MOBILE TV:

NEED FOR LEGAL AND REGULATORY REFORMS IN PAKISTAN

by

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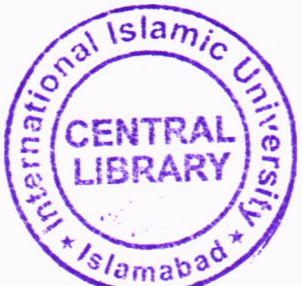

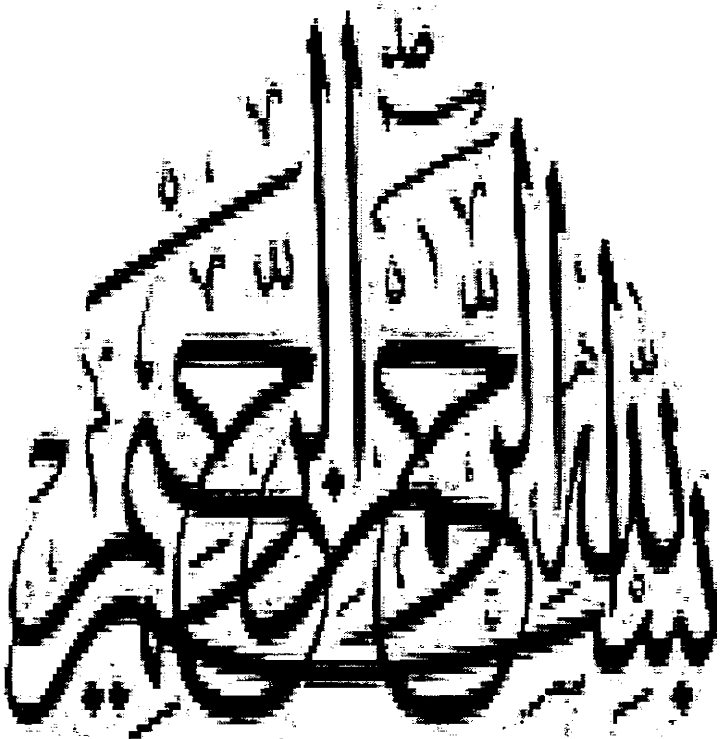

BISMILLAH IR-RAHMAN IR-RAHIM.

"(I START) IN THE NAME OF GOD, MOST GRACIOUS, MOST MERCIFUL"

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FINAL APPROVAL CERTIFICATE

This is certified that we have read and duly evaluated the thesis titled: **Mobile TV: Need for Legal and Regulatory Reforms in Pakistan** submitted by **Miss. Umbreen Iqbal** (Reg. # 258-FSL/LLMCL/F09) in partial fulfilment of the requirements for the degree of Master of Laws (LL.M.) and have found the same upto the requirements in its scope, design and quality for the award of said Degree.

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Declaration

This is hereby declared that this thesis has not been copied from any source. This is further declared that this research has entirely been done on the basis of my personal efforts made under sincere guidance/advice of my worthy supervisor. No portion of work substantially presented herein has been submitted in support of any application for any other degree or qualification of this university or any other university or institute of learning.

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LIST OF ABBREVIATIONS

AAC	Advanced Audio Coding
AGCOM	Authority for Communications Guarantees
AMPS	Advanced Mobile Phone System
AT&T	American Telephone and Telegraph
BOP	Bottom of Pyramid
CATV	Cable Television
CDMA	*Code Division Multiple Access*
CLI	Caller Line Identification
DBTB	Don't Block the Blog
DMB	Digital Multimedia Broadcasting
DTH	Direct to Home
DVB-H	Digital Video Handheld
EDGE	Enhanced Data GSM Environment
ETO	Electronic Transactions Ordinance
FAB	Frequency Allocation Board
FIA	Federal Investigation Authority
GATS	General Agreement on Trade in Services
GNI	Global Network Initiative

GPA	Geneva Plan of Actions
GPRS	General Packet Radio Services
GSM	Global System for Mobile Communication
IB	Investigation Bureau
ICCPR	International Covenant on Civil and Political Rights
ICESCR	International Covenant on Economic, Social and Cultural Rights
ICT	Information Communication Technology
ILDS	International Long Distance Service,
IPTV	Internet Protocol Television
ISDB	Integrated Services Digital Broadcasting Terrestrial
ISI	Inter services Intelligence
ITU	International Trade Union
LDI	Long Distance International
LL	Local Loop
LMDS	*Local Multipoint Distribution Service*
MDA	Media Development Authority
MMDS	*Multichannel Multipoint Distribution Service*
MMS	Multimedia Messaging Service
MNO	Mobile Network Operator
NARAL	National Abortion and Reproductive Rights Action League
NLDS	National Long Distance Service
NTC	National Telecommunication Corporation

NTT	Nippon Telegraph and Telephone
NGN	Next Generation Networks
PBC	Pakistan Broadcasting Corporation
PDC	Personal Digital Cellular
PECO	Pakistan Electronic Crime Ordinance
PEMRA	Pakistan Electronic Media Regulatory Authority
PHS	Personal Handy System
PSTN	Public Switched Telephone Network
PTA	Pakistan Telecom Authority
PTC	Pakistan Telecommunication Corporation
PTCL	Pakistan Telecommunication Company Limited
PT&T	Post Telephone and Telegraph
PTET	Pakistan Telecommunication Employees Trust
PTV	Pakistan Television
RFID	Radio-frequency identification
TACS	Total Access Communication System
TDCDMA	Time Division-Code Division Multiple Access
TDMA	Time division Multiple Access
TRAI	Telecom Regulatory Authority of India
SMS	Small Messaging Service
UDHR	Universal Declaration on Human Rights
UMTS	Universal Mobile Telecommunication System

VAS	Value Added Services
VASP	Value Added Service Provider
VLDS	Very Large Data Store
VOIP	Voice over Internet Protocol
VPN	Virtual Private Network
WAP	*Wireless Application Protocol*
WCDMA	Wideband Code Division Multiple Access
WIMAX	Worldwide Interoperability for Microwave Access
WLAN	*Wireless Local Area Network*
WTO	World Trade Organisation
WWB	World Wide Web

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DEDICATION

DEDICATED TO MY LOVING FAMILY,

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AND

KIND FRIENDS

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If oceans turn into ink and all the wood become pens, even then, the praises of **ALLAH ALMIGHTY** cannot be expressed. Unfeigned and meek thanks are before him, who created the universe and bestowed the mankind with knowledge and wisdom to search for its secret, favored and invigorated me with fortitude and capability to complete my research work.

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Umbreen Iqbal

Abstract

FREEDOM OF EXPRESSION IN PROPAGATION OF MOBILE TV: A REGULATORY CHALLENGE (WITH SPECIAL REFERENCE TO INFORMATION COMMUNICATION TECHNOLOGY LAWS IN PAKISTAN)

By

Umbreen Iqbal

Chair: Mr. Khurram Siddiqui Esq.

This work presents a plausible approach in an attempt to bring out a solution for the upcoming information communication technologies and their concerned regulations in Pakistan. It will scrutinize the existing system of regulation of telecommunication and broadcasting in a legal context. The thesis attempts to argue the various communication technologies and their effect on freedom of expression. This study attempts to highlight the significance of a need to have a converged regulations regarding ICT in Pakistan. It presents an epigrammatic portrayal of legal and regulatory framework of different countries regarding regulation of mobile contents. As a case study, Pakistan's endeavours for the Mobile TV regulations, with special reference to ICT law has critically been analyzed. The strong and effective ICT regimes (e-strategies) and regulatory framework is needed in order to narrow down the digital divide as well as for getting benefits of communication technologies.

Pakistan needs an effective ICT regulatory framework in order to reap the benefit of information communication technology. The paper will focus on critical description of telecom industry in Pakistan including regulatory framework, legislation regarding regulatory regime, ICT indicators of Pakistan. As there is no case law available particularly with regard to ICT in Pakistan, the study attempts to provide a suitable legal and regulatory regime for the ICT industry in Pakistan. I have also attempted to evaluate and discuss in detail the existing regulatory laws and regulation of Pakistan Telecommunication Authority (PTA) and Pakistan Electronic Media Regulatory Authority (PEMRA). I have presented a critical approach and also provided with the possible approach to ferret out solutions. What's more is that who will regulate the content services in Pakistan and is there any legislation that provides the new media and telecom technologies to develop. Most importantly, it has also been analyzed that what could be done to draft and promote the ICT legislations in Pakistan. In order to fill the gap of digital divide between the countries, the ICT regimes and frameworks need to be set up keeping in view the local and national priorities of each country. Content appears as new challenge in convergence of technologies which modernize the individual with having latest electronic services. With the development of ICT sector, the competition among the sector increases as well as the regulatory priorities changes with the passage of time, the choice for structuring the regulatory regime also changes.The telecom sector has diverse regulatory authorities each having its pros and cons. There is serious debate around the world on having an ICT convergence regulator dealing a broader array of telecom, broadcasting and IT issues. The justification given is that it is more appropriate form as compared to other regulators because the one common regulator can deal with the

same issues. The arguments in favor of ICT convergence are strong. The broadcasting and other media are related with content regulation so the ICT convergence has led the arguments on the convergence of content regulation and infrastructure regulation. The broadcasting infrastructure and content can't be separated on the ground that these issues are not related to ICT convergence to some extent. The countries having strict content regulation control the content through content consideration and licensing of network operators. At the end it is concluded that contradictory views and approaches of network operators and regulators have significantly restricted the process of development in telecommunications and broadcasting sector, especially with reference to convergence and emergence as to regulate the communication services through one media. It is stated that in dictatorial rule the rights of freedom of expression have always been subjugated around the globe. However, it can be stated that technology and its innovative new version starting from Mobile 2.0 can stop or put barriers for transformation and transmission of any kind of information. For a free and democratic nation it is necessary for the operators to encourage fair practices and provide constitutional right of freedom of expression to the consumers at the BOP. There is an urgent need for making of the transparent policies for consumers enjoying freedom of expression in mobile 2.0 content. This scheme needs a full understanding of the regulatory regimes, legislations and previous drawbacks so that a best approach could be designed for future to develop and amend the existing legislation.

CHAPTER – 1

INFORMATION COMMUNICATION TECHNOLOGY (ICT): AN INTRODUCTION

The developments in Information Communication and Technology Laws are on the way in Pakistan. Technology wise convergence has been paving its way since 2007 when Mobile 2.0 content was started in Pakistan. What seems to be a difficult barrier are the regulatory regimes of broadcasting and telecommunication sector. Many Jurisdictions around the globe have adopted converged regulation but Pakistan is still facing the development phase to reach a final solution. There are not adequate media and telecom regulations dealing with the new technologies. An effort has been made to pose regulatory problems of broadcasting and telecommunication sector in Pakistan. The work is intended to analyze and criticize our national laws on ICT. It would be a critical study in a sense that it will point out how the right of freedom of expression has been abrogated and how it has affected the media and telecommunication technologies. But in order to know what is ICT, the introduction to certain terms in necessary.

1.1 DEFINITION OF THE TERMS

The term Information Communication Technology (ICT) is a combination of three words i.e. Information, Communication and Technology. All these words have their own meanings and construe various interpretations while applying on case to case basis[1].

1.1.1. Information

The word ***"Information"*** conveys simple meaning as knowledge of something, awareness. As to classify the term information it may be categorised as information related to private person and public at large. There are many modes of communication of information from one end to other. Information can be in form of words, signs, action which can be communicated by traditional means or with the help of technology.

1.1.2. Communication

For provision of information from one point to another the word "communication" is used. It has been derived from Latin word ***"Communis"*** which employs "common". It means conveying information or means of connecting different places[2]. It means an act in which information or knowledge is transmitted from one point to another. From one person to another by verbal or non-verbal means[3].

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[1] Leslie Haddon, *Information Communication and Technology in Everyday Life*, (Oxford: Berg, 2004), 1.
[2] Jean Lyttleton McKechnie, ed., *Webster's New Twentieth Century dictionary Of The English Language* (Cleveland: The World Publishing Company,1971), 361.
[3] Arry. L. Barker and Deborah Roach Gaut, *Communication* (Boston: Allyn & Bacon, 2002), 29.

1.1.3. Technology

Currently, information is communicated through technology. The word "Technology" is from "*technŏlogia* "or "*techne*" which means an art or skill, it is branch of knowledge of a discipline. It may referred to electronic means used for communication of information like through computer by using IP, through fixed telephone, wireless telephone i.e., telecommunication or may be through broadcasting[4].

The aforementioned discussion will lead to determine that any information communicated through any technology falls within the scope and purview of the ICT. However, this scope is too broader and can grasp a lot therefore; this paper will be focused on the issues with respect to the scope of thesis title.

1.1.4. Telecommunication

Telecommunication is the modern mean of communication of information from one place to another. The word *"Tele"* derives from Greek word which means "far off"; or "at or to a distance". Similarly, telecommunications means communication over a distance through cable, or telegraph. It is a process of sending or exchanging information or knowledge over a distance by different electronic means like cables, telegraphs, telephones, wireless or telecasting[5].

[4] See http://www.esa.int/esaMI/Technology/SEMYSRWPXPF_0.html (Last accessed on March 21,2011).
[5] Anu A. Gokhale, *Introduction to Telecommunications*, (New York: Thomson Delmar Learning, 2005), 23.

1.2 AN APPROACH TOWARDS INFORMATION COMMUNICATION TECHNOLOGY

The countries around the world believe that telecommunication is a beneficial industry[6]. The progressive nations strongly assume that "*wealth does not create telephone density, but that telephone density creates wealth*".[7] Traditionally, it was the responsibility of the state to provide telecommunications services. The rationale behind was that obligation to provide high infrastructure cost and, universal network service are the responsibility of government and market forces were not able to control these resources.[8] However the government interfered so much that every country except some developed nations, the telecom services were controlled by Post Telephone and Telegraph department.

The American Telephone and Telegraph Company was broken up in 1984, the same year British Telecom was privatized. The deregulation and liberalization movements became silent. Pakistan was doing efforts for deregulation of the telecom sector and started the process with the corporatization of Telegraph and Telephone department in 1991.[9] Privatization of PT&T department was considered as the first stair on the ladder of

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[6] ITU, World Telecommunication/ICTs Development Report: *Measuring ICTs for Social and Economic Development,* (Geneva, 2006) at 11. Available at <http://www.ifap.ru/library/book084.pdf> (Last accessed on April 21, 2011).

[7] D. Benton, "MSS Systems Advance Telecommunications in India", *Satellite Communications* 18, no.11 (Nov 1994):18.

[8] World Telecommunication Development Report, (ITU, 1994) at p. 50. Available at <http://www.ifap.ru/library/book084.pdf> (Last accessed on April 21, 2011).

[9] S. D. Lando, "The European Community's Road to Telecommunications Deregulation," *Fordham Law. Review* 62 (1994):2159 at 2187. (British Telecom was privatized by the Telecom Act during the Government of Thatcher).

competition. Competition is necessary because it maximizes the protection of consumers, makes efficient changes in the economy and protects the market from malpractices.[10]

To further expand the liberalization of telecommunication industry, the Uruguay round of Trade negotiations in 1994 was concluded on the final note of GATS[11] with the annexure of Telecommunication. As a result the World Trade Organization (WTO) member jurisdictions were allowed to use the GATS provisions related to the market access towards public telecommunication services. But it failed to cover the basic telecom services[12]. In 1997, almost sixty nine WTO member nations signed on an agreement liberalizing trade in basic telecom services named as the Fourth Protocol to GATS.[13]

With the burst of regulatory changes and development around the world in the telecommunication industry, the change was headed for a Global Information society, thus the concept changing from telecommunication to wider term ICT[14]. It may be stated that ICT is *"the product of services that are limited to those industries that facilitate, by electronic means, the processing, transmission and display of information. The definition excludes the industries which create the information, the so-called 'content' industries."*[15]

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[10] R. H. Bork, *The Antitrust Paradox* (Toronto: Maxwell Macmillan, 1993), 427.

[11] General Agreements on Trade in Services

[12] Stephen Le Goueff, ed., *Satellite Regulation in Europe: Legal Texts and Materials* (Hague: Kluwer Law International, 2001), 651.

[13] Agreement on Telecommunications Services (Fourth Protocol to the General Agreement on Trade in Services), Feb. 15, 1997, 36 I.L.M. 354 (1997). See also on <http://www.wto.org/english/tratop_E/serv_e/4prote_e.htm> (Last accessed on November 20th, 2010).

