Understanding the Regulatory Context of the Internet

Dr. Alyamamah Khudair Al-Harbi
PhD in Internet, Media, and E-Commerce Law

Abstract:

This paper focuses on regulatory issues arising from the Internet as an advanced technological medium, which requires an orientation on key elementary issues: first, its history, and second, the technological aspects behind it which means the software and hardware that altogether compose the infrastructure of the network. It describes the whole picture for the Internet as a regulatory context. It provides a brief history of the development of the Internet since its early days until recently. It then attempts to define the term 'Internet', looking at the network's infrastructure and then at the services it provides for the users. It also deals in brief with the regulatory issues originating from the distinctive nature of the Internet as a global network. The paper will lay down the background against which self- and co-regulation methods arose as alternative regulatory arrangements that are able to cope up with the complexity of the Internet.

Introduction

In the case of Kuwait, the Internet had been a complex environment that raised regulatory challenges for law makers before the **20/2014 Law Regarding the Electronic Transactions** was issued to be the first of its kind providing a regulatory framework for civil, commercial, and administrative transactions conducted by electronic means. One of the main barriers to initiating a workable framework for Internet governance was the lack of a specialised legal knowledge that would bridge the gap between the advanced technologies of the Internet and the legal

profession. This can be applicable to other countries in the region who still struggle with the elementary question of how to regulate the Internet?

One of the purposes of this paper is to fill that gap. However, it is not intended to comment on the **20/2014 Law** in this paper, it focuses on regulatory issues arising from the Internet. In the first place, it is necessary to understand the nature of the Internet as an advanced technological medium, which requires an orientation on key elementary issues: first, its history, and second, the technological aspects behind it which means the software and hardware that altogether compose the infrastructure of the network. By understanding those issues the regulatory context of the Internet becomes clear.

For this purpose, this paper describes the whole picture for the Internet as a regulatory context. It provides a brief history of the development of the Internet since its early days until recently. It then attempts to define the term 'Internet', looking at the network's infrastructure and then at the services it provides for the users. It also deals in brief with the regulatory issues originating from the distinctive nature of the Internet as a global network. The paper will lay down the background against which self- and co-regulation methods arose as alternative regulatory arrangements that are able to cope up with the complexity of the Internet but also involve limitations of freedom of expression(1). This paper is designed to underpin the theoretical foundations behind the self-regulation of Internet content in the light of experiences from US, EU, and UK systems. Given the complexity of the Internet as a regulatory context and the multiple dimensions of content regulation, the paper is intended to build an informed understanding of the nature of the Internet as an advanced technological medium.

(1) These issues are considered in further depth in: Al-Harbi, Alyamamah (2012), the Constitutional Implications of 'Monitoring' Harmful Internet Content in Kuwait: an Empirical Study in Light of European Union/United Kingdom and United States Regulatory Models, a thesis submitted for the degree of PhD (Department of Law/University of Essex).

Accordingly, this paper proceeds as follows: first section one highlights the history of the Internet in brief, and then section two defines the Internet as a term by looking first at its infrastructure, and then at the services it provides for the end users. Section three looks into the characteristics of Internet and multimedia content that entail advanced regulatory methods outside traditional state regulation. Also, it sheds light on the term 'convergence' and the emergence of multimedia services.

1. Concise Summary of the Internet

Internet technical development explains why it has become a global two-way network that integrates communication and information. This means that the involved parties can transmit and receive information via the network as well as communicate and interact with other users in various ways as it is explained below. Since the beginning of the network there have been various entities that worked together to make the Internet possible. The founders were a mixture of public, academic and business players. This fact explains the decentralized nature of the Internet since its early days. A significant progress was the design of Internet protocols which are essential components of the system that make it operate in the way we see. The 1990s witnessed the exponential growth of the Internet because of two events. The first was commercialising the network to be open to the public and the second was the emergence of the World Wide Web (WWW)(2). The WWW is "The set of all information accessible using computers and networking, each unit of information identified by a URI."(3)

The Internet began in the US in 1964 as part of a federally-funded research program at the Advanced Research Project Agency (ARPA). It

(2) Cerf, V. G. and the Computing Research Association (1995, 1996, 1997), Computers Networking: Global Infrastructure for the 21st Century, online available at: *http://www.cs.washington.edu/homes/lazowska/cra/networks.html*, last accessed on 15/03/2017.

(3) Berners-Lee, T. with Fischetti (1999), *Weaving the Web: the Past, Present and Future of the World Wide Web by its Inventor*, (Orion Business: UK), p. 236. URI stands for (Universal Resource Identifier).

was an experimental project under the control of the US government and involving a number of universities and companies(4). For this purpose, ARPANET was installed in 1969. ARPANET was based on linking a number of computers or 'nodes', exchanging messages that were divided up into a number of segments called 'packets'(5). Its hosts started using the procedure Network Control Protocol (NCP). In the 1970s, a set of procedures was developed under the control of the US defence research laboratories (DARPA). The communication standard Transmission Control Protocol/Internet Protocol (TCP/IP), was created for specific purposes: the TCP for converting messages into streams of packets, and the IP for functions relating to addressing and routing the packets to their intended destination(6).

In the mid-1980s, a major backbone communication service for the Internet, the NSFNET, was developed based on the initiative of the US National Science Foundation (NSF). In addition, other US state agencies contributed to developing backbone facilities such as the National Aeronautics and Space Administration (NASA) and the Department of Energy. That was not exclusive to the US but was also in Europe as Internet services became available through major international backbone services, such as NORDUNET and others. Also, commercial Internet service providers emerged at that time. It should be noted here that the continuous collaboration in the technical development of the Internet between entities from various fields: public, research and industry(7). The operation and maintenance of the Internet have always involved similar

(4) A Brief History of the Internet by its inventors, version 3.32 last revised 10 Dec. 2003, available online at: *http://www.isoc.org/internet/history/cerf.shtml* last accessed on 15/03/2017; Cerf, V. (last modified on 15 Jan 2008), A Brief History of the Internet and Related Networks, online available at: *http://www.isoc.org/internet/history/cerf.shtml*, last accessed on 15/03/2017; RFC 2235: Zakon, R. H. and The Internet Society (1997), Hobbes' Internet Timeline.

(5) On the initial concepts of the Internet, see: A Brief History of the Internet by its inventors, *supra 4*.

(6) RFC 791: Postel, J. editor (1981), Internet Protocol - DARPA Internet Program Protocol Specification", STD 5, USC/Information Sciences Institute, September 1981, pp. 1-3.Sss also: Vinton G. Cerf and the Computing Research Association (1995, 1996, 1997), *supra* 4.

(7) See: Internet Histories: A Brief History of the Internet and Related Networks by Vinton Cerf, Internet Society (2009), available online at: *http://www.isoc.org/internet/history/cerf.shtml*, last accessed on 15/03/2017.

collaboration[8]. For this reason a number of global organisations were established, such as the World Wide Web Consortium (W3C)[9].

