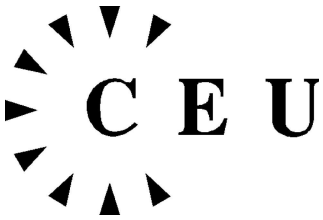

C E N T R A L E U R O P E A N U N I V E R S I T Y

Models of Internet Regulation

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Abstract

Internet emerged in our lives as a global phenomenon. It widely opened doors of innovation and made it accessible to everyone. From military project internet has grown to trend of world importance, which affects lives of billions of citizens within hundreds of states all over the world.

Internet has huge potential, but to receive its benefits internet needs appropriate regulation. From the beginning of Internet era scholars have debated on the question how should the Internet be regulated. This paper discusses several proposed models of internet regulation, which include Self-Regulation, International Regulation, Model of Code, National Regulation and Market Regulation. The paper focuses on finding of advantages and disadvantages of these models and proposes two recommendations to be addressed in nearest future.

Regulation the internet is challenging task. Due to its global nature Internet involves several stakeholders and their interests are not always in line with each other. Governments of nation states, international organizations, network engineers, private sector and civil society all have interests in different parts of internet governance. Industries, international organizations and nation states had decades and sometimes even centuries to overcome problems of regulation, while internet, as we know it now, is relatively recent development. Its global potential is not yet fully achieved. This makes it even harder to give preference to any particular institution and make casting vote, because decision may be yet premature.

Table of Content

Introduction

The most famous and the most ambiguous definition of the internet is that it is a network of networks. Although this definition is correct, it gives no substantial information to identify the main characteristics of new global medium. On the other hand, the first that comes to one's mind when talking about internet is a World Wide Web[1], but still this is also not correct. The WWW is just an application and it has its own creator. The internet can be compared to a huge network of highways, which are used to transport information or boxes of data from one place to another using many and random routes.

In the narrow sense, internet is a mechanism or infrastructure which enables computers all over the world to communicate with each other using special communications protocols, such as TCP/IP[2]. In the broader sense, Internet includes the content that is sent or received, or generated by its applications, personal computers connected to net, servers, routers, cables, millions of internet-enabled mobile phones and much more.[3]

Internet is a new technology, but what is an Internet Law. Scholars have completely opposite ideas whether such a branch of law should exist at all. At one end is a famous American judge Frank Easterbrook and his book "cyberspace and the law of Horse", where he wrote:

[1] Abbreviated as WWW and commonly known as The Web, is a system of interlinked hypertext documents contained on the Internet. The author of The Web is British engineer and computer scientist Sir Tim Berners Lee.

[2] The Internet Protocol Suite is the set of communications protocols used for the Internet and other similar networks. It is named from two of the most important protocols in it: the Transmission Control Protocol (TCP) and the Internet Protocol (IP), which were the first two networking protocols defined in this standard.

[3] Solum, Lawrence B., Models of Internet Governance, Illinois Public Law Research Paper No. 07-25; U Illinois Law & Economics Research Paper No. LE08-027; pp.48-49 (2008); Also available at SSRN: http://ssrn.com/abstract=1136825

> Best way to learn the law applicable to specialized endeavors is to study general rules. Lots of cases deal with sales of horses; others deal with people kicked by the horses; still more deal with licensing and racing of horses… Any effort to collect these strands into a course on "The Law of the Horse" is doomed to be shallow and to miss unifying principles… Only by putting the law of the horse in the context of broader rules about commercial endeavors could one really understand the law about horses.[4]

On the other end is Professor Lawrence Lessig, which points out some characteristics which make internet and its regulation not similar to any other technology discovered before. Lessig focuses on the structure of internet, which has enormous influence over its function as a mean of communication. He eventually says that internet can be a place of freedom, as well as a place of total regulation, depending on the path we choose.[5]

Both authors are right to some extents. Although there is much truth in judge Easterbrook's words and internet law is indeed a part of "the law of the horse", he missed some points which internet posed as a question to general rules of law. The courts had a hard time to answer some of these questions. Problems arose in court's jurisdiction over actions on internet, law applicable to such conducts, protections of IP rights, Patent law, online privacy, unauthorized access, spam, spyware and computer crimes, content regulation and E-commerce. In all of these fields internet introduced something new, distinct from "the law of the horse", which had to be regulated separately.

Finally to overcome issue we should resort to factual evidence. The market has regulated against judge Easterbrook and while there is no demand for the course "the law of the horse", more and more students attend "the law of internet" with its many course name variations.

[4] Frank H. Easterbrook, "Cyberspace and the Law of the Horse", University of Chicago Legal Forum, 1996, Vol.11, pp. 207-208

[5] See further Chapter III.

After defining internet and internet law we should look at what is internet regulation. In a narrow sense internet governance is a complex set of specific task-related institutions, which ensure proper functioning of Internet. In a broader sense internet governance includes content regulation, the roles of international organizations and nation states in regulation.[6]

The Secretary-General of the United Nations after World Summit on the information Society, held in Geneva, assembled the Working Group on Internet Governance, The purpose of which was to develop and understand issues related to internet governance.[7] The main goal was to achieve stable and secure developing policy for the internet. Finally working group came up with its working definition of Internet governance which includes aspects from both definitions mentioned above. The report states:

> Internet governance is the development and application by governments, the private sector and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures, and programs that shape the evolution and use of the internet.[8]

Internet emerged as global phenomenon. Its importance in everyday life, within private industries, public organizations, and governmental structures cannot be exaggerated. Its potential and use is non-exhaustive. Thus, proper regulation, reregulation or sometimes even deregulation is necessary to gain all benefits that Internet provides.

Regulating Internet is a challenging task. Due to its global nature internet involves several stakeholders and their interests are not always in the line with each other. First, specific technical issues are regulated by special non-profit organizations. Second, International organizations

[6] Solum, supra n. 3, p. 50
[7] See further Chapter II.
[8] Report of the Working Group on Internet Governance, available at http://www.wgig.org/docs/WGIGREPORT.pdf, last visited on: 10/02/2010

think that because of the nature of the Internet it inherently should be regulated by supranational organization. Third, Developers also have their part of influence over the future of Internet. Network engineers create base and direct how technology should work. Fourth, Market is also a big field player. Market forces can be decisive in shaping future path. Fifth, there is an overwhelming consumer interest for the internet to be easily accessible, cheap and fast. Finally, we cannot circumvent nation states. States always try to regulate activities within their borders. It is impossible to give to any of above factors a leading role, because there always will be a couple of others which will come into resistance. The only way to avoid collision is to find consensus between above interests.

Starting from the last decade of XX century, when internet became freely accessible to everyone, up to date several models of internet regulation were proposed, starting from the most liberal ones which favored complete Self-Regulation, to the strictest and rigid governmental regulation. The purpose of this research is to collect and examine proposed models of internet regulation in one paper, in order to identify advantages and disadvantages of each regulatory model, find reasons of previous failures, to reallocate responsibilities among regulatory bodies and find optimized solution for ideal model of governance.

In the first chapter I will discuss the earliest model of internet regulation, Self-Regulation, its main characteristics and reason of failure. The second chapter is dedicated to International Regulation, One of the most prevalent views nowadays, that Internet due to its global nature should be regulated by international organization only. The third chapter reveals the model of code, which is mainly based on the idea of Professor Lawrence Lessig that “The Code is Law.” The fourth chapter is about nation states’ responses to global network of networks. This chapter mainly focuses on decentralized model of Internet governance. Final chapter is dedicated to

Market forces and their influence over important decisions about internet governance and their possibility to guide future technology changes.

"We reject kings, presidents and voting…"

David Clark[9]

I. Self-Regulation

1.1 Definition of self-Regulation

Self-Regulation is the first to emerge and till now most discussed model of internet regulation, but these discussions and different viewpoints that exist among scholars makes it even harder to come up with one universal definition, which would cover all aspects of Self-Regulation. There is no comprehensive definition of Self-Regulation.[10] "Different profiles of self-regulation emerge and adjust depending on which particular aspect of the Internet is being regulated."[11] Generally Self-Regulation in its broadest sense includes two possible ways of regulation, two completely different approaches: first part of this definition is the most extreme one which almost inherently excludes governments from internet regulation, this is the theory of deregulation or no-regulation. In its feature this model is negative because it requires no-action whatsoever from government. The second view is that there should be some intervention from the local authorities and its must be similar to delegation of powers to private sector.[12] In this respect, there are several levels of governmental intervention.