[14] Leslie Haddon, *Information Communication and Technologies in Everyday Life*, (London: Berg Publishers, 2004), 3.

[15] OECD, Working Party on Indicators for the Information Society: Guide to Measuring the Information Society, DSTI/ICCP/IIS(2005)6/FINAL, at 101. See also on < www.oecd.org/dataoecd/41/12/36177203.pdf > (Last accessed on December 3rd, 2010).

The rationale behind the late access to ICT(s) by developing countries is the lazy process of liberalization, the developing countries already gained their destination that created the digital divide between them and developed nations. With the passage of time access to ICTs became a pre-requisite for every country for having an informed society. The last few decades brought institutional changes in the regulatory regimes of every country bringing telecom sector under the auspices of ICTs. The Geneva Plan of Actions [16](GPA) and the Tunis Agenda for the Information society[17] discussed the importance of reliable statistical information for tracking of digital divide.

In order to fill the gap of digital divide between the countries, the ICT regimes and frameworks require to be laid down observing in sight the local and national concerns of each country.[18] This plan needs a complete consideration of the regulatory regimes, legislations and previous drawbacks so that a best approach could be designed for future. This could be done through indicators, which are gained through various resources.

The strong and effective ICT regimes (e-strategies) and regulatory agenda is required in order to narrow down the digital divide as well as for getting benefits of communication technologies. Pakistan needs an effective ICT regulatory framework in order to obtain the advantage of information communication technology. The paper will focus on critical

[16] See Plan of Action, "World Summit on the Information Society", Geneva 2003 <http://www.itu.int/wsis/docs/geneva/official/poa.html > (Last accessed on April 3rd, 2011)

[17] See Tunis Agenda For The Information Society http://www.itu.int/wsis/documents/doc_multi.asp?lang=en&id=2266|2267 (Last accessed on 21st April 2011)

[18] ITU, World Information Society Report, (Geneva, July 2006) at 12. <http://www.ifap.ru/library/book084.pdf > (Last accessed on April 3rd, 2011)

description of telecom industry in Pakistan including regulatory framework, legislation regarding regulatory regime, ICT indicators of Pakistan.

1.3 COMMUNICATION OF INFORMATION AND TECHNOLOGY

1.3.1 Communication of information through technology

Communication develops the connection between human beings, through which we share our feelings and thoughts with each other. In the past the telecommunication was only possible through wire. Now any type of data can be sent and received by wire or wireless means. Traditionally, the main barriers in the development of information and communication were the distance and large amount of data. But with the development in telecom field, now time and distance is no more a problem. Next Generation Networks (NGN) are diverse and multitalented. A large segment of people can enjoy high-speed communication anywhere and at anytime.

Circuit switching[19] is ideal. The transmitted traffic is exactly in same order in which the traffic was sent, such as live audio and video. It transmits traffic quickly in order in which it is sent. This is the case with most real-time data, such voice communications and

[19] It is a network based on connection because any physical distortion or network problem would drop the call. A new call is then needed to being initiated and a new circuit is provisioned then.

live audio and video. Packet switching[20] is proficient for data. It can resist some delays in communication like in internet blog pages and e-texting.

1.3.2 Categorization by nature of Information

There are three types of information data, voice and video. Communication of data is a digital flow of information. Voice communication is used to describe the communication through telephone. Video communications comprise transmissions in one way through CATV and video conferencing is possible through two way transmissions. Communications have developed from dedicated data/voice/video networks to converged networks for data/voice/video[21]. Traditionally, data communication was analog in text and numeric data however with the developments in the telecommunication technologies, any type of information that is digital in the format of 0s and 1s is measured as data. Internet and new technologies have dominated the telephony and now proceeding towards converged communications networks.

1.3.3. Form of Information

Data, voice and video need particular communication system necessities. These types of information requires continuous transfer rate. These traditional networks have been alienated from the modern networks because of the considerable differences in characteristics of

[20] It is a network having no connection. In it the message is divided into smaller portion of data also referred as packet which transmits data to the sender and receiver. These packets flow on different paths and join together at the end.

[21] Anu A. Gokhale, *Introduction to telecommunications*, (New York: Thomson Delmar Learning, 2005), 23.

traffic. Now, networks have modernized; for example, the PSTN[22] works for carrying voice now it carries data too. The packet-based infrastructure now carries all types of information. The existing telecommunication network evolves to match the paradigm shift from a voice network to a data-centric one to a data/voice/video converged network. Integrate communication includes information building blocks necessary for doing business in the 21st century: voice, data, video, and internet access.

The whole thesis is separated into four chapters. Chapter 1 introduces the basic concept of ICT terms. Chapter 2 provides a detailed historical overview of telecommunication and broadcasting regulations in Pakistan. It also throws light on the mobile and wireless communications followed by mobile content and mobile TV in Pakistan. It is tried that in a valuable and easiest way the technology should be introduced so that a layman can also get some idea about mobile TV technologies. Some jurisdictions from around the world have regulated the mobile 2.0 Content under information service, while others classify it as a broadcasting service. The mobile standards recommended by ITU are also mentioned in this chapter.

Chapter 3 provides a detailed overview of freedom of expression under the Constitution of 1973, Islamic law as well as the International Standards and Treaties. How the mobile content should be regulated is also mentioned in this chapter.

[22] Jonathan Davidson, Brian Gracely and James Peters, "Overview of the PSTN and Comparisons to VOIP", Available at< http://www.ciscopress.com/articles/article.asp?p=336863> (Last Accessed on December 12th, 2011).

Chapter 4 is about providing an enabling environment for telecommunication and broadcasting regulatory regime in Pakistan. The chapter also describes the licensing procedure and challenges for regulators.

At the end the conclusion and recommendations are presented.

CHAPTER-2

HISTORICAL OVERVIEW OF TELECOMMUNICATIONS, BROADCASTING AND TECHNOLOGY LAW

2. HISTORY OF TELECOMMUNICATION LAWS IN PAKISTAN:

The history of telecommunication goes back to1876 when Graham Bell of USA invented the world's most useful device called the "telephone"[23]. The journey of transmission have started from heavy fixed line phones and driven to light weight and smart wireless mobile sets marvellous.

The Lord Mountbatten announced the 3rd June 1947 Plan and the British Parliament promulgated the Indian Independence Act, 1947 as a result Pakistan was declared as an independent state. The Section 18(3) of 1947 Act made it clear that the Laws of British India were followed until the sovereign state make his own laws. According to Section 9(1) of the 1947 Act, Mountbatten of Burma issued "The Pakistan (Adaptation of Existing Pakistan Laws) Order dated 14th August 1947" (G.G.O. No. 20 of 1947) (the "Order").

Section 3 of the 1947 Order read as *"As from the appointed day, all existing Pakistan Laws shall, until repealed or altered or amended by a competent legislature or other competent authority, in their application to Pakistan and any part or parts thereof, be subject to the adaptation to Pakistan and any part or parts thereof, be subject to the*

[23] A. Micheal Noll, *Introduction to Telephones and Telephones Systems* (Boston: Artech House, 1998), 2.

adaptation directed in this Order". Till the enactment of new laws in Pakistan, the state was running on the inherited legislative instruments with little amendments.

The first legislation which thoroughly dealt with telecommunication in Indian sub-continent was Telegraph Act, 1885[24]. This was supplemented by Wireless Telegraphy Act, 1933[25]. Pakistan adopted both of these legislations.

Pakistan is one of those countries who in order to develop the technology, has promulgated legislations for telecommunication sector and like other developed countries adopted philology of privatization rather than controlled by the state. Pakistan Telecommunication Company Limited (PTCL) predecessor of Telephone and Telegraph (T&T) Department and subsequently Pakistan Telecommunication Corporation (PTC) have been emerged through this process. In late 1990's the begging of privatization process in the telecom industry was started. Subsequently, legislature passed a Pakistan Telecommunication Corporation Act, 1991 and converted Telegraph & Telephone (T&T) into Pakistan Telecommunication Corporation. To carry out the process further, PTA Act was passed which apart from establishing the Pakistan Telecommunication Authority (an independent regulatory body) also converted PTC into PTCL, a limited company working on commercial basis, and Special Communication Organization, National Telecommunication Corporation, Frequency Allocation Board, and Pakistan Telecommunication Employees Trust.

[24] A. Mahmood, *The Telegraph Act* (Lahore, Pakistan: Mansoor Book House), 1.
[25] Gazette of India, 1933, Part V, S. 3 of the Wireless Telegraphy Act, XVII of 1933.

In Pakistan the decade of 1990 was the period of success, development and liberalization for the telecommunication sector. The major change was the establishment of deregulation and privatization policies. The reason was to lessen the burden on the government departments and to improve the quality of work. The Pakistan Telecommunication Corporation Act, 1991 (Act XVIII of 1991) was enacted; the major breakthrough was the establishment of separate legal entity named "Pakistan Telecommunication Corporation (PTC)"[26]. It had taken away the assets and liabilities of the working departments. In process of the liberalization policy of the government regarding telecommunication, the private sector was given preference. The private sector introduced card payphone and calling card services.

Although at that time there was no regulator working but the PTC had some attributes of regulator. The PTC was empowered to handle the quality service, and to oversee the development, research, and fixation of tariff, services related telegraph telex, tele fax and data transmission and maintenance of liaison with member states of International Telecommunication Union.

The international communication was improving side by side with inland telephone services. The foreign communication of PTC has a network of satellite earth stations, submarine cable system, coastal radio systems and terrestrial systems.

[26] Act No. XVIII of 1991.

In order to welcome the Private sector and to increase the liberalization of telecommunication setup the Presidential ordinance was passed named "Telecommunication Ordinance, 1994 (Ordinance LI of 1994)".

2.1 PAKISTAN TELECOMMUNICATIONS (RE-ORGANIZATION) ACT, 1996

The Ordinance of 1994 made a change in the telecommunication laws, as a result the Telegraph Act and some sections of Pakistan Telecommunication Corporation Act, 1991 was repealed. According to Article 89, the Ordinance of 1994 was expired after four months, after its constitutional death it was given life through Presidential Ordinance No. LXXVII of 1994. It continued till the Parliament approved it. These Presidential Ordinances include the following ordinance(s) bearing numbers.

- XXIII of 1995 approved on 7th March 1995
- LXIII of 1995 on 5th July 1995
- CIII of 1995 on 30th October 1995
- Pakistan Telecommunication (Re-Organization) Ordiance1995 (CXV of 1995) on 27th November 1995.

However, in order to meet the following broad objectives to be achieved as a result of restructuring of the telecommunication sector of the country at last the Pakistan

Telecommunication (Re-organization) Act 1996 was promulgated on 17th October 1996. The salient features include[27] -

1. To advance speedy progress, upgrading and development of telecommunication industry;
2. Attain perfection in performance, facilities and operational competence of the telecommunication services;
3. To privatize the PTC(now PTCL) in order to bring the private sector efficiencies under its control;
4. Promote the Private entities in the telecommunication industry;
5. Assist new ventures and provide competition in telecom, sector by framing best legal and regulatory regime;
6. Growth of services.

I. Salient features of the PTA Act, 1996:

PTA Act of 1996 has following features[28]

- Establishment of the following institutions, organizations, bodies:

  - The Pakistan Telecommunication Authority (PTA) – to regulate the telecommunication sector, and[29];

[27] "The Pakistan Telecommunication (Re-organization) Act, 2006", <http://www.pta.gov.pk/media/pta_act_140508.pdf>, (Last Accessed July 27th , 2010).
[28] Bilal Sarwari, "Telecommunications Laws in Pakistan <http://www.pakistanlaw.net/law-articles/telecom-law/telecommunication-laws-in-pakistan/> (Last accessed on April 3rd,2011)
[29] See section 3 of Pakistan Telecommunication (Re-Organization) Act, 1996.

- Frequency Allocation Board – to manage the radio frequency spectrum

- Two network operating entities were also created, namely:

  - PTCL (Pakistan Telecommunication Company Limited), and;
  - NTC (National Telecommunication Corporation)

- Privatization of telecommunication sector to private sector;
- Issuance of policy directives by the Federal Government i.e., Ministry of Information Technology;
- Grant and Renewal of Licenses

II. Pakistan Telecommunication Company Limited

Section 34 of the Pakistan Telecommunication (Re-organization) Act, 1996 (the "PTA Act") established the Pakistan Telecommunication Company Limited. Initially the shares of PTCL were issued in the name of the President of Pakistan. But the policy has changed PTCL framework by selling off 26% of its equity to a strategic investor and transfer of management control which are now owned by Etisilat in 2006.

III. The Pakistan Telecommunication Authority

The establishment of PTA as a regulator was the first experience for Pakistan in the telecom sector. It was responsible for regulating the private sector including mobile networks working and internet service providers in the Pakistan. It also issued licenses to the private sector in telecommunication business.

Functions of PTA

The main functions of PTA are[30]:

a. Regulation and establishment of telecom industry in Pakistan

b. Receiving of applications for the purpose of radio-spectrum;

c. Promotion and protection of telecom consumers;

d. Promoting wide range of high quality services and competition among telecom services in Pakistan;

e. Modernizing telecom services and industry;

f. Investigation of complaints filed by consumer and service providers;

g. Regulating competition and protection of telecom consumer interest;

h. Regulating Access Promotion Contribution;

i. Making of recommendations to the Federal government regarding policy matters and providing service at international level.

IV. National Telecommunication Corporation

NTC is mandated to provide telecommunication services and establish telecommunication system for government departments and armed forces. It was established as a body corporate

[30] Section 4 of the Pakistan Telecommunication (Re-organization) Act, 1996 (XXX of 1996) (7th March, 1996, No. F. 2(1)/96 pub.)

under the section 41 of the PTA Act[31]. NTC do not have authority to sell its capacity on the telecom services to any person other than Government entities,

V. Frequency Allocation Board

Under section 42 (3) of the PTA Act, the Frequency Allocation Board (FAB) is an exclusive authority to allocate and assign portions of the radio frequency spectrum to the Government, providers of telecommunication services and telecommunication systems, radio and television broadcasting operations, public and private wireless operators and others. The FAB has taken over the functions of Pakistan Wireless Board.

This may, however is important to mention here that Pakistan has already became the signatory to the WTO Agreement on Telecommunications and filled its commitments pursuant to that.[32]

2.2 LEGAL INSTRUMENTS OF TELECOMMUNICATION

PTA Act provides a broad regulatory regime including functions and powers of the Authority. This Act only covers the telecommunication system and services. However, it would be pertinent to mention here that before emergence of the Pakistan Electronic Media Regulatory Authority (PEMRA), PTA issued cable TV licenses; however, after

[31] Section 41 (3) of PTA Act makes it clear that the license shall be granted to NTC by the Authority for provision of telecom services within Pakistan. The armed forces, Federal and Provincial Government shall get the license on non-exclusive basis. And according to section 39, NTC shall not sell its competence on the telecom services to any other person except those specified in section 41(3).

[32] Macro C.E.J. *Bronckers, Trade and competition Interlink ages: the case of Telecom* (Venice: Fondazione Eni enrico Mattei,1998), 98.

promulgation of PEMRA it has stopped to issue the same. Though the PTA Act is too old yet it has capability to meet the challenges of the new technology innovation hence, it would not be wrong to state that this legislation is not specific to any specific technology like legacy network but it can be called a technology neutral legislation. The current / existing telecom regime is an example to confirm the same as stated above.

In addition to the said primary legislation, the legislature through legislation has delegated power to further legislate secondary legislations in order to meet the requirement of the function and powers of the authority. Not only powers to make regulations, to be issued by the Authority, have been given but power to make rules, to be framed by Federal Government, have been entrusted to Federal Government. In light of the aforementioned, it would be safe to state that there are three legislative instruments i.e., PTA Act (primary legislations), Rules (secondary laws- to be enforced by the Federal Government) and Regulations (delegated laws issued by the Authority established under section 3 of PTA Act).

I. The Rules Framed Under Section 57 of PTA Act.

Federal Government under section 57 of the PTA Act as issued four rules namely the Pakistan Telecommunication Rules, 2000[33], the Access Promotion Rules, 2004[34], the Universal Service Fund Rules, 2006[35] and the Research and Development Rules, 2006[36].

