/program runs on the basis of its own Code or set of written rules and all applications/programs must conform to and be compatible with the larger Code – the Operating System. In traditional legal terms (of real space) the functional equivalents of Cyberspace would be the regulations or legislation that govern all real space activity which require such legislation to be compatible with the larger Grundnorm – the Constitution.

> *"Cyberspace presents something new for those who think about regulation and freedom. It demands a new understanding of how regulation works and what regulates life there. It compels us to look beyond the traditional lawyer's scope-beyond laws, regulations, and norms. It requires an account of a newly salient regulator* [- Computer Code]*…… In real space we recognize how laws regulate – through constitutions, statutes and other legal codes. In cyberspace we must recognize how code regulates- how the software and hardware that make cyberspace what it is* regulate *cyberspace as it is*…..Code is law."
>
> *- Code and Other Laws of Cyberspace, The Future of Ideas, and Free Culture*
>
> *by Lawrence Lessig*

A badly written Code will conflict with the Operating System and the Computer will 'crash', ie. the computer will be unable to perform its functions since an illogicality which cannot be resolved enters the calculation processes of a function. The only means of regaining its functions is for the system to be externally rebooted/restarted. This is an emergency measure. However, if the 'bad' and conflicting Code is still resident on the Computer and is not remedied,

(through patches/amendments) the Computer or Network of Computers (even the Internet) may crash again and Emergency measures may be required yet again. It is exceedingly important therefore that when writing the Code (law of a program) the Program draftsman (programmer) has the vision, knowledge and understanding of the changing nature and requirements of the Operating System and environment in which this Code is to function. An outdated, badly written or incompatible Code will undoubtedly lead to the entire System and Network failing.

I am sure that this analogy does not lose itself on Pakistani lawyers and Jurists. Legislation in the last several decades, and the failure of either each law or the Operating System itself to be compatible with each other or even within itself (for any one or more of the reasons mentioned above), have periodically required a rebooting of our Operating System or suspension of the Constitution. However, an exploration of the subtleties of this issue, its impact and solutions require a separate discourse in due course.

A new concept

The answer to our earlier question is clear: Cyberspace not only requires the existence of law/rules but depends on it for its efficacy. However, the question remains whether it is possible for any law to govern these interactions since the making of law has traditionally been the domain of sovereigns who have been by their very nature limited to their jurisdiction and territory.

Traditionally, legislation and rule making has rested with the right of nations when exercising their sovereignty over matters.

> *"Traditional aspects of jurisdiction over consumer protection and advertising practice are difficult to apply to the Internet… The primary reason is that countries throughout the world have in place numerous different regimes to protect their consumers based on the `old world' presumption that consumers will shop in proximity to where they live and will not give up their sovereignty in applying these laws."*

Hence, the traditional nature of law has also been inextricably dependent upon and linked to territoriality. In Cyberspace this limitation cannot prevail as is aptly illustrated by David R. Johnson and David G. Post in their article in the Stanford Law Review:

> *Global computer-based communications cut across territorial borders, creating a new realm of human activity and undermining the feasibility--and legitimacy--of applying laws based on geographic boundaries. While these electronic communications play havoc with geographic boundaries, a new boundary, made up of the screens and passwords that separate the virtual world from the "real world" of atoms, emerges. This new boundary*

> *defines a distinct Cyberspace that needs and can create new law and legal institutions of its own. Territorially-based law-making and law-enforcing authorities find this new environment deeply threatening. But established territorial authorities may yet learn to defer to the self-regulatory efforts of Cyberspace participants who care most deeply about this new digital trade in ideas, information, and services. Separated from doctrine tied to territorial jurisdictions, new rules will emerge, in a variety of online spaces, to govern a wide range of new phenomena that have no clear parallel in the nonvirtual world. These new rules will play the role of law by defining legal personhood and property, resolving disputes, and crystallizing a collective conversation about core values.*

If no nation or legislature can in isolation hope to effectively provide for rules or laws to facilitate and protect the Cybercitizen, what then is the solution to an effective enablement of law and regulation over Cyberspace?

Solutions

The solution may lie in the annals of history. A very similar problem had also existed in Maritime transport and trade at the beginning of the 20th Century which was addressed by nations realizing the necessity of an International Convention. Such Treaties, as the Law of the Sea Convention, took several years to agree upon. Ambassador Ahmad Kamal a former Permanent Representative of Pakistan to the United Nations who is now a Senior Fellow at the United Nations Institute for Training and Research and Chairman for many years of the United Nations Working Group on Informatics writes:

> *the absence of globally harmonized legislation was turning cyber-space into an area of ever increasing dangers and worries. In many ways, this situation is similar to the problems faced in dealing with the high seas, where the absence of consensus legislation was also creating an avoidable and acute vacuum. The international community finally woke up to the challenge, and started negotiations on the Law of the Sea. Those negotiations went on for almost a decade, but did finally succeed. The world is much better off as a result. In the case of cyber-space, the challenge is far greater. The speed of change is phenomenal, the dangers affect all countries without exception, new shoals and icebergs appear every day, and global responses are sporadic or non-existent. There can be no doubt whatsoever that a globally negotiated and comprehensive Law of Cyber-Space is essential. A complication arises from the fact that there are three distinct*
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> *- The Law Of Cyber-Space, An Invitation To The Table Of Negotiations*
>
> *Ahmad Kamal,*
> *UNITAR (United Nations Institute Of Training And Research)*

An International Convention or Treaty as a solution might address the concerns of Cyberspace but it needs to be set in a Framework which is flexible, easily allowing for innovation, improvements, adaptability and compatibility of the accelerated pace of technology over Cyberspace. Hence, such a framework by its very nature needs to be general, provide for principles and its architecture must be such that in no way prejudices the ability of the techies to innovate nor require them to seek approvals from any authority. The framework should allow for self-imposed rules. In other words, the framework should facilitate and enable party autonomy as opposed to any Regulator imposing its own concepts, policies or prejudices (with the exception of certain aspects such as those covered under the Council of Europe Convention on Cybercrime).

