CONCLUSIONS

Held in Lisbon on 6 October 2010, the Fourth International ANACOM Conference, entitled "Net Neutrality: network regulation and content regulation", brought together speakers from various fields, from politics to industry, including from national regulatory authorities (NRA) and sectorial associations.

Discussions focused, from a regulatory, market and consumer perspective, on some of the challenges facing the NRA, in particular, traffic management and prioritization of services, information transparency and consumer protection, *ex-post* and *ex-ante* regulatory intervention and the role of international bodies (European Commission, BEREC, etc.).

Opening Session

The Minister for Public Works, Transport and Communications (MOPTC), António Mendonça, considering the theme of the conference to be of fundamental importance to the future of the Internet, stressed the need to ensure an open Internet, with democratic access on equal terms because "*we cannot allow an Internet of the rich and an Internet of the poor*".

However, the MOPTC also mentioned that it is necessary to "*recognize the capacity that operators have to manage their networks appropriately, preventing congestion caused by increasing demand for content, especially content, such as video, that is more demanding in terms of capacity. It must also be recognized that operators have the right to develop their own business models, offering specific services and with a quality that aims to recognize the characteristics of their consumers*". Referring to consumers, António Mendonça said that "*no offer differentiation or traffic management is legitimate where the consumer does not have access to proper and transparent information about the offer. Transparency is the watchword*".

With regard to sectorial regulation, the MOPTC also said that he believed that "*for now there is no need to intervene that heavily; it is enough to closely follow the new practices and business models*".

Challenging the speakers and the audience, the **Chairman of the Management Board of ANACOM, José Amado da Silva**, stressed that, in his view, the problem of net neutrality was not yet well formulated and that, despite neutrality being the key word, a trade off had to be made between freedom, from the perspective of opening up the network, and the concept of network management. In this sense, and considering that when there is insufficient space, there is scarcity, and that this implies a choice, José Amado da Silva raised a number of questions: Can any choice be neutral? Can the word "neutrality" be applied to network management? Is there such a thing as neutral management?

In discussing the issue of access and exclusion, the Chairman continued to raise questions concerning freedom of access: everyone must have the capacity to get through the door (read access the Internet), but how wide is the door? Should everyone have equal status? Should there be a difference between those who pay more and those who pays less? What is the criteria for managing the network, who pays? And would a universal service in broadband solve the problems? And transparency? With respect to the latter, the Chairman of ANACOM stressed that "*Transparency is a necessary condition and but not enough. It is a condition but not an overall condition*".

Accepting the challenge, **Professor Marvin Ammori** then spoke on the subject, based on the American reality. According to this *keynote speaker*, the basic definition of *net neutrality* implies that Internet service providers (ISP) cannot arbitrarily discriminate between different providers of content and applications, i.e., the Internet will be open and neutral to all. Above all, he argues that we must be cautious when making decisions on this matter given that "*today's decisions will have a decisive effect on the future*".

Marvin Ammori then focused on three aspects of *net neutrality*: censorship in relation to the blocking of what he dubbed "*desfavorable speech*"; contents, the concentration of "*power of speech*", citing examples of persons or entities who made and make use of the open Internet to organize or to gather support, as in the case of Barack Obama; and privacy, highlighting the difficulties in setting limits on upholding several public and private principles at stake.

In terms of innovation, Marvin Ammori said that a neutral and open network provides more and better innovation, not only because innovation brings greater return, but also because those who have less economic power can challenge and

compete with larger companies. He added that "*investors are less likely to invest when there is a risk of blocking*".

Speaking specifically about the problems that *net neutrality* entails, Marvin Ammori highlighted the issues related to the blocking of competitors, the blocking of any application (from the perspective that it concerns basic infrastructure), the collection of access fees, giving as an example any ISP charging a fee for any one service provider to access customers, or the proportioning of service quality in a discriminatory manner.

With respect to traffic management, the speaker noted that the solution to this problem may involve increased network capacity or the prioritization of certain types of content, although this is feasible only in situations of actual network congestion.

Solutions or ways of implementing neutrality involve the establishment of a standard of discrimination, which should not be imposed at application level, a reasonable management of the network, as neutral as possible, with equal quality of service for all applications and selected by the end user, or involve the management of services, which should not be discriminatory or used to curtail the capacity of the open Internet.

Finally, Marvin Ammori stressed the need to establish remedies and penalties/fines in line with the violations concerned and the economic size of the infringing companies.