The first type which is called "subcontracting" has divided regulatory power in two separate processes. First is the procedure or formal steps for rule-making and the second one is the

[9] David Dana Clark is an American computer scientist. He acted as chief protocol architect in the development of the Internet. Above quote was said at a 1992 IETF meeting (Internet Engineering Task Force).
[10] Monroe E. Price and Stefaan G. Verhulst, Self-Regulation and the Internet, Kluwer Law International, 2005, p.3
[11] Ibid.
[12] Ibid.

content of the rule. Under "subcontracting" type of self-regulation government sets up first part of the rule-making, formal requirements and procedure, while internet community should shape its content.[13]

The second type in "concerned action", in this case state has increased regulatory power and sets formal requirements not only for rule-making procedure but also conditions for content of the rule, but still following these formal rules internet community should be able to shape code of conduct by themselves.[14]

The third type of self-regulation is "incorporation". This type can be final outcome of above two. "Incorporation" means that after adopting rules by internet community these non-official norms must become part of the state legal order. This is achieved by adopting new statutes, or inserting above norms in older ones or by declaring them binding as a result of private negotiations.[15]

The Self-Regulation of Internet simply is too big and complex issue to be discussed in details and such examination exceeds the scope of this paper. For purposes of this research I will use only the broad definition of Self-Regulation, while focusing on certain peculiarities within this definition - The model of cyberspace as a separate realm, in contrast of real world, which is based on the idea that "Internet is a self-governing realm of individual liberty, beyond the reach of government control."[16] This is the essence of Self-regulation.

[13] Ibid.
[14] Ibid.
[15] Ibid.
[16] Solum, supra n.3, 56

"A long time ago, maybe last Thursday…"

A. A. Milne.

1.2 History of Self-Regulation theory

The first idea of first users about the internet was escape from any governmental influence and regulation. It all started with idea that governments are not able to control internet activity. In 1995, Jason Kay, in his article "Sexuality, Life without A Net: Regulating Obscenity And Indecency On the Global Network" came to a conclusion that governmental regulation if such existed has failed, Self-Regulation has prevailed and from that point governments should have abstained themselves from intervening, "The Internet should continue to be allowed to regulate itself."[17]

Many authors came to conclusion that existing rules do not suffice; they are useless in the new era of Internet: Internet is a new and superior medium of communication, the actions of authorities to control it are doomed to fail. Traditional regulation proposed by congress and courts do not suffice. [18] Traditional Lawmaking is not appropriate method of regulation. [19] To regulate the new technology one must understand it first.[20] Internet is the one of the fastest developing medium that the legislature has encountered; because of this fast expansion adopted law becomes outdated in several months if not weeks.[21] "Efforts to control the flow of electronic

[17] Jason Kay, Sexuality, Live Without A Net: Regulating Obscenity And Indecency On The Global Network, 4 S. Cal. Interdisciplinary L.J. 355, 387 (1995)
[18] D. James Nahikian, Learning To Love "The Ultimate Peripheral"—Virtual Vices Like "Cyberprostitution" Suggest A New Paradigm To Regulate Online Expression, 14 J. Marshall J. Computer & Info. L. 779, 782-83 (1996)
[19] Dawn L. Johnson, It's 1996: Do You Know Where Your Cyberkids Are? Captive Audiences And Content Regulation On The Internet, 15 J. Marshall J. Computer & Info. L. 51 (1996)
[20] Nahikian, supra n. 18
[21] Johnson, supra n. 17; see also Nahikian, supra n. 18

information across physical borders are likely to prove futile.[22]" "Existing Laws and Methods of Lawmaking are inadequate; the internet should be self-regulated.[23]"

To illustrate the spirit of the internet society and how much users felt themselves independent from the governments, how much they felt that internet was new world, separate from real one, where no laws of real world were in force, we should look to their reaction to the state regulatory acts. In 1996, the Telecommunications Act was passed in US Senate with only 5 dissenting votes and on February 8th President Bill Clinton signed the act into the law.[24] On the same day in response John Perry Barlow[25] wrote a letter on his web-site with the heading "A Declaration of the Independence of Cyberspace". In this letter he pronounced the will of every internet user at that time:

> Governments of the Industrial World, you weary giants of flesh and steel, I come from Cyberspace, the new home of Mind. On behalf of the future, I ask you of the past to leave us alone. You are not welcome among us. You have no sovereignty where we gather.
>
> We have no elected government, nor are we likely to have one, so I address you with no greater authority than that with which liberty itself always speaks. I declare the global social space we are building to be naturally independent of the tyrannies you seek to impose on us. You have no moral right to rule us nor do you possess any methods of enforcement we have true reason to fear.[26]

[22] Johnson, David R. and Post, David G., Law and Borders: The Rise of Law in Cyberspace, 48 Stan. L. Rev. 1367 (1996)
[23] Keith J. Epstein and Bill Tancer, Enforcement of Use Limitations By Internet Services Providers: "How To Stop That Hacker, Cracker, Spammer, Spoofer, Flamer, Bomber", 9 Hastings Comm/Ent L.J. 661, 664 (1997)
[24] Guy Lamolinara, Wired for the Future: President Clinton Signs Telecom Act at LC, Library of Congress, http://www.loc.gov/loc/lcib/9603/telecom.html, last visited on: 3/8/2010.
[25] John Perry Barlow is an American poet, essayist, a political activist, known for its Libertarian political sympathies; He is also known to be a cyber libertarian.
[26] John Perry Barlow, A Declaration of the Independence of Cyberspace. Availabe at: http://w2.eff.org/Misc/Publications/John_Perry_Barlow/?f=barlow_0296.declaration.txt, Last Visited on: 3/2/2010

The theory of self-regulation emerged at the same time with modern internet. The internet gave so wide opportunities to anyone that people sought that they found paradise free from any external intervention. "Nothing is true. Everything is permitted" - These words can be used to describe first feeling of any user. Internet made users to feel freedom and power that they have never dreamed of. User when connecting to internet felt if traveling to new realm. First theory of regulation as well was reflection of these thoughts. In 1996 David Post and David Johnson wrote in their famous law review, Law and Borders - The Rise of Law in Cyberspace:

> Many of the jurisdictional and substantive quandaries raised by border-crossing electronic communications could be resolved by one simple principle: conceiving of Cyberspace as a distinct 'place' for purposes of legal analysis by recognizing a legally significant border between Cyberspace and the 'real world'. Using this new approach, we would no longer ask the unanswerable question 'where' in the geographical world a Net-based transaction occurred… *the development of rules better suited to the new phenomena in question, more likely to be made by those who understand and participate in those phenomena*…[27]

The first approach of any user is that they can do everything, no government; no authority will intervene in their actions. Every user is eligible to create his own rule; every single user creates precedents by his actions, thus making a custom. If custom finds approval within internet community it becomes generally accepted rule. This approach is much more flexible and ensures up-to-date maintenance of the system. Johnson and Post try to explain that regulation of cyberspace by external authority, such as national governments, will be extremely burdensome or even impossible. This won't settle existing problems and even could end up with new conflicts, as well as between national states and states and individuals:

> Governments cannot stop electronic communications from coming across their borders, even if they want to do so. Nor can they

[27] David R. Johnson and David G. Post, supra n.22 (emphasis added)

> credibly claim a right to regulate the Net… One nation's legal institutions should not monopolize rule-making for the entire Net… [States] argue [that] people engaged in online communications still inhabit the material world, and local legal authorities must have authority to remedy the problems created in the physical world by those acting on the Net… sysops, acting alone or collectively, have the power to banish those who commit wrongful acts online. *Thus, for online activities that minimally affect the vital interests of sovereigns, the self-regulating structures of Cyberspace seem better suited to dealing with the Net's legal issues.*[28]

These ideas are from mid-1990's, but now from the perspective of XXI century they seem as idealist's thoughts, who wish complete freedom from everything by creating new world wide country, with its own citizens and regulation. The idea has defect in its basics. Still at that time "this utopian vision of cyberspace as a separate realm beyond the reach of national governments may have seemed credible."[29]

1.3 Good points of Self-Regulation

The theory of Self-Regulation has some very good points over other forms of regulation and in these points its advantage and leading position is apparent. These benefits include:

Increased flexibility - "Meaningful and effective self-regulation provides the opportunity to adapt rapidly to the quickening technical progress globally and, when properly encased in collaboration with government, is preferable to mandatory governmental regulation." [30]

[28] Ibid. (emphasis added)
[29] Solum, supra n.3, p. 58
[30] Dr. Marcel Machill, Jens Waltermann, Self-regulation of Internet content, 1999 Bertelsmann Foundation, Gütersloh, 1999, pp. 21-29, Also available at www.cdt.org/speech/BertelsmannProposal.pdf, last visited on: 3/10/2010

Increased incentives for compliance by end-users[31] - Internet community is much more willing to obey rules which are created within community and not imposed by outside forces.