By May 1993 the WWW technology was available to everyone for free. However, in the mid-1990s, the network was transferred from government agencies to several private operations.[10]As the Internet grew, more problems arose. There were concerns about the need to enhance security and privacy for business and e-commerce purposes. In addition, the possibility for illegal activities to be conducted over the Internet has been a fundamental reason behind states'pressure on the industry to adopt responsive regulatory solutions. Therefore, technology-based constraints have been developed within the Internet infrastructure. Also, commercial and advertising reasons have motivated the technologists to develop geo-locations and segmentation facilities to reach potential end-users[11].

In terms of the services available on the Internet, a new version of the web known as Web 2.0 was developed from 2002. Web 2.0 has maximised the social side of the Internet as it allows for more interactive communication and information sharing between users.[12] The term was defined by O'Reilly as:

> "Web 2.0 is the network as platform, spanning all connected devices; Web 2.0 applications are those that make the most

(8) See for example the role of Internet Activities Board (IAB) and its two primary components; the Internet Engineering Task Force (IETF) and the Internet Research Task Force (IRTF) in *supra* 7.

(9) (W3C) "is an international consortium where Member organizations, a full-time staff, and the public work together to develop Web standards. W3C's mission is:
To lead the World Wide Web to its full potential by developing protocols and guidelines that ensure long-term growth for the Web". See the W3W website at: *http://www.w3.org/Consortium/*, last accessed on 15/03/2017.

(10) See: Charlesworth, A. (2000), "The Governance of the Internet in Europe" Ch3 in: YamanAkdeniz editor and others *The Internet, Law and Society* (Pearson Education Limited: UK), p.52. Also see: a Brief History of the Internet (2009) *supra* 4.

(11) For more infromation on Internet governance see: Zittrain, J. (2008), *The Future of the Internet and How to Stop It, (*US: Yale University Press), pp. 7-35; Wu, T. (2010), *The Master Switch: The Rise and Fall of Information Empires*, (New York: Alfred A. Knopf).

(12) The concept of Web 2.0 is not clearly defined. However, it is discussed in further details in: O' Reilly, T. (2005), 'What Is Web 2.0: Design Patterns and Business Models for the Next Generation of Software'.

> of the intrinsic advantages of that platform: delivering software as a continually-updated service that gets better the more people use it, consuming and remixing data from multiple sources, including individual users, while providing their own data and services in a form that allows remixing by others, creating network effects through an "architecture of participation," and going beyond the page metaphor of Web 1.0 to deliver rich user experiences."(13)

Since then, many social networks have emerged such as 'YouTube', 'MySpace', and 'Flickr'. These new technologies allow end-users to produce their own content which is known as User Generated Content (UGC).

However, the nature of the Internet promises more technological developments yet to come. As those developments bring new ways of providing services and interaction, more complicated legal issues are likely to arise in parallel, amongst which are concerns about the availability of illegal and harmful content. Thus, the theoretical analysis of the problem in the context of the Internet requires defining the term 'Internet'itself from a legal perspective.

2. Defining the Internet

Internet was precisely defined in a resolution passed by the Federal Networking Council (FNC)(14), the definition was developed in consultation with the leadership of the Internet and Intellectual Property Rights (IPR) Communities.

"The Federal Networking Council (FNC) agrees that the following language reflects our definition of the term "Internet".

(13) O'Reilly, T. (2005), 'Web 2.0: Compact definition?' *O'Reilly Radar* blog, 1/10/2005, available online at: *http://radar.oreilly.com/archives/2005/10/web-20-compact-definition.html*, last accessed on 16/03/2017.

(14) The Federal Networking Council (FNC) was chartered by the National Science and Technology Council's Committee on Computing, Information and Communications (CCIC) to act as a forum for networking collaborations among Federal agencies. On October 1997, it was decided to coalesce the FNC activities into several of the newer sub-organizations of the CCIC. For further information, see:University of Illinois Board of Trustees (1997), the FNC archived material-The Federal Networking Council.

"Internet" refers to the global information system that

i - Is logically linked together by a globally unique address space based on the Internet Protocol (IP) or its subsequent extensions/ follow-ons;

ii - Is able to support communications using the Transmission Control Protocol/Internet Protocol (TCP/IP) suite or its subsequent extensions/follow-ons, and/or other IP-compatible protocols; and

iii - Provides, uses or makes accessible, either publicly or privately, high level services layered on the communications and related infrastructure described herein"[15]

The Internet was defined by Lessig as:

"[A] network of networks. In the main, these networks connect over wires. All of these wires, and the machines linked by them, are controlled by someone. The vast majority are owned by private parties - owned, that is, by individuals and corporations that have chosen to link to the Net. Some are owned by the government"[16].

The term 'Internet'was also defined by Tim Berners Lee and Mark Fischetti as:

"[a] global network of networks through which computers communicate by sending information in packets. Each network consists of computers connected by cables or wireless links"[17].

The definition of Berners Lee and Fischetti simply indicates some of the Internet features but fails to articulate all its characteristics. However, Lessig's definition focuses on the identity of the net owners.

From the above definitions we can identify the criteria through which the Internet can be understood:

1. - By its infrastructure or the hardware and software components that make up the infrastructure through which various applications are distributed; and

2. - By the services it provides for the Internet users.

(15) Definition of Internet 24/10/1995 available online at: *http://www.nitrd.gov/fnc/Internet_res.html* last accessed on 15/03/2017.

(16) Lessig, L. (2001a), *the Future of Ideas: the Fate of Commons in a Connected World*, (First Vintage Books Edition: New York), p 26.

(17) Berners-Lee, T. with Fischetti (1999), *Weaving the Web: the Past, Present and Future of the World Wide Web by its Inventor*, (Orion Business: UK).

Accordingly, the Internet is distinct from other media that also provide either communication or information or perhaps both, but in different ways from the Internet. Starting with the term telecommunications in its traditional meaning, it was defined in the US Telecommunications Act of 1996 as "the transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received"[18]. Here, although telecommunications provide two-way communication, there is a significant difference from the Internet which is that telecommunications services do not allow the receiver to change either the form or the content of the information it receives. However, the Internet allows the end-user to use the information in various ways, including modifying the form and content of information. Therefore, telecommunications service is excluded from the definition of Internet. However, consequent upon convergence and technological development, new generations of mobile phones are providing access to the Internet. Also, the ability of mobile telecom networks to carry multimedia applications constitutes another intersection area with the Internet. These issues have to be born in mind when considering the question of Internet regulation.