Panel "New Regulatory Responses"

The moderator of this panel was **Elísio de Oliveira, vice-chairman of the Regulatory Council of the ERC**.

The first speaker, **Luís Magalhães, Chairman of UMIC**, briefly presented the ways in which neutrality can be broken: the blocking of certain information sources and destinations, positive or negative discrimination, through greater or lesser speeds of communication, discrimination of traffic based on source, destination, technology, platform or access equipment, or by tallying the packages, including by charging for preferential service.

In support of net neutrality*,* Luís Magalhães pointed out the factors related to freedom of expression and information, with the protection of competition and the free market, avoiding excessive concentration in Internet service providers and

operators, leaving space for services and applications that use these platforms, with equity of access to and use of the Internet and capacity for innovation, leaving the processing of information at the points of communications services so as not to limit the possibility that third parties may freely innovate using communication infrastructure.

According to Luís Magalhães "*it is necessary to clarify, legislate and create regulatory principles that incentivize the generativity of the Internet, so that it remains a platform that enables the development of innovative applications, to ensure competition in the market, without distortion, to ensure good operation of the Internet and, above all, to demand auditable transparency*".

A **representative of ARCEP, Nadia Trainar[1]**, presented the work developed by the French regulator on the issue, emphasizing that we are facing a changing environment that requires dynamic regulation, whereas regulators should use symmetrical tools with respect to access to content in order to promote net neutrality.

The French regulator then put forward the following objectives: ensuring freedom of choice for users (including competition at retail level), the proper functioning of networks and innovation over the long term "*at the core and the edge*". The study of the matter is also intended to distinguish between the "two lanes" of the issue, the *best effort Internet* and managed services which have structurally different objectives and restrictions.

Nadia Trainar also said that the regulation of neutrality should involve establishing best practices for all technologies, a case-by-case assessment of each scenario and tools to monitor relevant markets. These aspects should be implemented through co-regulation involving all stakeholders, which is more prescriptive if necessary, both in terms of dispute resolution procedures and through more detailed guidelines on traffic management, as well as through quality of service requirements.

With respect to the ISP's offers and specifically with regard to managed services, ARCEP recommends a more optimistic approach than that taken in the United States, based on the European scenario of triple play offers, a business where investment ultimately benefits the various types of services.

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[1] Presentation "ARCEP proposals on net neutrality - A proactive approach based on the revised telecom framework"

With regard to transparency, Nadia Trainar highlighted the need to provide the consumer with the clear information they need so that they can differentiate between the products, with everything in a language and with content that can be understood by any consumer.

Finally, **Phillippe Defraigne, Director of Cullen International[2]**, chose to emphasize that "*where some see reason to impose restrictions, others see a market failure and a business opportunity*", and that in this scenario competition and transparency can take us a long way in terms of neutrality.

In his presentation, Phillippe Defraigne noted two reasons for implementing traffic management: the need to cope with traffic growth while maintaining the best possible quality of service for consumers and the discrimination of vertically integrated ISP, i.e., discrimination against a competitor in a downstream market. With respect to the first, the Director of Cullen International believes that given the current penetration rates and investment, we are approaching a point of serious congestion on the Internet and that if such a point is reached, there will either be chaos or operators will have to impose more and more restrictions, managing or prioritizing certain types of traffic. Any one of these measures will only be socially accepted if the operators agree and strive to increase the transparency of their practices.

The second panel was moderated by **Jaime Andrez, Member of the Board, Autoridade da Concorrência (The Competition Authority)**

The first speech was given by **Ian Fogg, principal analyst at Forrester Research[3]**, who set out his approach on the costs of operators and the challenges faced in relation to business models.

According to Ian Fogg, the debate over net neutrality initially took place mainly in the USA and Japan and was very focused on industry issues, in terms of the relationship between Internet access providers (ISP) and Internet companies. This approach of a model with two sides fails to take account of the fact there is triangular relationship between the consumer (end-user), service providers and ISP. Hence, there is currently a speed-price paradox, as operators want to invest in new

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[2] Presentation "Network and content regulation"

[3] Presentation "Net Neutrality - Competition Issues A consumer & Internet view"

fibre networks with higher access speed, and yet it seems that users are more concerned about price (87% of respondents in a survey by Forrester), relegating bandwidth / speed of Internet connection to second place (62% of responses).