One of the most effective ways in which such an open-architecture can be sustained is by building a framework that enforces the intentions, understandings and policies of the parties ie. a Contract.

The advent of the Global village and market coupled with the Information Communication Technologies (ICT) Revolution has turned persons, businesses and organizations into citizens of the world, and through Cyberspace into Cybercitizens. The economy of any nation, its growth, progress and the future of its people is inextricably linked to the ease and effectiveness with which its Cybercitizens can take competitive advantage of the Global Market Place through Cyberspace – welcome to E-Commerce!

Allowing parties to choose their own Choice of law, Choice of Jurisdiction, Choice of procedure and then enabling harmonious and uniform Recognition, Enforcement and means of Dispute Resolution, based on multi-border or borderless contracts by the Judiciaries of world (based now on more than just the concept of comity of nations) are key to providing an enabling and protective environment to the Cybercitizen.

Unique, undue, conflicting, harsh and incompatible regulation or vagaries of internationally incompatible judicial decisions that refuse to recognize and enforce international best practice, International Conventions, the principle of comity of nations and the norms of Cyberspace will not just wrest away the rights of its Cybercitizens which have been guaranteed by the very architecture of Cyberspace but will also be self destructive for the economy of any nation attempting to regulate in such a manner, what it believes is its own sovereign territory in Cyberspace. Since no such 'territory' or boundary exists, all that such regulation, policy and enforcement will do is isolate such nations and cut their economies and citizens off from the benefits that Cyberspace brings to bridge the Digital and Economic Divide.

In one of the celebrated writings on Cyberspace and Law Lawrence Lessing has addressed these concerns, which are important for all legislators, policymakers, regulators and indeed lawyers and the Judiciary:

> *Sovereigns must come to see this: That the code of cyberspace is itself a kind of sovereign. It is a competing sovereign. The code is itself a force that imposes its own rules on people who are there, but the people who are there are also the people who are here — citizens of the Republic of China, citizens of France, citizens of every nation in the world. The code regulates them, yet they are by right subject to the regulation of local sovereigns. The code thus competes with the regulatory power of local sovereigns. It competes with the political choices made by local sovereigns. And in this competition, as the net becomes a dominant place for business and social life, it will displace the regulations of local sovereigns. You as sovereigns were afraid of the competing influence of nations. Yet a new nation is now wired into your telephones, and its influence over your citizens is growing.*
>
> *The point is to be critical of the power of this sovereign— this emerging sovereign—as we are properly critical of the power of any sovereign.*
> *What are these limits: As government takes control or influences the architecture of the code of the net, at a minimum, we must assure that government does not get a monopoly on these technologies of control. We must assure that the sorts of checks that we build into any constitutional democracy get built into regulation by this constitution — the code. We must assure that the constraints of any constitutional democracy — the limits on efficiency constituted by Bills of Rights, and systems of checks and balances — get built into regulation by code. These limits are the "bugs" in the code of a constitutional democracy — and as John Perry Barlow says, we must build these bugs into the code of cyberspace. We must build them in so that they, by their inefficiency, might recreate some of the protections we have long known.*
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> *My fear is not just that against this sovereign, we have not yet developed a language of liberty. Nor that we haven't the time to develop such language. But my fear is that we sustain the will — the will of free societies for the past two centuries, to architect constitutions to protect freedom, efficiencies notwithstanding.*
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> *- The Laws of Cyberspace Draft: April 3, 1998- Lawrence Lessing*

Thus, Cyberspace with its every user has entered into a social contract which guarantees the vested rights Cybercitizens have acquired from their new freedoms. "The Declaration of the Independence of Cyberspace", by John Perry Barlow, (annex A), though lighthearted aptly describes these sentiments and the

fear of incorrect, ignorant and 'old world' regulation. This problem has raised its head in some of the uninformed dialogue that transpired at the World Summit for Information Society (WSIS) process. Pakistan still has an opportunity to mend its policies which it has unwisely adopted in this process and do the right thing not just for Pakistan but also the global community at this forum. It is hoped for the sake of the betterment of all the Pakistani government heeds these warnings.

The introduction of Cyberspace into our lives and our society thus, requires a paradigm shift in the way we conceptualize, think about and address regulation. Such a shift will inevitably and consequently require a fundamental change in the way we develop policies about Cyberspace as well as draft, interpret, apply and enforce regulation.

This too in Pakistan will require immediate and fundamental changes in how we develop, conceptualize and implement policy and laws along with a parallel change in the drafting, enforcement and interpretation of such laws.

The Pakistani Judiciary

What is promising is to see how our judiciary has made initial strides in the direction suggested above. Some examples of 'new world' thinking by our Judges, despite their being unassisted by fully enabling policies and legislations, can be found in the following reported judgments of the Pakistani Courts.

The most notable of these is the judgment of the High Court of Lahore of Mr. Justice Tassaduq Hussain Jillani and Mr. Justice Abdul Shakoor Paracha, JJ (P L D 2003 Lahore 213) when dealing with a dispute under the Representation of the People Act (LXXXV of 1976). Though this judgment predated the knowledge of the promulgation of the Electronic Transactions Ordinance, 2002 and hence it could not take advantage of the enabling provisions therein, its ingenuity in dealing with the advanced Cyberlaw concepts of identity, non-repudiation, evidential value and recognizing as well as enforcing the nature of Cyberspace is truly remarkable:

> *Learned counsel for the respondent has raised objection to the admissibility of reports received from Fax or Internet in these proceedings on the ground that unless the documents/reports are verified by an official of the Pakistan High Commission in USA, those cannot be considered. This Objection of the learned counsel loses site of Article 164 of the Qanun e-¬Shahadat Order which mandates that the Court may allow and use any evidence that is available through modern devices or techniques. The Computer technically is a modern technique and is well within the ambit of the afore referred Article which reads as under:*

"164. Production of evidence that has become available because of modern devices, etc. In such cases as the Court may consider appropriate the Court may allow to be produced any evidence that may have become available because of modern devices or techniques."