[33] The rules are about issuing of licensing, time duration, modification, transfer and transmission. The rules also contain procedures of interconnection, its agreement and terms and condition and dispute settlement procedure. Purpose of these rules is to prescribe procedures for grant of license, procedure for monitoring, compliance,

II. Regulations Issued By the Pakistan Telecommunication Authority

PTA under the PTA Act for performance of its function and exercised of its powers conferred upon it under section 4 of section 5 in general has promulgated various regulations which *inter alia,* include the Access Promotion Contribution Regulations, 2005, the Accounting Separation Regulations, 2007, the Class Licensing and Registration Regulations,

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enforcement and early termination, determination of significant market power, interconnection agreement and resolution of disputes, tariff related matters, appeals etc. In addition, some specimens of application form and general terms and conditions of the licensees are attached.

[34] The idea of Access Promotion Contribution (APC) was introduced by clause 4.3 of deregulation policy. These rules contain areas related to approval of accounting rates, international telephony services agreement, APC contribution and APC for universal services funds and most importantly the provision of information i.e., reporting requirements (see rule 12) by LDI operators, LL and Mobile operators for the purpose of reconciliation.

[35] These rules deal with the mechanics of possession, management and operations of USF. It also provide for constitution of USF, creation of a company limited by guarantee and the other matters of the board. It also envisages monitoring and enforcement of fund for different projects of telecommunication services. Overview of USF rules is as under:

- As provided under section 4(e) of PTA Act, the Federal Government introduced the concept of Universal Services Fund to enhance the accessibility of wide range of high quality, competent, effective and facilitative telecommunication services within Pakistan. Objective of this fund is to expand the basic services including access to the internet, individually as well as collectively. This fund would be used for the provisioning of telecommunication service, telecommunication systems or electronic services in un-served and under-served areas of Pakistan.
- Every licensee having a license containing provision regarding USF shall contribute 1.5% from the date of grant of license.

[36] The Information and Communication Technology Research and Development Fund Administration Rules were promulgated in 2006. It provides for constitution of a company that deals with the functions of board, dispute settlement mechanism and other key areas. In accordance with rule 57 (2)(ab) read with section 33C of PTA Act the Federal Government issued rules for administration of Research and Development funds. The objective of this fund is to enhance the national information communication technologies (ICT) related to human resources, enhance knowledge and delivery of ICT bases, to promote the progress of comparative benefit in the ICT enhance quality of life for citizen. The purpose and focus of the fund is the allocation of funds to the every town and city in ICT industry of Pakistan. Licensees having the condition for R&D are obliged to deposit 1% of the gross revenue from the licensed services in the funds to be utilized as per procedure and objective given above. Rules prescribe procedures as to how this fund will be administered, control and mange by the Federal Government.

2007[37], the Telecom Consumer Protection Regulations, 2009[38], Fixed line Tariff Regulations, 2004,

Interconnection Disputes Resolutions Regulations, 2004, Number Allocation & Administration Regulations, 2005, Mobile Number Portability Regulations, 2005 Monitoring and Reconciliation of Telephony Traffic Regulations, 2010, Pakistan Telecommunication Authority (Functions & Powers) Regulations, 2006, the Type Approval Regulations, 2004[39], Protection from Health Related Effects of Radio Base Station Antennas Regulations, 2008 and _Protection from Spam, Unsolicited, Fraudulent and Obnoxious Communication Regulations, 2009.

[37] Pursuant to clause 7.1 of the Broadband policy class licensing regime was established and the Authority categorized and issued licenses for voice and data services accordingly. In accordance with clause 13 of the Deregulation policy, licensees providing ISPs, and EISs phased out after the expiry of their current period of validity and converted into class licensing. In order to regulate the value added services under the Broadband policy the Authority promulgated "Class Licensing and Registration Regulations, 2007.These regulations provide licenses for voice, data registration of some services like voice mail, SMS aggregator, video conferencing, content services provider.

[38] In exercise of functions given under section 4(1)(c) and (m) of PTA Act, the Authority in order to safeguard the telecom consumer rights in Pakistan issued consumer protection regulations, 2009. In these regulations matters related to telecomm consumer i.e., tariff, suspension, termination of telecommunication services, code of commercial practice, procedure for consumer complaints with the licensee or with the Authority is given. It is compulsory for the operators to publish the manual for consumer that contains customer service helpline, Conditions and requirements for new connection, tariff rates and complaint procedure.

[39] The Authority is empowered to determine and type approved telecommunication equipment[39] other than terminal equipment import and utilize in Pakistan. It gives approval of those telecommunication equipments which are imported and required to be used for specific purpose like satellite etc. Licensees having a license to establish maintain and provide telecommunication services can import telecommunication equipment without obtaining any new type approval certificate or license required under these regulations.

III. Policies

In addition, under section8 of PTA Act, Federal Government has been mandated to issue policy directive on telecommunication system and services including terms of the licensee not inconsistent with the provision of PTA Act. Till to date various policy directives have been issued, however, main policies dealing with fixed, mobile and broadband related matters are Deregulation police-2003, Cellular Mobile policy-2004 and Broadband Policy-2004.

a. Fixed line policy (Deregulation Policy)

- Federal Government on 13th July, 2003 issued Deregulation Policy for the fixed line telephony. Under this policy following two categories of licensees were awarded:

  a. Long Distance International (US.$.500,000)

  b. Local Loop (fixed and wireless) (US.$.10,000)

- According to the policy, fixed line telephony licensees were allowed to provide telecommunication services through wireless media[40] and accordingly spectrum was auction and allocated to local loop operators.

- Local Loop licensees are allowed to provide telecommunication services with the Pakistan Telecommunication Company Limited regions.

[40] See clause 4.4. of the Deregulation Policy 2003

- The policy was technology neutral and Local Loop operators were allowed to deploy any technology for provision of international and local licensed telephony services in Pakistan.

b. Mobile Policy-2004

In 2004, the Federal Government issued cellular mobile policy. Pursuant to that policy two licensees (Warid & Telenor) were issued with auctioned price of U.S.$291M.

c. Broadband Policy-2004

- For having high speed internet services, growth of new service providers and encouragement of private sector investment this policy was issued on 22nd December, 2004 by the Federal Government.

Under this policy Class Licensing regime was introduced and accordingly Class Licensing and Registration Regulations, 2007 were promulgated. Class licensing regime unified all value added service into two categories i.e., voice and data and registration.

2.3 ELECTRONIC MEDIA WITH RESPECT TO BROADCASTING

The medium of communication that are based on electronic or electromechanical means of production/transmission is called an electronic media. The primary and known resources of electronic media for communication or transmission of intelligence include radio, television,

sound and video recording and streaming content over the internet. In other word broadcast media means "such media which originate and propagate broadcast and prerecorded signals by terrestrial means or through satellite for radio or television and include teleporting, provision of access to broadcast signals by channel providers,..."[41]

The 20th century has brought revolution in the communication industry. Motion pictures were first seen in the start of this century. In 1920 proper radio broadcasting was started. Television arrived on scene in 1940's. Cable TV was started in 1950 followed by satellite TV in 1970's. The internet was first accessed in 1980's. In 1990's[42] the term World Wide Web was arrived on scene[43].

2.4. LAW OF ELECTRONIC MEDIA WITH REFERENCE TO BROADCASTING IN PAKISTAN

The television started working in Pakistan in 1964[44]. Pakistan Television was introduced as the sole channel in Pakistan providing few hours entertainment. PTV was completely controlled by the state and still remains a corporation of State where Board of Governors appointed by the State controls and regulates it. At that time there was no specific law provided by the Government of Pakistan. PTV was a joint stock company. With the passage

[41] Section 2(c) of Pakistan Electronic Media Regulatory Authority Ordiance-2002 As amended by the PEMRA(Amendment) Act, 2007.
[42] Josepha Sherman, *The History of the Internet* (Canada: Franklin Watts, 2003), 31.
[43] Art Wolinsky, *The History of Internet and World Wide Web* (New Jersey: Enslow Publisher, 1999), 38. Available at <http://books.google.com.pk/books?id=YZfgAAAAMAAJ&q=www#search_anchor >
[44] See Electronic Media on <http://www.scribd.com/doc/23965204/What-is-Electronic-Media-2-Background-of-Electronic-Me# > (Last accessed on October 9th, 2011).

of time private channels were introduced. But the Media Regulatory Authority Ordinance, 1997 stopped the continuation of private monopolies in electronic media.

Shaheen Pay Pal Television was the first wireless cable TV[45]. The immense and speedy changes in communication technology also brought a positive and progressive change in the electronic media sector in Pakistan, when in 2002 electronic media ordinance was promulgated. Under the said ordinance a regulatory authority was made to control the affairs of private and public channels.

I. Pakistan Electronic Media Regulatory Authority Ordinance 2002

Salient features of the Pakistan Electronic Media Regulations Authority Ordinance, 2002 (the "PEMRA Ordinance")[46] are as under:

- Section 3 of the PEMRA Ordinance forms the Pakistan Electronic Media Regulatory Authority (PEMRA).
- Issuance of policy directives by the Federal Government i.e., Ministry of Information and Broadcasting;
- Section 29 gives the power to the PEMRA's officers to enter the premises of licensee for the purpose of inspection;
- Grant and Renewal of Licenses; and

[45] *Ibid.*

[46] Pakistan Electronic Media Regulatory Authority Ordinance-2002(As amended by the PEMRA (Amendment) Act, 2007" <http://www.pemra.gov.pk/pemra/images/docs/legislation/Ordinance_2002.pdf > (Last accessed on April 3rd, 2011).

- Establishment of Council of Complaints.

a. Functions of PEMRA

According to section 4 of the PEMRA Ordinance the Authority has the following functions.

- PEMRA is responsible for regulating the establishment and operation of all electronic media in Pakistan.
- PEMRA was given the authority to issue licenses to the private channels for broadcasting media through radio, satellite TV and distribution stations at local and international level.

II. PEMRA Rules 2009

The PEMRA Rules, 2009[47] by PEMRA in implementation of the control conferred by sub-section (1) of Section (39) of the PEMRA Ordinance.

The rules contain the following features:-

- Section 2(q) provides the definition of mobile TV that means wireless distribution of TV signals to a mobile portable device using any supportive technology;
- Section 3 provides the procedure of meeting of the PEMRA;
- The rules also describe the categories of licenses;
- Section 7 defines the criteria for evaluating license application;
- Section 9 provides to whom the licenses may be granted; and

[47] "Pemra Rules 2009" http://www.pemra.gov.pk/pemra/images/docs/legislation/PEMRA_Rules_2009.pdf

- According to section 15 programs and advertisement content to be broadcasted shall obey the rules of the license.

III. PEMRA (TV/Radio Broadcast Operations) Regulations, 2002.

The main features of the said regulations are as under:

- Section 3 to 16 provides the licensing criteria for media broadcasting regulations;
- Section 17 establishes the council of complaints; and
- Section 22 describes the offences and penalties.

2.5. MOBILE COMMUNICATION

The innovative mobile technologies and wireless industry has brought massive change in the ICT structure. Mobile technologies have enabled the mobile user to use the latest ICT services with mobility and flexibility. The voice telephony has motivated the mobile technologies but the whole range of converged services, wireless standards and new generation mobile technologies have no doubt paved way for success and development in the telecom sector. The emerged mobile technologies have influenced the telecom regulations at all different levels. The main regulatory issues with reference to this technology are Licensing and Frequency Management of mobile services[48]. The other issues related to interconnection and tariff regulation, pricing and numbering play a key role in developing an innovative market. Starting from 1990, when mobile phone was an occasional service carried

[48] John Buckley, *Telecommunications Regulations* (London: The Institute of Engineering and Technology, 2003), 47.

through expensive handset used by high class businesses and now in 2010 it has become a necessary part of an individual's life based on low cast but smart handsets. In many countries the mobile phone has crossed the number of fixed line telephones. This technological change has taken almost two decades to make the mobile services available to each and every nook of the world. The 1940's decade reminds the mobile communication with radio phones[49]. The analog technology has been used in radio phones since 1940s till 1980. The jump from analog to digital technology proved to be progressive in the telecom services because of the low establishment cost, rapid use and cheap terminals of mobile networks having digital technology. The digital mobile phone has become available everywhere because of the "interoperability" of mobile handsets across different networks[50]. The acceptance of GSM standard by operators has made it possible to a large extent. The GSM standard was developed for Europe. It was the sole standard of All European nations and some Asians countries. Japan and South Korea used CDMA as their sole standard. Whereas the USA have been using both the standards. The mobile connectivity has increased enormously. Once it was the situation when the consumers have to wait along for the installation of wired set by telephone company. In 1990 the mobile phone has brought revolution in the communication paradigm. Mobile phone had enabled the people living in remote areas to communicate with each other. With the passage of time great developments have been seen in the device technology. Law of Moore associated with the first wave of technology brought innovative

[49] Cannon, Don L, and Gerald Luecki, *Understanding Communications* (Dallas: Texas Instruments, 1980), 35.
[50] Yu-Kwong Ricky Kwok and Vincent K.N.Lau, *Wireless Internet and Mobile Computing: Interoperability and Performance* (New Jersey: John Wiley & Sons, Inc, 2007), 113.

progress in the computing and processing abilities of smart tools[51]. Now information, data, music, video and much more can be saved on small portable devices. Today one can enjoy MP3 and MP4 music, handle MPEG4 tasks, use internet and watch TV on smart mobile sets.

2.5.1. Mobile Standards

I. First Generation (1 G)

This standard works through analogue technology. The telecom market was fragmented at that time because many other standards were also designed in different jurisdictions[52]. The first generation Nordic Mobile Telephone standard was designed specially by Ericsson and Nokia to examine the strong topography that typifies the Nordic Countries. Some other standards are as follows

a. AMPS:

In 1970 the Bell Labs designed the Advanced Mobile Phone System. The United Sates brought it in market in 1983[53]. It is the most widely distributed analog cellular standard[54].

b. TACS:

Total Access Communication System was developed by Motorola and is quite alike to AMPS. The United Kingdom commercially used it in 1985.

[51] Paul E. Ceruzzi, "Moore's Law and Technological Determinism: Reflections on the History of Technology", *Technology and Culture* 46, no. 3 (July 2005):584-93 <http://muse.jhu.edu/login?uri=/journals/technology_and_culture/v046/46.3ceruzzi.html> (Last accessed on April 3rd, 2011)

[52] J. Martin, *Future Developments in Telecommunications* (New Jersey: Prenctice- Hall, 1977), 76.

[53] A. Micheal Noll, *Introduction to Telephones and Telephones Systems* (Boston: Artech House, 1998), 226.

[54] Christoffer Andersson, *GPRS and 3G Wireless Applications* (Canada: John Willey & Sons, 2001), 18

c. NTT:

Nippon Telegraph and Telephone is quite an old analog standard of Japan.

d. C-Netz:

This old technology was mainly used in Austria and Germany. "Automobile telephone" was a first commercial 1G standard introduced by NTT Public Corporation in 1979 by Japan[55]. Soon the new device designed called 'shoulder phone' that was detached from automobiles. Today the analog system is not in use because the paradigm shifted to digital technology because of the fragmented telecom market and problem for more optimal utilization of frequency resources.

II. Second Generation (2G)

The 2G standard was a digital standard. "Digital technology utilizes the transmission resources in an efficient way, both due to advances in digital modulation technologies[56]." 2G standards have the advantage of facing less fragmented market because the Europe has decided to use a common mobile standard for a common mobile market. Some standards are as follows;

a. CDMA:

Code Division Multiple Access: IS-95: it a method of accessing the channel. It is different from the third Generation technologies like WCDMA. The Qualcomm has designed this technology[57], employing spread spectrum technology and a special coding scheme.

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[55] Mobile Telephone History, Available on <http://www.privateline.com/PCS/history9.htm> (Last accessed December 10th, 2011).
[56] Andrea Goldsmith, *Wireless Communications* (Oxford: Oxford University Press, 2005), 10.
[57] Jochen Schiler, *Mobile Communications* (London: Pearson Education Ltd, 2000), 7.

b. TDMA:

Time division Multiple Access: it was the first digital technology used in USA[58].

c. PDC:

Personal Digital Cellular is a Japanese technology based on TDMA.

d. PHS:

Personal Handy System is a Japanese-centric system that offers high speed data services and good voice clarity.

e. GSM:

Global System for Mobile Communication[59] is the first European digital standard, developed to establish cellular compatibility throughout Europe. Its success has spread to all parts of the world and now more than 80 GSM networks are now operational[60]. It is fully digital with advanced features. Each mobile has intelligence within the phone, using a smart card[61].