Therefore, how can operators sustain their businesses and simultaneously invest in next generation fixed and mobile access networks? According to the Forrester analyst, new revenue sources have to be found (for example, charging Internet companies), diversifying products (into advertising and content such as television) and persuading consumers that it is worth paying for better quality Internet access. On this last point, Ian Fogg considered that the issue of quality levels should be clearly and transparently explained. It is a classic prisoner dilemma, no single ISP is interested in being totally honest about what they are doing, but if they acted together and presented quality levels accompanied by an explanation, this approach would help to persuade consumers to spend more on broadband access, increasing ISP average revenue per customer.

Ian Fogg also pointed out that Internet innovation has disruptive characteristics which are particularly challenging for ISPs and that we are currently witnessing a collision of markets, with new players outside the telecommunications sector entering the market and using software specifically to create products and support vertically integrated products. He noted the case of Facebook, with 500 million users, and Skype, also with 500 million active accounts.

The debate over network neutrality is a direct result of value chain pressure from the arrival of disruptive Internet competitors in telecoms. Rather than convergence, we have a collision that obsoletes old market definitions. The Forrester analyst considered, however, that it is not too late to persuade consumers to pay more for access to the Internet and that greater clarity and transparency is therefore essential in the entire market. It is also important, when dealing with the issue of network neutrality, to consider the overall Internet experience and not just the network.

Ian Fogg highlighted the need for pragmatism, in order to avoid a paralysis of analysis, dividing the issue of neutrality into smaller parts. He further considered that the same principles of neutrality should be applied to mobile networks and wireless and that the differentiation of traffic according to application (*peer-to-peer* vs. *Web* vs. *e-mail*, for example) based on technical criteria will be a network requirement and will occur. Differentiation of traffic by brand/company will be much harder to justify, he concluded.

The next speaker, **Ralf Nigge, Chairman of the Regulatory Policy Working Group, ETNO**[4], addressed the link between competition and an open Internet in Europe, given that investment in high-speed next generation networks (NGN) is the backdrop against which net neutrality is being discussed. In this field, Europe needs large investments in the coming years if it is to catch up with the leaders in the penetration rate of broadband fibre per household, Japan (35%) and USA (4.8%), since the rate in the EU is reported at just 1.2% (2009 data). According to ETNO, investment in smart NGN operators depends upon network operators' freedom to innovate and develop new business models in line with EU competition and consumer protection rules.

From the viewpoint of network operators, the regulatory framework for electronic communications and competition law in the EU is suitable for ensuring the openness of the Internet. As an example, Ralf Nigge cited the European broadband and mobile markets, which he deemed to be highly competitive, providing real choice to the end-user.

On the other hand, ETNO considers that the openness of the Internet is supported by differentiation of services and innovation. An open network means that users must be free to choose the access products that best serve their individual interests and, in principle, operators should be free to develop such products.

To conclude, Ralf Nigge affirmed that, in Europe, an approach should be maintained which is based on facts and ensures dialogue with all stakeholders of the Internet, addressing issues where these exist and are relevant. The head of ETNO advocated support for intelligent networks and innovation in networks, as well as creating a *level playing field* across the Internet, to the extent that this is possible under the current regulatory framework.

Meanwhile, **Vicky Hanley-Emilson, representative of ECTA**[5], argued that, when it comes to network neutrality and traffic management, competition in telecommunications services is the key factor to mitigate concerns, as it promotes consumer choice.

Whereas traffic management exists today, Vicky Hanley-Emilson said that, going forward, it was needed at retail level, for example to avoid network congestion and improve quality of service, but should not have effects at wholesale level, enabling

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[4] Presentation "Competition and the Open Internet in Europe - Initial Observations"
[5] Presentation "Consumer choice and the open Internet: Chicken or egg?"

competition and hence facilitating consumer choice. Moreover, for consumers genuinely to have a choice, there can be no significant barriers to switching operator.

The ECTA representative highlighted the issue of changing technology, which can create new threats of market foreclosure; she recalled the situation in 2001, with respect to the market shares of the incumbent operators, when there was a widespread switch from *dial-up* to DSL broadband. "*For example, in the United Kingdom, the incumbent's market share went from 15% in dial-up to 95% in DSL, and in France, the incumbent went from a 35% share in dial-up to 90% in DSL*", said Vicky Hanley-Emilson, stressing that this situation should not be repeated at a time when there is a paradigm technological shift, with the arrival of next generation access networks.