In Halsbury's Laws of England, 4th Edn., para. 59, admissibility of statement received through Computer was commented upon in terms as under:
"In any civil proceedings a statement contained in a document produced by a Computer is, subject to rules of Court, admissible as evidence of any fact, stated in it of which direct oral evidence would be admissible if; (1) the document containing the statement was produced by the computer during a period over which the computer was used regularly to store or process information for the purposes of any activities regularly carried on over that period whether for profit or not, by anybody, whether corporate or not, or by any individual; (2) over that period there was regularly supplied to the computer in the ordinary course of those activities information of the kind contained in the statement or of the kind from which the information so contained is derived; (3) throughout the material part of that period the computer was operating properly or, if not, that any respect in which it was not operating properly or was out of operation during that part of that period was not such as to affect the production of the document or the accuracy of its contents; and (4) the information contained in the statement reproduces or is derived from information supplied to the computer in the ordinary course of those activities."

9. The evidence collected through Tape Recordings was held admissible by the august Supreme Court of Pakistan in "Islamic" Republic of Pakistan v. Abdul Wali Khan (PLD 1976 SC 56).

9-A. There is no cavil to the proposition that the enquiry in these proceedings is summary in nature. But if the basic Degree has been challenged, the relevant information with regard to its genuineness or otherwise is available on Internet and it is not seriously disputed that the information so received is from the competent authority of the institution concerned, no verification from Pakistan High Commission in U.S.A would be necessary. We, therefore, see no reason to discount it from consideration. Moreover, the information received has been further verified through the Commission appointed by this Court. The objection raised, therefore, has no substance and is accordingly repelled. Taking into account the afore-referred a documents and the report of the Commission we are left with no manner of doubt that the respondent was never issued a Degree of Bachelor of Business Administration the so-called degree produced before the Returning Officer is a fake document

and the respondent is not eligible to contest the elections as he lacks the basic educational qualification i.e. Bachelor's Degree in terms of section 99(1)(cc) of the Representation of the People- Act, 1976.

As can be seen that due to the unavailability at the time of the specific legislative rules on electronic documentation and their admission into evidence the judgment relied upon Halsbury's laws thereby incorporating international best practice, comity of nations and recognizing and enforcing the global nature of the Internet. This example is an illustration of how advanced and 'new world' the Judiciary can be but tends to regretfully remain unassisted due to the lack of enabling and 'new world' policies and legislations.

To a great extent the latent problems faced in this judgment were remedied by the promulgation of the Electronic Transactions Ordinance, 2002 (ETO 2002), which is discussed below and dealt with in detail in my earlier article which is annexed.

Another promising judgment on internet related issues came from the High Court at Karachi of Mr. Justice Khilji Arif Hussain, (2004 C L D 1131) ACER, INC. Versus ACER COMPUTERS in which his Lordhsip upheld the international rights to the domain name www.acer.com and held that www.acer.com.pk was not only a 'cyber squatted' domain but was being used by a domestic company to violate and take advantage of the 'Acer' trademark and trade name. Here once again, though the Trade Marks Ordinance, 2002 mentions domain names it does not provide a holistic or internationally compatible framework for domain name dispute resolution under ICANN rules. Nonetheless, in order to make up for the lack of legislative and policy framework, our judiciary supplemented and decided the situation in consonance with international best practice and keeping in mind Pakistan's international commitments and upholding the global 'new world' nature of the Internet and Cyberspace.

A similar matter came up yet again before the High Court at Karachi for interim relief before Mr. Justice Maqbool Baqar, (2006 C L D 580) TELEBRANDS CORPORATION Vs. TELEBRANDS PAKISTAN (PVT.) LIMITED, where the Tradename of an internationally recognized company was alleged to have been illegally established under the domain name "Telebrandspakistan.com". This matter involved the implementation of an ICANN award. Although the Court did not completely apply the ICANN decision it seems to have had some persuasive value. It is however, hoped that the recognition and enforcement of such internationally accepted decisions will be followed in keeping with the concepts expressed above as part of a continuing and progressive tradition of our esteemed judicial institution.

Electronic Transactions Ordinance, 2002 (ETO 2002)

At the close of the first period of President Pervaiz Musharraf's advanced Good Governance, in September 2002, the President promulgated the Electronic Transactions Ordinance, 2002 (ETO 2002). Having authored this piece of legislation, it was a singular honour and a privilege for me to see it promulgated. It provided the Road Map and brought with it the conceptual revolution in policy and legislative drafting that since its promulgation has not revisited most of the Ministries, especially the MoITT.

This Legislation is to Cyberspace what the Contract Act is to Commerce and more. For a detailed discourse on the ETO 2002 Annex B of this paper may be instructive. The most important elements of this legislation are the:

- Conformity with International Best Practice – Harmonious
- voluntary accreditation as opposed to mandatory licensing (the "NoC culture")
- recognition of party autonomy/contract,
- holistic rules thereby enabling legislation based regulation rather than regulator (person and discretion) based regulation
- technology neutral as opposed to technology specific definitions
- recognition of extraterritoriality/cross-border jurisdictional requirements

After the promulgation of the ETO 2002, I actively lobbied for its awareness and promoted its use within the business community. In what may have been my naivety I expected the Banking sector to be the most effective channel for implementation. However, to my disappointment the resistance to new ideas and accelerated progress was more than I anticipated. To my surprise, I found the entrepreneurs, service providers, mobile operators, e-commerce gateways, the stock exchange sector, trade, transport and logistics and even the government more open to the relevancy of these new ideas.