Reduced cost[32] - finally, all types of regulation comes to question of its cost and in this respect Self-Regulation is most attractive one. In contrast of governmental regulation or other models, there are no administrative or institutional costs of regulation.

Efficiency[33] - By combining all above advantages, Self-Regulation occurs as one of the most effective means of regulation, with which if properly executed can be achieved superior results in Internet Regulation.

1.4 Inherent difficulties of Self-Regulation

As well as good points, Self-Regulation has its own inherent difficulties and problems. There several aspects which must collaborate within each other to achieve needed result:

The first problem which occurs when talking about Self-Regulation concerns the definition. Simply there are too many definitions of Self-Regulation and most of them are correct, depending on what we want to achieve. There is no universal definition to satisfy all requirements and there can't be, because many of them excludes or even contradicts each-other. The meaning of Self-Regulation depends on the industry at issue and on circumstances. Because

[31] Ibid.
[32] Ibid.
[33] Ibid.

Self-Regulation is the most flexible model of regulation it's meaning always changes with the development of internet and new technology.[34]

The next cloud of ambiguity which surrounds the Self-Regulation is the definition of "Self", what constitutes self of the Internet? On one hand, there is an idea that "Self" of the regulation is each and every individual user; this is the lowest level of Self-regulation, performed by end-user[35]. On the other hand, this can be a social body, a virtual community which will supervise actions of its members and create "Cyber culture".[36] Such a body is much more effective to enforce Netiquette on end-users. The third alternative is that "Self" can be constituted by industry and commerce.[37] The next and one of the most interesting alternatives is a "Self" as Internet itself, represented by bodies and organizations setting standards for its proper functioning. These organizations are ICANN[38], IEFT, IANA, IAB, IESG, ISOC[39] and others. This diversity of possible regulatory bodies makes it hard to imagine Self-Regulation as a comprehensive model of regulation. It more emerges as a generic name including many similar models of regulation rather than model itself.

Whoever should constitute a "Self" of the Regulation, for it to be effective and meaningful it requires active end-user participation at any stage of development. "Without user involvement, a

[34] Monroe E. Price and Stefaan G. Verhulst, supra n.10, p. 3
[35] Trotter Hardy, The proper legal regime for "cyberspace", 55 U. pitt. L. Rew. 993 (1994)
[36] Roger Clarke, Encouraging Cyberculture, available at http://www.rogerclarke.com/II/EncoCyberCulture.html, Last visited 3/10/2010
[37] Jeffrey A. Jacobs, Comparing Regulatory Models - Self-Regulation vs. Government Regulation: The Contrast Between the Regulation of Motion Pictures and Broadcasting May Have Implications for Internet Regulation, 1 J. TECH. L. & POL'Y 4, 1996, Available at http://journal.law.ufl.edu/~techlaw/1/jacobs.html, Last visited 3/10/2010
[38] See further Chapter II.
[39] Internet Engineering Task Force (IETF), Internet Assigned Numbers Authority (IANA), Internet Architecture Board (IAB), Internet Engineering Steering Group (IESG), The Internet Society (ISOC).

self-regulatory mechanism will not accurately reflect user needs, will not be effective in delivering the standards it promotes, and will fail to create confidence."[40]

The inherent problem of self-regulation and the reason why it is almost impossible for it to function independently is that Self-Regulation needs support of public authorities. This can encompass several ways, starting from the point that Self-Regulation requires governments to not interfere with the self-regulatory process and, on opposite, to acknowledge self-regulatory codes and support through enforcement. Self-Regulation cannot punish wrongdoers over internet, it cannot be appropriate body to fight crime; Self-regulatory body's function can be only assistance to public authorities. "There are clearly limits to what can be achieved by self-regulation."[41]

1.5 Crush of Self-Regulation

As mentioned above Self-Regulation was the first model of regulation that was introduced by scholars. At that point it really seemed the only credible and acceptable solution. The core point of the Self-Regulation was based on negative assumption and it emerged as a defense against governmental regulation. The famous quote by John Gilmore, "The Net interprets censorship as damage and routes around it", shows that internet was thought to be a place outside the control of public authorities.

Nowadays it is hard to imagine Internet as a separate and independent realm. It is true that Internet cannot be subject of purely national control, but still some countries have possibility to

[40] Dr. Marcel Machill and Jens Waltermann, supra n. 30
[41] Ibid.

influence its development. Governments and multinational organizations exist within cyberspace.[42]

One of the biggest countries trying to regulate internet content and information exchange is China. China created a "great firewall". The Golden Shield Project, sometimes referred to as the 'Great Firewall of China', is a censorship and surveillance project operated by the Ministry of Public Security division of the Communist government of China.[43] The project started in 1998 and began operations in November of 2003. Still technically it's impossible to block access to restricted content with 100% assurance. Internet itself gives opportunity to avoid such restrictions, it enables such applications that easily hide computers IP address[44], In this case only way to restrict user from viewing particular content is removing it from the server itself, thus making it accessible to no one. As a conclusion we can say that "Although the Internet may not be a separate, self-governing, libertarian utopia, but it is still a realm that hampers government regulation."[45]

[42] Solum, supra n.3, p. 58
[43] "Race to the Bottom" - Corporate Complicity in Chinese Internet Censorship, Human Rights Watch, (2006), Volume 18, No.8(C), Also available at http://www.hrw.org/reports/2006/china0806/index.htm, Last visited 3/10/2010.
[44] An Internet Protocol (IP) address is a numerical label that is assigned to devices participating in a computer network that uses the Internet Protocol for communication between its nodes. An IP address serves two principal functions: host or network interface identification and location addressing. Its role has been characterized as follows: "A name indicates what we seek. An address indicates where it is. A route indicates how to get there." DOD Standard Internet Protocol, Internet Engineering Task Force, (1980), Available at http://tools.ietf.org/html/rfc760, Last visited 3/10/2010; Internet Protocol, Internet Engineering Task Force, (1981), Available at http://tools.ietf.org/html/rfc791, Last visited 3/10/2010
[45] Solum, supra n.3, p. 59

II. International Regulation

2.1 UN Models of Internet Regulation

The second model of Internet regulation is International regulation, which is based on a premise that Internet is a global phenomenon in its nature. Though internet was created in USA with direct participation and financing of military forces,[46] nowadays its importance and usage is far beyond US territory. The basis of international model of regulation is that Because of the inherent international character of the internet it should be regulated by international organization. Only one international organization can be comparable to the internet with its global nature and this is United Nations. UN consists of 194 Member States,[47] thus, including almost all sovereign states all over the world. As a result UN should be considered as a proper forum for internet governance.