Secondly, another close notion is broadcast media. However, there are differences between the two terms. The Internet differs from broadcast media in two fundamental aspects, first is the method of service delivery, and second is the way in which users consume the service, particularly services linked with content. Broadcast content is transmitted to the general public at the press of a button and following an appointed programmes schedule. Conversely, access to the Internet requires connection to an ISP, wired or wireless, by subscription or other means based on pull-in mechanisms free of time restrictions. Also, a main feature of Internet content is the absence of editorial responsibility in general, although web-based cast can be subject to editorial procedure. Further features of Internet content are shown below.

(18) Telecommunications Act of 1996, Pub. L. No. 104-104, purpose statement, 110 Stat. 56, 56 (1996), at § 714.

2.1 Internet infrastructure

The Internet infrastructure is what gives the network the capability to distribute a massive amount of information and to carry various types of services such as commerce, entertainment, and communication. In addition, the Internet architecture involves technology-based constraints through its network designs and standards, besides system configurations which explain the technical side of Internet governance. This feature of the Internet infrastructure was explained first by Reidenberg in the theory of 'LexInformatica'(19), and then it was developed by Lessig, however under the term 'Code as law'(20). According to this, technology-based constraints throughout the network infrastructure constitute a fundamental source of rules for Internet governance. The technical description is needed to understand the regulatory context of the Internet before conducting the regulatory analysis throughout the following chapters.

The Internet is based on a global and complex operational infrastructure which indicates the limitation of the traditional power of states to exercise direct governance over it(21). Technically, the Internet interconnects millions of computing devices around the world(22). These devices are of various types, such as personal computers and other servers that store and transmit data and are known as 'hosts'or 'end systems'.

The expansion of the Internet has been an exceptional phenomenon throughout the world. Since 2000, the growth of Internet users has been

(19) Reidenberg, J. (1998), 'LexInformatica: the Formulation of Information Policy Rules Through Technology': 76 *Texas Law Review*, no.3 Feb, 554- 584.

(20) Lessig, L. (1999a), *Code and Other laws of Cyberspace*, (Basic Books: New York).

(21) There are arguments taken from economic market perspective regarding new trends in Internet history claiming the Internet is changing to more closed networks following new generations of devices Like IPhone. See Zittrain, J. (2008), *The Future of the Internet and How to Stop It*, (US: Yale University Press), pp. 7-8. For general information see: Wu, T. (2010), *The Master Switch: The Rise and Fall of Information Empires*, (New York: Alfred A. Knopf).

(22) Internet Usage Statistics The Internet Big Picture: World Internet Usage and Population Statistics, last updated on March 04, 2017, available online at: *http://www.internetworldstats.com/stats.htm*, last accessed on 16/03/2017.

estimated at 923.9 % worldwide[23], and by end of 2016, around 49.2 % of the world's population was estimated to have access to the Internet.[24]

Internet access is available to the end-user through connection to commercial ISPs. According to Noam there are eight industries comprising the basic infrastructure components of the Internet: ISPs, broadband providers, portals, search engines, browser software, media player software, and IP telephony[25]. The ISPs are known to be at the edge of the network connected to the rest of the networks through Internet backbone companies, which are a few companies at the top of the network such as AT & T and Verizon. The Internet backbone are also known to be international in their coverage, directly connected to each of the Internet backbone companies, and also connected to a large number of other local ISPs[26]. From a regulatory perspective the ISPs constitute the most important local intermediaries in terms of content regulation[27].

The Internet is regulated through its infrastructure. Thus, there are four essential concepts about Internet infrastructure that have to be understood:

1 - packet switching network,

2 - Internet protocols that allow multiple packet networks to be interconnected,

3 - the concept of layers which is used as a tool for legal regulatory analysis,

4 - and end-to-end, the principle of control.

The four concepts are briefly explained below.

(23) *Ibid.*

(24) *Ibid.*See also: ITU (2016), *ICT Facts and Figures 2016*, (Geneva International Telecommunication Union).

(25) Noam, E. (2003), 'the Internet: Still Wide Open and Competitive?' *Oxford Internet Institute Issue Brief* No.1, August, p.2.

(26) Kurose, J. F. & Ross, K. W. (2003), *Computer networking: A Top-Down Approach Featuring the Internet*, 2nd ed. (Pearson Education: US), p39.

(27) See the discussion on how governments rule the net through Internet intermediaries in Goldsmith, J. & Wu, T. (2006),*Who Controls the Internet? Illusions a Borderless World,* (Oxford University Press), pp. 65-85.

I - Packet Switching Network

Within the global network, 'hosts'or 'end systems'are connected by communications links through which Internet traffic flows. These links are made up of different types of physical media namely: conventional copper wire, coaxial cable, fibre optics and radio waves. There are different rates for data transmission over the different types of communication links and the link transmission rate is called 'band-width'which is measured in bits/second. However, end systems are not directly connected to each other but indirectly through 'routers'which constitute the intermediate switching devices with ingoing and outgoing communication links. Here, the amount of information transmitted is called a 'packet'which flows from the sending end system to the receiving end system through what is known as a 'route'or 'path'. This was exactly the idea behind creating a decentralized network based on packet switching technology, or the Internet in its present form.(28)

The Internet provides for multiple communicating end systems to share a path, or even parts of it, at the same time instead of providing a dedicated path. This is known as a 'packet switching'system, which was explained by Cerf:

> ''In a packet switching system, data to be communicated is broken into small chunks that are labelled to show where they come from and where they are to go, rather like postcards in the postal system. Like postcards, packets have a maximum length and are not necessarily reliable. Packets are forwarded from one computer to another until they arrive at their destination. If any are lost, they are re-sent by the originator. The recipient acknowledges receipt of packets to eliminate unnecessary re-transmissions.''(29)

Thus, the Internet constitutes a packet switching network as an alternative for the traditional 'circuit switching'technology used in telephony networks. In circuit switching networks the communication between two hosts would take a direct 'end-to-end'connection and during the communication session the resources needed along a path, such as

(28) On the initial concepts of the Internet, see: A Brief History of the Internet by its inventors, *supra* 4.

(29) Cerf, V. G. and the Computing Research Association (1995, 1996, 1997), *supra* 4. Also, see RFC 970 - On packet switches with infinite storage by John Nagle, December 1985.

link bandwidth, to provide for communication between the end systems are reserved for this particular communication session, while in packet-switched network, these resources are not reserved but used on demand and may have to wait for access to a communication link. This latter description summarises the idea of time-sharing provided through 'packet switching'communication.(30) The exchange of packets between two machines on the net is managed by a set of (TCP/IP) protocols which is explained in the next section.

II. TCP/IP Protocols

The concept of Internet Protocol was defined by Berners-Lee as "[a] language and a set of rules that allow computers to interact in a well-defined way"(31). According to Postel, there are two functions implemented by TCP/IP: addressing and fragmentation(32). He explains:

"The internet modules use fields in the internet header to fragment and reassemble internet datagrams when necessary for transmission through "small packet"networks.

