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The review of the ITU's international telecommunication regulations: A threat or an opportunity for the internet?

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THE REVIEW OF THE ITU'S INTERNATIONAL TELECOMMUNICATION REGULATIONS: A THREAT OR AN OPPORTUNITY FOR THE INTERNET?

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ABSTRACT

THE CURRENT DEBATE ABOUT THE INTERNATIONAL TELECOMMUNICATION REGULATIONS (ITRs) IS FIERCE. NGAN ARE CRUCIAL AND INVESTMENTS BURDEN OUGHT TO BE BORNE BY DIFFERENT PLAYERS IN THE VALUE CHAIN. THE ETNO PROPOSAL, AIMING AT INSERTING NEW HIGH LEVEL PRINCIPLES IN THE ITRs, FOCUSES ON IP INTERCONNECTION COMMERCIAL AGREEMENTS AND END-TO-END QUALITY OF SERVICE DELIVERY: A WIN-WIN PERSPECTIVE.

1. Introduction

WCIT is going to dominate the global ICT scene this year. The ‘World Conference on International Telecommunications’ (WCIT), a treaty-making negotiation to review the 1988 ITU’s International Telecommunication Regulations (ITRs), will take place in Dubai in December 2012.

Given the involvement and role of Member States in the ITU, the ITRs revision represents a highly political debate. Blocs of Countries are forming alliances, according to common interests.

Always more frequently, scholars, organizations and Institutions express concerns about the Internet governance, by arguing that changes to ITRs, by Heads of State, could jeopardise the multi-stakeholder model of the Internet.

The talks about the Internet governance imply geopolitical and economic considerations on a global scale: today’s globalised and networked world puts to the test both the well-established sovereign State scheme and the inter-governmental multilateralism.

The current discussions on the ITRs revisions are quite fierce and the different positions expressed depict a variegated scenario.

This paper focuses on such a debate, by lingering especially on different stances, in particular the European and US ones, about some relevant issues. On this ground, we will maintain that the ITRs revision should be seen as an opportunity to foster a stronger ICT ecosystem.

The rapid evolution of the Internet, from being a newly-commercialized resource in 1995 to a network with over two billion users today, has brought about a number of consequences.

The telecommunications traffic migrates to Internet protocol-based communication. This transition to IP-based networks raises major regulatory, technical and economic issues.

We believe that the revision of the ITRs may be an opportunity to address some critical issues. Indeed, the ITRs should acknowledge the principles that fair value is recognised for carried traffic and operators’ revenues should not be disconnected from the investment needs caused by rapid Internet traffic growth. This should at best be achieved through commercial arrangements between players.

To ensure more efficient use of networks and to allow for new business models better reflecting future demand, we believe that Member States should support a new IP interconnection ecosystem that provides both best effort delivery and end-to-end Quality of Service delivery. Delivery based on QoS allows for management of the IP traffic according to its characteristics (i.e. delivery requirements and acknowledged value) thus supporting innovation to provide a value-added service.

2. The IP interconnection

The interconnection environment is continuously changing, the IXP increased in number (fostered by the Peering growth) and the traffic flows became more local (f.i. due to the role of CDNs). With reference to the theme of interconnection, it ought to be set in the context of the on-going transition from PTSN to NGAN.

As to a new IP interconnection model, both best effort delivery (the current widespread paradigm) and end-to-end quality of service delivery (defined on a private commercial basis) should be taken into account.

Generally speaking, as provided by the EU Regulatory Framework, interconnection means the physical and logical linking of public communications networks *“used by the same or a different undertaking in order to allow the users of one undertaking to communicate with users of the same or another undertaking, or to access services provided by another undertaking”*.¹

According to this provision, interconnection is a telecom issue (as well as IP interconnection)². Moreover, although interconnection arrangements developed without regulatory intervention, the EU general obligation to negotiate for interconnection is valid for IP interconnection as well. In any case, in considering the wholesale interconnection between ISPs and other intermediaries in the Internet value chain (e.g. CAPs), one should bear in mind that European Institutions stress vigorously the separation between network layer and application layer.³

From a legal point of view, with regard to interconnection it is worthwhile underscoring the (symmetric) obligation to negotiate on a non-discriminatory basis, provided for in Article 5 of the Access Directive 2002/19/EC as amended in 2009/140/EC. The market driven arrangements have so far served the purpose (and will hopefully continue to do so), but some new guiding principles at the international level could be helpful, as the boundaries between the activities of the Internet players became blurred.