Whilst senior bankers suspiciously questioned whether e-Banking, mobile banking and e-commerce would grow in the short to medium term, the other sectors had already adopted the basics and were investing their own capital (none came from the government or banks) into innovative new technologies and ventures.

Pakistan saw the introduction of a Public Key Infrastructure, mobile commerce, e-documentation, e-commerce portals, e-money/digital cash (non-bank sourced) Outsourced export of Software and IT Services and even e-filing of Income Tax, Sales Tax and Customs Declarations. The Banks have now followed with basic forms of e-banking and mobile banking pressed by the State Bank of Pakistan.

The most important element of the ETO 2002 was that no Certification Service Providers had to obtain a license to engage in this business nor was any mandatory approval required for Digital Signatures (as per international practice) to be recognized under the law as long as they conformed to the legislative definition. The concept was that the law itself should regulate instead of a bureaucrat with arbitrary discretion. This might be the first area of trade or the economy in Pakistan where legislation enabled business in this area to arrive in Pakistan and immediately set itself up. On the heels of the promulgation of the ETO 2002 NIFT signed and implemented its agreements with VeriSign USA and brought the Digital Signature Infrastructure to Pakistan. There were no cataclysmic disasters, no carpet-bagging, no crisis of foreign exchange etc. The 'old world' fears were disproved. Instead, the CSP and PKI have provided the foundation and backbone to the new Pakistani e-commerce economy. Businesses as well as Government recognized and implemented the solution. What the Government had been unable to do for years due to prohibitive costs/budgets, a single piece of enabling 'new world' legislation brought to the citizens, businesses and Government of Pakistan at nominal cost.

Since 2002 no meaningful cyber legislation with the exception of some Revenue laws (Income Tax Act and Customs Act – available on www.jamilandjamil.com) have been enacted. However, draft legislations in various areas have been prepared including Cyber crimes, Data Protection, E-Payment Systems & Electronic Fund Transfer etc.

The concerns expressed above and the concepts of the ETO 2002 have not been followed by these drafts. Quite to the contrary these drafts have largely (if not wholly) followed the 'old world' conceptualization of policy and drafting of legislation. My comments to most of these are available at www.jamilandjamil.com . I will thus, only allude to some main features of these Drafts.

Draft Cyber Crime Act

It had been my view as member of the MoITT Task Force on IT Law that the Budapest Convention on Cyber crimes be the model for any such law to ensure international harmony of definitions, procedures, international cooperation and enforcement. Instead, the Draft has serious flaws in every definition. The procedural safeguards for protection of human rights and democratic values as deemed mandatory under the Cyber Crime Convention have been curiously omitted and instead disproportionate sentencing provisions, search and seizure powers and offences have been created without international precedent. Moreover, the enabling provisions for international cooperation are muted and in any case the absence of the Convention mandated safeguards and procedures would be a hurdle to international cooperation with nations complying with these provisions.

This law, if enacted in its present form, will be a grave threat to the Civil Liberties and Fundamental Human Rights of not only Pakistanis but also those who would come within the extraterritorial scope of this legislation.

Draft Data Protection Act

The purpose of this legislation was to provide security and protection to transferors of personal data to third countries such as India and Pakistan, which are an evolving market for Business Process Outsourcing. Once again the legislation is fraught with serious errors as to definitions, confused as to scope, highly regulatory to the extent of being oppressive and insecure in judicial and investigatory control. In comments received from various US outsourcing companies under the umbrella of the US Chamber International Business state:

> *There are significant ramifications because it could create ownership rights and therefore greatly impact the ability of companies to use data in general. Apart from the ownership issue, it simply does not make sense to extend any data privacy obligations (such as the requirement to process foreign or local data fairly and lawfully and store it for specified, explicit and lawful purposes) to nonpersonal data. Such requirements serve no purpose and will only discourage companies from engaging in any processing activities in Pakistan.*
>
> *Complaints may be lodged with the Sessions Judge and the Session Judge, may, in turn, direct someone to investigate on his behalf and report back to the court. Requiring access to data systems by unauthorized personnel poses significant security risks.*

Moreover the Chief Privacy Officer of a large Global international IT Company has aptly characterized the legislation as follows:

> *Companies are less likely to choose a location for sourcing that interferes with their ability to contractually bind parties as they see fit according to the law of their location. The same is true if they feel that a law unnecessarily interferes with their deployment of global policies on privacy and security. In this case the law is dictating rules some of which are too stringent concerning some compliance obligations, some not stringent enough. This will always be the case when trying to address global needs with one standard. Furthermore there is no basis for the law's attempt to create obligation outside the jurisdiction. Lastly, the EU model, for instance, would not recognize the law as adequate since it does not apply in Pakistan to its citizens. To find adequacy, companies would have to use model contracts, binding corporate rules or other methods of compliance.*

> *As set forth above, and as has been a successful approach in India's amendment of its IT Act, the best approach is to assure that contracts can be enforced, that appropriate remedies exist and that those that are responsible for enforcement are trained.*

Effectively the purpose for which this legislation was drafted is ironically the same reason for which it has been rejected by the stakeholders. Its promulgation would only make matters worse. The simple reason for the rejection by stakeholders of this legislation is that the policy, conceptualization and drafting is contrary to international best practice, 'new world' thinking and demonstrates a lack of understanding of the Global nature and the ongoing developments of Cyberspace.