The mode of operation is that an internet module resides in each host engaged in internet communication and in each gateway that interconnects networks. These modules share common rules for interpreting address fields and for fragmenting and assembling internet datagrams. In addition, these modules (especially in gateways) have procedures for making routing decisions and other functions."(33)

The Internet protocols provide two types of identification on the Internet, first for the computer on which a server runs which is known as 'Internet Protocol address', a unique 32-bit identifier looking like this: 86.166.164.41; a second type is a service identifier known as a 'protocol port number'which identifies each available service. For example, Hyper

(30) Lessig distinguishes between the telephone network and the Internet from a regulatory perspective. For further information, see: Lessig, L. (1999a), *Code and Other laws of Cyberspace*, (Basic Books: New York), pp. 44-46.

(31) Berners-Lee, T. with Fischetti (1999), *Weaving the Web: the Past, Present and Future of the World Wide Web by its Inventor*, (Orion Business: UK).

(32) RFC 791: Postel, J. editor (1981), Internet Protocol - DARPA Internet Program Protocol Specification", STD 5, USC/Information Sciences Institute, September 1981.

(33) *Ibid*; Lessig, L. (1999a), *Code and Other laws of Cyberspace*, (Basic Books: New York), pp. 100-102; Lessig, L. (2006a),*Code: Version 2.0,* 2nd ed.,(Basic Books: U.S), p.43.

Text Transfer Protocol (HTTP) is a protocol to publish and read hypertext documents on the web[34]. Actually, this is based on the original version of the IP suite known as IPv4. However, a new version of Internet Protocol called IPv6 has addresses which are 128-bit identifiers for interfaces and sets of interfaces[35]. IPv6 maximizes the authentication function to identify senders and receivers of information over the Internet. This later development increases the potential for control of behaviours as it eliminates the opportunity for end-users to remain anonymous[36].

III. The concept of layers

The concept of 'layers', used as a tool for legal regulatory analysis, was first described by Yochai Benkler and later adopted by Lawrence Lessig to articulate the way in which a communications system is run. Benkler and Lessig divide the system into three layers: the physical infrastructure layer that includes wires, cable, and radio frequency spectrum; then the logical infrastructure layer which means software, and finally the content layer[37].

Internet 'layered protocol stack'was justified by end-to-end (e-2-e) argument as it was intended to be not only a structure for the network design, but also a philosophy about keeping the network as simple as possible.

IV. End-2-end

The aim of e-2e was deregulation of the network at its content level. This design was described by network architects Jerome Saltzer, David Clark and David Reed:

> "end-to-end arguments have...two complementary goals:
>
> [1] Higher-level layers, more specific to an application, are free to (and thus expected to) organize lower-level network

(34) Further explanation how TCP/IP implemented provided by Lessig, L. (1999a), *Code and Other laws of Cyberspace*, (Basic Books: New York), pp. 100- 102.

(35) Hinden, R. & Deering, S. (2003), Internet Protocol Version 6 (IPv6) Addressing Architecture, RFC 3513 Internet Society, April.

(36) See for example: Shawn, H. (2001), 'Translating Privacy Values with Technology': *7 B. U. J. Sci. & Tech. L.* 288; and Lessig, L. (2006a), *Code: Version 2.0,* 2nd ed.,(Basic Books: U.S), p. 54.

(37) See: Benkler, Y. (2000), "From Consumers to Users: Shifting the Deeper Structures of Regulation": *Federal Communications Law Journal 52, 561, 562-63*; Lessig, L. ((2001a), *the Future of Ideas: the Fate of Commons in a Connected World,* (First Vintage Books Edition: New York), p 23.

resources to achieve application-specific design goals efficiently. (application autonomy);

[2] Lower-level layers, which support many independent applications, should provide only resources of broad utility across applications, while providing to applications usable means for effective sharing of resources and resolution of resource conflicts. (network transparency)''[38].

The impact of 'end-to-end'design is providing more ability to the users at the lower level or edge of the network, because control is placed at that end instead of higher level of the network, in order to sustain innovations of applications for the network independently from the network owners. So, in contrast to traditional communications network which are centrally controlled, no approval or technical configuration is required inside the network. However, that was the original design of the Internet. As the network has grown up, the principle of end-to-end has been eroded. The design of the network has been developed to integrate more technology-based regulation in order to meet various regulatory objectives. These diverse objectives might be commercial or non-commercial depending on the type of interest they reflect amongst the Internet multi stakeholders. For example, the demand for increased security standards for e-commerce purposes was behind the development of a protocol known as ''Cookie''which allows a web server to deposit a small bit of data on the user's computer so the server could recognize the user when it exits to another page[39]. Another example is the impact of state pressure on the industry to develop special technologies to facilitate censorship of illegal and harmful content.

2.2 Internet services

Two elements must be understood in order to assimilate the Internet services: the types of services provided over the network, and the role of

(38) See:Reed, D. P. *et al*., Commentaries on "*Active Networking and End-to-EndArguments,*" 12 IEEE Network 66, 69-71, (May-June 1998).

(39) For further details on architectural constraints over the network see: Lessig, L. (2006a), *Code: Version 2.0,* 2nd ed.,(Basic Books: U.S), pp. 38-60.

the Internet Service Providers (ISPs) and Internet Content Producers (ICPs).

I. The available services (the virtual world)

Essential services accessed from the Internet by electronic means and based on the hybrid nature of the Internet as a communication/ information medium are described by Chadwick as "a set of mass media"(40). These services have been broadly grouped into the following; electronic mail (e-mail), search engines and directories, dialog services between users with a common interest (chat), personalised and social networks based on Web 2.0 technologies like weblogs, and e-commerce of goods and services through the network.

Since the emergence of the Internet the social side has been crucial. According to its inventors the Internet influence was not only intended for the technical fields of computer communications but throughout society moving toward increasing use of online tools to accomplish the wide range of services provided through the network(41). Therefore, the idea of the Internet as a parallel 'place' to the real world or (cyberspace)(42) has arisen since it became available for the public(43). This reflects the social diversity of the network among which people gather in a large variety to communicate or socialise in real time. These communities are known as 'virtual communities'(44).

(40) Chadwick, A.(2006), *Internet Politics: States, Citizens and New Communication technologies*, (Oxford University Press: New York), p.6

(41) See a Brief History of the Internet by its inventors, *supra* 4; Vinton G. Cerf and the Computing Research Association (1995, 1996, 1997), *supra*4.

(42) The term 'Cyberspace' was first described in *Neuromancer* a science fiction novel by Gibson first published in 1984. It means "[t]he notional environment within which electronic communication occurs, esp. when represented as the inside of a computer system; space perceived as such by an observer but generated by a computer system and having no real existence; the space of virtual reality": Gibson, W. (1993), *Neuromancer*, (Harper Collins: London). Also, see: Lessig, L. (1999a), *Code and Other laws of Cyberspace*, (Basic Books: New York), pp. 63-84.