It would be interesting to evaluate the consistency of the position of some EU States, busy on the one hand in making the case that IP interconnection ought to be out of ITRs and on the other hand in adhering to the EU Framework.

As a matter of fact, the Internet environment now includes a number of players: ISP, CDNs, CAPs, CAUs are acronyms that group diverse actors who operate in a variegated scenario. In this regard, it is important to underline the increasing clout that CDNs and OTTs do have in networks business.

¹ Article 2 b) of the EU 2002/19/EC Access Directive, Directive now amended in 2009/140/EC.

² As enunciated in the recent BEREC's draft report for the public consultation closed on 31st July 2012 - BoR (12) 33 – *“[Peering and transit] interconnection arrangements developed without any regulatory intervention, although the obligation to negotiate for interconnection applies to IP networks as well [...]”*. *Id est*. IP interconnection is covered by the provision of Article 5 of the EU Access Directive.

³ On this point see the recent BEREC's draft report, quoted. In this regard it could be also useful to recall the new Article 20 of the 2002/21/EC Directive on resolution of disputes as amended in 2009/140/EC, that, with reference to the interested parties in disputes, states: *“between undertakings providing electronic communications networks or services in a Member State, or between such undertakings and other undertakings in the Member State benefiting from obligations of access and/or interconnection.”*

A major problem is represented by the high traffic flows generated by the OTT: currently there are claims about a sort of “free riding” in the case of IP interconnection both via “Transit” and via “Peering”. According to these complaints, only small fees are paid to the Carriers for content transport, while utilizing (and not duly paying) the underlying telecommunications infrastructure services.⁴

On this theme, an interesting contribution to the international debate was provided by Geoff Huston, who stresses on the antithesis between carriage service operators and content providers. According to Huston’s opinion, the real debate is currently about who owes who money. The Author lingers on the dynamics of the Internet during the past ten years, by highlighting the growing revenues of content providers and the claims of carriage operators that have to beef up their capacity and spend money for new infrastructure. He believes that it is not a problem of sustainability but it regards out-of-date business model.⁵

On the contrary, about sustainability, one can argue: high traffic volumes can bring about lower performances, including latency for end-users. Bandwidth demand, throughput capacity are nowadays overused phrases. In short, NGAN are needed: Telcos ask that investments should be borne also by those players who spur this revolution with increasing data traffic flows (generated by a gamut of applications, social networks, video streaming et cetera).

To the opinions according to which ITRs should not regulate in-depth about networks architectures and management, one could counter and argue that in such a global binding treaty there would not anyway be detailed regulatory provisions, but by and large guiding principles.⁶ In any case, Member States or Regional Confederations are free to autonomously implement them by means of specific regulatory provisions, not to mention the possibility of making reservations to the application of the provisions of ITRs.

To sum up, as far as the ITRs are concerned, it seems to be essential to address, by means of general guiding principles (commercial agreements remain the preferable implementation’s tool), some key topics in the context of new interconnection’s trends, such as growing rates of traffic and consequent NGAN deployment and funding, role of different players, types and modalities of interconnections.

3. The ETNO proposal

First of all, it is worthwhile highlighting some positions related to the forthcoming revision of ITRs. With reference to the prevalent US point of view, one could sum it up by referring to recent remarks of the FCC’s Robert McDowell Commissioner. The US Commissioner stigmatizes, *inter alia*, the ETNO proposal for the

⁴ On this disputed theme see the Conclusions – point 6 g) of the BEREC’s draft report (quoted), in which BEREC expresses a contrary opinion to the “free riding” complaint.

⁵ See Geoff Houston, “Carriage vs. Content”, July 09, 2012, at http://www.circleid.com/posts/print/20120709_carriagevs_content/.

