Dynamic Coalition on Network Neutrality

IGF 2014 Meeting

Report by Luca Belli & Primavera De Filippi

The annual meeting of the Dynamic Coalition on Network Neutrality (DC NN) offered the occasion to analyse the annual report of the DC NN, dedicated to "Network Neutrality: an Ongoing Regulatory Debate". The authors of the papers included in the report exposed their findings and positions through an interactive debate. The annual report is available at http://www.networkneutrality.info/sources.html

The meeting was opened by a keynote delivered by Mr Vint Cerf, highlighting the main challenges of the net neutrality debate from a US perspective. Cerf stressed that at the US level discussions mainly focus, on the one hand, on the limited competition for provision of broadband Internet access and, on the other hand, on claims that Content and Applications Providers (CAPs) exploit access to electronic networks without duly contributing. Cerf highlighted that this latter claim ignores the fact that users already pay the Internet access providers for access to the Internet whilst CAPs have to undertake considerable investments in high capacity access to the Internet backbone in order to be reached by users around the world.

Ørnulf Storm illustrated the position articulated in the paper authored by his colleague Frode Sørensen with regard to "The Net Neutrality Service Model and Specialised Services". This paper argues that the debate is still open with regard to what constitutes a "specialised service" - *i.e*. a service that relies on access restrictions and Internet traffic management (ITM) techniques guaranteeing specific quality level, therefore not qualifying as an Internet access service. Understanding what this means in practice is an important precondition to the proper implementation of Network Neutrality regulations in Europe. However, some national regulatory agencies believe that a broad interpretation of the term would limit the competitiveness of the private sector, imposing a set of minimum standards for any service involving Internet connectivity, regardless of its purpose or scope.

Similar questions are being addressed in a variety of countries. For instance in South America, the Network Neutrality issue is heavily debated in countries such as Argentina, Colombia and Ecuador, and legislation has already been enacted in a few countries, including Chile, Peru, and, more recently, Brazil. Yet, controversies exist with regard to the implementation of certain provisions, and, in particular, as regards the interpretation of established exceptions to the Net Neutrality principle. In this respect, Patricia Vargas-Leon's provided a comprehensive overview of the various Net Neutrality laws enacted and/or proposed in Latin America and identifies the most important differences that subsist amongst these laws.

In Chile, the first Net Neutrality law[1] was enacted in 2011, as a modification of the Chilean general telecommunications law promulgated in 1982. The law establishes a duty for every Internet Service Provider (ISP) to provide non-discriminatory treatment to anyone using content or services for legal purposes. Yet, ISPs are given the discretion to ultimately determine what qualifies as a legal or illegal purpose. Besides, despite the enactment of Net Neutrality provisions, law enforcement may face difficulties and many ISP have been accused of slowing down the speed of specific online services, such as YouTube or P2P networks. In Peru, Net Neutrality principles were incorporated into domestic law in 2012, through a bill[2] designed to promote the development, use and massive access to high-speed Internet connectivity. The law made it illegal for ISPs to block, interfere, discriminate or restrict the right of any Internet user to use an application, regardless of its nature, origin, or destination. Yet, just like the Chilean law, the law leaves it to the ISPs to determine what constitutes "arbitrary" practices when it comes to the respect of the Net Neutrality principle.
Finally, after five years of debate, the Brazilian Senate adopted the Marco Civil[3], which specifically endorses the Net Neutrality principles by prohibiting ISPs from discriminating amongst packets and/or to implement special prices for special content. Yet, exceptions to the general principle are not clearly specified, since those have to be implemented, at a later stage, by the executive branch.

The regulatory debate in Mexico was analysed by Alejandro Pisanty in his paper "Network Neutrality debates in Telecommunications Reform", which presents a summary of the net neutrality debates in the legislative process of Mexico in 2013-2014. The author highlights that a major telecommunications law and market reform is taking place in the country and Network Neutrality is a useful test case to measure how convergent the legislation actually manages to be and to identify options that can be translated to other markets. This reform is particularly interesting because it occurs in the absence of any common-carriage tradition and at the same time as must-carry, must-offer provisions are being introduced for television for the first time. As a result, Network Neutrality has become a rallying cry for public demonstrations and other protests against the reform project. The paper describes and interprets the major economic forces, ideological and political trends that can be observed in Mexico, with a view toward their application to other geographies and contexts.

With regard to Australia, Angela Daly explained that the situation is much less mature. In her paper, the author highlights that although the country has been lagging behind in the regulatory debate, it is now catching up to the recent developments happening both in Europe and in the U.S. While there is still no Network Neutrality regulation in place (or even proposed) in Australia, it is nonetheless regarded as one of the major issues on the public agenda for Internet regulation. The 2012 Convergence Review Final Report specifically addressed the issue, pointing at content-related competition as one area where new policy and regulation should be implemented. However, following the

[1] The net neutrality law in Chile is officially known as "Law 20453", or "Ley que establece la neutralidad de la red para consumidores y usuarios de Internet" ("Law that establishes the net neutrality for consumers and internet users").
[2] On July 20th, 2012, the Peruvian government enacted the law titled "Ley de promoción de la banda ancha y construcción de la red dorsal nacional de fibra óptica", ("Law to Promote the Increasing of Broadband and Construction of National Fiber Optic Backbone"), officially law 29904.
[3] On April 23rd 2014, the Brazilian Senate passed what is known as the "Marco Civil Da Internet ("Civil framework for the Internet"), officially law 12965.

federal elections in 2013, most of these recommendations were effectively abandoned as the new government was not supportive of any reform in this area. Today, there are therefore no plans to introduce Net Neutrality provisions into Australia legislation. Infringement to Network Neutrality can thus only be dealt with through the perspective of competition law, as a generic body of law which does not, however, specifically refer to Network Neutrality as principles that ought to be enshrined within the law.