Draft Payment Systems & Electronic Fund Transfer Act
This legislation is possibly the most salient example of an 'old world' regulatory framework. A third of the legislation is clumsily modeled upon the US EFT Act, another third attempts to incorrectly follow the EU eMoney Directive and the remaining third is a mixture of existing Pakistani Banking legislation with a pinch of a failed Indian legislation. As may be well imagined the various parts, their language and most importantly definitions are incompatible and inconsistent with international best practice. Some definitions, concepts and even basic workings of payment systems and the basis of their regulation seem confused. The eMoney institutions have been incorrectly treated and regulated as if they were Banks and major Financial Institutions. Most remarkable is the complete lack of any provisions in the legislation setting out the basis/principles for regulation, the criteria for taking enforcement action and terms under which such exercise of power would be exercise. The existence of such rigid, burdensome, draconian, undefined and arbitrary and blind discretion in favour of the regulator (State Bank Pakistan) is completely contrary to the 'new world' methods suggested above and possibly open to be struck down as unconstitutional. Such a legislation will only result in becoming a disincentive to future investing business and impede innovation, investment and economic and market growth. In this context the warnings of possibly the wisest monetary planner and legendary economist of recent times should be heeded:

> *"As I have said many times in the past, to continue to be effective, governments' regulatory role must increasingly ensure that effective risk management systems are in place in the private sector.*
>
> *As financial systems become more complex, detailed rules and standards have become both burdensome and ineffective, if not counterproductive.*
>
> *If we wish to foster financial innovation, we must be careful not to impose rules that inhibit it. I am especially concerned that we not attempt to*

> *impede unduly our newest innovation, electronic money, or more generally, our increasingly broad electronic payments system"*
> *- Alan Greenspan*

In addition the result of such legislation will be the following: few businesses will enter this arena thereby throttling innovation and competition, the lesser use there will be of electronic payment systems the more use will there be of cash, especially since it is easier to use with little or no regulation. Cash is both 'dirty', non-transparent and cannot be put back into the economy through banks and payment systems to create credit with a multiplier effect in order to contribute in boosting economic growth.

As can be seen 'old world' policies put into 'old world' drafting lead to regression of economic growth and market forces, disenfranchising the citizen of any nation let alone its Cybercitizens. This legislation therefore, needs serious reconsideration.

There is limited space to dilate upon many other areas such as the Intellectual Property but a brief mention is necessary:

Patents Ordinance 2000
This is a relatively recent legislation however, it does not take into account innovation in services and especially IT related patents since it only recognizes mechanical inventions. The definitions say it all:

> *"process" ; means any art, process or method or manner of new manufacture of a product*
>
> *"product" means any* ***substance, article, apparatus or machine;***

This is even corroborated by the SMEDA Business Guide Series on Copyrights Registration Procedure:

> *In Pakistan, computer programmes are excluded from patent protection under the patent laws. Protection under the copyright laws is the only safeguard available for the computer software industry.*

As can be seen the legislation does not recognize innovation, processes or methods that may be related to Cyberspace.

Copyright Ordinance 1962

The amendments to this legislation attempt to cover cyberspace but due to a lack of understanding of what is 'Code', the amendment is inappropriate and requires that the 'Code' be visually represented on some physical media which must be 'fed into a computer'. Anyone in the IT industry would characterize such a definition as technologically inaccurate.

> *"literary work" includes works on humanity, religion, social and physical sciences, tables "compilations and computer programmes, that is to say programmes recorded on any disc, tape, perforated media or other information storage device, which, if fed into or located in a computer or computer-based equipment is capable of reproducing any information"*

Clearly the Digital Millennium Copyright Act and the Copyright Act of the US were unknown to the draftsman of the amendments to both the Patents Ordinance and the Copyright Ordinance. Some judicial innovation may be necessary here to provide adequate protection as demonstrated by the judgments quoted above to fill the void left by a failure of the Government to evolve appropriate 'new world' and Cyberspace compliant polices and drafting.

Overarching problem

As mentioned earlier these problems generally stem from the same cause i.e. the failure to change perspective, expand our vision, understanding and grasp the concepts of Cyberspace when formulating policy, regulation and legislation in order to facilitate international and domestic trade and protect the rights of the cyber-citizen. In order to attract FDI and local Investment in this field and other areas it is necessary for policy makers to open their minds, change their culture and their tradition of dealing with these regulatory and legal issues. They must focus on international best practice, harmonization of laws and policies and then translate them into compatible legislative drafting, followed by effective implementation, enforcement and judicial interpretation/decision. In the latter roles, the legal profession and the Judiciary can play a vital role. The recent introduction of Alterative Dispute Resolution in cooperation with Judicial oversight and enforcement through mediation or arbitration and the implementation of the New York Convention 1958 through the Recognition and Enforcement (Arbitration Agreements and Foreign Arbitral) Awards Ordinance, 2005 are important elements of progress in the right direction, which is a welcome step forward. It is hoped that the Pakistani Legislature, Government and Policymakers will give greater importance than they have to Pakistan joining and implementing the numerous international conventions Pakistan fails to either sign or ratify due to decades of neglect at the hands of the Foreign Office. This 'old world' policy of the Foreign Office is highly visible in its dealings at the WSIS and Follow on process. It is time that Pakistan made a determined effort to

become an inclusive and active actor in the Global stage taking on a more positive and responsible role. The first step would be to not only sign but also ratify and implement through compliant and implementing legislation the various International Conventions and Treaties to create and enabling environment of harmonization of our laws with global norms in order to more effectively take advantage of the Global market place enabled by Cyberspace.

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Jamil and Jamil

2nd August 2006

Annex "A"

A Declaration of the Independence of Cyberspace by John Perry Barlow

Governments of the Industrial World, you weary giants of flesh and steel, I come from Cyberspace, the new home of Mind. On behalf of the future, I ask you of the past to leave us alone. You are not welcome among us. You have no sovereignty where we gather. We have no elected government, nor are we likely to have one, so I address you with no greater authority than that with which liberty itself always speaks. I declare the global social space we are building to be naturally independent of the tyrannies you seek to impose on us. You have no moral right to rule us nor do you possess any methods of enforcement we have true reason to fear.

Governments derive their just powers from the consent of the governed. You have neither solicited nor received ours. We did not invite you. You do not know us, nor do you know our world. Cyberspace does not lie within your borders. Do not think that you can build it, as though it were a public construction project. You cannot. It is an act of nature and it grows itself through our collective actions.