(43) Goldsmith, J. & Wu, T. (2006), *Who Controls the Internet? Illusions a Borderless World,* (Oxford University Press), pp. 13-17.

(44) For further information on the concept and nature of virtual communities see: Schalken, K. (2000), 'Virtual Communities: New Public Spheres on the internet?' in Hoff, J. &Horrocks, I. & Tops, P. editors, *Democratic Governance and New Technology: Technologically mediated innovations in Political Practice in Western Europe,* (Routledge: London), 153- 170.

In 2001, further types of personalised weblogs (blogs) emerged, allowing users to interact with content by posting comments(45). Later on, following the emergence of Web 2.0 technologies, new online social networks, such as My Space and Twitter, became available to end-users. These new technologies have maximised the ability of Internet users to consume content and contribute to it. So, the users are able to download, comment, debate, and share various types of content such as videos, music, and texts. However, most importantly is the ability for users to upload User-Generated Content (UGC), although not necessarily created by the user(46). According to McNair, such developments led to the "rise of interactivity and mass participation"(47). The issue has drawn a great deal of attention within the literature of Internet politics and citizens'participation in democratic society(48). However, it is not the aim here to conduct a political analysis of the impact of the Internet on citizen participation. Here, the aim is to consider Internet content as the object to which regulation is applied. Therefore, understanding the features of such content is fundamental for regulatory purposes. As mentioned earlier in this paper, Internet content can be distinguished from traditional mass media through two criteria: the method of content delivery and the way in which the users consume or interact with content.

(45) See McNair, B. (2009), 'The Internet and the Changing Global Media Environment' in Chadwick, A. Howard, N. editors, *Routledge Handbook of Internet Politics,* (Routledge: Oxon), pp. 217-229, in particular pp. 221-23.

(46) *Ibid*, also see: Blazquez, F. j. c. (2008), 'User-Generated Content Services and Copyright': *IRIS plus Legal Observations of the European Audiovisual Observatory,* 2008-5; Papacharissi, Z. (2009), 'The Virtual Sphere 2.0: the Internet, the public Sphere, and Beyond' in Chadwick, A. Howard, N. editors, *Routledge Handbook of Internet Politics,* (Routledge: Oxon), 230-245; Stanyer, J. (2009), 'Web 2.0 and the Transformation of News and Journalism' in Chadwick, A. Howard, N. editors, *Routledge Handbook of Internet Politics,* (Routledge: Oxon), 201-214.

(47) *Ibid.*

(48) For a comprehensive background on Internet politics see: Chadwick, A. Howard, N. eds. (2009),*Routledge Handbook of Internet Politics,* (Routledge: Oxon); Chadwick, A.(2006), *Internet Politics: States, Citizens, and New Communication technologies*, (Oxford University Press: New York); Oates, S. & Owen, D. & Gibson, R. K. editors (2006), *The Internet and Politics: Citizens, Voters and Activists*, (Routledge: London); Hoff, J. &Horrocks, I. & Tops, P. editors (2000), *Democratic Governance and New Technology: Technologically mediated innovations in Political Practice in Western Europe,* (Routledge: London).

In this context, the coming together of all those services on the Internet is absolutely relevant to the phenomenon of convergence of media, information technologies, and telecommunication(49).

Convergence is briefly described below in relation to the closely allied notion of 'multimedia', by which means the characteristics of Internet content can be identified.

a) Convergence of media, IT, and telecommunications

The term 'convergence'in this context indicates the shift from a situation where media sectors are distinct or single purpose network to converged multipurpose networks which is reflected in the convergence of delivery channels. This convergence is linked with digitalization by which all forms of data are translated into digital bits(50). The convergence is reflected at various levels, indicated by Marsden and Verhulst(51): convergence of content types (multimedia and new media), consumer markets convergence (access through multi devices, bottleneck control of data flow, convergence of broadcasting into the Internet) or which is described by Price and Verhulst as a "fundamentally different regulatory context"(52) compared to the analogue delivery model. They define the regulatory context by:

Shift in scarcities and intermediaries (based on the shift from analogue model to digital model).

(49) The complex interaction and the impacts of these interdependent factors and actors on the Internet as a regulatory context, are identified and analysed with special emphasis on Internet content in: Al-Harbi, Alyamamah (2012), *the Constitutional Implications of 'Monitoring' Harmful Internet Content in Kuwait: an Empirical Study in Light of European Union/United Kingdom and United States Regulatory Models*, a thesis submitted for the degree of PhD (Department of Law/University of Essex). See in particular pp. 44-54.

(50) Marsden, C. & Verhulst, S. (1999),'Convergence: A Framework for Discussion' in Marsden, C. & Verhulst, S., *Convergence in European Digital TV Regulation,* (London: Blackstone Press Limited), pp. 1-20.

(51) Marsden, C. &Verhulst, S. (1999), *Ibid*; Tambini, D *et al*. (2008), *Codifying Cyberspace: Communications Self-regulation in the Age of Internet Convergence,* London: Routledge, pp. 30-37.

(52) Price, M. &Verhulst, S. (2005), *Self- Regulation and the Internet*, (Kluwer Law International), p. 137- 150.

1. Shift in information flows (from central information store to individual information store).(53)

Convergence is also linked with the growth of the global information economy within which a multimedia market has cross-national regulatory influence(54).

b) Multimedia Services

As a result of convergence, new multimedia services emerge with wider ability; to carry different services by a single medium, to distribute a service through several different physical media, and to operate a multipurpose network or transmission mode(55). Multimedia was defined as "data that contains a combination of text, graphics, audio, and video"(56). In this context, Grewlich distinguished the term 'new media'services from 'classic media'by three ideas: "*firstly* the combination of different types of information; *secondly*, two-way communication or interactivity; and *thirdly*, the approximation, substitution or even the convergence of networks, terminal equipment and applications"(57). The term multimedia was also classified as "being synonymous with the term 'Information Society Services'"(58). The latter was described as "any service normally provided for remuneration, at a distance, by electronic means and at the individual request of a recipient of services."(59)

(53) Price, M. &Verhulst, S. (2005),*Ibid*; See also: Sauter, W. (1999), 'Regulation for Convergence: Arguments for a Constitutional Approach?' in Marsden, C. &Verhulst, S. (1999), *Convergence in European Digital TV Regulation,* (London: Blackstone Press Limited), pp. 65-98.

(54) See: Noveck, B. S. (1999), 'Thinking Analogue about Digital Television? Bringing European Content Regulation into the Information Age' Chapter 2 in Marsden, C. and Verhulst (Eds.), *Convergence in European Digital Television*, (Blackstone Press Ltd: London), pp. 21-64. For example, the European approach to data protection has been integrated into the network so it is applicable by default beyond the region.