⁶ For a critical position about the inclusion of interconnection aspects in ITRs, see www.internetsociety.org - In the conclusion of “Internet Interconnections – Proposals for New Interconnection Model Comes Up Short”: “*The ITRs are simply the wrong place to attempt to re-architect and re-define Internet interconnection*”.

revision of ITRs, underlining the risk of a kind of siren call, like “Please Regulate My Rival”, defining it a recipe for regulatory failure.⁷

On the EU side, the ETNO proposal for the revision of ITRs gave rise to concerns and suspects: actually, it targets at a more sustainable model for the Internet.

By the way, ETNO does not ask for an increased regulatory intervention but aims at establishing a reference for commercial negotiations (by means of guiding principles at international level). As a matter of fact, the revision of the ITRs offers a unique opportunity to propose high-level principles for IP interconnection. In particular, ETNO proposes to introduce, in the ITRs, a principle of QoS delivery to improve the performance provided by the traditional best effort delivery.

ETNO, through its proposal, *“is not asking for a subsidy from OTTs to the network providers, but would like to foster the adoption of the new “quality based” delivery model as a basis to reduce the current imbalances in the value of traffic exchanges.”*⁸

In this regard, as asserted by Prof. Christopher S. Yoo, when *“values are asymmetrical, using barter to exchange traffic on a settlement-free basis no longer makes sense. Instead, the literature on two sided markets indicates that society would be better off if the side of the transaction incurring lower costs and deriving more revenue from the network were to make a side payment to the side of the transaction that faces higher cost and lower revenues”*.⁹

In order to rightly grasp the focus of the debate, it could be useful to define different types of service, thus placing the Interconnection (and then the IP Interconnection) according to opposite opinions.

The regulatory distinction, between telecommunications services and information society services, represents a widespread custom.¹⁰

According to such a model, a telecommunications service consists in a mere transmission of signals whereas an information (society) service (including the Internet services) ought to be considered as an enhanced service, thereby only the latter regards information processing.

On the one hand, some think that such a scheme turns out to be moot if one uses it to justify a loose regulation for information services by highlighting the risk of a governance of the Internet, without considering the complex nature of the Internet players.

⁷ See www.fcc.gov - remarks of the Honourable Robert McDowell, Commissioner, US Federal Communications Commission, before the Associazione ego and puntoit Italian parliament Aula dei gruppi parlamentari Rome, Italy - June 28, 2012

⁸ See - <http://www.etno.eu/LinkClick.aspx?fileticket=0zO4IVZKkkU%3d&tabid=1072> - ETNO paper on Contribution to WCIT ITRs Proposal to Address New Internet Ecosystem

⁹ Christopher S. Yoo, “The Dynamic Internet: How Technology, Users and Business Are Transforming the Network”, American Enterprise Institute”, 2012.

¹⁰ On this issue, see, *inter alia*, “Telecommunication Broadcasting and the Internet – EU Competition Law & Regulation”, Edited by Laurent Garzaniti and Matthew O’Reagan – 2010 - Sweet and Maxwell.

Actually, these actors, more and more often, operate crosswise and generate high pressure on networks with flows of IP traffic. In this regard, to have an idea, one could only point out the activity of the so called *Hyper Giants*, the main content providers on the Internet.

On the other hand, others assert that extending *sic et simpliciter* traditional telecommunications regulatory provisions to the Internet (and e.g. to its content providers), could impair its intrinsic free and open feature. A sound definition of the ITRs' scope, can strike the right balance in this thorny issue.

In any case, if a problem of overlapping between telecommunications and information services exists, it ought to be handled with new tools (mainly private, e.g. new commercial agreements schemes).

These adjustments should not be perfunctorily deemed as an attempt by the "Telcos" to weaken the Internet players, or as an effort to regulate the Internet itself. The Internet will keep on being driven by market forces and will continue to be the "network of the networks". Anyway, this "network" has changed and needs to be soon upgraded.

To put it simply, it is not an ideological matter, it has not to do with OTTs or Telcos: it is about sustainability.

Nevertheless, in a time when Internet actors and Internet services become more and more "telcos" (and maybe Telcos more "Internet"), boundaries shrink and revenues do not always reflect the burden borne by each player. Some Providers complaint about the fact that digital highways are needed (NGAN) and the costs for deployment (i.e. investments) could hit in a disproportioned manner.