You have not engaged in our great and gathering conversation, nor did you create the wealth of our marketplaces. You do not know our culture, our ethics, or the unwritten codes that already provide our society more order than could be obtained by any of your impositions.

You claim there are problems among us that you need to solve. You use this claim as an excuse to invade our precincts. Many of these problems don't exist. Where there are real conflicts, where there are wrongs, we will identify them and address them by our means. We are forming our own Social Contract . This governance will arise according to the conditions of our world, not yours. Our world is different.

Cyberspace consists of transactions, relationships, and thought itself, arrayed like a standing wave in the web of our communications. Ours is a world that is both everywhere and nowhere, but it is not where bodies live.

We are creating a world that all may enter without privilege or prejudice accorded by race, economic power, military force, or station of birth.

We are creating a world where anyone, anywhere may express his or her beliefs, no matter how singular, without fear of being coerced into silence or conformity.

Your legal concepts of property, expression, identity, movement, and context do not apply to us. They are all based on matter, and there is no matter here.

Our identities have no bodies, so, unlike you, we cannot obtain order by physical coercion. We believe that from ethics, enlightened self-interest, and the commonweal, our governance will emerge . Our identities may be distributed across many of your jurisdictions. The only law that all our constituent cultures would generally recognize is the Golden Rule. We hope we will be able to build our particular solutions on that basis. But we cannot accept the solutions you are attempting to impose.

In the United States, you have today created a law, the Telecommunications Reform Act, which repudiates your own Constitution and insults the dreams of Jefferson, Washington, Mill, Madison, DeToqueville, and Brandeis. These dreams must now be born anew in us.

You are terrified of your own children, since they are natives in a world where you will always be immigrants. Because you fear them, you entrust your bureaucracies with the parental responsibilities you are too cowardly to confront yourselves. In our world, all the sentiments and expressions of humanity, from the debasing to the angelic, are parts of a seamless whole, the global conversation of bits. We cannot separate the air that chokes from the air upon which wings beat.

In China, Germany, France, Russia, Singapore, Italy and the United States, you are trying to ward off the virus of liberty by erecting guard posts at the frontiers of Cyberspace. These may keep out the contagion for a small time, but they will not work in a world that will soon be blanketed in bit-bearing media.

Your increasingly obsolete information industries would perpetuate themselves by proposing laws, in America and elsewhere, that claim to own speech itself throughout the world. These laws would declare ideas to be another industrial product, no more noble than pig iron. In our world, whatever the human mind may create can be reproduced and distributed infinitely at no cost. The global conveyance of thought no longer requires your factories to accomplish.

These increasingly hostile and colonial measures place us in the same position as those previous lovers of freedom and self-determination who had to reject the authorities of distant, uninformed powers. We must declare our virtual selves immune to your sovereignty, even as we continue to consent to your rule over our bodies. We will spread ourselves across the Planet so that no one can arrest our thoughts.

We will create **a** civilization of the Mind in Cyberspace. May it be more humane and fair than the world your governments have made before.

Davos, Switzerland February 8, 1996

Annex "B"

Article authored in September 2002:

E-COMMERCE LAW IN PAKISTAN

Introduction

With the advent of Global trade being crystallised under especially the auspices of the World Trade Organisation and exponentially accelerated by the use of instant communication across the Internet the 21st Century is an era where the law is faced with new and growing challenges.

Matters ranging from cross-jurisdictional issues, lack of enforcement capabilities, security, transactional sanctity, evidential matters and payments terms to cyber crimes and Terrorism are all intertwined in Global Commerce. In fact E-Commerce has come to mean Global Commerce. *Lex Meractoria* is now more than ever feeling the effects of a lack of uniform principles relating to legal frameworks around the globe in a Market where the exposure and trade is Global.

Fortunately the disparity of legal frameworks or the lack thereof in various jurisdictions is not an obstacle when compared with the technical advancements around the World. Computers, Programming, the Internet and Information Technology Infrastructure around the World are largely compatible. Thus, the tools of E-Commerce have progressed at a faster pace and are capable of handling nearly all matters relating to Global E-Commerce with security and a great degree of satisfaction for users. The Legal Framework on the other hand has been lagging behind. This was a reality in Pakistan more so than other jurisdictions because the laws generally were nearly a Century old.

Moreover, if Pakistan is to become operationally and commercially viable for taking advantage of Global Trade, the fast pace of Commerce as a result of Electronic means and the countless opportunities that it held it is necessary for Pakistan to provide the users of E-Commerce with the Legal Infrastructure, framework and protection of the law in relation to E-Commerce.

As a result of the advanced vision of the Government of President Musharraf, the Electronic Transactions Ordinance 2002 has come to fruition and is being promulgated. This is a fist step and a solid foundation for providing Pakistan with a comprehensive Legal Infrastructure to facilitate and provide legal sanctity and protection for Pakistani E-Commerce locally and Globally.

There are various aspects relating to Commerce generally and providing legal cover only to Transactions is akin to providing a Contract Act & Evidence Act.

In order to facilitate Commerce, however, other areas also need to be addressed; such as:
E-Banking/Finance
Intellectual Property
Anti-Trust/Competition
Consumer Protection
Conflict of Laws
Telecommunication
Technology Law
Date Protection & Confidentiality
Cyber Security
Cyber Crimes/Terrorism
The Shariah Aspects

Thus, this Government as it were has put the first man in Orbit in a long Space Race. It I now necessary to concentrate on the continued and efficient implementation of the ETO 2002 by correct interpretation and application and also the promulgation of laws in the other areas identified above.

It will be effort to first highlight the salient features and policy reasons for the particular provisions of the ETO 2002 both in the domestic context as well as in comparative light of International regimes. This will be followed by an identification of the areas of Pakistani E-Commerce Law that exist at present and an analysis of whether legislation in those areas is desirable and if so briefly what form it might take.