World Summit on the Information Society (WSIS) was held In Geneva, in 2003, on December 10-12. The Secretary-General of the United Nations was given the mandate to set up the Working Group on Internet Governance (WGIG). This Working Group was assembled by 40 members from Governments; also representatives from business sector and civil community were elected. All participants had equal voting power and all of them participated on an equal footing. In 2005, WGIG delivered a report on Internet Governance. The report includes a working definition of internet governance, public policy issues, the roles of all stakeholders in

[46] Tim Kevan and Paul McGrath, E-mail, The Internet and the Law - Essential knowledge for safer surfing, EMIS Professional Publishing, (2001), p.3
[47] http://www.un.org/en/members/index.shtml, Last Visited 3/17/2010

internet governance, and recommendations related to Internet governance. The report also proposed four international models of Internet governance.[48]

First model suggests creation of Global Internet Council (GIC), which will consist of representatives from governments and other stakeholders. Although in this model governmental component has a leading position and other stakeholders have only advisory capacity. GIC replaces two excising institutions; it will take over functions of US Department of Commerce and the ICANN Governmental Advisory Committee (GAC). The GIC will be part of the United Nations System. At the same time this model preserves existence of ICANN as a technical and operational Internet institution. ICANN will be accountable to GIC.[49]

The second model is less demanding and includes fewer changes to existing institutions. No new organization or institution is created, but instead this model enhances the role of Governmental Advisory Committee (GAC) of ICANN. The first requirement is that all main stakeholders must be properly represented. GAC will take a coordination function and create a forum where any issue involving Internet governance can be openly discussed. The mission of the forum will be to produce analyses and recommendations on any internet related issues. The activity of GAC and the forum must be based on transparency.[50]

The third model takes into account the interests of nation states. It suggests creation of International Internet Council (IIC), which will monitor and decide policy issues concerning ICANN/IANA competencies. As in the first model the governmental element will be the main leading one, and the industry and the internet community will take part as advisers. The IIC may

[48] Report of the Working Group on Internet Governance, June 2005, available at http://www.wgig.org/docs/WGIGREPORT.pdf, last visited 3/17/2010
[49] Ibid.
[50] Ibid.

or may not replace GAC. This model includes internationalization of ICANN which must be made by agreement with the host country. This model is premised on the idea that no nation should have leading position in internet governance by influencing specialized institutions such as ICANN.[51]

The fourth model is the most extreme one in its nature and makes fundamental changes to excising institutions and organizations. This is truly an international model of regulation. This model includes creation of three international institutions with different functions and different participants. The first one is The Global Internet Policy Council (GIPC). This organization will be responsible for international Internet related public policy issues. It must consist of representatives of nation states, which will take leading position in the functioning of the organization. As for industry and internet community, they will not have right to vote and can participate only in an observer capacity. The second organization is World Internet Corporation for Assigned Names and Numbers (WICANN). This organization will perform similar functions as now is allocated to ICANN. In contrast with GIPC, in the operating of WICANN the leading element is the private sector. As in previous model ICANN is internationalized organization and it is linked to UN. Governments also play a role in operation of WICANN; this includes two functions oversight and advisory. GIPC will appoint a committee which will perform these functions. Oversight function is similar to role of US Department of commerce and does not include any operational or management activities. The advisory function, on the other hand, is similar to ICANN's Governmental Advisory Committee. The third and final step is creation of The Global Internet Governance Forum (GIGF). The function of this institution is to coordinate and facilitate discussion on internet related problems. In general this is a forum where any

[51] Ibid.

stakeholder can pose problematic issues for discussion. GIGF seems as a preparatory stage before the discussions in GIPC. Governments, industry and civil society all participate on equal footing.[52]

Each of these four proposed models can be a plausible solution to internet regulation but at this stage they are yet far from being comprehensive. These models need much discussion and detailed description. The powers and responsibilities of all participants should be clearly allocated without leaving a place for ambiguity. Participation issues should be based on the premises of transparency and equality. The next problematic issue is having four models from the start, which means that there is no agreement on bases of Model of Regulation even between the members of working group. Discussion of four models at the same time and preparing four different detailed proposals will be inefficient, time-consuming and costly. As a result it will make even harder to agree on one specific model. In the first place it seems to be necessary to agree from the start on basic questions of regulation, such as should there be created a new organization or can the result be achieved by reforming existing ones, is there a need for such a diversity of organizations: Technical institution, oversight institution, public policy institution, coordinating institution which are suggested by WGIG report. After agreeing on important issues, discussion should be continued within one model making it as comprehensive and as detailed as possible.

[52] Ibid.

2.2 Transnational Institutional Regulation

Professor Lawrance B. Solum states that the model of international regulation must be discussed together with the model of Transnational Institutions.[53] Both these models, according to Solum, have one base core, which is that any institution governing the Internet must have crossborder character. The difference between international regulation and transnational institutional regulation is that the first model is based on the premise that internet can be regulated by national governments, while the second model, in contrary, is based on the outcome of the Self-Regulation Model. National governments are in no position to regulate the internet, it should be governed by special transnational institution, which is independent from nation states and represents "internet community" and "network engineers".[54]

ICANN regulation and its responsibilities are very similar to Transnational Institutional Regulation to some extent. In this section I will address the issue how ICANN regulation works and what it lacks to be a true Model of Transnational Institutional Regulation.

ICANN was incorporated according the laws of State of California on 30th of September 1998.[55] It is a non-profit public benefit corporation and is organized according to California Nonprofit Public Benefit Corporation Law for charitable and public purposes.[56] In essence it is a regular firm formed according to state laws. Article 3 of the Articles of Incorporation of the ICANN

[53] Solum, Supra n.3, p. 59
[54] Ibid.
[55] California Secretary of State, available at http://kepler.sos.ca.gov/cbs.aspx, Last Visited on 3/17/2010
[56] Articles Of Incorporation Of Internet Corporation For Assigned Names And Numbers, Available at http://www.icann.org/en/general/articles.htm, Last Visited on: 3/16/2010

provides that "The Corporation is organized, and will be operated, exclusively for charitable, educational, and scientific purposes."[57]

The same article specifies the purpose of the corporation, which is based on the international character of the Internet:

> In recognition of the fact that the Internet is an international network of networks, owned by no single nation, individual or organization, the Corporation shall… pursue… purposes of lessening the burdens of government and promoting the global public interest in the operational stability of the Internet…[58]

The specific sphere of ICANN activity is narrow and it is not mentioned in the Articles of Incorporation. ICANN has its own Bylaws, which define ICANN's powers and responsibilities; Section 1 defines the mission of ICANN as:

> [ICANN] Coordinates the allocation and assignment of the three sets of unique identifiers for the Internet, which are:
>
> a. Domain names (forming a system referred to as "DNS");
>
> b. Internet protocol ("IP") addresses and autonomous system ("AS") numbers;
>
> c. Protocol port and parameter numbers.[59]

ICANN also "coordinates the operation and evolution of the DNS root server system"[60] and "policy development reasonably and appropriately related to these technical functions."[61]

Furthermore, ICANN has special relationship with US government and U.S. Department of Commerce. This relationship was once more emphasized in *ICM Registry LLC v. ICANN*, the US

[57] Ibid.
[58] Ibid.
[59] Bylaws For Internet Corporation For Assigned Names And Numbers As Amended 30 September 2009, Available at Http://www.icann.org/en/general/bylaws.htm, Last Visited on: 3/17/2010, (emphasis added)
[60] Ibid.
[61] Ibid.

Department of Commerce on behalf of the US government "transferred operational responsibility over the protocol and domain names system of the Internet to the newly formed Internet Corporation for Assigned Names and Numbers."[62] ICANN and US Department of Commerce signed Memorandum of Understanding, which provides that the purpose of privatization of DNS management is to increase competition and representation of main stakeholders.[63] Such a privatization and further management of DNS must be based on four core principles: stability, competition, bottom-up coordination, and representation.[64]

ICANN can serve as a Model for Transnational Institutional Regulation Model, but the question which was problematic from the beginning of its formation is the nature of its relationship with the US government. The core principle of this model of regulation is that Institution must be completely independent from governmental influence and especially must be protected from intervention in its performed activities. Recent year developments in ICANN decision-making process showed that ICANN is not shielded from US government influence. This is apparent

[62] ICM Registry, LLC v. Internet Corporation For Assigned Names And Numbers (ICANN), International Centre for Dispute Resolution, Case No. 50 177 T 00224 08, p. 2
[63] Memorandum of Understanding Between the US Department of Commerce and Internet Corporation for Assigned Names and Numbers, available at http://www.icann.org/en/general/icann-mou-25nov98.htm, Last Visited on: 3/16/2010
[64] Ibid.

from .xxx sTLD[65] domain name issue, which has been often discussed since year 2000 and in latest ICDR[66] case *ICM Registry LLC v. ICANN* which was decided 19th of February, 2010.