With respect to the access and network infrastructure market, the most important tool to prevent market foreclosure and abuse of dominant positions is *ex ante* regulation. And when there are failures which make it possible to circumvent *ex ante* regulation, the application of *ex post* regulation is essential to discourage anti-competitive behaviour.

To conclude, Vicky Hanley-Emilson considered that the existence of consumer choice of broadband access supplier ensures an open and neutral Internet, which in turn ensures consumer choice in terms of content and applications.

Meanwhile, **Pedro Sousa, of Holos**[6], recalled that the Internet began as a place where information was put to be consulted, evolved into an area of distribution and communication, and is today a community. The Internet is no longer just an economic reality, it is associated with democracy itself. As such, he considered, providers of Internet access should be regulated to guarantee "freedom of access" and "quality of service". The Internet's openness and freedom will be assured as long as there is transparency, clarity and choice.

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[6] Presentation "Regulatory Networks and Regulation of content"

The third panel was moderated by **Eduardo Cardadeiro, member of ANACOM's Management Board**.

The consumer perspective was brought by **Teresa Moreira, head of the DGC - Direcção Geral do Consumidor (Directorate General for the Consumer)**[7], who advocated the need for regulation in relation to networks and content. From a consumer viewpoint, however unusually free and fantastic the phenomenon of the Internet might be, it cannot be guaranteed that this freedom will not be abused (e.g. illegal content), whereas the market cannot be depended upon to regulate and accommodate all those interested in having a presence.

Referring to information disclosed this year at an OECD conference, the Director-General of the DGC demonstrated that specific concerns of consumers with respect to the Internet have been identified. These concerns are as varied as the many applications and uses that are made of the Internet, including: contractual issues; protection of means of payment; behavioural advertising and the necessary counterbalance of personal data protection; advertising directed at children and young people; counterfeit and pirated products; strengthening of law enforcement and provision of consumer-suited means of dispute resolution.

Teresa Moreira recalled that the defence of the rights and interests of consumers (and of the public interest) requires determined and sustained intervention on the part of the public authorities involved. "*Having sectorial regulation, and I agree that special care must be taken to avoid over-regulation which creates a disincentive to innovation and ends up creating more barriers with negative effects, it is clear that ex-ante sector regulation must be combined with ex post interventions which are punitive in nature, with both forms being necessary and complementary*", she said.

Finally, Teresa Moreira highlighted the urgent need to strengthen enforcement, which represents a joint effort of various national authorities, taking advantage of European and international cooperation networks.

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[7] Presentation "Network Management and Access to Content and Applications"

Next came the vision of an incumbent operator, British Telecom (BT), given by **Simon Milner, Director, from *Group Industry Policy* of BT[8]**, who recounted that the trends of the Internet increasingly require higher bandwidth, with an increasing number of customers connected more often, in a wider range of places and with different equipment, accessing a wide range of applications, in which the video component is growing.

In 1971, the beginnings of the Internet consisted of a network that linked a number of networks in the USA belonging to universities and defence organisations. "*Everything was completely neutral, there was no shaping or prioritization of traffic, but at the time this "everything" was only file transfer, email and computer log-in*", explained Simon Milner. As the Internet grew, it was quickly realized that applications existed which take up the maximum bandwidth possible and that some applications required a more stable and secure throughput than others. Then, between 1994 and 1998, techniques for traffic prioritization and quality of service assurance were developed, which led, from 2000, to the development of *Deep Packet Inspection* equipment for automatic identification of different applications.

According to the BT director, traffic management is positive and has been essential to the development of the Internet, since speed is not the only factor comprising the customer experience. "*If the information packets have to be dropped because of congestion, and they will, those associated with non time-critical applications can be dropped first. Moreover, applications of this type, such as file transfer, can have speed limits imposed at busy times*", considered Simon Milner. Traffic management also allows ISP to develop and experiment with different business models, including allowing providers of applications and content who want high quality service to pay for it.

There is, then, the question of whether some of these traffic management practices should be banned. According to Simon Milner, the answer is a resounding no, since "*these practices support ongoing investments and are paramount to ensure the best possible experience for consumers and this is what matters most to ISP*".