III. Development of 2G (2.5 G)

The technological developments have been introduced in 2G and 2.5G to increase the bandwidth of mobile networks. This technology is associated with (GPRS) and EDGE. It lasts between 2nd and 3rd technology. It supports WAP, MMS, SMS, mobile games and search service.

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[58] Ibid.
[59] T.S.Rapport, *Wireless Communications: Principles and Practice*, (New Jersey: Prentice Hall 2002), 22.
[60] Andrea Goldsmith, *Wireless Communications* (Oxford: Oxford University Press, 2005), 10.
[61] Christoffer Andersson, *GPRS and 3G Wireless Applications* (Canada: John Willey & sons, 2001), 18.

a. EDGE:

Enhanced Data GSM Environment[62] increases the speed of transmission on GSM. EDGE enables the mobile operators to deliver multimedia and broadband applications to mobile sets.

b. GPRS

General Packet Radio Services is a radio technology based on GSM. It adds packet switching protocols[63]. Data communication and high speed internet can be enjoyed through GPRS on mobile phone. SMS, MMS, email, games and WAP applications are other examples.

IV. Third Generation (3G)

2G network does not have the ability to cope with the rapid developments in communication services. 3G technology meets universal success goal in communication services[64]. Present 2G or all digital wireless cellular radio systems will evolve to higher bandwidth systems that provide faster downloads. The emphasis on voice will change to a parity with data. These 3G systems will rely on packet switching, not the circuit switching that most of cellular used today[65].

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[62] In 2010 the Pakistan Telecommunication Authority has promulgated GPRS/EDGE Quality of Services Regulations.
[63] Mobile Telephone History, Available on< http://www.privateline.com/PCS/history11.htm >
[64] Christoffer Andersson, *GPRS and 3G Wireless Applications* (Canada: John Willey & sons, 2001), 65.
[65] Paul Golding, *Next Generation Wireless Applications* (New York: John Willey & Sons, 2004), 11.

a. Code Division Multiple Access (CDMA)

CDMA is a wireless technology that is used to spread a radio signal to a wide range of frequencies. CDMA used a spread spectrum technique for this purpose. It is basically a 2G technology. WCDMA is 3G technology that is based on CDMA[66].

b. Wideband Code Division Multiple Access (WCDMA)

It is also known as UMTS in Europe. It is 3G technology for GSM network in Europe, USA and Japan. The basic quality of this standard is that it supports high speed multimedia services like full motion video, TV, internet and video conferencing.

c. TD-CDMA

Time Division-Code Division Multiple Access. UTRA TDD operates in the unpaired spectrum.

2.6. WHAT IS MOBILE CONTENT?

A great technological development has been seen in the mobile industry during past few years. It is a surprised change for the mobile population that enjoys from access to digital content in an unwired, mobile milieu. Recent advances in technology have diverted the

[66] ibid

attention of mobile users towards a new innovative service called the mobile content[67]. The stout market for ringtones, music snippets used on mobile sets and TV broadcasting alarmed the telecom and media industry that the mobile market is ready to adopt the 'digital content'. The problem that is related with the service is *who will regulate the content service in the form of intelligence transmitted through telecom media?* In order to know the answer it is necessary to know about the mobile content services. The paper will present an overview of the mobile content and its usage around the globe and especially in Pakistan with the special focus on its regulation and emergence and its effect on freedom of expression.

Mobile Content is a popular type of media which is utilised on mobile phones and include ringtones, games, movies, TV and GPS navigation. The significance of mobile phone in everyday life has increased in the mid 1990's. The mobile phone user can now enjoy different type of innovative activities such as to make calendar notes, entertain from music, watch and shoot videos, upload on the internet social networks, and most interesting thing is watching TV over a mobile phone.

Through the modern technology, the mobile content can have access to the multimedia hosted on websites that can be either specific mobile pages or other internet pages.

I. Transmission

The main technology used in mobile phones for communication is SMS which help the consumers to send and receive messages in the form of data. In other words it is most simple

[67] Aaron Marcus and Anxo Cereijo Roibas, eds., *Mobile TV: Customizing Content and Expereience: Mobile Strorytelling, Creation and Sharing* (London:Springer, 2010),99 . <http://www.springerlink.com/content/978-1-84882-700-4#section=617629&page=2&locus=87 > (Accessed on 3rd April 2011).

content that is also used for sending and receiving ringtones and wallpapers. Because it is the main and important communication technology content that is most popular among youngsters. It is ubiquitous because it reaches a great number of receivers as compare to other technologies like MMS, Bluetooth, and WAP and email service available in cellular phone. The SMS senders are increasing day by day because of the easy usage of SMS.

II. Types of content

a. Games

Mobile games are the type of content through which people play games on cellular phone. This content is also quite popular among users. Many mobile handsets offer this service[68].

b. Images

Another type of content that is mobile images is used as wallpapers and screensavers. Some mobile phones provide the facility of display images of the particular person calling. Some sites allow the users download free content[69].

c. Music

Mobile music is an entertaining content in the form of audio file. It is formatted as Advanced Audio Coding (AAC) file or MP3 format. With the passage of time Monographic ringtones are replaced by polyphonic ringtones that allow the user to play several tones at a time. There are many other technologies like Real tones, Sing tones, Cover tones, Voice tones.

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[68] Africa's Mobile Content Conference & Awards 2012: Building a mobile Eco System, <http://www.huetzmobile.com/images/Africa_Mobile_Content_Conference_and_Awards_2012.pdf > (Last accessed on April 3rd, 2011)

[69] ibid

The other things include downloads of full tracks and albums that allow users to play the full album on mobile phone.

d. Video

This content comes in several formats like MP4, MPEG and Flash players.

e. Mobishows and Cellsodes

These are the terms used to describe a broadcast program which is specially produces, edited and encoded for mobile handsets. The short videos and mini clips, celebrity updates, movie trailers are included in it. The Ashes and Mr. Paparazzi are the two hit shows created for mobile users viewing[70].

II. STREAMING

a. Radio

With the growth of modern technology now radio can be streamed over mobile phone that allows users to enjoy live radio and audio channels. USA has provided the world with first company named mSpot who developed and commercialized streaming radio over mobile handsets on Sprint in 2005. Today many countries adopted this technology and they offer streaming radio services.

[70] ContentEssay, http://kaitlanfoley.wordpress.com/2011/04/19/content-essay/ (Last accessed 9th Novermber 2011).

b. TV

Like voice over radio now video also can be enjoyed in the form of streaming TV over mobile handsets. The handset should be 3G network. This imitates a TV station but the user is not free to watch according to their wish, but must watch whatever is on the channel on a particular time.

There is another technology of mobile broadcast which works like a common TV station and broadcast the content over a different spectrum. This content frees up the mobile network to receive and dial calls. The video quality is quite better because of one to many system as compared to streaming TV which is one to one.

c. Live Video

The Qik is a famous application that allows streaming of live videos over mobile phones[71]. This gives the advantage to the users to upload and share Live videos on social networks sites. Most video streaming applications works through Wi-Fi.

2.6.1 CONTENT PROVIDER OVER MOBILE PLATRFORMS

As the content has become digital it will be carried over mobile network. The mobile networks have showed themselves as very promising content delivery podium. Thus, the mobile delivery platforms and digital content is the main focus of the thesis. Mostly the content is delivered over mobile or wireless platforms with 'always on connectivity', unwired technologies using the licensed and unlicensed spectrum. The famous licensed

[71] Qik http://qik.com/ (Last accessed on November 9th, 2011).

technologies include GSM, GPRS and 3G. The Wi-Fi, WLAN, RFID, WIMAX and Bluetooth come under unlicensed and short-range technologies[72]. Each technology has its own characteristics and specific application.

The three types of data services are offered over mobile networks:

- **Communication related data services** include peer to peer communications like SMS, MMS and E-mail.
- **Transactions related data services** include financial transaction services.
- **Content- based data services** include music, entertainment, edutainment, videos, news and games.

2.6.2. MOBILE CONTENT VALUE CHAIN

This part deals with the relationship of three major drivers. The value chain for mobile content is developing these days. The service delivery is crucial in the current mobile environment; the reason behind the fact is that it can specify the content available and involves the procedure of paying and to access the services. The mobile services are delivered by and through consumer's mobile operator, but as the technology is advancing day by day there is much pressure on this model. Thirdly, the mobile set or device restrains the access of the users to mobile content.

[72] Andrea Goldsmith, *Wireless Communications* (Oxford: Oxford University Press, 2005), 117.

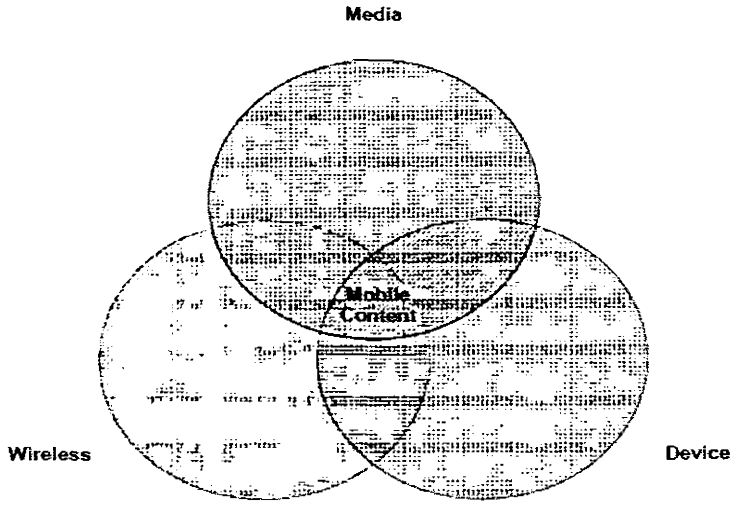

Figure 1: Mobile Content Value Chain

The ability to enjoy the latest content requires a modern handset with the capability beyond common content like SMS and MMS. The myriad players in the value chain of mobile content discovers from famous industry sectors include wireless telecommunications, the media and the device or handset. Each three sectors have different strength. The manufacturers of handsets and operator have a strong focus on technicalities. They build strong relationship with mobile user. But as far as the content is concerned the mobile operators have not prepared themselves to meet the demands of entertainment services. The manufacturers of device rely on features and functions of handsets. But the media and broadcasting companies focus on market sensibilities and mobile content services. The entrance of media companies in mobile content environment attributed to skepticism and doubt about the size of mobile industry, also because they do not stand on central position of

value chain. It is also recommended that the media sector have full knowledge about the financial capabilities and it produces opportunities for marketing of cross-media[73].

2.7 MOBILE TV: AN INNOVATIVE STEP

"Mobile TV is the wireless transmission and reception of television content – video and voice – to platforms that are either moving or capable of moving. Mobile TV allows viewers to enjoy personalized, interactive television with content specifically adapted to the mobile medium"[74]. The personal use discerns the mobile content from usual television. The familiarity of watching TV over smart set distinguishes in diversity from watching it on the big screen, most remarkably when the size is the main concern.

The digital technology is used in mobile 2.0 content services and most of the terminologies imitate internet phraseology. Two terms are used in this context unicast and multicast. *Unicasting* represents the transmission to a single subscriber, while on other hand sending content to multiple users is *multicasting*[75].

There is an increase in delivering every type of content anytime through the modern mobile technologies. There are some mobile content that were specifically made for mobile

[73] Sonja Kangas, *Benchmarking Report*, MGAIN Deliverable D6.2.2 to the European Commission User-Friendly Information Society (IST) Accompanying Measures Project IST-2001-38846 (December 31, 2003) at 56.

[74] ICT Regulation Toolkit. Also available at <http://www.ictregulationtoolkit.org/en/Section.3427.html> (Last accessed on September 29th, 2010)

[75] Networking Glossary, < www.Searchnetworking.techtarget.com> (Last accessed on February 2008).

platforms such as ringtones and wallpapers. However there is a majority of contents like TV and broadcasting, news, chat rooms have shifted from the fixed-line platforms.

2.8. CLASSIFICATION OF MOBILE TV

The mobile TV is a new technology and it has put the regulators in great complexity with regard to regulations and legislation. Some jurisdictions from around the world have regulated the mobile 2.0 Content under information service, while others classify it under broadcasting regulations.

I. United States

In USA the information services and regulators deals the mobile TV services, 2G and third generation and portable dedicated mobile systems showing live TV channels. Broadcasting regulations does not cover this service[76].

II. Singapore

The broadcasting regulator of Singapore, the Media Development Authority (MDA), is working to sort the mobile 2.0 content under broadcasting regulation. A 'technology-neutral approach' has been taken here for regulating both types of mobile content services, independent of broadcasting platform[77]. These regulatory implications have been strongly

[76] *Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967 (2005).
[77] Cable & Sat. Broad. Association of Asis (CASBAA), *MDA Public Consultation on the Policy and Regulatory Framework for Mobile Broadcasting Services in Singapore* (2007), available at <www.mda.gov.sg/wms.file/mobj/mobj.1180.Casbaa.pdf.> (Last accessed on March 30th, 2011).

criticized by 3G mobile providers on the basis that the current licenses permit them to propose such type of services, so broadcasting regulation shall not apply to mobile TV[78].

III. Hong Kong and China

Many jurisdictions have found that the mobile TV services should not be categorized under broadcasting regulations. The Broadcasting Ordinance was drawn up in Hong Kong and China from the perception of television reception at a particular site rather than for a personalized viewer.

On this, they have proposed two alternative approaches. The first approach is self-regulatory. In which Mobile TV would not be characterized as a 'television programming service', but will be regulated under the regulations of internet's content provider.[79] The second possible approach is to make new broadcasting regulation in order to bring the mobile TV under its ambit.

IV. Italy

In 2006 following the same issue AGCOM, the Italian regulator have drafted broadcasting laws to include mobile TV[80]. The Republic of Korea has also made changes in the

[78] *See* Singapore Telecom Mobile PTE LTD, *Submission to the Media Development Authority of Singapore, Policy & Regulatory Framework for Mobile Broadcasting Services in Singapore* (2008), available at <www.mda.gov.sg/wms.file/mobj/mobj.1196.SingTel.pdf>. (Last accessed on April 3rd, 2011).
[79] ICT Toolkit Regulation < http://www.ictregulationtoolkit.org/en/Section.3427.html > (Last accessed on September 29th, 2010).
[80] Available at <www.agcom.it/provv/d_266_06_CONS.htm>

broadcasting legislations to include the Mobile TV, in effect creating new 'mobile multimedia broadcasting services'[81].

V. Canada

The Canadian Radio-TV and Telecommunications Commission has exempted the mobile TV from Licensing and other issues in the Broadcasting Act of 1999 and 2006[82]. The point to point technology or the transmission of separate steam of broadcasted video and audio comes under its ambit.

VI. Australia

The Australian regulations that restrict access of minors to certain content were applied to mobile premium services, including mobile portals services[83]. The content-related provisions regarding mobile phones were removed from the '*Telecommunications Service Provider (Mobile Premium services) determination of 2005*'.

VII. Pakistan

Telecommunication industry in Pakistan is regulated by PTA, an self-governing body, recognized under section 3 of the Pakistan Telecommunication (Re-organization) Act, 1996 (the "Act"), an Act of the Parliament to provide for re-organization and regulation of telecom sector in Pakistan, transfer of telecommunication services to private entities and for matters

[81] Enforcement Decree of the Broadcasting Act, art. 1-2(3) (2007) (Republic of Korea), available at <http://www.moleg.go.kr/FileDownload.mo?flSeq=26454> (Last accessed on April 3rd, 2011).
[82] Enforcement Decree of the Broadcasting Act, art. 1-2(3) (2007) (Republic of Korea), available at <http://www.moleg.go.kr/FileDownload.mo?flSeq=26454> (Last accessed on April 3rd, 2011).
[83] Ausli. Comms. & Media Auth. (ACMA), *Restricted Access System Declaration 2007*, (Dec. 20, 2007). This new rule for restricting access to age restricted content becomes effective on Jan. 20 2008.

relating to promote consumers' interest and rapid modernization of telecom systems in Pakistan. Under section 8 of the Act Federal Government issued policies i.e., fixed and cellular mobile in 2003 and 2004 respectively. As per cellular mobile policy 2004 two new licenses were awarded to M/s Telenor and M/s Warid Telecom. Now the total numbers of mobile licenses are five in Pakistan.

In Pakistan, telecom policy is technology neutral. Licensees are allowed to deploy any technology for provision of their licensed services. From technology point of view there is no prohibition or restriction for deployment of any technology. Telenor has also started Mobile TV services. PTCL has recently started IPTV services after obtaining a license from PEMRA. All these services are provided through single media.