The factual background of the case was as follows: Initial proposition for creating .xxx domain name as a new adult-only domain name was rejected by ICANN in 2000. In 2003, ICANN announced new round for receiving applications for creating new sponsored TLD names. In 2004, ICM Registry LLC provided with application and scheme to create new .xxx TLD name. After two years of deliberations on June 1, 2005, ICANN board of directors came to decision that ICM Registry complied with all three objective criteria and authorized the President and General Counsel to start negotiations on commercial and technical terms of the agreement. Shortly First Draft of Registry Agreement was negotiated. The meeting of the board of directors was planned on 16th of August, 2005, and it was anticipated that the agreement would be accepted.[67]

This was the time when ICANN received huge amount of letters from US Government officials and from other governments. The subject of adult only sTLD name caught the attention of not only government officials but also so-called "religious right". Finally this resulted in *volte-face* of the position of Department of Commerce (DOC). Before these events DOC was in favor of creating new .xxx sTLD name, but after as the tribunal found in its decision "there was even

[65] A sponsored TLD is a specialized TLD that has a sponsor representing the narrower community that is most affected by the TLD… A Sponsor is an organization to which is delegated some defined ongoing policy-formulation authority… The sponsored TLD has a Charter, which defines the purpose for which the sponsored TLD has been created and will be operated. The Sponsor is responsible for developing policies… so that the TLD is operated for the benefit of a defined group of stakeholders, known as the Sponsored TLD Community, that are most directly interested in the operation of the TLD. Available at http://www.icann.org/en/tlds, Last Visited on 3/17/2010

[66] International Centre for Dispute Resolution is alternative dispute resolution (ADR) service operated by American Arbitration Association (AAA) as an international division of the AAA. Available at http://www.adr.org/about_icdr, Last Visited on: 3/17/2010

[67] ICM Registry, LLC v. ICANN, Supra n. 62, pp. 6-14

indication in the Department of Commerce that, if ICANN were to approve a top level domain for adult material, it would not be entered into the root[68] if the United States Government did not approve."[69]

On one hand, there was big pressure on ICANN to reject the domain name, while, on the other hand, if ICANN would changed its previous position it would be obvious that it lacked independence from the US Government.[70] The decision about .xxx domain name was postponed for almost two years, and finally on March, 2007, board of directors of ICANN adopted a resolution which stated that ICM Registry failed to meet one of the three criteria. After this decision ICM Registry commenced proceedings in International Centre for Dispute Resolution in front of Independent Review Panel pursuant to ICANN Bylaws.

The above proceedings are advisory in their nature but Composition of the panel gives the decision much more persuasive character, in addition it is the only way to appeal the decision of the ICANN board of directors. IRP was constructed by 3 famous judges: Mr. Jan Paulsson - president of both the London Court of International Arbitration and the World Bank Administrative Tribunal; Honorable Dickran Tevrizian - a retired judge who had served on the U.S. District Court for the Central District of California and the President of the Panel Judge Stephen Schwebel, who was former President of International Court of Justice.[71] Declaration of the IRP stated that by its decision of June 1, 2005, board of directors

> …found that the application of ICM registry for the .XXX sTLD met the required sponsorship criteria. …the board's reconsideration

[68] The root zone file is the list of top-level domains, which are identified by readable, comprehensible, user-friendly addresses, such as .com, .org, and .org.
[69] ICM Registry, LLC v. ICANN, Supra n. 62, pp.14-16
[70] Ibid, p. 17
[71] http://www.icmregistry.com/irp/ICANNBoardPackage2March2010.pdf

> of that finding was not consistent with the application of neutral, objective and fair documented policy.[72]

ICM Registry was nominated as prevailing party of the proceedings as expressly required by ICANN Bylaws.[73]

Finally, the arguments against ICANN that it lacks transparency; the relationship with Department of commerce is ambiguous and subsequently US government is in a position to influence the decisions of the board of directors found some ground. The panel concluded that the decision of board of the directors lacked sufficient grounds and was a result of pressure, which resulted in a biased decision against the ICM.[74] After the decision of the IRP, at the ICANN board meeting, which was held on March 7-12, 2010, in Kenya, the President and Chairman of the ICM Registry Stuart Lawley announced that they anticipate offering .xxx sTLD names to public already in late 2010.[75]

Above case makes it apparent that ICANN's regulation is not quite what is expected from the transnational institution. Full independence from national government is a core value of such a regulation and ICANN yet lacks such independence. Already some technology analysts say that ICANN needs a reform to become truly independent from US Department of Commerce.[76] Opposed to this idea US officials do not consider such alternative. Mr. Michael Gallagher head of the National Telecommunications and Information Administration (NTIA) said that US will "maintain its historic role in authorizing changes or modifications to the authoritative root zone

[72] Ibid.
[73] Article 4 Section 3 of ICANN Bylaws states that the decision of the IRP must "Specifically designate the prevailing party". Bylaws for ICANN, Supra n. 59
[74] Plans for '.xxx' porn net domain revived, Mail and Guardian Online, Guardian News and Media 2010, available at http://www.mg.co.za/article/2010-02-24-plans-for-xxx-porn-net-domain-revived, Last Visited on: 3/17/2010
[75] Interview with Stuart Lawley, available at http://www.icmregistry.com, last visited on: 3/26/2008
[76] Whose net is it anyway?, Bill Thompson, BBC News, available at http://news.bbc.co.uk/2/hi/technology/4165920.stm#top, Last Visited: 3/17/2010

file".[77] The conclusion to be made is that until ICANN is subject to US jurisdiction and US laws, it will not be able to perform its tasks as independent organization.

From all above it follows that only credible solution will be to move towards International Regulation of Internet. This will be the logical evolution of DNS management. As the court in above case noted, after creation of domain name system in 1980 and until the incorporation of ICANN in 1998, DNS was operated by individual persons who were pioneers of the Internet.[78] One of them was Mr. John Postel who was in charge of IANA[79], a predecessor of ICANN whose function essentially ICANN has subsequently overtaken. At the beginning of DNS management individual regulation was much more flexible and efficient. Change in Regulation became inevitable due to commercialization of Internet and domain names; at that point it became clear that DNS could no longer be managed by single person, thus, individual regulation was changed with more formal regulation by ICANN.[80] The next step of evolution of DNS management will be International Regulation, as governments all over world will realize that internet is global medium and they should be given opportunity to take part in its regulation.

As the importance of the internet grows it is not far while national governments will acknowledge the need of truly independent regulatory institution or regulation by international organization. Nowadays the dependence of the states on the Internet to perform their day-to-day functions increases rapidly, thus resulting in dependence on state which has most influential

[77] Ibid.
[78] ICM Registry LLC v. ICANN, Supra n. 62, p. 2
[79] The Internet Assigned Numbers Authority (IANA) is the entity that oversees global IP address allocation, root zone management for the Domain Name System (DNS), media types, and other Internet Protocol related assignments. It is operated by ICANN.
[80] Solum, Supra n.3, p.60

power over institution controlling the core elements of Internet stability. The only solution is International Regulation and only organization to be entrusted such a task can be United Nations.

III. Model of Code

The third model of Internet regulation is a model of code which was introduced by Professor Lawrence Lessig.[81] In his famous book "Code and Other Laws of Cyberspace" Lessig discusses how software and hardware can serve as a means of regulation.[82]

Lessig is a constitutionalist and he compares creation of the internet to the formation of the state. Essentially he introduces three core elements which are the bases of the liberal state.[83] These three elements are tightly connected to each other. Imagine tree, on the top of the tree is an ultimate goal which is Liberty, at the bottom is the Root-Constitution and the growing pillar is the State. The interaction between these notions is that the constitution provides with fundamental values and state by protecting these values achieves liberty of its citizens. In essence liberty is based on constitution, if the constitution is liberal than state is liberal, but if the constitution is totalitarian than it will create totalitarian regime. The choice is made by founders of constitution.