At present, WCIT and ITRs revision are perceived as crucial at the international stage: the stake seems to be high with reference to the definition of boundaries between telecommunications and information services.

Both in US Acts (for instance in the 1934 and 1996 Telecommunication Acts) and in the EU Regulatory Framework (f.i. the Directives of the 2002/2009 Telecom Package), there is a distinction between telecommunications (or electronic communications) services and information (society) services.

In the US Telecommunications Act of 1996, there is, in fact, a clear partition between information service and telecommunication service.¹¹

¹¹ The definitions contained in the US Telecommunications Act of 1996 (Pub. LA. No. 104-104, 110 Stat. 56 (1996).): "(41) *INFORMATION SERVICE* - The term 'information service' means the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications, and includes electronic publishing, but does not include any use of any such capability for the management, control, or operation of a telecommunications system or the management of a telecommunications service". "(48) *TELECOMMUNICATIONS* - The term 'telecommunications' means 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." "(51) *TELECOMMUNICATIONS SERVICE* - The term 'telecommunications service' means the offering of telecommunications for a fee directly to the public or to such classes of users as to be effectively available directly to the public, regardless of the facilities used".

One can find, *passim* in various provisions throughout the text, the twofold reference to “telecommunications and information services”. This separation was already provided for in the US Communications Act of 1934, whose definitions still shine at clarity.

However, FCC’s remarks in paragraph 17.3 (“The Legal Framework for the FCC’s implementation of the PLAN”) of the FCC National Broadband Plan, reflect some existing inconsistencies in the interpretation of such a separation, especially with regard to the Broadband (Internet access) services.

With regard to the distinction between telecommunications service and information service, one often quote the 2005 U.S. Supreme Court decision upholding the Powell FCC’s definition of cable modem Internet as an information service. Some scholars trot out this episode aiming at exempting the Interconnection from (national) regulation and, in a wider perspective, from ITRs.¹² Including IP interconnection in ITRs (by considering it as a telecommunication service) is deemed as an attempt by some telecommunication incumbents to preserve their interests at the Internet players’ expense. A very critical opinion about such an (alleged) attempt was expressed by Prof. Milton Mueller.¹³

In the EU context, internet-related services are split into two groups: electronic communication services (distinctive element being the transmission of signals) *vis à vis* information services (characterised by the information processing and content providing).¹⁴

In addition, Recital 5 of the 2002/21/EC Framework Directive effectively indicates: “*It is necessary to separate the regulation of transmission from the regulation of content. This framework does not therefore cover the content of services delivered over electronic communications networks using electronic communications services, such as broadcasting content, financial services and certain information society services.*”¹⁵

At any rate, the considerations of Recital 10 of the Framework Directive are extremely telling about this separation and it could be worthwhile reading it in full: the distinction hinges on the “conveyance of signals”. This Recital hints at cross activities as well.¹⁶

¹² See Milton Mueller at <http://www.internetgovernance.org/2012/05/24/threat-analysis-of-itus-wcit-part-1-historical-context>, as to the Brand X case and its implications.

¹³ See Milton Mueller at <http://www.internetgovernance.org/2012/05/24/threat-analysis-of-itus-wcit-part-1-historical-context/> (quoted) and <http://www.internetgovernance.org/2012/06/09/threat-analysis-of-wcit-part-3-charging-you-charging-me/>. The articles are also interesting for the definition of the different type of services.

¹⁴ As provided for in Article 2 c) of the 2002/21/EC Framework Directive, now amended in 2009/140/EC: “ – “*electronic communications service*” means a service normally provided for remuneration which consists wholly or mainly in the conveyance of signals on electronic communications networks, including telecommunications services and transmission services in networks used for broadcasting, but exclude services providing, or exercising editorial control over, content transmitted using electronic communications networks and services; it does not include information society services, as defined in Article 1 of Directive 98/34/EC, which do not consist wholly or mainly in the conveyance of signals on electronic communications networks”.

¹⁵ Information society services are, *inter alia*, covered by Directive 2000/31/EC of the European Parliament and of the Council.