(55) Goldberg, D., Prosser, T., Verhulst, S. (1998), *Regulating the Changing Media: A Comparative Study,* (Clarendon Press: Oxford), pp. 1-2.

(56) Comer, D. (2009), *Computer networks and* Internets, 5th ed. (Pearson Education International: US), p. 22.

(57) Grewlich, K. w. (1999), Governance *in* "*cyberspace*"*: Access and Public Interest in Global Communications*, (Kluwer Law International: Netherlands), p. 59.

(58) Closs, W. (2001), "Does the Existing Regulatory Framework for Television Apply to the New Media": *IRIS plus, Legal Observations of the European Audiovisual Observatory*, Issue 2001-6.

(59) Article 1(2) of Directive 98/34/ EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical =

The characteristics of new multimedia have fundamentally changed the traditional context of mass media regulation. The impact affects the regulatory process of content regulation in several ways either regarding the rationale and justification of regulation or even practically in terms of methods of control, the identity of the regulator, and instruments of rules. Thus, self-regulation arose as a proper alternative response to deal with such converged services. Therefore, the role and liability of ISPs and ICPs become essential in regulating Internet content(60).

c) Internet content

Internet content is in various forms: text, images, audio, and video. It can be considered from different angles: first old forms of existing content that were provided through traditional interfaces based on the one-to-many push-button mechanism, in other words mass media, such as TV channels, radio and electronic versions of newspapers. These forms are now provided on the Internet, however, using pull-in delivery mechanisms. Here the content is duplicating the old form, but it is delivered differently where the end-user is able to download content with the choice of when and where to do so. Then there is Internet-based content which allows two-way, participative communication. Internet content is also divided into two generations: the type known as Web 1.0 which is characterised by downloading, consuming, corporate, based on separate media, and static. The abovementioned new generation of the Web 2.0 model is characterised by uploading, creating, being personal, based on converging media, and interactive. So, it has enhanced the

standards and regulations, as amended by Directive 98/48/EC of the European Parliament and of the Council of 20 July 1998. According to Sauter the concept of 'Information Society' emerged in the EU as a counter-initiative to the US 'Information Superhighways'. That was within a project promoted by the EC Commission in the context of driving the European economic and political integration. See: Sauter, W. (1999), 'Regulation for Convergence: Arguments for a Constitutional Approach?' in Marsden, C. &Verhulst, S., *Convergence in European Digital TV Regulation,* (London: Blackstone Press Limited), pp. 67-74.

(60) See: Al-Harbi, Alyamamah (2012), *the Constitutional Implications of 'Monitoring' Harmful Internet Content in Kuwait: an Empirical Study in Light of European Union/United Kingdom and United States Regulatory Models*, a thesis submitted for the degree of PhD (Department of Law/University of Essex), pp. 64-79.

ability of active end-users[61] who create, annotate, comment and communicate[62].

There are two key elements in identifying type of content, the method through which it is delivered and the way consumers interact with it[63]. Accordingly, Internet content is not delivered by a one-way controlled push-button method at appointed times and places and thus differs from the classic linear broadcasting. The two-way platforms changed the passive role of the consumer to an interactive relationship with the digital content which is being pulled in, modified, discussed and also reproduced for unlimited times and purposes. So, in addition to the existing professionally produced content, a new type of user-generated content is available on the Internet. These Web 2.0 platforms were classified by UK regulator Ofcom as: "social networking sites such as Myspace and Bebo, user/community-generated sites such as Youtube, and information sites such as Wikipedia."[64]

The flow of information across such a global environment can include legal and non-legal content. In addition, content deemed to be harmful to minors is now accessible on the Internet outside traditional media zoning restrictions. Generally speaking, the availability of potentially illegal and harmful content raises the question of regulation. Internet characteristics explain the difficulty of dealing with such a complex non-central network operated by multi-stakeholders in terms of the applicable form and structure of regulation. A pragmatic response in combating undesirable types of Internet content required advanced technological knowledge and experience. Meanwhile, direct state

(61) Freedman, D. (2008), *The Rise and Fall of the Public Service Publisher*, a briefing paper prepared for the Center for Social Media Department of Media and Communications and Centre for the Study of Global Media and Democracy Goldsmiths, University of London.

(62) Harm and Offence in Media Content: Ofcom's Submission to the Byron Review in November 2007, Annex 6: Literary Review, A report for OfcomBy Andrea Millwood Hargrave and Sonia Livingstone, with David Brake Department of Media and Communications London School of Economics and Political Science, p.17. Also, see: Ofcom (2007), *A new approach to public service content in the digital media age*. Discussion paper, (London: Ofcom).

(63) See on digital content issues also papers published by Intellect the trade association for the UK technology industry: Intellect (2008), Capitalising on Convergence 2 from Creation to Consumption: delivering Content in a Converged World (February 2008); And Intellect (2008), Capitalising on Convergence 2 the Blizzard of Content, July.

(64) Ofcom (2007).

governance is challenged by practical and technological challenges. Intermediaries such as ISPs and ICPs are more likely to control the dissemination of content by imposing restrictions on access and distribution of content. In this context, the control of Internet content is practised by ISPs and ICPs through architectural constraints(65).

II. The rise of ISPs and ICPs in Internet regulation

As noted earlier, Internet access is available to the end-user through connection to commercial ISPs. Besides the basic actual connectivity, major ISPs usually provide additional content services through a default homepage 'portal' such as (msn.com) and (btyahoo.com). A wide range of facilities is available on those 'portal' homepages for the end-user, such as search facility, news, e-mail subscription, and entertainment services(66).

The term Internet Service Provider was defined in the European Directive 2000/31/EC: ""service provider": any natural or legal person providing an information society service"(67). Information society services are "services within the meaning of Article 1(2) of Directive 98/34/EC as amended by Directive 98/48/EC"(68). The latter defines 'service'as:

> "any service normally provided for remuneration, at a distance, by electronic means and at the individual request of a recipient of services.
>
> For the purposes of this definition:
>
> 'at a distance'means that the service is provided without the parties being simultaneously present,

(65) See Al-Harbi, Alyamamah (2012), *the Constitutional Implications of 'Monitoring' Harmful Internet Content in Kuwait: an Empirical Study in Light of European Union/United Kingdom and United States Regulatory Models*, a thesis submitted for the degree of PhD (Department of Law/University of Essex), pp. 41-43, 69-79.

(66) See: Tambini*et al*. (2008) *Codifying Cyberspace: Communications Self-regulation in the Age of Internet Convergence,* London: Routledge, pp.6-8; Sutter, G. (2005), 'Internet Service Providers and Liability' in Klang, M. & Murray, A., *Human Rights in the Digital Age*, (Glasshouse Press: London), pp. 71-84.

(67) Directive 2000/31/EC, Article 2(b).

(68) *Ibid*, Article 2(a).