To translate the above into language of Internet, the constitution is the code of Cyberspace; similarly code is the source of freedom and control at the same time. The code includes software and hardware, architecture of the Internet. The state can be identified as Internet itself and the ultimate goal stays the same liberty and freedom. Lessig argues that freedom is not an inherent

[81] Lawrence Lessig is a Professor of Law at Harvard Law School. Prior to rejoining Harvard, he was a professor of law at Stanford Law School and founder of its Center for Internet and Society. Lessig is a founding board member of Creative Commons, a board member of the Software Freedom Law Center and a former board member of the Electronic Frontier Foundation.
[82] Lawrence Lessig, Code and Other Laws of Cyberspace, Basic Books, (1999)
[83] Ibid. p. 5

nature of internet, it did not just emerge;[84] Internet was created as such. Freedom was specifically put in design of the Internet.[85]

The liberty over internet is dependent on the choices we make; choice must be made when adopting constitution, because it includes basic principles and ideals, fundamental values and characteristics which state will subsequently inherit. The same principle works for internet, the code is law; depending on what we will insert in code we will have different results. If we acknowledge liberal values, the internet will be liberal and free but if we acknowledge opposite Internet as well can become a perfect tool of control.[86] The code is not value-neutral, which enables code writers to promote different values.[87]

Lessig describes choice in broad and general terms. We, on the other hand, need to specify what values are at stake. In the extreme hypothetical case we might have to choose between such values that before have never conflicted (to this extent) with each other. The question is what we will choose if there is a conflict between the right of privacy and the copyright. In a situation when there is no middle ground, i.e. when one's copyright cannot be protected without infringing other's right of privacy. If as ICANN Bylaws provide, we have to specifically name "prevailing Party". Someday choices like this might arise and that will be the point when we will decide the future of internet, will it be a place of freedom or total control.

[84] Lawrence Lessig, The Law of the Horse: What Cyberspace Might Teach, Harvard Law Review, Vol. 113, No. 2, pp. 505-506, (1999)
[85] Lessig, supra n. 82, p. 6
[86] Ibid.
[87] Steven Hetcher, Climbing the Walls of Your Electronic Cage, Michigan Law Review, Vol. 98, No. 6, 2000 Survey of Books Related to the Law (2000), p. 1929

Lessig continues that such a choice must not be short-termed. We must build the code for the future. As Lessig puts it "to speak of a constitution is not to describe a one-hundred-day plan."[88] The decision should be well-grounded. The code permits its owner to control cyberspace. Thus by making it a common value, or common good, it inherently rejects certain forms of governmental control.

How does the code regulate, how does the software and hardware affect user behavior? In essence Lessig argues that on the Internet behavior is directly connected to software, because that defines the boundaries of what is permitted. You cannot do something unless architecture allows you. Designers are themselves bound by restrictions, some are imposed by limits of technology; others include economic constraints, such as cost and time.[89] Illustrative example is development of internet itself. In the beginning software and architecture allowed users to send only text-based information.[90] As the software developed it implemented new Internet Protocols, which allowed sending not only texts, but images, audio-video files, made possible peer-to-peer[91] network connection and others. Software can grant you free and anonymous access to the internet but at the same time if programmed differently, it can restrict access to particular individuals, identify users and even monitor their activities.[92] Regulability of the network

[88] Lessig, supra n. 82, p. 6
[89] Charles Fried, Perfect Freedom or Perfect Control?, 114 Harv. L. Rev. p. 609 (2000), (book review)
[90] Ibid. p.610
[91] A peer-to-peer, commonly abbreviated to P2P, is any distributed network architecture composed of participants that make a portion of their resources (such as processing power, disk storage or network bandwidth) directly available to other network participants, without the need for central coordination instances (such as servers or stable hosts). Rüdiger Schollmeier, A Definition of Peer-to-Peer Networking for the Classification of Peer-to-Peer Architectures and Applications, Proceedings of the First International Conference on Peer-to-Peer Computing, IEEE (2002)
[92] Lessig, supra n. 82, p. 26

depends on architecture. For example in the network which permits anonymous connection it is harder to control behavior than in the network where identity of users is known.[93]

As Lessig points out, there are certain features that make net unregulable, or hard to regulate; but these features are not inherent, some networks may have all or some of these feature while others may not. Essentially what we get is a degree of regulability, depending on what features the network implements. Some of these features are anonymous access, not verifiable information and internet not distinguishing content of packets of data transmitted. Above shows that control can be added to the architecture of the network.[94]

Finally, concern of Lessig is that software is more and more used to regulate behavior over internet. Software such as filters can be used to differentiate between contents that end-user sees. This software can be used not only by governments but they are available also to private sector. Industry which is driven by commerce is more and more utilizing the possibility to differentiate content and as such it is undermining a core principle on which internet was built. The network for the internet is built on theory introduced by network engineers in 1984; this was the "end-to-end argument".[95] This principle creates a network as platform for other applications. The network itself does very little, only transmits packets alongside till their final destination. Lessig himself uses above type of network in opposite to "smart" networks, where intelligence is placed in the network itself.[96] In the internet network end-to-end principle means that Internet itself does

[93] Ibid. p. 27
[94] Ibid. p. 28
[95] Jerome H. Saltzer, David P. Reed, and David D. Clark, End-to-end arguments in system design, ACM Transactions on computer systems, 1984, vol. 2, 277, 278.
[96] Lawrence Lessig, The Internet under Siege, Washingtonpost, Newsweek Interactive LLC, Journal of Foreign Policy, No 127, p.58 (2001)

not differentiate between the data it transmits. The content of the data is known only to end-users. Some authors refer to this as the "stupidity of the network".[97]

To summarize Lessig's final argument, as the code is laws, policymakers should not adopt laws in a hurry.

> These regulations will not only affect Americans. …impact of this sort of control will be felt worldwide. There is no "local" when it comes to corruption of the internet's basic principles. …these changes weaken the open source and free software movements… Policymakers around the world must recognize that the interests most strongly protected by the internet… are not their own. The internet promised… the weakest in the world - the fastest and most dramatic change to existing barriers to growth. That promise depends on the network remaining open to innovation. That openness depends upon policy that better understands the Internet's past.[98]

The model of code is completely different approach to Internet regulation. While other models address mainly the question of who should regulate the internet, model of code more concentrates on questions how should the internet be regulated and on what principles. It gives priority not to states, international or transnational institutions, but to the software and hardware, to internet itself. The software can be a mean of regulation and it will ensure greater level of obedience from users that any other regulation. The rules of software are much more solid and to override them one needs special knowledge of the software world itself.

[97] Solum, supra n.3, p. 62
[98] Lessig, supra n. 96, p. 65

IV. National Regulation

The next model of internet regulation is national regulation. This model is based on the premise that Internet should be regulated with the laws enacted by nation states. In contrast to Self-Regulation, this model is based on the idea that internet not only can be regulated by national governments but it should be. In other words, nation states and laws regulate most part of human behavior and Internet activity is no difference.

Sometimes state regulation is necessary and none of the states have denied the regulatory power within their boundaries. As long as internet activities do not cross state borders they are subject to local laws. There are certain issues that unless backed up by laws and state enforcement power would serve only as a detriment to internet community. These include computer crimes and defamation, fraud and other public policy issues over which state is always able to assert regulatory power. Enforcement of contracts made over internet also need state regulation.

From the very emergence of the Internet national states never even intended to give complete freedom to new medium. States were not convinced by declaration of independence and alleged failure of laws to regulate online activity.[99] Unless there are states there always be a border-based regulation and states will asset jurisdiction on every activity performed within their borders.

The problematic issue of nation state regulation arises when activity over internet is originated in other states or content over internet is lawful in one state but unlawful in another. Simply global nature of the internet undermines the ability of individual nation states to regulate global flow of information. The most famous case about regulation of internet content by national state was the

[99] Stephan Wilske & Teresa Schiller, International Jurisdiction In Cyberspace: Which States May Regulate The Internet?, 50 Fed. Comm. L.J. 117, p. 125 (1997)

case *Licra v. Yahoo! And Yahoo! France* decided by High Court of Paris (Tribunal de grande instance de Paris) in 2000[100] and the subsequent case *Yahoo! v. Licra* which was decided by US Court of Appeals, Ninth Circuit, in 2006.[101] The facts of the cases are as follows.