¹⁶ Recital 10 of the 2002/21/EC Directive: “*The definition of “information society service” in Article 1 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 and of rules of information society services spans a wide range of economic activities which take place on-line. Most of these activities are not covered by the scope of this Directive because they do not consist wholly or mainly in the conveyance of signals on electronic communications networks. Voice telephony and electronic mail conveyance services are covered by*

Anyhow, it's a given that, considering the brisk market evolution, the question is whether the Internet issues became to a certain extent telecom issues because of their tight relation with networks dynamics.

The same above mentioned Recital 5 adds: *"The separation between the regulation of transmission and the regulation of content does not prejudice the taking into account of the links existing between them"*. The convergence phenomenon and the market developments could make closer those links.

Besides, this topic unleashes animated debates about economics, technicalities and regulatory aspects of the Internet and more specifically of interconnection, thereby being the distinction between network layer and application layer of great consequence.

In this context, claims for keeping a deregulated and free Internet seem to collide with demands for contributions from the "over the top" operators, who operate "on top" of the telecommunications platform.

The revenue sharing, and more specifically the contribution (e.g. introducing a data termination charge for IP interconnection on the basis of specific commercial agreements) by the over the top operators for the deployment of NGA networks (considering the higher flows of traffic generated) is a disputed and outstanding issue. Commercial interconnection disputes already occurred and could henceforth rise.

Thus, in relation to the above mentioned changes, claims for new regulatory, technical and economic approaches vigorously emerge. All in all, the rapid Internet traffic growth (main of the telecommunications traffic moving to an Internet protocol-based communication) brings about investment need in high speed networks: the definition of a fair compensation for the traffic generated is a popular plea. In this regard, sending party network pays is one of the matters at issue, indeed disputed and not universally accepted.

At any rate, commercial arrangements seem to remain a valid and widely accepted tool.

On the European side, it is also interesting the Digital Europe's position paper on WCIT 2012. The paper reaffirms the importance of a decentralised and multi-stakeholder mechanism for the Internet governance. In the meanwhile, Digital Europe asserts that the current scope of ITRs should not be changed to explicitly include ICT and the Internet; about the inclusion in ITRs of IP interconnection proposals the DE's opinion is critical as well.

Principles are not detailed rules. Revised ITRs could obviously pave the path by setting a high level policy framework, while detailed aspects could be defined at regional and national level (leaving the due freedom of action and choice to commercial agreements).

this Directive. The same undertaking, for example an Internet service provider, can offer both an electronic communications service, such as access to the Internet, and services not covered under this Directive, such as the provision of web-based content."

3.1 The ETNO proposal - About QoS

The core element of the ETNO proposal for the revision of ITRs is the Quality of Service delivery. Authoritative and reasoned judgments were passed on the ETNO QoS proposed model: most of them aimed at blasting the proposal.¹⁷

One can introduce the item with some preliminary observations. First of all, differentiated QoS is needed by the Internet ecosystem and it is not against Net Neutrality.

In detail, freedom of communication is certainly the key goal of Net Neutrality; however it means ability to send and receive any content over the Internet, and to have access to any web site/IP address. Providing differentiated QoS: it means giving different performance, not blocking traffic.

Differentiated QoS (such as the priority given to specific type of content) is related to the service requirements not to Net Neutrality. For example, real time video streaming is needed for some specific services and it is crystal clear that the performance of real time streaming cannot be provided (due to evident cost issues) to any IP traffic.

Moreover, it must be taken into account that differentiated QoS was always used in the public Internet and nowadays the need for QoS delivery is growing. No claim was ever made on QoS delivery against Net Neutrality.

Examples of differentiated QoS are: use of CDN, web acceleration, caching, buffering for some of the contents.

Some OTTs/CPs/Aggregators/CDN Providers already use differentiated QoS for some traffic and then, one could point to these companies as enemies of the freedom of communication, against Net Neutrality: we do not think so.

Since 1995-1998 some CDN and other kind of companies provide (mainly at international level) quality based delivery services, in order to improve the performance obtained by best effort delivery. QoS based delivery improves latency, bit rate, jitter, user experience and it is obtained by different techniques (such as caching, buffering, IP VPN) and platforms (such as CDN, AND - Application Delivery Networks, Web Acceleration).

In the last two years, telecoms operators have been receiving requests from OTTs/CPs/Aggregators/CDN Providers, aiming at moving their own servers from the edge of the Telco operators' networks "into" the Telco operators' networks. These requests reflect the need to provide differentiated QoS and to improve Quality of Service (QoS) and Quality of Experience (QoE).