Electronic Transactions Ordinance 2002
The Ordinance deals with 8 main areas relating to E-Commerce:

1. *Recognition of Electronic Documents.*

   The Ordinance gives legal recognition to documents, information, records and allows their admissibility into evidence in a court of law without the need witnessing. In addition the requirement for maintaining any document is writing has been satisfied if the document or record is in electronic form and is capable of being retrieved and accessible. Moreover, rules regarding what would be an electronic original form of the documents, information, record or communication and rules regarding compliance in electronic form with any law requiring retention of such documents, information, record or communication have also been defined. Thus, the legal foundation for all matters relating to moving Pakistan from a paper intensive to a paperless and electronic economy and government are provided for in this Ordinance. This will undoubtedly lead to speed and efficiency in accessing of records and documents through electronic means and will have an exponential impact on Commerce, Administration and Governance in Pakistan.

2. *Electronic Communications*

The Ordinance especially lays down rules regarding how to associate/attribute a particular electronic communication to a particular recipient or sender. It also provides for specific rules regarding legal acknowledgement, the legal rules regarding time and place of sending and despatch of the communication. This is vital to E-Commerce since it gives legislative cover and clarification to what would otherwise under common law be akin to the 'postal rule' and lead to multiplicity of interpretation on the origin, receipt and time and place of offers, acceptances and creation of contracts and vital communications that not only affect Commercial interest but also rights of citizens in general. This clarification thus, gives stability to the Commercial sector by guaranteeing and informing both business and consumers the implications of how, when and where from or to send a communication which can lead to the creation of legal obligations and rights.

3. *Digital Signature regime and its evidential consequences (presumptions)*

The Ordinance recognising the possibility and apprehensions of the market and administrations in general of maintaining security of such electronic information, documents, records and communications provides for security in the E-Environment of Pakistan and over the Internet. Instead of becoming technology specific when defining what would legally deemed to be secure electronic documents, records, communications and information, the Ordinance defines the principles that are required in any security application for it to be deemed legally secure. Hence the purpose that signatures and seals fulfil under current law and commerce are replaced by an electronic signature or electronic application that acts as a lock on any document, communication, record or information.

Recognising the cost of acquiring advanced electronic signatures the Ordinance allows for a two tier system. The first tier is simply an electronic signature which can be any symbol, image, number, character etc. or its combination which is included in the electronic information, document, record or communication which is affixed by the affixer with the intention of authenticating or signifying his ownership or approval of the same. This however, is not secure as it may be tampered with and thus fails to fulfil the criteria of integrity and secured authenticity of the electronic information, document, record or communication**.** In such a case the signature if relied upon for either authenticity or integrity before a Court of law would need to be proved by the one relying on the same and the burden of proof would initially lie on that party. Thus, it possible to allow legal recognition of such a simple electronic signature by leading evidence but it does not attract any special favours for evidential purposes in the Court and thus, proving the signature may prove to costly.

Hence, there is incentive built into this Ordinance for the acquisition and application of the more secure and reliable digital signature or as has been defined the advanced electronic signature. This constitutes the second and higher tier in relation to electronic signatures in this Ordinance. The digital signature by its very nature and programming is designed to provide secure authenticity (identity)

of the maker, originator or approver of the electronic information, document, record or communication and also simultaneously provide integrity of the electronic information, document, record or communication ensuring that the same has not been altered, modified or tampered with without leaving a record of the same. The heavy incentive that has been attached with use of an advanced electronic signature is the fact that the Ordinance proved a legal presumption in favour of any advanced electronic signature thereby reducing the costs increasing the efficacy of proving such an electronic signature in Court. This does not mean that the signature cannot be disproved. The opposing party can launch an objection and claim that the signature is false or unreliable and for this the burden of proof and hence the cost is borne by the challenging party.

Advanced Electronic Signatures are those signatures that have the criteria of authenticity and integrity simultaneously or any signature that has been provided by a certification provider 'accredited' by the Certification Council. This latter provision is an incentive for the local IT industry to develop encryption capabilities and apply for voluntary accreditation in this regard with the Accreditation/Certification Council which aims to ensure that its accreditation promotes and encourages both local IT industry but at the same time ensures the security of the E-Environment.

4. *Providers of Certification of Web Site & Digital Signatures*

In order to provide security and guarantee that websites and E-Businesses are reliable not only with regard to their security procedures but also with respect to reliances being placed upon them for transacting commercially, the birth of the certification service provider and encryption (digital signature) providers in Pakistan will go along way to boost the IT industry and promote International standards and thus economic growth both for the domestic as well as international (exportable) markets. In order not to stifle the industry and become restrictive and create obstacles or disincentives for entry into this industry, the policy decision was very clearly not to make such accreditation into a licensing or regulatory framework. Akin to and in line with the logic of all E-developed countries accreditation was specifically made voluntary. However, the legal presumptions attached with accreditation and the credibility and following in the market that the Council will have to create would be the basis for incentivising the voluntary accreditation of such providers.

5. *Stamp Duty*

The Ordinance further incentivises the transition from paper-based to paperless E-Environments and E-Commerce by excluding the payment of Stamp Duty on Electronic Transactions, with the exception of items such as Negotiable instruments and transfer of immovable property.

6. *Attestation, notarization, certified copies*

The legal requirement for attestation, notarization are excluded and the process by which certified copies of Electronic forms are to be obtained are laid out in the Ordinance.

7. *Jurisdiction*

Consequent upon the very global nature of E-Commerce and the Virtual and Electronic Environment, it was necessary to allow jurisdiction over matters that may have substantial foreign elements and as long as they are connected in any way to connected to or have an effect on any person, systems or events within Pakistan to the Pakistani Courts. This provides greater degree of security to E-Commerce in Pakistan and Pakistani Consumers as it allows them recourse in their own jurisdiction.