Yahoo! and Yahoo! France are operating auction sites which provide a platform for yahoo users to exhibit goods for public offering. Yahoo! does not monitor content of auction sites.[102] Both sites included content such as Nazi Symbols and Memorabilia. Under French law sale and public presentation of such memorabilia is forbidden and constitutes criminal offence. LICRA and UEJF started proceedings against Yahoo! and Yahoo! France in French court, in order to remove offensive content from Yahoo! sites.[103] During proceedings French Court issued interim order and required Yahoo! and Yahoo! France to block any access to Nazi Memorabilia and any other content which promoted Nazism from French territory.[104]

Yahoo! put forward several arguments in defense. Yahoo! argued that there are no technical means available to comply with courts interim order. Yahoo! also contested jurisdiction of French courts and argued that Servers of Yahoo.com were on US territory, the site was primarily aimed at US residents and Yahoo! was shielded by the First Amendment to United States Constitution. Thus, French judgment would be unenforceable in US on the ground of unconstitutionality.[105]

[100] LICRA and UEJF v. Yahoo! Inc. and Yahoo! France, High Court of Paris, Case No. 00/05308, unofficial English translation available at www.lapres.net/yahen.html, last visited on: 3/23/2008
[101] Yahoo! Inc v. LICRA, 433 F.3d 1999 (9th Cir. 2006)
[102] Ibid.
[103] LICRA and UEJF v. Yahoo! Inc. and Yahoo! France, supra n. 100
[104] Ibid.
[105] Ibid.

French court issued second interim order which reaffirmed its previous order and directed Yahoo! to comply with the order within three month. French court also obtained a report of three experts, which stated that as a minimum 70% of users could have been identified by Yahoo! using technology which yahoo already possessed. The court stated that difficulties faced by yahoo do not constitute insurmountable obstacles.[106] As for Yahoo! France the court stated that it complied with the order in large measure and no additional compliance was requested.[107]

This case is setting a new precedent in internet regulation. The main question is whether a nation state can oblige web-page operators which are located outside the state territory to comply with the state rules concerning the content of the web-site which available from the state territory. I think the answer to this question should be obvious and that is no. If French court orders are allowed to be binding on Yahoo! in USA we will have a result under which French court could assert content regulation of any site all over the world accessible from French territory.

Most importantly such a jurisdiction of the French court could not be limited to generic TLDs. This would seem irrational and jeopardize the very ground of jurisdiction itself. With the same argument Yahoo! UK, Yahoo! India and any other existing yahoo sites can be sued in France. It is apparent that any yahoo portal offers auctions sites and any user is able to post goods for public offerings. Let's suppose that all yahoo sites offer Nazi Memorabilia to local users and worldwide users.

We have to compare yahoo local sites and generic TLD site yahoo.com to find out if French court will be able to assert jurisdiction over other yahoo sites. It is true that yahoo local sites are

[106] LICRA and UEJF v. Yahoo! Inc. and Yahoo! France, interim order of May 22, 2000, unofficial translation available at http://www.juriscom.net/txt/jurisfr/cti/yauctions20000522.htm, last visited on: 3/24/2010

[107] LICRA and UEJF v. Yahoo! Inc. and Yahoo! France, supra n. 100

primarily dedicated to the local state, but this does not prevent them to be viewed anywhere else in the world. Everyone, including French users, may access any of above web-sites and view any of its content. Thus, accessibility of yahoo.com does not in any case differ from accessibility of any other local yahoo sites.

The argument that other local yahoo sites are less important, because they are dedicated to specific countries and use the language of that country cannot be accepted. The only difference can be language, but this is not always true either. Such difference is non-existent between yahoo.com and yahoo.co.uk, because both these web-sites are in English. Finally, if really there is any difference between above sites it is a specific content, information and news related to local states, which in our case is irrelevant.

The conclusion to be made from above is that if French court really wants to restrict French citizens from viewing Nazi content on yahoo sites, it should look at all yahoo sites, especially yahoo.co.uk, yahoo.in and other English sites, and make same interim order binding on all yahoo sites. Otherwise purpose of the order to restrict users from viewing Nazi Memorabilia will be lost. The user who offered Nazi content on yahoo.com can with one click offer same content on yahoo.co.uk.

The court, while making its judgment or order, should always look one step forward. The goal of the French court was to restrict French users from viewing Nazi content, but the implemented measure was not consistent with this goal. The French court should take into consideration the architecture of the internet, diversity of applications, ease of use and ease of access to information. The order which with such an ease can be routed around does not serve any purpose at all.

But this is not end of story. The decision is important not only for France but also for any other countries. The second proposal of experts was that yahoo on its auction site should implement an obligatory step for users to declare nationality, which would increase filter from 70% to 90% accuracy.[108] If we take a close look on this proposal, we will find that eventually by implementing this step yahoo would be obliged to comply with the rules of each and every country from where its web-sites are accessible.

In our case the rationale of the court was that if user declares that he/she is French, yahoo should alter its web-site and exclude the content which is restricted in France. But every coin has another side. If the user is not French and declares to be Georgian, then Yahoo! must check its web-sites compliance with the Georgian Law. Hypothetically it is possible that in Georgia it is prohibited to sell on an auction Memorabilia related to Communism or alternatively in Hungary it is prohibited to sell Memorabilia connected to both Communism and Nazism or any other historically tragic event. Thus again, the court by this order indirectly imposes on Yahoo! an obligation to comply with laws and regulations of any other country from which user will access yahoo web-site.

Under these circumstances any country might have claim against yahoo. National states may allege that yahoo by knowing that their citizens are accessing web-site should comply with the laws of that particular country. Of course this situation will extremely jeopardize yahoo's business. The only way for Yahoo! to escape such a fate and at the same time obey to French court order would be a ridiculous question posted before accessing yahoo.com auction site: Are you French?

[108] This proposal was made by two experts. Third expert did not take part in these calculations. His idea was that it was impossible to calculate how accuracy would increase with implementation of declaration of nationality.

To summarize, regulation of global flow of information by individual nation state is almost impossible. States should not be allowed to impose obligations on third country content providers. Inevitably such requirements will result in a regulation where any state would be able to assert jurisdiction over any internet site and every internet site would be obliged to comply with the rules of every nation state.

On the other end is China with its internal internet regulation system. Chinese case is completely different compared to French regulatory attempts. China is a one of the few countries that try to restrict access to certain content over internet to its citizens, but unlike the above case its actions are clearly performed within the state boundaries. There are states that similarly control specific content availability on their territory[109] but Chinese system is the most rigorous one. Chinese control system restricts access to politically sensitive content and forbids the use of internet for government criticism. [110] It is estimated that censorship filter blocks access as a minimum to 18,000 foreign sites, including sites such as YouTube, Facebook or Twitter.[111]

As noted by Solum, nation states such a regulation comes in collision with the architecture of the internet.[112] As we mentioned in the previous chapter, internet itself does not differentiate between the content of the packets. The only information with which the data is labeled over internet is IP address of sender and IP address of receiver. China's solutions are very restrictive, costly and still not fully efficient. Users are still able to route around the filter using applications

[109] Germany blocks access to child pornography web-sites by obliging ISPs to use filters. Available at http://www.edri.org/edri-gram/number7.8/web-filters-isp-germany, or http://www.bmwi.de/BMWi/Navigation/Presse/pressemitteilungen,did=298564.html, last visited on: 3/24/2008

[110] Sky Canaves, China Ratchets Up Web Privacy Fight, the Wall Street Journal, Available at http://online.wsj.com/article/SB10001424052748703410004575028931978304078.html, last visited on: 3/23/2008

[111] Ronald Bailey, Battering Down the Great Firewall of China, available at http://reason.com/archives/2010/02/02/battering-down-the-great-firew, last visited on: 3/23/2008

[112] Solum, supra n.3, p.74

that hide IP addresses, on which the filtering software is mainly dependant. Freedom Network,[113] for example, reroutes web traffic though a series of detours, and as a result it is almost impossible to determine from where the original request was send.[114]

Thus, regulation of the internet by one nation state requires huge resources and at the same time due to architecture of the internet it will be still far from perfect regulation. As we have seen, none of the attempts of states to regulate the internet content is efficient and none of them can be a persuasive precedent.

[113] Freedom Network is privacy software produced by Zero-Knowledge Systems, Inc. Jim Hu and Evan Hansen, Yahoo auction case may reveal borders of cyberspace, CNET News, available at http://news.cnet.com/2100-1023-244365.html, last visited on: 3/24/2008

[114] Ian Goldberg, Adam Shostack, Freedom Network 1.0 Architecture, available at http://www.homeport.org/~adam/zeroknowledgewhitepapers/arch-notech.pdf, last visited on: 3/24/2008.