Pakistan Electronic Media Regulatory Authority under PEMRA Ordinance, 2002 is accountable to regulate the TV and radio licenses for the establishment and operation of all broadcast media and distribution services in Pakistan. PEMRA has already conferred two Mobile TV (Content Provision Service) license to **M/s Brand Promotions Services Private Ltd.** and **M/s Cellevision Private Ltd.** The content provider (licensee), under an agreement, provides broadcast content to Mobile Network Operator (MNO) through video streaming technology over data networks. The Mobile Network Operator in turn distributes the content to its subscriber through GPRS/EDGE network.

Through amendment in PEMRA Ordinance in 2007, a new definition i.e., Distribution Service has been inserted which means a service in which the already recorded signals that

are received from different rooms(channels) are allocated to the subscriber through wire, wireless or satellite alternative and includes CATV, LMDS, DTH and various other technologies. Similarly PEMRA Rules 2009 defines the words Cable Television system. It is a structure for allocation of radio and TV programs through a set of closed communication paths, including terrestrial wireless, for reception by multiple users, including: coaxial or fiber-optic cable trunk amplifiers; line extender amplifiers; return amplifiers; line isolators; passive devices; connectors and subscriber drops. These both definitions are too broad and contain devices and media which are also used for provision of telecommunication services.

2.8 CONTENT REGULATION AND ITS APPLICATION TO MOBILE TV

It has been analyzed earlier that a large number of governments are drafting content regulations and applying it on mobile TV. In Europe the Mobile TV advertisements are subjects to same restriction as the common TV advertising. Singapore is also doing the same. As mentioned before that MDA Singapore is regulating mobile broadcasting, they consummated a public discussion for recommending the mobile TV service providers, as well as cellular mobile TV providers under broadcasting regulation[84].

2.9 MOBILE TECHNOLOGIES RECOMMENDED BY ITU

Four mobile technologies have been recommended by International Telecommunication Union. These include:

[84] Media Dev. Auth. (MDA), *Public Consultation on Policy and Regulatory Framework for Mobile Broadcasting Services in Singapore*, at 18 (Nov. 21, 2007), available at: <www.mda.gov.sg/wms.file/mobj/mobj.1167.Mobile%20TV%20Consultation.pdf >

I. Digital Video Handheld (DVB-H)

The DVB-H standard has DVB-T specification to be used for terrestrial digital television. The standard has also other feature that supports the limited time span of battery of portable handsets[85]. It also support environments in which such receiver must operate.
The use of this modern technology is called time-slicing, in which the bursts of data are received sporadically and it allows the receiver to turn off when it is not active for power saving. The DVB-H standard also provides forward error correction that improves the already existing performance of DVB-T.

II. MediaFLO Technology

MediaFLO is a modern broadcast standard designed by Qualcomm technology in USA. It was designed to deliver a considerable amount of multimedia content to a large number of subscribers by using off-peak capacity. The standard operates in the Ultra High Frequency band and can carry twenty high quality TV channels. The basic purpose of this technology is the economical distribution of multimedia content to large number of subscribers.

III. Digital Multimedia broadcasting (DMB)

A digital radio transmission setup used to fling multimedia content to mobile phone operates through Digital Multimedia Broadcasting technology[86]. The technology is also recognized as

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[85] Amitabh Kumar, *Mobile TV: DVB-H, DMB, 3G Systems and Rich Media Applications* (Burlington: Focal Press, 2007), 218.

mobile TV which is a derived from Digital Audio Broadcasting and was first developed as a result of research work of the European Union. The Mobile TV can operate via satellite as well as terrestrial transmission.

IV. Integrated Services Digital Broadcasting

It is a mobile terrestrial digital audio/video/data broadcasting service based on Integrated Services Digital Broadcasting Terrestrial. The technology was designed in Japan. Each channel is fragmented into 13 segments. HDTV broadcast uses 12 segments and the 13th segment is occupied by mobile receivers called the "One-Seg"[87]. The standard is designed to provide high-quality video, audio and data broadcasting for mobile receivers.

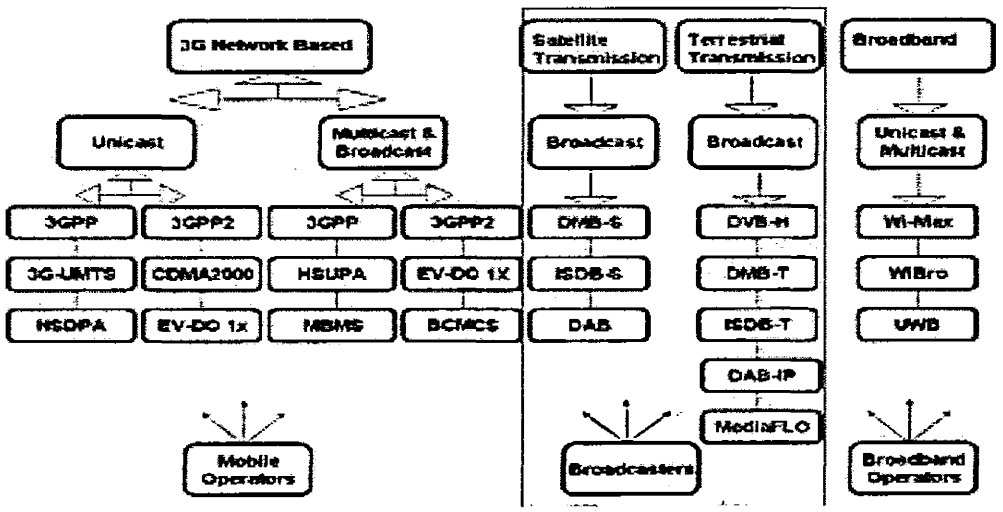

Figure 2: Mobile Technologies

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[86] Ibid 152.

[87] K.F. Ibrahim, *Newnes Guide to Television and Video Technology* (Oxford: Newnes Publishers, 2007), 59.

Spectrum Issues

Access to desired spectrum for supporting the deployment of mobile TV is the major issue. The cost and availability of desired spectrum will affect the technology use options for the operators. For instance if an operator wants to install a satellite mobile TV system then a satellite broadcasting distribution is also needed for the required spectrum. In case of no availability of spectrum for a dedicated terrestrial mobile TV network then the operator will run the Mobile TV services in pre-installed bands used for traditional mobile services? This may affect the Quality of service of mobile operators because they are left with the limited options. The countries should consider the compatibility between old and latest services in order to identify the desired spectrum for dedicated mobile TV networks. The mobile operators should have the choice to choose a desired technology if the technology confirms the frequency allocations of a desired country or internationally.

CHAPTER-3

EXPRESSION AND EMERGENCE OF MOBILE CONTENT UNDER THE LAWS OF PAKISTAN

3. BROADER COCEPT

The term "freedom of expression" is a broad category that includes:

1. "Freedom of speech": It means the freedom to say what one wishes, in a manner that one wishes, to a chosen audience. The audience may be the person himself.
2. "Freedom of Press":
3. The right to speak freely.
4. The right to believe what one wishes.
5. The right to relate with people of his choice.
6. The right to choose to live in a society where "a free press and the right to petition government are guaranteed".[88]

Freedom of Expression is a fundamental human and legal right that is protected in many international legal instruments of every jurisdiction of today's world.

In this chapter we will first discuss the international standards and theories to justify the freedom of speech as well as the Constitution of Pakistan along with few norms of

[88] Bruce Barry, *Speechless: The Erosion of Free Expression in the American Workplace* (California: Berrett Koehler Publishers, Inc., 2007), 16-17.

Islamic Law. After this we will analyze the effect of freedom of expression on mobile content and certain exceptions related to the topic.

Article 19 of the Universal Declaration on Human Rights (UDHR), a United Nations General Assembly Resolution affirms the right to freedom of expression in following terms:

"Everyone has the right to freedom of opinion and expression; this right includes the right to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers".

Article 19 was later followed by the **International Covenant on Civil and Political Rights (ICCPR).**[89] The ICCPR is officially obligatory legal treaties that guarantee the right to freedom of opinion and expression in almost the same matters as the **UDHR.** Pakistan has also signed the document but has not ratified ICCPR yet.

Pakistan has also ratified the **International Covenant on Economic, Social and Cultural Rights (ICESCR),** now the three mentioned documents are called the *"International Bill of Human Rights*[90]*."*

3.1 FREEDOM OF EXPRESSION AS A UNIVERSAL RIGHT:

Freedom of expression is considered as a universal right that's why it is acceptable to all mankind. There are some restrictions placed on the right that are also acknowledged by

[89] Freedom of expression is also protected in three regional human rights systems, at Article 10 of the *European Convention on Human rights (ECHR)* (Article 10) Article 13 of the *American Convention on Human rights* (Article 13) and the *African charter on Human and Peoples 'Rights* (Article 19).

[90] International Bill of Human Rights <http://asiapacific.amnesty.org/apro/aproweb.nsf/pages/bill> (Last accessed on October 23rd, 2011).

international law. Domestic laws also impose some restrictions on this right. As far as Islamic Law is considered, it also imposes certain restrictions on it that will be discussed in coming topics.

3.2 WHY EXPRESSION SHOULD BE PROTECTED: IN THE CONTEXT OF THEORIES

Freedom of expression and speech is quite a common word but very few people can understand its exact meaning. When we talk about this we obviously consider the United States and not Pakistan. Surveys have shown that a minority only understand the meaning of freedom of expression. In this part we will briefly discuss the reasons for justification of freedom of expression. This contains that why freedom of speech is a good thing and where should we draw a line demarcating permissible free speech and prohibited speech? The theories mentioned below reflect the ideas.

3.2.1. Opinion of John Stuart Mill:

The John Stuart Mill has presented the underlined idea that in a best way symbolises with freedom of speech. A metaphor "market place for ideas" was drawn from his writings "*On Liberty*". In which it is maintained than an unhindered flow of ideas is the best approach to promote truth as a help to freedom and specially democracy. He mentioned that famous views are not usually the complete truth and need to be confronted and challenged with non-conforming views. By this, the truth will emerge and benefit the democracy. This metaphoric term was originally mentioned by Justice Oliver Wendell Holmes in his dissenting opinion:

"They may come to believe even more than they believe the very foundations of their own conduct that the ultimate good desired is better reached by free trade in ideas—and that truth is the only ground upon which their wishes safely can be carried out. That at any rate is the theory of our Constitution".[91]

3.2.2 Importance of an Individual:

As compared to collective ideas, an individual approach assumes that speech is not protected to achieve collective interest but to protect the interest of an individual.[92] It is only the freedom of an individual particularly that makes free expression necessary as a constitutional principle. An individual give priority to these values over collective goals.

3.2.3 System of Freedom of Expression

The famous writer Thomas Emerson in his writing *System of Freedom of Expression* presented various theories. He articulated four main premises:

- The main essential according to him is the individual self-fulfilment
- Freedom of speech is important for an individual for seeking knowledge and discovery of truth.
- It is necessary for bringing social changes and for making collective decisions.
- It is also essential for stable and adaptable society.[93]

[91] *Abrams v. United States*, 250 U.S.616 (1919).
[92] C. Edwin Baker, *Human Liberty and Freedom of Speech* (Oxford: Oxford University Press, 1989), 5.
[93] Thomas Irwin Emerson, *System of Freedom of Expression* (New York: Random House, 1970).

3.3 THE RIGHT TO FREEDOM OF SPEECH IN THE CONSTITUTION

3.3.1 Constitutional Guarantee Regarding the Right to Freedom of Expression

Article 19 of Constitution of Islamic Republic of Pakistan's 1973 provides:

> *Every citizen shall have the right to freedom of speech and expression, and there shall be freedom of the press, subject to any reasonable restrictions imposed by law in the interest of the glory of Islam or the integrity, security or defence of Pakistan or any part thereof, friendly relations with foreign states, public order, decency or morality, or in relation to contempt of court, commission of or incitement to an offence.*

In *Nawabzada Nasrullah Khan v. Government of West Pakistan* it was held by the court that freedom of expression is not an unqualified right. They are relative and cannot be absolute in all circumstances[94].

3.3.2 Restrictions Placed on the Guarantee:

Article 19, of Constitution of Pakistan does not meet the international standards for the protection of right to freedom of speech and expression. The article mentions the words "reasonable restrictions" when on the other side international Laws advocates "necessary" or "legitimate aim" As well as clear and "present threat". The aforementioned Article 19 also delineates a long list of exceptions that weaken the state of right of freedom of expression. The exceptions contains

1) The glory of Islam;

2) The integrity, security or defence of Pakistan or any part thereof;

[94] PLD 1965 Lah. 642.

3) Friendly relations with foreign states;

4) Public order;

5) Decency or morality;

6) Contempt of court;

7) Commission of or incitement to an offence.

These limitations are formless and can be interpreted broadly. The restriction of friendly relation with states is not required and is unnecessary.

The right to receive information is not included in the Article, although this is one of the imperative right that needs to be included with the word "necessary". It is recommended that:

- Article 19 should integrate the three optioned test requiring any restrictions on the right to freedom of expression that are (a) approved by law (b) having a legitimate state aim (c) only as burdensome as necessary to further that aim.
- The Article should contain the right to receive information.
- Article 19 should be amended in a way that it provides minimum exception provided in Article 10 of the European Convention on Human Rights.[95]

The Constitution also contains the proclamation of state of emergency (Article 232 and 233). The fundamental rights including this article stand suspended during this state of emergency, which have been tried many times. It has further been recommended that if the

[95] Douglas A. Griffin and Monroe E. Price, *Review and Analysis of the Legal Framework Governing the Media in Pakistan* (London: Stanhope Centre for Communication Policy Research, 2004), 2.

rights are suspended during emergency, the matter should be placed before the legislature. The rights should not be completely set aside rather they should be abridged[96].

3.4 FREEDOM OF EXPRESSION AND ISLAMIC LAW

3.4.1 Islamic provisions of the Constitution

It was noted while studying Islamic traditions that the word *Hurrayat al ra'ay i* and *Hurrayat al Qawl* are alternative concept[97]. Islam is the State religion of Pakistan according to the Article 2 of the Constitution of Pakistan. According to Article 2A the Objective Resolution became a substantive part of the Constitution that provides that Sovereignty is bestowed to Allah Almighty. Article 227(1) proclaims that the entire active laws should be brought in compliance with the commands of Islam and sources of Shariah. Article 62 requires the members of Parliament not to violate the laws of Islam.

3.4.2 Islamic Law and Emergency Provisions in the Constitution of Pakistan

Islamic makes it clear that all the rights are granted by *shariah* and no government or authority can suspend them in any situation. The rights granted by *shariah* to human beings are considered as Right of Allah. These Rights are protected by Allah Almighty and no human agency can alter them or suspend them in any way. Only Allah has the right to suspend. Another view is that if the *shariah* is to be implemented in its proper and true spirit,

[96] Ibid, 3.
[97] Muhammad Hashim Kamali, *Freedom of Expression in Islam* (Cambridge, 1997), 61.

the rights remain justifiable. There will be no chaos in the society. The preamble of the Cairo Declaration is adopted by OIC Organisation of Islamic Countries[98] states as follows: The fundamental rights are integral part of the Islam and no one has the right to suspend the, violate or ignore them in any way.[99]

3.5 EXCEPTIONS TO FREEDOM OF EXPRESSION AND CONTENT REGULATION

Freedom of expression in Mobile 2.0 Content has cosseted the legal practioners to think upon and to legislate new laws and regulations keeping in consideration the converged technologies. Section 20 of the PEMRA ordinance lays down certain conditions to be fulfilled in order to issue licenses to broadcasters. Some of these conditions are related to the exceptions provided by Constitution of 1973. Some exceptions to freedom of expression in Mobile 2.0 Contents are as follows:

I. Blasphemy

These are laws that prohibit "denigrations of [ ] religion or religious symbols, irrespective of whether this constitutes hatred toward the religion's adherents"[100]. These laws are famous and criticised all over the world. Many developed countries still have blasphemy laws in their statute books. These laws have been rarely applied these days but still they are

[98] Christof Heyns, ed., *Humar Rights Law in Africa 1999* (Hague: Kluwer Law International, 2002), 400.
[99] Cairo Declaration on Human Rights in Islam, Nineteenth Islamic Conference of Foreign Ministers (Cairo, 14 Muharam, 1411 A.H./5 August, 1990 A.D), pmbl.
[100] Webster's New World College Dictionary, (Third edition, Simon and Schuster Inc.; 1997), 147.

considered as laws. The Supreme Court in United States strikes down any law that restrain blasphemy, because "it is not the business of government to suppress real or imagined attacks upon a particular religious doctrine..."[101]

As far as the United Kingdom is concerned, blasphemy laws have been promulgated twice since 1923 on the complaints to the European Court and Commission of Human Rights only twice since 1923. The case law *Wingrove v. United Kingdom*[102] was concerning the famous film *Vision of Ecstasy*. The film was about the life of sixteenth century nun named St. Teresa of Avila.