> 'by electronic means' means that the service is sent initially and received at its destination by means of electronic equipment for the processing (including digital compression) and storage of data, and entirely transmitted, conveyed and received by wire, by radio, by optical means or by other electromagnetic means,
>
> 'at the individual request of a recipient of services'means that the service is provided through the transmission of data on individual request."(69)

In fact, the ISPs constitute intermediaries for a massive amount of information and content passed or stored on their servers. Thus, their role in content regulation becomes significant as gatekeepers to the Internet. For this purpose, advanced filtering and rating technologies are used by ISPs and ICPs(70). Therefore, the question of the ISPs'liability for content posted by third parties has been essential in the efforts to combat illegal and harmful content. According to Goldsmith and Wu, "Internet Service Providers are the obvious first target for a strategy of intermediary control"(71). In the US and the European Union the ISPs enjoy a limited liability for content they distribute or store on their servers(72).

ISPs and ICPs usually apply rules originating from: their own standards, pre-existing standards (law or industry norms), or simply as a direct response to state pressure to do so. However, the fact that they enjoy limited liability for content, or are probably released from it, could

(69) Article 1(2) of Directive 98/34/ EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations, as amended by Directive 98/48/EC of the European Parliament and of the Council of 20 July 1998.

(70) See s. 2.2.2 in: Al-Harbi, Alyamamah (2012), *the Constitutional Implications of 'Monitoring' Harmful Internet Content in Kuwait: an Empirical Study in Light of European Union/United Kingdom and United States Regulatory Models*, a thesis submitted for the degree of PhD (Department of Law/University of Essex), pp. 42-43.

(71) Goldsmith, J. & Wu, T. (2006), *Who Controls the Internet? Illusions a Borderless World,* (Oxford University Press), p.73.

(72) In this context, Yen indicates the controversy regarding ISPs' liability for the behaviour of their subscribers, however, regarding copyright infringements. See: Yen, A. (2000), 'Internet Service Provider Liability for Subscriber Copyright Infringement, Enterprise Liability and the First Amendment': *Boston College Law School Research Paper No*. 2000-03.

result in unbalanced control of Internet content because there is possibility for ISPs and ICPs to over- or underestimate the potential harm of a given content. If such shortcomings occurred in the practice of ISPs'censorship then that might lead to illegitimate decisions. Driven by market imperatives, and interested mainly in making profits, it is cheaper for ISPs and ICPs to block or remove content rather than seeking legal advice. Consequently, the end-users rights to freedom of expression could be infringed. Thus, self -regulation by the industry was the preferred regulatory choice for governments and industry in the examined systems. However, the role of state is not completely absent(73). On the contrary, states have been involved in the development of Internet governance. The cooperation and interaction between the industry and states resulted in the move to co-regulation.

3. Alternative regulatory models for the Internet

During the last two decades the awareness of the need to combat certain types of content and conduct on the network has led to the adoption of more technological solutions integrated into the network infrastructure(74). In fact, the reason for that is the infrastructure's flexible design gave the network its emerging nature. In this context, Lessig stated that:

"Cyberspace has no permanent nature, save the nature of a place of unlimited plasticity. We don't *find* cyberspace, we build it. (If anything is socially constructed, cyberspace is.) And how we build it depends first upon the kind of place we want to make."(75)

That proved to be true during years of the Internet maturing despite the claims for an Internet free from control(76). As the network grew, more concerns followed regarding unlawful activities occurring on it. In response to those diverse demands, architectural regulations were integrated into the network.

(73) Al-Harbi, Alyamamah (2012), *Ibid.*

(74) Zekos, G. I. (1993), "Internet or Electronic Technology: A threat to State Sovereignty", *The Journal of Information, Law and Technology (JILT)*.

(75) Lessig, L. (1996), 'Reading the Constitution in Cyberspace': *45Emory L. J. 869*.

(76) See: Goldsmith, J. (1998); Lessig, L. (2001a).

Since the Internet has become open to public use, the debate regarding Internet governance has been an interesting topic to research across different disciplines and to discuss the possibilities and limitations of designing balanced strategies for Internet regulation. In this context, the regular question of legitimacy and effectiveness has been crucial. A parallel development in legal thought followed the developments in Internet technologies as they facilitated architectural constraints through the network infrastructure. In particular three commentators' arguments have guided development in regulatory thoughts and attitudes towards Internet governance. These are Goldsmith, Lessig, and Reidenberg(77). Landmark court decisions like *Yahoo! Inc. v. La Ligue contre le racismet l'antisémitisme(78) and Reno v. ACLU(79)* have also influenced the literature of Internet governance.

Regulation constitutes intervention in a given field; the intervention must be justified by legitimate policy objectives to achieve, otherwise it would be undesirable intervention(80). In principle, purely state regulation of the Internet is not the right answer because of the abovementioned Internet characteristics as a decentralized international network run and operated by multiple players as it is explained in the previous sections of

(77) Goldsmith, J. (1998) 'Against Cyberanarchy': *65 U. Chi. L. Rev. 1199*; Goldsmith, J. & Wu, T. (2006) *Who Controls the Internet? Illusions a Borderless World,* (Oxford University Press); Lessig, L. (2006a) *Code: Version 2.0,* 2nd ed.,(Basic Books: U.S); Lessig, L. (1999) *Code and Other laws of Cyberspace*, (Basic Books: New York); Lessig, L. (2001a) *the Future of Ideas: the Fate of Commons in a Connected World,* (First Vintage Books Edition: New York); Lessig, L. (2001b) 'The End of End-To-End: Preserving the Architecture of the Internet in the Broadband Era': *48 UCLA L. Rev. 925;* Testimony of Lawrence Lessig C. Wendell and Edith M. Carlsmith (Feb. 7, 2006b); Reidenberg, J. (2005) 'Technology and Internet Jurisdiction': *153 U. Pa. L. Rev. 1951;* Reidenberg, J. (2004) 'States and Internet Enforcement': *1 U. Ottawa L. & Tech. J. 214;*Reidenberg, J. (2002) 'Yahoo and Democracy on the Internet': *42 Jurimetrics 261*; Reidenberg, J. (1998), 'LexInformatica: the Formulation of Information Policy Rules Through Technology': *76 Texas Law Review, no.3 Feb, 554- 584;Reidenberg, J. (1996)* 'Governing Networks and Rule-Making in Cyberspace': 45 Emory L. J. 911; Post, David G. (2000) What Larry Doesn't Get: Code, Law, and Liberty in Cyberspace. *Stanford Law Review, Vol. 52*, p. 1439; Murray, A.D. D. & Scott, Colin David (2002) 'Controlling the New Media: Hybrid Responses to New Forms of Power': *Modern Law Review, Vol. 65, pp. 491-516.*

(78) *Yahoo! Inc. v. La Liguecontre le racism etl'antisémitisme* 2001 U.S. North Dist. California (San Joes Div.), 7 November 2001.