The representative of the BT group also argued that the key factor in the protection of Internet freedom is the existence of a competitive retail market, for which the following is necessary: regulation in wholesale markets for access where there is SMP, transparency with respect to the practices of traffic management and the ability

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[8] Presentation "Network management and access to content and applications"

to switch (operator) in the event of any negative change (in service). Moreover, ISP do not want to lose existing customers or fail to win new ones, so that the basic service will always have to be good enough and will have to improve steadily, and cannot be crowded out by premium services.

According to Simon Milner, the answer to concerns about net neutrality entails:
- development of clear policies and explanations with respect to traffic management;
- not blocking legal applications at any level of service;
- development of online pages or a portal to show information about a user's service and potentially about the ISP's network;
- statement of clear principles about what customers can expect from the ISP approach to broadband.

The panel was concluded by **Jean-Jacques Sahel, Director of Government and Regulatory Affairs, Skype[9]**, presenting the position of one of the Internet's innovative companies. He began by affirming the fundamental principle of the open Internet: where, in general, end-users have access without barriers to content/applications/services which are compliant with Internet protocol. Considering that this open Internet provides clear socio-economic benefits, Jean-Jacques Sahel stressed that it is "innovation without permission" that is the driver of growth and productivity.

However, the representative of Skype warned that the virtuous circle of innovation, demand and return on investment, which has brought many gains, is in danger. This cycle basically works around the encouragement of users to adopt broadband, which in turn creates a critical mass of broadband users that encourages the development of new content and broadband applications. Being new and attractive, this new content will increase demand for broadband, encouraging the deployment of broadband investment. "*If we change this dynamic, the results will be bad for all players in the system, which in turn would be bad for the general economy*", he said.

Focusing his presentation on Europe, the Director of Skype noted that some ISP have claimed that they can filter, block, delay or degrade the data packets used to transmit certain applications. "*Often this traffic management is necessary for reasons of security or congestion, but the truth is that it is the usage of VoIP such as Skype, peer-to-peer connections, newsgroups, video, audio, instant messaging, etc. which*

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[9] Presentation "The open Internet in the EU today: a reality check and emerging regulatory practices"

suffer repeated restrictions in contracts or terms and conditions of services. In Germany, for example, there are operators who charge for the use of VoIP, on top of what they already charge for the Internet access service. That is, for the transmission of data over the Internet, which is what VoIP is, users pay double".

Jean-Jacques Sahel held that such practices have nothing to do with managing network traffic for technical, legal or security reasons; there is a problem where competition and transparency are not sufficient to ensure consumer choice or protect innovators. "*EU Competition law is narrowly focused and ill-suited to an ecosystem of online innovators mainly made up of small firms. What small business has the financial resources and time to wait 8 /10 years for court resolution of a case of competition in the European Union?*", he asked. Moreover, he continued, "*switching operator remains a most difficult challenges for European consumers, with difficulties in number portability as only one of many examples*".

Finally, the Director of Skype considered that the new regulatory framework for electronic communications may help resolve these issues and argued that its implementation at national level should clearly uphold the principle that end-users can access and perform legal services and applications of their choice on the Internet, without loopholes that legitimize arbitrary restrictions by operators and giving the NRA the mission and legal power to prevent abuse.

Closing session

Closing the works of Fourth International ANACOM Conference, **Amado da Silva, Chairman of ANACOM**, said the regulator faces more challenges and more questions which relate to the evolution of regulation from basically asymmetric regulation to a recent trend of symmetric regulation, with talk of co-regulation.

Although any alternative other than free access to the Internet without exclusions is out of the question, the Chairman of ANACOM considers that more thought must be given, first and foremost, to convergence of problems and solutions, "*because the markets seem to be in collision more than in convergence*". Therefore, with respect to freedom of access, the Chairman of ANACOM wondered if free means it is free of charge or free means that it is accessible to all users, even if everyone has to pay a lot. Simultaneously, quality of service minimums are imposed, or before "*best efforts*", whereby it can only be true when it says that it ensures the provision of a service "from a certain level", instead of saying "up to a certain level".

Amado da Silva concluded noting that "*political statements on this issue seem to want to create, and properly so, a democratic, balanced and transparent world in the digital ecosystem, perhaps in recognition of the weakness of the analogue world that the current crisis clearly reveals - the accesses are what they are, the concentrated power is what it is. We are hoping that the digital world is different. But I fear that the flaws and errors that existed in analogue can persist in the change to digital, preventing us from creating the digital world we want, and can lead to our having to make a regulation of second best*".