V. Market Regulation

The next model of internet regulation is Regulation by Market. This model is based on the premise that Internet must be regulated by industry itself. Market regulation is opposite of governmental regulation. As Lessig puts it "just let the market reign and keep the government out of the way, and freedom and prosperity… [will] inevitably grow".[115] On the other hand, Market regulation finds great resemblance with the model of Self-Regulation. As we mentioned in the first chapter "Self" of the internet can be construed under several leading stakeholders and one of them is private sector.

In the first years as internet started to emerge as a global medium and it became accessible to everyone the governments supported market-led regulation. President Bill Clinton's adviser in developing and E-commerce policy Mr. Ira Magaziner pointed that "the private sector should lead. Governments should avoid undue restrictions on electronic commerce."[116]

Market regulation has specific characteristics which make it worth to consider as an efficient model of internet regulation. These characteristics have been greatly discussed by professor Peter Swire in his article "Markets, Self-Regulation, and Governmental Enforcement in the Protection of Personal Information". Although article mainly discusses regulation of privacy over internet, but mentioned advantages of market regulation are in general applicable to other fields of industry-led regulation. These four characteristics include:[117] a) low cost of the regulation; b) the

[115] Lessig, supra n. 82, pp. 3-4 (emphasis added)
[116] Joseph Reagle, Why the internet s good, Community governance that works well, Berkman Center for Internet and Society, available at http://cyber.law.harvard.edu/archived_content/people/reagle/regulation-19990326.html, last visited on: 3/26/2008
[117] Swire, Peter P., Markets, Self-Regulation, and Government Enforcement in the Protection of Personal Information, in Privacy and Self-Regulation in the Information Age by the U.S. Department of Commerce, Available at SSRN: http://ssrn.com/abstract=11472 or doi:10.2139/ssrn.11472, last visited on: 3/26/2008

rules adopted under market regulation will be based on collective expertise of industry participants. Industry experts are most affected by these rules and they hold special knowledge in the field; c) the rules created by private sector will be based on common knowledge; they will be a common rules excepted by all participants. This will lead to greater incentives to follow them; d) market regulation as its successor inherits flexibility from Self-Regulation. Industry is able to respond to technology changes and consumer preferences in a much shorter time that is possible in other forms of regulation;[118]

The two other advantages of market regulation which are not mentioned by professor Swire is that, first, market regulation in general avoids disadvantages of governmental regulation and, second, creates, diversity of the products on the market. As we mentioned market regulation can easily react to consumer preferences. The same example of privacy shows that some consumers are more concerned with privacy than others. Taking account this internet corporations can offer several packages of privacy policies to their customers, giving them certain discounts and advantages in exchange of the right to use their personal information or part of it for marketing purpose and other services. Such information can be also sold to third party marketing institutions. Transaction gives benefit not only to the company but to its consumers, while keeping safe those customers which have opt-out from such a possibility.

As we have seen with other models of regulation, Market regulation is not perfect either. It also faces some difficulties, there some aspects of market regulation which serve as a detriment to consumers. The first flaw of market regulation is consumer protection. Market regulation fails to offer desirable level of consumer protection, which is the main reason why governments in general interfere within industries. Consumer protection is very broad concept. In particular

[118] Ibid.

market regulation fails to address several issues: [119] a) It is hard for consumers to monitor behavior of market players, hard to detect whether company follows the rules or not; b) Even if the fault is known it is hard to enforce; c) parties have unequal bargaining power, thus, consumers rarely have possibility to negotiate contracts; d) in general rules adopted by industry serve the industry itself but not protect consumers.[120]

The second major disadvantage is a danger that market players will create cartels and exercise their market power in order to receive greater benefit.[121] The third and general disadvantage is that market regulation lacks positive sides of governmental regulation, which often delivers much higher level of consumer protection.

How does market regulation work? What are the main incentives of market players? These are the questions which should be answered to determine to what extant is market regulation credible and advantageous model of regulation. The main incentive of the market and its participant companies is entirely financial.[122] The first driving force is the needs of consumers, if market does not meet such needs the sale of the companies may suffer.[123] The second is the reputation of the industry which may as well suffer if consumer needs are not met.[124] The overall desired reputation of the industry may induce further compliance with the rules which create such a reputation. An example is the banks in Switzerland, which are famous for their protection of consumer privacy.[125] Off course such a reputation is to what the clients are attracted to and banks benefit from it. The second incentive is often driven by the fact that market players always want

[119] Ibid.
[120] Ibid.
[121] Ibid.
[122] Ibid.
[123] Ibid.
[124] Ibid.
[125] Ibid.

to avoid mandatory governmental regulation. Governments use this to force market players regulate themselves[126] and come up with solution which will be acceptable to government and industry itself.

How does market regulate consumer behavior and behavior of the market participants themselves? There are several possibilities how Market can regulate consumer behavior. These are economic characteristics of the model of market regulation. Market regulates by: a) price and availability, thus it is subject to economic rules of supply and demand;[127] b) institutions,[128] market players often create association, unions and alliances to coordinate certain behavior, which is outside the scope of anti-competitive behavior; c) rules of economic behavior,

> Market-based rules are a function of private property rights and profit-seeking behavior. They arise as individuals use and exchange rights to resources. Some will imitate successful enterprises, while others will innovate. Successful innovation will be imitated. This process leads to rules of thumb and standard practices that are tested and modified over time and become an integral part of the economic and legal system.[129]

and d) standards,[130] often standards and rules are set by institutions.

As we can see Internet regulation has its economic characters, this makes it even more complex phenomenon. Market regulation has its advantages and disadvantages in every field of industry both are applicable in the context of Internet regulation. It is hard to find balance to what degree of market regulation should apply. Various industries had centuries to overcome this issue but

[126] Joseph A. Cannataci and Jeanne Pia Mifsud Bonnici, Can Self-regulation Satisfy the Transnational Requisite of Successful Internet Regulation?, International Review of Law, Computers and Technology, Vol. 17, No. 1, p.55 (2003)
[127] Gerald P. O'Driscoll Jr. and Lee Hoskins, The Case For Market-Based Regulation, Cato Journal, Vol. 26, No. 3 (2006), Available at http://www.cato.org/pubs/journal/cj26n3/cj26n3-4.pdf, last visited: 3/26/2008
[128] Ibid.
[129] Ibid.
[130] Ibid.

still have not found perfect middle.[131] While Internet is recent medium, its global potential is not yet fully achieved, which makes it even harder to make casting vote, because the decision may be yet premature.

[131] Bank industry in USA

Conclusion

The conclusion to be made from all above discussion is that the Internet is the most complex medium that mankind has ever invented. There is no one perfect solution to the model of internet regulation, as economist would say it is a principle of "Nirvana Fallacy". It is better to concentrate on improving existing institutions and in aiding them to perform their functions, rather than to search for perfect model of internet regulation.

As we have seen all above models of internet regulation have their advantages and disadvantages. Pure governmental regulation is costly and inefficient; it conflicts with interests of other states. Pure market regulation separately does not suffice; it creates a danger of cartels and does not provide reliable consumer protection. Transnational institutions will always pose questions related to their legitimacy unless all main stakeholders are properly represented. Network Engineers and Code Writers may be influenced by different governmental bodies. Creating a model of internet regulation based on one of the above factors is misleading. Correct way to proceed is to find a hybrid solution where all participants will have their part of rights and responsibilities in global internet governance. The goal of future researchers would be to combine them as to create most efficient model of regulation.

On the basis of discussed models there are two important issues which should be addressed in the near future. First we must concentrate on the global character of the internet and create a forum which will represent all main stakeholders. The important issues connected to internet can be decided only within such a global forum. The main stakeholders include governments, network engineers, private sector and civil society. Global medium needs global approach. The second important issue is internationalization of ICANN or making it properly independent from US

government. We are thankful to the US government and teams of researchers who have invested money and time in creating internet; we acknowledge their lot in developing the Internet, but from military project internet has grown to worldwide phenomena, which affect lives of billions of citizens within hundreds of states all over the world. Sooner or later these states will request to respect their right to take part in global internet governance.

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