(79) *Reno v. American CivilLiberties Union* No. 96-511. 26/06/1997.

(80) Price, M. &Verhulst, S. (2005), *Self- Regulation and the Internet*, (Kluwer Law International), p.6.

this paper. This fact poses practical and technological difficulties in addition to some fundamental legal questions regarding jurisdiction and choice of applicable law(81). For example, how to define the liable entity for certain undesirable content amongst all those parties who participate in the process of content generating and transmission? And are there available methods for states to impose their laws against users' behavior who are not based within their geographic territory?

However, this does not deny the fact that the Internet is actually regulated through a different form and structure of regulation by technological methods through the system design and based on codes and net protocols applied by the network owners. That is explained by the Lessig and Reidenberg theories of 'Code is law' and ' LexInformatica'(82). Control is possible by technological means by the network owners in addition to control by the net users(83).

However, it is necessary to indicate that the network system allows for two ways to control content. First, regulation of the delivery of content through network infrastructure(84); second, regulation that is practised on the actual content by means of censorship.(85)

Accordingly, Internet content is controlled, however, by non-governmental entities, to maintain certain standards in the network through protocols they apply to it. Instead of command control, self-regulation involves a shift from legislation to industry-regulation. Thus, it is considered 'soft law',a term defined by Senden as

> ''[r]ules of conduct that are laid down in instruments which have not been attributed legally binding force as such, but

(81) Reed, A. (2000), "Jurisdiction and Choice of Law in a Borderless Electronic Environment" Ch 4 in YamanAkdeniz editor and others, *The Internet, Law and Society* (Pearson Education Limited: UK) pp. 79-105.

(82) Reidenberg, J. (1998) 'LexInformatica: the Formulation of Information Policy Rules Through Technology'; Lessig, L. (1999a) *Code and Other laws of Cyberspace*, (Basic Books: New York).

(83) Hammond, A. (1995), "Regulating the Multi-Media Chimera: Electronic Speech Rights in the United States": *21 Rutgers Computer & Tech. L. J. 1.*

(84) Weinstein, S. (2003), "OFCOM, Information-Convergence and the Never Ending Drizzle of Electric Rain", *8 Int'l J. Comm. L. &Pol'y 5.*

(85) Weinstein, S. (2003),*Ibid.*

nevertheless may have certain - indirect - legal effects, and that are aimed at and may produce practical effects"[86].

For example, 'soft law' instruments might take the form of communications, recommendations, and guidelines[87]. Here, ISPs'codes of conduct can be classified as 'soft law'[88].

Self-regulation can be voluntarily applied, mandated by government either directly or indirectly under its pressure. The latter model of mandated self-regulation is known as co-regulation[89]. In fact, making the regulatory choice between self-regulation and co-regulation is affected by socio-cultural factors under different legal systems. For example, Murray and Scott emphasized that while self-regulation strategies are well established under the UK system for media regulation, it is not the case in the US[90].

The state of economic development is another factor to be considered by policy designers in the regulatory procedure. According to Braithwaite, a responsive regulation approach has been designed in developed economies. Developing countries seem to have less regulatory capacity to adopt such an approach[91]. This is evident in Kuwait; for instance, the press refused to adopt codes of ethics for fear of potential pressure from the government on the press to implement codes against

(86) Senden, Linda A.J. (2005), 'Soft Law, Self-regulation and Co-regulation in European Law: Where do they Meet?':*Electronic Journal of Comparative Law, Vol. 9, No. 1, January*.

(87) Senden, Linda A.J. (2005),*Ibid.*

(88) *Ibid.*

(89) See Al-HarbiAlyamamah (2012), *the Constitutional Implications of 'Monitoring' Harmful Internet Content in Kuwait: an Empirical Study in Light of European Union/United Kingdom and United States Regulatory Models*, a thesis submitted for the degree of PhD (Department of Law/University of Essex), pp. 31-33.

(90) Murray, A.D. D. & Scott, David, C. (2002) 'Controlling the New Media: Hybrid Responses to New Forms of Power': *Modern Law Review, Vol. 65, pp. 491-516*; and Tambini*et al* (2008), *Codifying Cyberspace: Communications Self-regulation in the Age of Internet Convergence*, London: Routledge. See Al-HarbiAlyamamah (2012), *the Constitutional Implications of 'Monitoring' Harmful Internet Content in Kuwait: an Empirical Study in Light of European Union/United Kingdom and United States Regulatory Models*, a thesis submitted for the degree of PhD (Department of Law/University of Essex), pp.64-68.

(91) Braithwaite, J. (2007), 'Responsive Regulation and Developing Economies' in Brown, D. & Woods, N. editors *Making Global Self-Regulation Effective in Developing Countries*, (Oxford University Press: US), pp. 149-74.

freedom of the press(92). Unjustified restrictions on content are expected given long standing experience of the state's behaviour in the field of media regulation(93). Serious concerns arise because in some cases content can be restricted in the name of law enforcement. If the contrast between the US and the UK raises interesting points to examine, more interesting points arise from the contrast between these two systems, on the one hand, and the Kuwaiti system on the other.

This topic presents a balance between two competing interests: society demands the protection of certain values such as protecting minors and human dignity from harmful content, and users have rights to access information and freedom of speech and their rights need to be protected against the providers'authority to control content. The problem of harmful content itself is not exclusive to a certain legal system. However, it is treated differently in different social contexts and jurisdictions. Therefore, the issue is worth comparing across a number of legal systems to examine their regulatory approaches in responding to the challenges that originate from Internet content in addition to the available methods of protecting users'rights against the implemented censorship(94).

4. Conclusion

This paper summarised the regulatory development of the Internet and the technological aspects that give the network its distinctive characteristics. It also identified the features of multimedia content that are connected with digitalization and convergence. The description highlighted the limitations of traditional classic regulation in dealing with multimedia issues. In brief, it explained the emerging role of industry, services providers, and self-regulation of Internet content as alternative

(92) See Chapter 5 in Al-HarbiAlyamamah (2012), *the Constitutional Implications of 'Monitoring' Harmful Internet Content in Kuwait: an Empirical Study in Light of European Union/United Kingdom and United States Regulatory Models*, a thesis submitted for the degree of PhD (Department of Law/University of Essex), pp. 129-188.

(93) *Ibid.*

(94) See for example: Noveck, B. S. (1999), 'Thinking Analogue about Digital Television? Bringing European Content Regulation into the Information Age' Chapter 2 in Marsden, C. and Verhulst (Eds.), *Convergence in European Digital Television*, (Blackstone Press Ltd: London), pp. 37-64.

regulatory arrangements for state's regulation. The background is necessary in order to underpin a better understanding of the nature of the Internet as an advanced technological medium and why alternative self-regulatory tools are used in combating undesirable Internet content and conducts.