Furthermore, differentiated QoS can turn out to generate incremental revenues for both OTTs/CPs and Telcos.

On the one hand, QoS would allow the development of new services and the growth of the customer base, for OTTs/CPs.

On the other hand, QoS would provide to Telcos additional revenues for quality based delivery, thus solving the sustainability issue.

So, differentiated QoS could trigger a win-win process: this is the rationale which underpins the ETNO proposal.

¹⁷ For a critical opinion on ETNO QoS proposal, see Goeff Huston, "The QoS Emperor's Wardrobe", at www.potaroo.net, June 2012.

All in all, DPI (Deep Packet Inspection) and traffic monitoring technologies, used to provide differentiated QoS, are certainly much less invasive than end user profiling made by OTTs/CPs.

In this regard, it is useful to underscore that privacy issues are related to end user profiling (e.g. correct use of opt in and opt out end user choices) and not to the analysis of traffic flows, made to understand the traffic type and to manage this traffic according to the service requirements.

Differentiated QoS does not disadvantage small players and new entrants: on the contrary, it gives them the possibility to develop new services that cannot be offered with best effort delivery.

ETNO also believes that, the offer of differentiated services (basic and higher priced/higher quality premium services) by Internet access service providers is the right way to spur innovation and enhance welfare. As a matter of fact, this is a widespread practice in many strongly competitive industry contexts. As found by Jamison and Hauge (2009),¹⁸ it is reasonable to expect the offer of premium services to be welfare-enhancing and consistent with increased edge-innovation (content diversity), overall lower prices and competition.

Only when Internet access service providers are free to differentiate their offer by developing their services according to different quality levels, and price them accordingly, they will be stimulated to invest in new technologies to meet market demand. On the contrary, without a reasonable expectation of an adequate remuneration of their investment, access broadband providers will not be pushed to develop new and technologically enhanced services.

Furthermore, banning access tiering could also have anticompetitive effects on the market. Preventing Internet access providers, content and applications providers from offering differentiated services will make price the primary dimension, possibly the only, over which competition occurs, making collusion the more likely and stable result, as the TV advertising ban in the US showed for the tobacco industry.

In conclusion, differentiated QoS is not provided to all internet traffic: it is used only for the high value traffic (i.e. for the traffic that gives revenues to OTT/CP and that is paid by end users). The “not high” value traffic is delivered by best effort. Telcos end users receive both best effort and differentiated QoS traffic.

According to this scenario it is clear that if a Telco operator does not give good performance for best effort traffic delivery, it will lose customers and market share, because of the high competition among ISPs.

¹⁸ See Mark Jamison & Janice Hauge (2009) “Dumbing down the Net: A further look at the Net Neutrality Debate” in Lehr & Pupillo (Editors) “Internet Policy & Economics: Challenges and Perspectives”, Springer 2009. Excerpt: “Offering premium service stimulates innovation at the edges of the network because lower-value content sites are better able to compete with higher-value sites with the availability of the premium service. The greater diversity of content and the greater value created by sites that purchase the premium service benefit advertisers because consumers visit content sites more frequently. Consumers also benefit from lower network access prices. [They also] explain that a vertically integrated network provider does not have an incentive to discriminate against its n-content rivals”.

If a Telco wants to stay on the market, it must provide good performance for best effort delivery and must invest in more bandwidth.

4. The Internet Governance

We do believe that the theme of the Internet governance is out of the scope of the ITRs. However, considering the fierce debate, it could be useful to linger on several positions.

In an article published on 25th May 2012 on The New York Times, Vinton Cerf, Google's chief Internet evangelist, warned against the attempt by some States to establish international control over the Internet through the ITU. He sums up by asserting: *"The decisions taken in Dubai in December have the potential to put government handcuffs on the Net. To prevent that – and keep the Internet open and free for the next generations – we need to prevent a fundamental shift in how the Internet is governed"*.¹⁹

So, how is the Internet currently governed? Many scholars and activists propose a decentralised multi-stakeholder model. But is it so?