8. *Offences*

As an interim measure before the promulgation of the Cyber Crimes or Computer Misuse legislation it was necessary to deter and prevent certain Electronic Crimes that would foster in the wake of legal recognition of Electronic Transactions. Thus, the criminal offences under the Ordinance were made cognizable, compoundable and non-bailable. From false information being supplied by the subscriber of services of a certification service provider, to issuance of false certificates by the provider and serious crimes such as violation of privacy (data protection) and damage caused to electronic systems leading data loss or alteration etc. are covered under the Ordinance. There is a need to bring a comprehensive regime relating to Computer Misuse which is under consideration by the Information Technology Law Forum.

The Ordinance has thus created the legal basis and incentivised the propagation of the IT industry in Pakistan and consequently E-Commerce in Pakistan as well. It will create incentives and demand for cheaper local programming and encryption technology as well as demand for Data Warehousing, Digital Security, Surveillance and many other areas which at this time may not even be conceivable. The Ordinance is the foundation and the dawning of the true IT Revolution in Pakistan and the mantle of Pakistan's progress in the new Millennium.

Outstanding issues

It is now vital that global payment mechanisms of EFT and Digital Payments such as E-Wallets, TradeCard and other means of making payments across the E-Environment including cross-border and global trade are opened up for the speed of the Commerce will be held hostage to the speed of the payment mechanism. In an E-Environment with global Commerce methods of instant payments will only

lead to a growth of Commerce and International Trade in and from Pakistan bringing the Pakistani business and industry to the door step of the World Community.

The Sub-Group on E-Banking of the ITLF tackling this very challenge and the draft of the E-Banking legislation is on its way.

The ETO 2002 takes heavily from the International experience and comparison of International legislations in this area from Ireland, to Hong, Kong, Singapore, India, UK, US, UNCITRAL, EU, New Zealand and Australia. In keeping with its spirit to maintain standards that are the best and International and to take the best from the Global experience, it is necessary that the draft of the E-Consumer Protection and E-Commerce Legislation take into account the vital recommendations of OECD and the EU:

(a) accessibility and affordability;
(b) consumer friendliness of equipment and applications and the skills necessary to use them;
(c) transparency including the quantity and quality of information;
(d) fair advertising, marketing practices, offers and contract terms;
(e) protection of children against unsuitable contents;
(f) security of payment systems, including electronic signature;
(h) the apportionment of responsibility and liability;
(i) privacy and the protection of personal data; and
(j) access to efficient systems of redress and dispute resolution;
(k) information technology as a tool for information and education;
(l) establishment of consumer confidence and trust are a pre-requisite for consumer acceptance of,
and participation in the Information Society and
(m) global cooperation

These aspects of E-Commerce would have to be seen in the light of the impact that the Sales of Goods 1930 and the Transfer of Property Act 1882 would have on Transactions over the E-Environment. – need to dilate on effects of the provisions of these legislations and their interaction with ETO 2002 and E-Commerce in Pakistan in general.

The advent of the ETO 2002 also has had exponential impact on the possibilities for enhancement of International Trade and Finance in Pakistan as the advent of the eUCP will bring Pakistani exporters at par in their speed, legal framework and accessibility with their competitors. These matters will be further dealt with in my next paper which will concentrate on the impact that the ETO 2002 shall have on the Financial Institutions with regard to day to day banking practices, in particular matters relating to International Trade Finance, Loan/Finance

Documentation, Evidentiary matters and the impending legislations regarding e-Banking that are under consideration by the ITLF.

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He is a member of the Bar of England & Wales, International Bar Association, Inter-Pacific Bar Association, American Society of International Law, Sindh High Court Bar Association, Life Member Lahore High Court Bar Association, Lahore Bar Association and Karachi Bar Association, Member American Society of International Lawyers, Member International Bar Association, UK, Member Inter-Pacific Bar Association, Tokyo, Member International Chamber of Commerce (ICC), Member ICC Commission on E-Business, IT and Telecoms, Member International Lawyers for Multilateral Trade Cooperation, Geneva (UNCTAD) .

As a member of the Information Technology Law Forum, Ministry of Science & Technology, responsible as the core drafter of the Electronic Transactions Ordinance, 2002 and is currently working on the drafts of the Cyber Crimes Law, the Electronic Banking Law, Telecommunication & Convergence Law and the Anti-Trust Law relating to the Information Technology Industry of Pakistan. Presently, the Chairperson of the e-Commerce Committee of the ITLF

He is a Member of the E-Business IT and Telecommunications Commission of the International Chamber of Commerce at Paris (EBITT), Chairperson and member of International Chamber of Commerce (ICC) National Committee on E-Business IT and Telecommunications, Pakistan (EBITT), Vice Chairperson Legal Working Group United Nations Council on Trade Facilitation and E-Commerce (UN/CEFACT), Geneva and a Member of AFACT and Chairperson Joint Legal Working Group of Asia Pacific Council on Trade Facilitation and E-Commerce (AFACT).

He is also providing Legal & Policy advice to the State Bank of Pakistan as well as the ECH Task Force of the SBP headed by the Mr. Naved Khan, County Representative for ABN AMRO and NIFT.

He is presently the Legal Consultant to the World Bank Project implemented through the Ministry of Commerce by United Nations Convention on Trade and Development Transport & Trade Facilitation Program.

He has been the Legal Consultant for the Task Force for Rehabilitation of Sick Industrial Units and has drafted rehabilitation plans for revival of sick as well as privatized units from a list of 800 Industries all over Pakistan.

He is a Professor of U.S. Constitutional Law at the Sindh Muslim Law College, University of Karachi, and also lectures in U.K. Constitutional Law for the LL.B. (Hons), University of London at L'Ecole, Karachi and an Advocacy Trainer Accredited by the Bar of England & Wales to Train in Pakistan.