Establishment and protection of religion is pre requisite under Article 20 of the Constitution and its importance is further strengthened by Article 233. These imperative articles cannot be suspended in any situation even in the case of emergency. Still there are some exceptions that can affect the right to freedom of expression that is blasphemy or defamation of religion. Any offence against the religion or defaming the religious personalities is an offence under the Blasphemy Act, 1679. As far as the new media technologies like mobile 2.0 is considered an initiative has been taken by Pakistan Telecommunications Authority (PTA) on recommendation of Inter Ministerial Committee has banned and blocked several websites and blogs especially[103] "Youtube", "Blogspot" and "Wikipedia" that had carried the blasphemous sketches of Prophet Muhammad

[101] *Joseph Burstyn, Inc v. Wilson, 343* U.S. 495, 504-05 (1952).
[102] *Wingrove v. United Kingdom*, 25th November 1996, Application No. 17419/90 (European Court of Human Rights).
[103] PTA is under the PTA Act is not empowered to regulate to web site and content transmitted thereon,however pursuant to court order and direction of Ministry of Information Technology for blocking of certain websites in 2010 i.e., facebook PTA through its ISPs licensee made assure to block websites which contain any anti ani-islam, anti-country or, blasphemy etc.

S.A.W(PBUH). The ban was imposed on the order decided by the Supreme Court of Pakistan that says:

"*We will not accept any excuse or technical objection on this issue because it relates to the sentiments of the entire Muslim world. All authorities concerned will have to appear in the Court on the next hearing with reports of concrete measures taken to implement our order*"[104]. This legal exception is exercised as Internet Censorship in countries like China, Malaysia, India and Thailand[105].

II. Defamation:

A communal proclamation used to aim and spoil an individual is called defamation. Defamation includes three tests:

- A false statement that is based on fact and not on mere opinion
- If a poor publication is made to a third person
- And if a public figure is defamed, casual effect to be proved[106].

III. Incitement to Crime:

If an individual harms someone with the offensive messages that leads towards criminal effect such as statement that may incite terrorism or other heinous crime. Section 15 on Cyber terrorism of the Prevention of Electronic Crime Ordinance, 2009 (PECO), which has been elapsed not in force dealt with the person who aids or abets violence against the State.

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[104] Websites blocking containing sacrilegious material <http://www.dawn.com/2006/03/14/top16.htm > (Last accessed on November 13th, 2009)

[105] Stephanie Wang, "Internet Filtering in Asia in 2006-2007".< http://opennet.net/studies/asia2007 >(Last accessed November 13th, 2009)

[106] *Aligarh Muslim University Old Boys Coo'p Housing Society Ltd Vs Muhammad Yusaf Qureshi 1997 ClC 918 KHCS*

But Mobile services cannot protect freedom of expression, keeping in view this exception. Network operators have to be cautious that their means of communications are not used for illegal purposes and are not inciting any crime in the society. Terrorists and criminals are using the mobiles for carrying out the crimes and to coordinate the criminal activities and also to detonate bombs.

IV. Obscenity:

Obscenity, vulgarity and indecency are the major cause of being the exception to freedom of expression. Such activities cause moral and ethical harm to the society. There is no authority in Pakistan who monitors websites containing any un-ethical, anti-islam and anti-state contents, but the pornographic or "objectionable"[107] websites or vulgar contents have been blocked by PTA. However, there is a need to have separate comprehensive legislation to deal such nature of issues.

V. Public Order:

Public order comes under the exception to freedom of expression. This was done under the Maintenance of Public Order Ordinance, 1960 in the situation when huge protests and rallies were arranged against the Government in 2007.

[107] The word objectionable content is not clarified in Pakistani law. Internationally it is defined that storing and publicizing an objectionable content will lead to criminal or tortuous liability. There are not clear rules or definition of this word but may include the following:
a). Inciting crime or sexual and pornographic acts destroying society
b). storing and publicizing racial or gender issues.
c). storing and publicizing the breach of official contracts between the parties.

VI. National Security:

Pakistan is facing its crucial time against "war on terror" after the invasion of United State on Afghanistan. Terrorism activities are taking place through cells and sympathizers. The Government agencies are controlling the terrorism activities carried out through communication services. The Special Investigation Group of FIA put an eye on illegal mobile and internet traffic. Inter services Intelligence (ISI) and Intelligence Bureau (IB) remain in constant connection with mobile companies to guarantee religious performance of rules to check that whether any terrorist or extremism policy is taking place. Twitter, Facebook and Youtube are microblogs which are also a source of communication used by the terrorists. The Government had shut down the SMS centers and communication services in case of national security. The Government under Section 54 of PTA Act reserves the right to suspend the license of mobile companies.

Ban on the freedom of expression has never been appreciated in any country. It happened many time that in case of state emergency and chaos in the country, the nation has faced the restrictions to freedom of expression. In Pakistan the expression of freedom of information through electronic means has been brought up in various phases[108]. The technological innovation could not stop transformation of information through electronic means. Therefore, it would not be wrong to state the due to political maturity need of freedom of information was felt and from 1999 till now an integrated policy was introduced which resulted in burgeon expansion and swift boost of Television (TV), FM radio channels

[108] Shelton A. Gunaratne, (ed.) *Handbook of the Media in South Asia.* (New Delhi: Sage Publisher,2000), 35.

and cable networks. The transmission of information through the said media is regulated under the Pakistan Electronic Media Regulatory Authority (PEMRA).

Besides the aforesaid means there are other ways and modes of communication of information which are known as wireless communication i.e., mobile. Initially, mobile is source of transmitting two way communications i.e., intelligence[109] through wireless media by using radio frequency spectrum. With the gradual innovation in wireless technology and phenomena of 0s and 1s now has swapped analogue system with digital system. As consequence of this technological revolution now any information in any form e.g. voice, data, video, images can be communicated and transmitted through carrier having permission/license under telecom authority. In Pakistan, this concept is new and there is still much need for betterment in the rules and regulations of regulating authorities to bring the new technologies under their ambit. Mobile networks worked as nonaligned means for transmitting free flow of information. Mobile networks reported the highest volume of messaging for approximately 10 SMS per cell phone and according to common estimate 500 million SMS per day that was a big quantity.[110]

A non-Governmental Organization (NGO) working for women rights named as "Aurat Foundation", subscribed to SMS center. Their main purpose was to inform its

[109] The word "intelligence" means and included voice, data, images, video as defined under section 2 of the Pakistan Telecommunication (Re-organization) Act, 1996.

[110] Manjeet Kripalani, "Cyber Demonstrations: E-resistance Blooms in Pakistan," Spiegel Online, <http://www.spiegel.de/international/business/0,1518,517023,00.html> (Last accessed March 01, 2009).

members and common people about social changes especially related to human rights, freedom of expression, free and independent media.[111]

3.6 REGULATION OF CONTENTS SERVICES, MOBILE NETWORKS AND THEIR LINK WITH RESPECT TO FREEDOM OF EXPRESSION

Mobile networks are progressing by adopting new business models and modern technologies. The highly networked ecosystem is providing the consumers with latest technologies. The mobile networks do not act as only access provider but works as "network with intelligence". In this regard generally the words "intelligence" in telecommunication terms means any information about network, transaction and consumer that are commercially important for parties.[112] Mobile networks do not only work as plain access provider or common carriers but as information networks. The content industry grows on decentralized intelligence in which the content providers incorporate horizontally with network providers to give result to the subscribers.

The challenge of meshed networks comes with mobile 2.0 content, where no single conciliator or third party is concerned and communication takes place between individual users which may not otherwise correspond under the typical term of service of network service provider, and the addressee and originator may share common ownership to information shared on micro blogging and social networking sites such as Twitter, Facebook,

[111] Fareed Zakaria, "The Rise of Illiberal Democracy,"< http://www.jstor.org/pss/20048274 > (Last accessed March 13th, 2009).
[112] Netsize Guide, "Connecting Always-On Society" (Portugal: Cia Bourgogne, 2008),26.

and Orkut[113]. That means that there is need of assigning short term property rights to communications occurring by allowing sharing of networks through a service provider that liberally stick to confidentiality of user to the matter. A query arises where a content made by a community on a blog or social website for discussion on gay rights or homosexuality and it twisted in protests, using a service center of a specified mobile network, then who is answerable if such matter is detrimental to public order or creed, the originator or the addressee or the common carrier?[114]

The case law in USA[115] and UK has estranged internet traffic from telephone traffic. Internet was taken as broadcast means for content services. The Internet Service Provider (ISP) was considered as publisher when the content on internet was published. The telephone operators carried voice and data service and the telecom and wireless laws covered telephone traffic and data. Both internet and telephone data and traffic are not separate as the telecommunication carriers also work as publishers. There is no doubt in saying that Mobile carriers are working as next generation ISPs by offering bundled and unbundled services with voice and data.[116] With technological convergence the legal definitions needs to be updated. The Electronic Transactions Ordinance, 2002 (ETO) in Pakistan deals with the electronic transaction and communication but it do not address the technological advancements and challenges of law 2.0.

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[113] Electronic Transactions Ordinance (ETO) 2002, Chapter 2, Sections: 3 - 6

[114] Hina Sarfraz, Freedom of Expression in dissemination of Mobile 2.0 Content : Pakistan.

[115] David Baumer and J.C. Poindexter (2002) *Cyber law and E-Commerce* (United States: McGraw-Hill, 2002), 151-153.

[116] Mobile Virtual Network Operator transmits content and traditional telephony services. Available on http://www.pta.gov.pk/media/mvno_app_framework.pdf (Last accessed March 10th , 2009)

The internet is measured as broadcast medium according to United States Patriot Act, 2001 where least control is needed and a telecom scheme when it deals the political interests that leaves an entity with limited legal remedy to their communications being detained or blocked[117]. The mobile operators also rely on transactional data retained to make informed market tactic; it is also used as relying on consent of subscriber to be sold to another person to make it a feasible choice. But when we take the case of Pakistan, the mobile operators do not have the full moral or legal control to implement these rights which could restrict direct and free flow of information[118].

Albeit, the mobile networks are progressing and adopting technological advancements and becoming smart, they are now capable to decode and often intercept communications. But legally such act does not fall in the category of "lawful interception[119]," and can cause trouble and harm to the consumers. It also breaches the confidentiality and transparency of telecommunication framework. As a result the telecom industry would harshly effect. In a case law *PTCL v Rizwana*[120], the phone service was disconnected without prior information, the court has awarded damages to the aggrieved consumer the court further said that public authorities shall not take laws in their hands by infringing ejection of their responsibilities determined by law. Consequently a consumer shall be provided with the earlier discern and justice must be provided uniformly. But the major

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[117] Gus Hosein, *The Bordering and Restraining of Global Data Flows* (UNESCO: Publications for the Politics of the Information Society, 2004), 19.

[118] Mobile companies cannot show favoritism to its customers and users according to the licensing conditions mentioned in Section 21(4) of PTA Act.

[119] http://www.cisco.com/en/US/tech/tk583/tk799/tsd_technology_support_protocol_home.html (Last accessed on December 3rd, 2011).

[120] Pakistan Telecommunications Limited (PTCL) v Rizwana Shaheen 2004 YLLR 999.

drawback is that the case describes the role of public functionaries and does not deal with private entities?

The private entities should be reserved for decentralized laws "where market players resort to *de minimis* self regulation upholding fundamental human rights". The tortuous liability affects the behavior of private entities when an individual urges for privacy. It is imperative that information framework take communal duty for any illegal demeanor that materializes as consequence of usage of their means of expression that are notified and if not notified through self regulatory stratagem. The fundamental rights to information should be protected by self regulatory policies.

3.6.1 Mobile Content 2.0 in context of Freedom of Expression

Content appears as new challenge in convergence of technologies which modernize the individual with having latest electronic services. In 2007 very few people were aware of the mobile 2.0 technologies in Pakistan. A limited class of affluent consumers having modern handsets was aware of its usage. "Democracy 2.0 faces the challenge to protect civil liberties especially where freedom of expression will occasionally find itself battling Repression 2.0"[121]. Pakistan being a developed country has faced civil challenges to protect freedom of expression by way of latest media technologies.

The legal instruments should be developed in order to ascertain and set behavioral standards and morals and it become necessary under converging mores in latest ICT

[121] Digital Media in Repressive Regimes Public sphere, Civic engagement and Political Mobilization -Internet Freedom: Online activism and Emerging Threats. Copenhagen, p: 10-11. November 2008

technologies. The content type regulated under law would thus verify the viability of free flow of information, which embrace "amoral", "indecent", "obscene "or "sacrilegious". Then it would be the issue of courts to construe it as harmful or illegal by looking at principle of reason and morality[122].

Neo-morality has emerged as a new term in content 2.0. A matter strikes the mind that how a content being broadcasted would permit public to share sentiments and recover associations among them? We answer it with the help of an example; legally it is allowed to celebrate Valentine's Day in Pakistan and mobile companies take advantage of the day by offering various talk-times, messaging services, wallpapers and different contents. The society has started celebrating this day to express their emotions and sentiments for loved ones, however the religious groups strongly condemn it. Now it became the prudence of the operators to identify the character of the content being articulated among submissive individuals. No precedent is available here that put a bar on celebrating the valentine day but what if, it is implicit that operators must not permit modified content that is "indecent" or "immoral" or violates the stipulations of Islam, to be shared? But such interpretation affects the right to freedom of expression. Apparently, if it came to the information of operator that an unlawful or amoral activity is taking place, according to the policy it became the duty of the operator to inspect and take down such commotions without providing any prior discern to the end user. Firmly, a network service provider draws a sketch and thus can retain the content or interrupt the privacy. It can also provide the intelligence and law enforcing

[122]Edwin Shorts and Claire de Than, *Civil Liberties: Legal Principles of Individual Freedom* (London: Sweet & Maxwell, 1998), 24.

agencies with the private information under any criminal offence and safeguard and protect the national integrity of Pakistan under the PTA Act.

However, it is provided that the terms of service protects freedom of expression and privacy of consumers, if the network provider access to terminate the information service without any authority, then under section 36 of ETO 2002 such interruption will be considered as an offence with a sentence that may lead to seven years imprisonment or with fine up to a million rupees. The aforementioned matter will be reckoned as unscrupulous under social norms, the freedom of speech and the principles of constitution. The monitoring of information to invade privacy of such transaction may be deemed as violation of privacy of telecommunication under section 31 of the PTA Act. This type offence is dealt under section 31(2) provides three years imprisonment or fine of ten million rupees or both. In addition, to the said penal action civil liabilities should be conferred on the parties in case of breaches to the right to freedom of expression and privacy as both are correlated rights and a balance should be drawn in making a connection between both the rights enshrined in the constitution[123].

It is necessary that principles and rules should be designed with the help of consultation of stakeholders that will in response protect the freedom of expression and privacy in information systems. This system would eventually encourage social norms, behavioral standards, ethics, and plurality that are not in consonance with the religion and also will improve the legal system. But no such principles were drawn before promulgation of ICT laws in Pakistan, like the controversial elapsed PECO which deliberately violates the

[123] Richard Clayton and Hugh Tomlinson, *Privacy and Freedom of* Expression (Oxford, OUP, 2010), 2-3.

fundamental freedoms mentioned in International Covenant on Civil and Political Rights, United Nations' declaration of Human Rights and Pakistan's Constitution. Interestingly, Pakistan has not signed on the International Cyber Crime Convention (Budapest Convention 2001).