In the words of Andrea Renda: *"while more than half of Internet users are located in Asia, the U.S. still has exclusivity over the Internet Assigned Numbers Authority and the root zone file, the list of all top-level domains in the Internet. Non-U.S. companies, including EU-based ones, cannot compete to become the managers of these critical resources"*.²⁰

The initial governance of the Internet was, by and large, informal.²¹ During the last years, its nature evolved ceaselessly in various aspects.²²

In this regard, aiming at briefly defining the Internet Governance, one could address it from three different points of view: technical, economic and political.

The technical functioning of the Net is run by an open community of experts. Such a community is made up of several organizations, f.i. the Internet Architecture Board (IAB), the Internet Engineering Task Force (IETF), the World Wide Web Consortium (W3C). The ICANN (Internet Corporation for Assigned Names and Numbers) runs the world's domain name system (DNS).

¹⁹ See Vinton Cerf, "Keep the Internet Open", The New York Times, May 25, 2012.

²⁰ See his article on The Wall Street Journal – April 25th 2012 – The UN Internet Regulator? Private governance has the flexibility and competence needed to keep Internet dynamic and free.

²¹ On the evolution and decline of such informal governance, see Christopher S. Yoo, in "The Dynamic Internet: How Technology, Users and Businesses are changing the Networks (2010).

²² About the evolution of the Internet Governance, see Viktor Mayer-Schönberger and Malte Ziewitz in "Jefferson Rebuffed: The United States and the Future of Internet Governance (2005).

From an economical perspective, the domain name system management played a great role during the last years in the Internet ecosystem. That was something like the economical Internet governance. Intellectual property rights had a big part as well.

The political governance of the Internet is yet to come. And some wonder if there will ever be.

Some attempts were made. The Internet Society, founded in 1992, is a non-profit organization, involved in addressing legal, political and economical implications of the Internet.

The sovereign, centralised, territorial State, *superiorem non recognoscens*, somehow collides with the multi-stakeholder, virtual, decentralised model of the Internet. The *netizenship* is at present as relevant as the citizenship.

The ICANN case is interesting for focusing on the mix of technicalities, politics and economics that characterise the Internet governance. The non-profit organization was founded in 1998 in California. The links with the U.S. Institutions were always clear and they were settled on 29th September 2006 when ICANN signed a brand new Memorandum of Understanding with the United States Department of Commerce (DOC). As regards other links, one can simply highlight the fact that IANA (the ICANN's Internet Assigned Number Authority) is under contract with the US - DOC.²³

Actually, the Internet developed in a US-centric manner: at present many States complaint about the crystallization of such a model.

It is worthwhile to quote the definition of Internet governance formulated in the context of the 2005 Tunis Agenda, UN World Summit on the Information Society (WSIS): "*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 programmes that shape the evolution and use of the Internet.*"²⁴

The 2005 UN debate led to the establishment of the Internet Governance Forum (IGF), a multi-stakeholder public policy network. OECD is also active on Internet policy related issues.²⁵

In our opinion, the clash of ideas about the Internet governance and the role of multilateral organizations (e.g. ICANN), can be only solved by a middle-ground approach: as far as the Internet is concerned, no direct governmental control but sincere international management system. In this regard, Europe can play a go-between role.²⁶

²³ On these issues see Rebecca MacKinnon (2012) – "Consent of the Networked – The Worldwide Struggle for Internet Freedom".

²⁴ Definition contained in the "Report of the Working Group on Internet Governance (WGIG)", June 2005.

²⁵ See for instance OECD Council Recommendation on Principles for Internet Policy Making - 13 December 2011

²⁶ On the role of Europe, see also Rebecca MacKinnon (2012) – page 207 of "Consent of the Networked .." quoted.

Conclusions

We do believe that ITRs ought to be revised in order to enshrine high level principles reflecting some important changes occurred in the telecommunications ecosystem.

Accordingly, considering that the ITRs scope should be duly adapted, we presented the ETNO proposal, underlining in particular the importance of the promotion of IP interconnection agreements, providing both best effort delivery and end-to-end Quality of Service delivery.

We deem the growth of IP traffic flows as a critical issue: NGAN are essential and investments should be borne in a proportioned manner by different players in the value chain to make sustainable the Internet ecosystem.

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