Chris Riley exposed the findings of his paper on "A New Way Forward for Net Neutrality", analysing the regulatory debate currently taking place in the U.S. Riley highlighted that relations between ISPs and remote hosts are influenced by a wide range of ITM practices, including differential treatment in local routing, paid peering and the increasing diffusion of "specialised services". For this reason, routing within a terminating access network cannot always be assumed to be based on non-discriminatory "best-effort" relationships. Riley also noted that the existence of discriminatory blocking and throttling practices holds promise to jeopardise the remote hosts' possibility to communicate with end-users, thus potentially hindering the circulation of innovation. Furthermore, the author describes the many-sided nature of the Internet access market, highlighting that ISPs entertain commercial relationships with their own end-user customers but also with remote hosts such as website operators, email service providers, and all endpoints connecting to the Internet through other ISPs. Therefore, the author suggests that last-mile operators do not merely offer access to end user and interconnection services, but also a separate service enabling "remote endpoints" to communicate with the ISP's local subscribers.

Based on these remarks, Riley offers an innovative perspective arguing for a logical distinction between remote delivery services and local delivery services. In the author's perspective, remote delivery services are offered to all remote Internet hosts and consist solely of transport of data-packets. For this reason they ought to be categorised as "common carriers". On the other hand, local delivery services represent a distinguished typology because local end-user subscribers enjoy a vaster spectrum of services such as the assignment of a temporary IP address, domain name resolution, hosting services and the provision of an email address. Hence, Chris Riley argues that although both local and remote delivery services exploit the same underlying transport functionality, these services can be logically distinguished because they serve separate customers for separate purposes. Such categorisation, peered with the establishment of clear non-blocking and non-discrimination rules for network management would foster a pro-competition environment while strengthening end-users' capability to be active "makers" in a dynamic and many-to-many Internet environment.

Lastly, the report provides two economic perspectives on the network neutrality debate, elaborated by Benoît Felten and Roslyn Layton. In his paper on "There's no Economic Imperative to Reconsider an Open Internet", Benoît Felten clearly presents the investment and recurring costs of various Internet traffic management (ITM) models while describing different solutions to solve potential ITM problems without utilising traffic discrimination. The author points out that the Internet's success can be attributed to a few simple network management principles including the adoption of open standards like the Internet Protocol (IP). Such principles delineate an online environment where no single player – public or private – exert control over access to the Internet and no blocking or degrading of lawful Internet traffic is allowed. This open

environment empowers users, providing them choice and control over their online activities. Furthermore, while highlighting that discriminatory traffic management may be used as leverage for a commercial negotiation, the author notes that such discrimination may lead to "fragmentation" of the Internet ecosystem.

Felten's paper provides an overview of how Internet traffic crosses ISPs' networks allowing Internet users to access content, applications and services offered by online service providers (OSPs). Particularly, the author analyses the dynamics of different traffic management solutions – such as transit, peering and content delivery networks – in order to clarify the investments and costs that such solutions require to ISP and OSPs. Based on this analysis, the author claims the fallacy of the argument according to which OSPs can be considered as "free riders" on the ISPs networks, highlighting OSPs role with regard to investing and financing international, regional and national transport networks. Moreover, the author examines the debate regarding network capacity and growing transit within the French market and highlights that costs related to external traffic management concern less than 0.3% of the main ISPs' average revenue.

In her paper on "Net Neutrality Regulation and Broadband Infrastructure Investment: How to Make an Empirical Assessment", Roslyn Layton elucidates the design of an empirical test of the theory of the "virtuous-circle of innovation", according to which the growth of content and applications stimulates demand for Internet subscriptions, which generates revenue for operators that consequently invest in infrastructure. This theory, the author argues, is frequently used to back network neutrality policies' benefits with regard to encouraging broadband providers to expand their networks and invest in new broadband technologies[4]. Prior to delineating the aforementioned test, the author offers a review of several economic theories of innovation and explains how such theories may be applied to Internet technology. Subsequently Roslyn Layton utilises such theories to test whether the imposition of net neutrality rules stimulates network investments. While designing a "virtuous-circle test" Roslyn Layton highlights the difficulty of comparing different net neutrality regulatory approaches. Particularly, the author stresses that such approaches are based on dissimilar provisions aimed at framing very different markets and networks. Furthermore, she underlines that investment metrics to be used within a "virtuous-circle test" may be impacted by different accounting rules. Such differences may lead to discrepancies in capital expenditure measurements subject to the approach undertaken by different countries and companies.

In the light of her preliminary findings, the author acknowledges that the "virtuous circle" is an important and compelling assertion, while highlighting that scrutinised data seem to reveal that operators' decisions to invest in infrastructure are based on a wide variety of factors and objectives that are not duly considered by the "virtuous circle" theory.

[44] E.g. FCC Report and Order Preserving the Open Internet (2010), available at https://apps.fcc.gov/edocs_public/attachmatch/FCC-10-201A1_Rcd.pdf