3.6.2 Micro-blogging and Mobile 2.0

Subscriptions on various blogs are increasing day by day. Pakistanis belonging to different age groups have subscribed to different blogs such as Emergency Times, Teath Maestro and iSMS are quite famous[124]. New media proved itself as an alternate and efficient medium for dissemination of freedom of expression. It also happens that concealed or censored news opens in mainstream which would otherwise have been silenced by the authorities like the case of Iran. Election rigging videos were published on different blogs that were captured with mobile cameras. The contents were sent to the subscribers showing the corrupt electoral activities during 2008 elections[125]. As a result thereof Government of Pakistan put a ban on websites showing those videos such as YouTube and also blocked various SMS center of blogs. But the ban was not accepted by the youth and considered as direct attack to freedom of expression. A forum was created by bloggers representing the civil society, and media persons named as "Don't Block the Blog (DBTB)", that sought international support as

[124] iSMS is the famous content service provider. It contained many controversial issues and discussion over them.

[125] Huma Yusuf, "Old and New Media: Converging During the Pakistan Emergency" (March 2007-February 2008). <http://civic.mit.edu/watchlistenlearn/old-and-new-media-converging-during-the-pakistan-emergency-march-2007-february-2008 > (Last accessed March 11th , 2009).

well.[126] The famous social networking website Facebook promoted mobile activism by allowing users to post content online through their mobile phones. iSMS another blog claims about 80,000 Facebook subscribers. Twitter network is also getting fame and communicates through SMS service. Its services are also banned many times.

These incidents show the government intervention to effect freedom of expression, the discussion led towards a debate on "whether Constitutional freedoms extend to matters of public concern and use of state power, relieving the latter under contract law"[127]. The civil right activists and Global Network Initiative (GNI) accepts double standards for the enforcement of freedom of expression in both tyrannical and democratic governments.

[126] Don't Block the Blog & HelpgPakistan.com, "ALERT! Pakistan Government Issues Further Orders To Control The Internet In Pakistan" June 2007.<http://help-pakistan.com/main/press_release/> (Last accessed March 08, 2009)

[127] Daniel J. Solove and Neil M Richards, "Rethinking Free Speech and Civil Liability" *Columbia Law Review*109:1650(2009):1660-1666.Availableat: http://www.columbialawreview.org/assets/pdfs/109/7/SoloveRichards.pdf and http://ssrn.com/abstract=1355662 (Last accessed at 29th March 2011).

CHAPTER-4

ENABLING ENVIRONMENT FOR BROADCASTING AND TELECOM REGULATORY REGIME

4. A CRITICAL REVIEW

The media has a key responsibility in building an informed society. Last few years have brought huge changes in the field of broadcasting in Pakistan, as the number of TV channels increased from one to seventy one. It has no doubt that media has fostered the democratic processes and given the opportunity to the common people to build public opinion on different issues[128]. Media is considered as a true representative of right to freedom of expression.

The Government of Pakistan in 2002 decided to liberalize the airwaves, and made a regulatory regime for issuing licenses for electronic media to the private channels and for solving other issues related to the broadcasting sector. For this purpose PEMRA was formed through legislation, known as the PEMRA Ordinance 2002.

Mandate of PEMRA

- to improve standards of information and;
- to increase the level of education and;

[128] Peter Dahlgren, "Doing Citizenship: The Cultural Origins of Civic Agency in the Public Sphere". *European Journal of Cultural Studies* 9(3) (2006): 267-286.

- developing standard of news and current affairs and;
- enlarging easy access to mass media and communication at the local and in easy range of common people and;
- Ensuring independence, autonomy and accountability among the various media sectors.

4.1 PAKISTAN ELECTRONIC MEDIA REGULATORY AUTHORITY

The establishment of PEMRA is unique experience in a region for a struggling country like Pakistan as there was no similar regulatory regime introduced for regulating broadcast media. The key objective is to provide free, independent and enabling environment for media. In order to fulfil its objective, PEMRA has been given the authority to issue licenses to the private channels for broadcasting media through radio, satellite TV and distribution stations at local and international level[129].

Since 2002, PEMRA has issued licenses to more than 100 licenses to FM radio station, 71 satellite TV channels. It also controls operation of licenses to 28 international satellite channels for transmission in Pakistan.

In addition, to the above, the two modern technologies internet protocol TV (IPTV) and mobile TV has also got licenses. Initially, the regulatory scheme does not support the

[129] Pakistan Electronic Media Regulatory Authority Ordinance, 2002 available at: http://pemra.gov.pk/pdf/ordinance1.pdf [Last accessed February 22nd, 2010].

cross media ownership; but it was allowed through an amendment in the PEMRA Ordinance in 2007. It is noteworthy here that two corporations were working prior to the regulation, Pakistan Television (PTV) and the Pakistan Broadcasting Corporation (PBC) for entertaining, informing and educating the people on the airwaves.

Although it has worked eight years but it is struggling for its legitimacy, independence and autonomy. A range of problems are disturbing its regulatory regime such as deficiency of proper legal and regulatory regime, lack of interaction between licensees and regulators, cross media ownership, technological convergence, lack of modern and appropriate expertise and lack of interest from the government entities related to the authority. A comprehensive research is needed to develop a practical approach for regulating broadcast. Although the media is growing by leaps and bounds; but its independence and freedom is shrinking for its practitioners day by day[130].

4.1.1 Structure of legal and regulatory framework

The regulatory board should represent the members extended to all stakeholders. The President appoints the chairman and the members of the boards are appointed by the Federal Government. The PEMRA law does not provide a clear picture of content regulation, it creates a "vague and overbroad" picture[131]. The amended PEMRA Ordinance had put more restriction on electronic and broadcast media. However, the amendments in the PEMRA

[130] Adnan Rehmat and Matiullah Jan, 2005. "Media in Pakistan: Growing space, shrinking freedoms". *Media Law Bulletin* 2(2) (2005):13-15. Available at <http://ebookbrowse.com/media-in-pakistan-growing-space-shrinking-freedoms-pdf-d19593754> (Last accessed at December 12th 2011).

[131] Douglas A Griffin and Monroe E Price, *Media Laws in Pakistan* (London: Stanhope Center, 2004), 14.

laws should be introduced to eliminate the content restrictions and to harmonize the laws with the international standards[132]. It is also necessary that the broadcasters should work according to the self-governed code of conduct instead of government's enacted code and content restrictions.

4.1.2 Challenges faced by PEMRA

Due to rapid impetus and growth of electronic media in Pakistan, PEMRA faced the great challenge of creating realization among the media persons that media freedom is linked with direct responsibility. The main challenge was to protect freedom of expression in the country, where this right is declared by the Constitution of Islamic Republic of Pakistan, 1973 as fundamental right, so it becomes the responsibility of all and sundry to exercise this right with sufficient care by ensuring that it may not incite terrorism, vulgarity, extremism or any offence that directly or indirectly affect the integrity of Pakistan.

After the rapid growth of Cable TV and by giving landing rights to international channels PEMRA has emerged as successful broadcasting regulator.

On the other hand, in the mid of 2008 Pakistan Telecommunication Company Limited (PTCL) launched first Internet Protocol TV (IPTV) service in Pakistan. PEMRA had awarded two IPTV licenses to each PTCL and Sachal Satellite Communication (Pvt.) Ltd. Another milestone was granting Mobile TV (Content Provision Service) licenses to *Messers* Celle Vision and *Messers* Brand Promotion Services for provisioning of services to Mobilink

[132] ibid

vi. The Authority may impose fine to the licensee if he contravenes any provision of this Ordinance.

b. Power to vary conditions suspend or revoke the license:-

1. The Authority may revoke the license of broadcast media in any of the following situations if;

i. The licensee has failed to pay the fee of the license, annual fee or fine;

ii. The licensee has contravened any provision of PEMRA Ordinance;

iii. The licensee has failed to fulfill any condition of the license;

4.3 TECHNOLOGICAL CONVERGENCE AND INADEQUATE MEDIA REGULATIONS

Technological developments around the world have made it feasible to utilize telecommunication networks for the broadcasting services and electronic media networks for telecom purposes. Through this innovative technology only one handset can be used for accessing the internet, call purposes and for entertainment and broadcasting. The audio and video can be streamed, buffered and broadcasted at the same time on mobile handset. The Problem was faced by the PEMRA because it was not prepared to adapt the technological advancements. When mobile TV was introduced by a mobile company, the issue emerged as a serious one because no proper regulations were present for the content. When the company applied to PEMRA for grant of a license, no specific provisions were available in the

PEMRA Ordinance to deal with the licensing procedure of mobile TV. The coming years will pose a regulatory problems with the emergence of convergence of technologies which the current PEMRA legal instruments cannot handle easily.

4.4 PAKISTAN TELECOMMUNICATION AUTHORITY (PTA)

Pakistan Telecommunication Authority (PTA) was made to regulate the voice and data services (telecommunication). The authority was established under the Pakistan Telecommunication (Re-Organization) Act No. XVII of 1996.

Services including but not limited to fixed- line telephony, mobile phone services, wireless technology and communication, internet service etc. are covered in the PTA Act. The basic objective of the Authority is to facilitate and advance the accessibility of high superiority and spirited telecommunication services in all the areas of Pakistan.

4.4.1 Function, Powers and Responsibilities of the Authority

As to regulate telecom sector in Pakistan, the legislature under sections 4, 5 and 6 of the PTA Act provides the following functions, powers and responsibilities to the Authority:

- **Functions** (section 4 of PTA Act)
  - i. Regulate
    - a. founding, function and preservation of telecommunication system; and
    - b. Provision of telecommunication services in Pakistan.
  - ii. speedy clearance of submissions for use of spectrum frequency

iii. Encourage and guard concern of customers of telecommunication services in Pakistan

iv. Encourage the accessibility of telecommunication services throughout Pakistan with,

a) high quality,

b) efficient

c) cost effective and

d) competitive

v. Encourage swift transformation of

a) telecommunication services; and

b) telecommunication system

vi. Scrutinize and adjudication

a) complaints; and

b) other claim

against the licensees arising out of the alleged contravention of:

i. PTA Act;

ii. the rules; and

iii. the license conditions

vii. Recommend to the Federal Government on guidelines with esteem of:

a) worldwide telecommunication;

b) stipulation of support for involvement in global summits;

c) concurrence to be accomplished in relation to the steering of international traffic; and

d) Accounting defrayal.

viii. Act upon other jobs as the Federal Government consign time to time

ix. Legalize deals between telecommunication service providers of allocating their proceeds derived from provision of telecommunication services

x. Guarantee acquiescence with Universal Services Obligations.

xi. Regulate Access Promotion Contributions.

xii. Resolve disputes between licensees.

xiii. Regulate

a) competition in the telecommunication sector; and

b) guard consumer rights

➢ **Powers of the PTA (section 5 of PTA Act)**

i. Award and refurbish licenses for

a. telecommunication system; and

b. telecommunication services

ii. Scrutinize and implement license

iii. Refer application to Board of frequency spectrum for telecom license

iv. Modify of license with consent of licensee

v. Regulate tariff for telecommunication services

vi. Regulate transfer of license

vii. Prescribe standard for:

a. telecommunication equipment; and

b. terminal equipment (issuance approval)

viii. Issue guidelines and determine terms and condition of interconnection (between the licensees)

ix. Inspection of:

a. telecommunication equipment; and

b. any site (own or occupied by the licensees).

x. Call any person for inquiry and an inquisition.

xi. Hire supervisor

xii. Develop National Numbering Plan

xiv. Gather information with respect of telecommunication (within and outside Pakistan)

xv. Pierce into deal.

xvi. Obtain, rent, Encumber, Dispose of, switch over, Vest or otherwise deal with any:

a. Moveable; and

b. Immovable Property

xvii. Issue regulations for:

a. implement of power; and

b. performance of functions

xviii. Impose fee

xxi. Regulate allocation of revenue from international telephony services

xx. Auction for licensing.

➢ ***Responsibilities of the Authority (section 6 of PTA Act)***

The Pakistan Telecommunication Authority while exercising its functions and powers is responsible for:

i. Protection of rights of licensees;

ii. Passing decisions and determinations duly passed through:

a) equitable;

b) non-discrimination;

c) consistent; and

d) transparent manner.

iii. Expeditiously disposal of application;

iv. Affording opportunity of hearing to the persons affected by its decision or determination;

v. Fair competition in the telecommunication sector and its maintenance; and

vi. Protection and safeguarding interest of users of telecommunication services.

In exercising of powers conferred upon the Authority, a large number of licenses for provision of voice, data, fixed and wireless telephony services have been granted and renewed. Many private operators operates and provided services through interconnect arrangements with PTCL. It happens that the operators face penalties when they don't improve their services after issuance of notices by PTA.

4.5 REGULATORY DESIGNS

Today, a majority of jurisdictions from around the world have a nationalized regulatory authority for telecommunications. The International Telecommunication Union listed 131 countries on their website with a 'split regulatory authority'[134]. Even though several authorities fall under the category of "converged" regulatory authorities[135], while the majority's spotlight is on sector specific regulator. Initially the most regulators opt for a sector specific regulation, but with the progress and growth of technology the converged regulator appears to be the most suitable. Some countries go for the multi-sector regulation or rely on the application of competition and anti-trust rules for the communication sector.

[134] *See*< http://www.itu.int/ITU-D/treg/profiles/SepRegAuth.asp>. (Last accessed on January 29th, 2011)
[135] For example, ACCMA-Australia, OfCOM-UK, FCC-USA, MCMC- Maylaisa,

In choosing the appropriate organisational design, the courtiers have a range of variety available including the economy and infrastructure wide or purely telecommunication based institutions. A main issue that eventually escorts towards the option of institutional design is whether the regulatory establishment sustains the accurate stability between identifying the specificity of telecommunication sector and developing the uniformity of legal and regulatory assessments athwart the sectors[136].

Elasticity is the main concern that should be kept in mind in choosing an institutional design. The regulatory regimes change with the progress upon in the concerned sector. The success of the regulator will not *per se* depend on the choice of institutional design.

Principles necessary for opting for institutional design:

- Regulators must be independent and transparent.
- Regulators should have the expertise to make sound judgments on industry and technical issues.
- The regulator should take into account the legal, social, political and economic objectives. The system of checks and balances should be reflected.
- The market realities should be allowed for an institutional design.

Following are some organizational structures relating progress and development of ICT.

[136] Michel Kerf and Damien Geradin, "Controlling Market Power in Telecommunications: Anti-Trust vs. Sector-Specific Regulation: An Assessment of the United States, New Zealand and Australian Experiences", *Berkeley Technology Law Journal*, Issue 14:3 (Fall 1999), *available at* http://www.law.berkeley.edu/journals/btlj/articles/vol14/.

4.5.1 Industry Specific vs. ICT Converged Regulator:

The regulator controlling only one specific sector is Industry Specific regulator like telecom regulator. The regulator controlling telecom, IT and broadcasting sectors are called ICT converged regulator.

4.5.2 Sector vs. Multi-Sector Regulator:

The single sector regulator include one related infrastructures like ICT services, while the multi sector regulator covers multi sectors such as telecom, water, gas and electricity.

4.5.3 Infrastructure vs. Infrastructure and Content Regulator:

An infrastructure regulator will manage the communication levels, while the second type includes the communication levels as well as contents issues.

4.5.4 Sector Specific Regulator vs. General Competition Regulator:

The sector specific regulator controls the particular industry[137], while a general competition regulator covers general competitions rules and regulations but may include more than one particular industry. The presence of one regulator does not exclude the existence of other.

4.5.5 Local vs. national regulator:

A local regulator works as the public utility commissions like in USA whereas the Federal Communications Commission acts as a national regulator in UK.

[137] Damien Geradin, *Controlling Market Power in Telecommunications: Anti-Trust vs. Sector-Specific Regulation*, Mediterranean Telecommunications Forum on Regulatory Policies and Investment, 18-19 September, 2003.

4.5.6 Functional vs. industry specific regulator

The functional regulator deals with the specific functional matters like instant universal service, in case of South African Universal Service Agency. The industry specific regulator regulates the wide range of functional issues.

4.5.7 Independent regulator vs. Part of Ministry:

A self-governing regulator is autonomous from governmental control and acts as a separate unit; conversely a few regulatory problems can also be solved by ministerial department like the case of Japan. Independent does not mean complete separation from ministerial departments but the regulator also works on policies designed by ministries.

With the development of ICT sector, the competition among the sector increases as well as the regulatory priorities changes with the passage of time, the choice for structuring the regulatory regime also changes[138].The telecom sector has diverse regulatory authorities each having its pros and cons. There is serious debate around the world on having an ICT converged regulator solving a broader variety of telecom, broadcasting and IT issues. The justification given is that it is more appropriate form as compared to other regulators because the one common regulator can deal with the same issues. The arguments in favor of ICT convergence are strong. The broadcasting and other media are related with content regulation so the ICT convergence has led the arguments on the convergence of content regulation and infrastructure regulation. The broadcasting infrastructure and content can't be separated on the ground that these issues are not related to ICT convergence to some extent. The countries

[138] Michel Kerf, Manuel Schiffler and Clemencia Torres, "Telecommunications Regulators: Converging Trends?", *Public Policy Journal*, Issue 230, May 2001.

having strict content regulation control the content through content consideration and licensing of network operators. The arguments against this are strong because infrastructure and content regulation are considered two different things. An argument in favor of multi-sector regulators is the "commonalities" in a few matters of regulation. Public utilities like gas, water and electricity companies use optical fibers for telecom purposes. The points regarding regulatory issues are stronger.

4.6 CONVERGED NETWORKS

In network regime the converged Data/Voice set-up can be portrayed as the application of voice digitization and compression systems through a range of hardware and software products to facilitate voice to be conveyed on public and private networks initially designed to convey data. It accomplishes one of the mainly essential features of network organization: to assimilate the transport of information in a cost-effective manner. Currently, many licensees operate separate voice and data networks based on a traditional separation of the two technologies for two primary reasons: economics and technology. One of the latest technological developments has been seen in the area of Voice over IP (VoIP), a term that refers to the process of transmitting telephone calls over the Internet rather than through the traditional telephone system.

4.6.1 What is convergence?

It means

- "the ability of different network platforms to carry essentially similar kinds of services" or
- "the coming together of consumer devices such as the telephone, television and personal computer"[139]

As it is clear from the above definition that working collectively or the fusion of services are called 'convergence[140]'. It has emerged as a well accepted notion in Information communication Technology (ICT) worldwide. The core rationale is that ICT expertises have progressively allowed the submission of earlier diverse sorts of services over the similar set-up. Manifold offering is predominantly factual of IP-based networks, which can offer data, voice and video services. These services were earlier provided over separate circuit-switched voice telephone networks, packet switched data networks such as the Internet and broadband video networks such as cable television and satellite networks. In broad-spectrum, convergence-based course of actions encourage the same management of services or technologies formerly licensed or regulated in diverse behaviors.

[139] Green paper on the convergence of the telecommunications, media and information technology sectors and the implications for regulations COM(97)623 3-12-97. Available at http://ec.europa.eu/avpolicy/docs/library/legal/com/greenp_97_623_en.pdf (Last accessed on March 11th,2011).

[140] Convergence has tainted how services are carried and has distorted the appearance between fixed and mobile services. the progress towards NGN is the current move in the evolution process of converged technologies. (see: http://www.ictregulationtoolkit.org/En/Section.3316.html

Convergence can be classified into two category i.e., convergence of technology and convergence of services. The convergence of services is depended upon the convergence of technology. Thus, provision of service on one network can only be possible when there is no barrier for technology. In Pakistan, telecommunication policy is technology neutral. However, licensees are not allowed to provide converged / unified licensed services[141].

The new technology and convergence of ICT services are also related with sector specific and general competition regulation because the "horizontal convergence" between different sectors requires the possibility of "inter-infrastructure competition[142]" that may increase the reliance on competition regulations and less concern will be shown to sector-specific regulation. The point against competition regulations is the continuing existence and development of sector specific regulations. The sector specific regulator can turn into competition regulatory by having a specific department with ICT market competencies, technologies and proper skills in the national competition authorities[143].

4.7 LICENSING REGIME OF TELECOMMUNICATION AND BROADCASTING

The developments in mobile technologies have brought immense changes in the field of telecommunication. In the past the telecom sector was regulated to provide separate licensing Regimes for fixed line, internet, Long Distance and International (LDI) and wireless

[141] http://www.ictregulationtoolkit.org/En/Section.3321.html (Last accessed on 29th January 2011)
[142] S L Rao, Competition in Infrastructure, Available at <http://www.cuts-international.org/pdf/viewpointpaper-comp-infrastructure.pdf > (Last accessed on November 3rd,2011).
[143] Damien Geradin, *Remedies in Network Industries: EC Competition Law vs. Sector Specific Regulation* (Oxford: Intersentia Press, 2004), 25.

technologies. With the advancement of technology and emergence of market applications, most significantly the evolution in the wireless technologies, the distinctions previously drawn among different services are concealing and now many services are being offered by the same technology[144].

The drift in technology is likely to persist and difficult to foresee. The regulatory framework should smooth the progress for the vibrant evolutions in the technology and product markets, and for that reason be technology and service neutral.

The regulatory framework should be designed to provide flexibility and diminishes the conflicts occurring out due to any 'policy imposed restriction'. The ideal way to deal with the changing technologies is to implement a "future proof" regime dealing with licenses to be called as "Unified Licensing/Authorization Regime. The regime may help the service provider to offer any type of service by using technology of his own choice. In 2003, the Indian Government planned to implement a Unified Licensing Regime in a two phase plan. In the first phase both fixed and mobile services are covered by a Unified Licensing Regime. In the final phase the Indian regulator TRAI has determined recommendations for Unified Licensing which covered several services like NLDS[145], ILDS[146], VSAT services etc.

[144]Rajerndra Singh, Unified Licensing Regime in India, Available at http://www.itu.int/ITU-T/worksem/conreg/abstract/conreg_0504_sapna_sharma_abs.pdf (Last accessed on September 4th, 2011).
[145] National Long Distance Service
[146] International Long Distance Service,

The Unified Licensing Regime has appeared as a big challenge for the telecom sector because it is difficult to bring all these services under this regime, while maintaining the progress and growth of telecom services.

This chapter will cover a brief of current telecom licensing regime in Pakistan from the legal and regulatory aspect under the existing legislative framework with an anticipatory overview of highlighting the legal and regulatory issues of Unified Licensing to be faced by the policy makers and country's regulator in the years to come prior its emergence. The scope of this chapter however is neither to mention the technological issues or aspects of introducing the concept of Unified Licensing Regime nor the migration process to Unified Access License in Pakistan.

4.7.1 Licensing mobile TV providers

Licensing of mobile TV is another major issue. The government has drawn distinction between content and carriage in different countries. The mobile TV has proposed to license it under fixed digital broadcasting. Mobile TV has to get broadcasting service license and multiplex license as well from MDA under the Broadcasting Act. Mobile TV providers have to obtain "Facilities-Based Operators" license from Info-communications Development Authority under Telecommunications Act.[147]

[147] Media Dev. Auth(MDA), Public Consultation on Policy and Regulatory Framework for Mobile Broadcasting Services in Singapore, at 8(Nov.21,2007), available at: www.mda.gov.sg/wms.file/mobj/mobj.1167.Mobile%20TV%20Consultation.pdf (Last accessed on January 29th, 2011).

The Hong Kong, China issued a consultation paper in January 2008. The paper presents the proposal for licensing of mobile TV under television program services that means under the Broadcasting Ordinance. The second option given was to regulate mobile TV through general laws in case of self regulation. The streaming type mobile TV services are not licensed under broadcasting regulation and the mobile TV providers can offer services through mobile carrier license.

4.8 NEED FOR NEW LICENSING ARRANGEMENTS

Evolution and application of digitalization in information technology has combined transmission voice, video and data service on same network. Provision of these services like voice, video and data through on network is known as convergence of technologies. This phenomenon requires due consideration and special attention of telecom regulators in respect to lay down the parameters and draw line for such services. Capability of one entity to provide converged services via various licenses or through special arrangements with other entities, need modification and rethinking of polices and legal framework for licenses.

In order to address this issue a new term i.e., "unified licensing" has been introduced in telecom industry around the world. This is a new phenomenon for telecom regulators. It requires re-consideration of existing licensing arrangements to meet the challenges of technology. Under this approach services providers are allowed to offer both fixed and mobile services under one license and wireless local loop operators can offer mobile

services. In other words Unified licensing enables the operators to provide all telecom services in a single circle with a single authorization[148]. With a unified license, any operator will be able to offer any type of service using any technology.

4.9 CHALLENGES FOR REGULATORS

➢ The high-speed broadband is imperative to broadcast video, music games and other contents to a large number of mobile subscribers at a same time. This has emerged as a main challenge for the regulators. Comparable to this, the broadcast sector countenance a influential confront in personalizing content and fragmenting conduits towards a still further segmented market that, separately from digital TV and radio, comprises the Internet, which must be used through mobile workstations. Especially youngsters have their necessities for content and communication through the Internet and mobile services while they relatively spend less time on watching traditional TV. This has challenged the broadcasters to make new solutions to mark this mobile fragment by offering streaming of mobile content over the internet along with SMS service usage.

➢ The ability to distribute a large number of programs and other digital content to many mobile users at the same time and to combine this with the possibilities that lie in the 3G mobile network for new interactive services and business models are all conditions that create a corresponding/congruent interest within the broadcast and mobile industry.

[148] Theresa E.Miedema, "Authorization of Telecommunications Services", Module-3 of ICT Regulation Toolkit-2007 Availabe at www.ictregulationtoolkit.org/en/Document.3728.pdf . (Last accessed on January 29th, 2011)

- Convergence between the ICT services is a paradigm shift that will alter TV and radio from a push broadcast media to pull media. The large amount of fragmented channels will be delivered over mobile sets. Mobile and itinerant function will effect in significant new conduct models that transmit great prospective for research and innovation.
- The wireless and internet industry have brought new product and technologies in the market that will also affect the regulations and regulatory regimes. Diverse mobile TV technologies have already designed for commercial deployment. In near future the users will purchase mobile sets or end user terminals not only for communications but to articulate them in different manner. Now the voice communications have progressed and moved towards more innovative Value Added Services (VAS) like video communication. Social networking, mobile banking and mobile TV.
- Value Added Services have grown internationally and figure an extensive segment of the revenues. Users are now interested in mobile banking, mobile TV and location based services. Value Added Services are offered either unswervingly by the telecom operators or through a conciliator i.e. the Value Added Service Provider (VASP) / Content Aggregator.
- Typically, every sort of content utilized one dedicated network infrastructure. Audio and video were broadcasted through TV; the print media carried text-based content, while the telephone system transmitted the voice. With the emergence of packet switching and the digitization of information and then the advent of IP-bases networking, the technology developed and multiple services can now be performed on one network. These services are materialized as challenges to the association of regulation internationally.

➢ The already running services such as VOIP and IPTV had posed regulatory challenges for the operators and now the advent of mobile TV employs that regulators have to swing nearer rather than afterward to service convergence. The regulators around the world are designing a framework in which non telephone operators are allowed to offer voice services[149].

[149] R. Alex Dufour, "Voice Over Internet Protocol: Ending Uncertainty and Promoting Innovation through a Regulatory Framework", *Commlaw* 13, (2005):477-79.

CONCLUSION AND RECOMMENDATIONS

Conclusion

Based upon the aforementioned discussion and facts as narrated in the preceding chapter of this thesis, it is concluded that

- Contradictory views and approaches of network operators and regulators have significantly restricted the process of development in telecommunications and broadcasting sector, especially with reference to convergence and emergence as to regulate the communication services through one media. It is stated that in dictatorial rule the rights of freedom of expression have always been subjugated around the globe. However, it can be stated that technology and its innovative new version starting from Mobile 2.0 can stop or put barriers for transformation and transmission of any kind of information. For a liberated and egalitarian country it is indispensable for the operators to promote reasonable practices and provide constitutional right of freedom of expression to the consumers at the BOP. There is an urgent need for making of the transparent policies for consumers enjoying freedom of expression in mobile 2.0 content.
- Converged technologies mostly bring forth the concept of making converged regulator in Pakistan. They have given a birth to converged regulators. The emerging technologies are a challenge for the regulators, operators, legislature, law enforcement agencies and the government also. The sender and recipient of the content manipulate responsibility to continue to work within the constraints of ethical standards, ethnicity and

mores of religion. The accountability guaranteed by the pertinent laws must also be secured against the freedom of information and freedom of expression. Over-eagerness can end result in "iron-clad" legislation which restraint the process of innovation and development in the ICT sector. While discovering such an issue it will be significant to ensure whether there is twofold standard of practice and strategy of mobile regulators and operators as well? The fact remains that the government and regulators should ensure free flow of information without any encumbrance and draft legislation in consultation with stakeholders. Otherwise the BOP segment will be deprived of their legal right to express and inform without illogical limitations and despotic one-sided implementation of legal exceptions to freedom of speech forced by the state.

- Regulators necessitate pioneering contemplation in order to make evolutionary regulations that can adopt and accept any type of future technologies and do not lead to the collision of policies. Regulators should follow the best and known worldwide principles of consumer protection in order to secure the confidentiality of telecommunication services.
- Regulatory framework for the converged technologies, content, spectrum and licensing matters must be beneficial for the market investment and competition.
- The solution lies only in convergence. There is much need of making a converged regulatory authority in Pakistan. The PTA and PEMRA should be merged to form a new converged regulatory authority dealing with the ICT laws in Pakistan.

- **SUITABLE TIME FOR CONVEGENCE REGULATION**

➢ Since the 1995 the convergence issue is much in discussion especially in electronic media and telecommunication sector. Now a large number of countries have experienced offering of converged services over network infrastructure. Hopefully it is possible that sooner or later the jurisdiction around the globe will attract towards making converged regulators.

➢ An outcome is that the regulators have to bear serious responses to the convergence. If adopted at suitable timing the converged regulator will enable the countries to enter into next era of innovative and emerging ICT services.

➢ The exact time to adopt converged regulation depends upon the technical, political and social factors, like Pakistan urgently needs converged regulations because of the emerging technologies of VOIP, IPTV and mobile TV that need services from both telecom and the broadcasting sector and it becomes quite difficult for operators to adopt regulation of only PTA or PEMRA.

- **SEQUENCING OF CONVEREGNCE OF ICT**

➢ After thinking about of introducing convergence the next step is the sequencing of convergence. The best example is the Indian regulation, where In 2003, the Indian Government planned to implement a Unified Licensing Regime in a two phase plan. In the first phase both fixed and mobile services are covered by a

Unified Licensing Regime. In the final phase the Indian regulator TRAI has determined recommendations for Unified Licensing which covered several services.

- **DEPTH OF CONVERGENCE**

  - The true convergence needs technology and service neutrality. The Government should have the freedom to choose the legal regime suitable for converged services, organizational structures and regulatory framework.

- Thus a choice is available to different countries adopt a regulatory framework according the market innovation in the ICT sector.

Recommendations

- In order to shape out an incorporated policy, the trio of Government, Regulators and operations should implement the following recommendations.

- **GOVERNMENT**

  - The government should safeguard the constitutional freedoms, especially the freedom of speech and information in electronic communications.
  - It should upheld safe and democratic use of converged technologies falling under the ambit of Information Communication Technology.
  - Reduce injudicious use of state influence to hamper operators to deny content services sheltering constitutional right of freedom of expression.

- The government should encourage apposite legislative consultation, which provides extensive powers to law enforcing agencies.

- **REGULATORS**

  - The regulators should protect the free flow of information.
  - the regulators should have restricted control or scrutiny of content requested by the consumer
  - The content services should have the *de minis* regulation.
  - The regulators should connect operators to premeditated revelation and free flow of information under self-regulated policies.
  - Guard clients under the laws and regulation dealing with the mobile content.
  - Ensure consultation of stakeholders before promulgating new legislations.
  - The regulators should work for the evolution of regulatory regimes in Pakistan.

- **OPERATORS**

  - The operators should promote freedom of information without arbitrary constraints.
  - Protecting privacy and confidentiality of consumers under the telecommunication laws of state.

➢ The operators should follow the international practices and principles on freedom of expression and information and also the privacy of consumer in telecom and broadcasting communications.

- The strict regulations should be promulgated in order to get control of broadcasted content on the mobile TV. This effort can control and protect consumers from obnoxious content like pornographic content or that incite racial and religious hatred among the masses.
- Mobile TV regulations should be drafted to include market competition and investment.
- Mobile TV being a convergent service employs both telecommunication and broadcasting technology and supplies a podium for broadcast services. For this reason legislations should be legislated by putting in place both the services.
- In order to broadcast television content over the network the mobile TV operators and cellular mobile TV operators should be required to get broadcast service license because they both have the same look. A mobile carrier license is needed when the network operator transmits mobile TV through the assigned spectrum. So in this case the content service providers do not require obtaining telecommunications license for provision of program service when they use transmission network of a licensed carrier for ram from their servers to their customers.

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