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ETNO Reflection Document on « Net neutrality » in the US - framing the debate

The big scrum: some hints

AT&T CEO Edward Whitacre (Google and other companies) *“use my lines for free, and that’s bull...” “I ain’t going to let them do that” because “there’s going to have to be some mechanism for these people who use these pipes to pay for the portion they’re using.”*

BellSouth, *« During the hurricane, Google did not pay to have DSL restored »*

V.Cerf, Google Chief Internet Evangelist (sic): *“The broadband carriers already are fully compensated by their residential customers for their use of the network... Trying to extract additional fees from Web-based companies – who are not in any way “customers” of the provider -- would constitute a form of “double recovery.”*

M.Powell, former FCC Chairman, *“What’s really going on here (in the public debate) is a battle between the Googles and the Verizons of the world – it’s a big scrum about who absorbs the full costs (of running the network)”*

“An expected source for tens of millions of dollars in industry campaign contributions during this election cycle.” According to The Washington Post Website, Sunday, February 12, 2006

Abstract:

The purpose of this document is to clarify the “net neutrality” debate that has recently taken place in the US. There is an intense political, regulatory and technical polemic going on regarding the relationships between Internet access providers and Internet application providers (or content providers). Seen from the other side of the Atlantic, the debate may appear confused as it centers on an exotic and ill-defined notion. The term means radically different things to different people therefore should be handled with care.

Does the US debate yield consistent or convincing views that appear of paramount importance for the EU regulatory debate? Considering the

features of the US market and especially the fact that broadband markets are deregulated, any simple comparison between the US and the intensely regulated EU broadband markets looks pointless. From an EU perspective, therefore, net neutrality looks rather like a non-exportable good.

Some underlying issues

'Net neutrality' in the US is discussed from an end user perspective. It is a customer welfare approach where customers have a right to use the network in the way they think is beneficial. Should competition be deemed insufficient to ensure access for the end-consumer to legal content and applications on the internet, some rules may be re-introduced to ensure "network neutrality" or even "simple" common carriage if for instance cable and telcos are not willing to offer services on a commercial basis to unaffiliated ISPs.

From a regulatory viewpoint the main issue is whether regulators should intervene in a deregulated broadband market so as to protect consumers. It is therefore a debate on self-regulation versus government regulation.

From an economic standpoint, the main stake of the debate is the value that each category of player could derive from broadband services and how to affirm his position in the value chain.

An underlying question relates to new forms of interconnection in an IP world. Today, interconnection between Internet application providers and Internet access providers is generally done in an indirect manner. Application providers negotiate their interconnection with a few backbone operators on the basis of a single metric: bandwidth. The Internet though is the prototype of a "network-neutral" interconnection system, meaning that application providers need not negotiate directly with access providers to receive interconnection services. As a result, the interconnection of application providers to the worldwide Internet subscriber base is a very cheap commodity. The net neutrality debate is about the evolution of this interconnection system in line with market and technological developments.

Background: Mom where does net neutrality come from?

The idea originally stems from consumer protection considerations. It dates back to the commitment of former FCC Chairman Michael Powell to enforce what was then called the 4 "Internet Freedoms« (February 2004)¹:

- *Freedom to access to content,*
- *Freedom to use applications,*
- *Freedom to attach personal devices,*
- *Freedom to obtain service".*

This commitment built upon some connectivity principles issued by the industry itself (High -Tech Broadband Coalition) several years ago.

¹ "The man who started all – former FCC chairman Michael Powell- can kick back, relax and say that his so-called Internet Freedoms are "doing great"", Paul Kaputska, www.networkingpipeline.com

Under the chairmanship of Kevin Martin, on September 23, 2005 the FCC released a *Report and Order and Notice of Proposed Rulemaking (NPRM)*² placing wireline broadband Internet access services, commonly delivered by digital subscriber line (DSL) technology, on an equal regulatory footing to cable modem Internet access services. The order establishes a new regulatory framework for broadband Internet access services³ offered by wireline facilities-based providers. It deregulated broadband services and brought to a close the "open-access" judicial odyssey that was ended by the US Supreme Court decision (June 27, 2005: Brand X). DSL and cable modem service are now classified as "information" services. Therefore, broadband services are not regulated as telecommunications services.

This order was accompanied by a FCC statement of principles (Policy Statement on Broadband Internet Access Broadband -Net Neutrality) that was reintroducing the same lines of consumer protection:

- *"consumers are entitled to access the lawful Internet content of their choice;*
- *consumers are entitled to run applications and services of their choice, subject to the needs of law enforcement;*
- *consumers are entitled to connect to their choice of legal devices that do not harm the network;*
- *and consumers are entitled to competition among network providers, applications and service providers, and content providers."*

This last principle enshrines the notion of "Network neutrality". The statement recalls that: *"the Commission has jurisdiction necessary to ensure that providers of telecommunications for Internet access or Internet Protocol-enabled (IP-enabled) services are operated in a neutral manner"*. This notion was mostly pushed by the democrats within the FCC and granted by the republican chairman to his democrat colleagues as a concession to reach a consensus on broadband.

These considerations are also deeply grounded in policy issues dealing with the value of the open Internet as a component of the information society. Typically, promoting the «values » of the Internet world (openness, dynamism, decentralisation combined with a limited public intervention) has been a stepping stone of US policies. The policy goal being to ensure that the Internet remains open and dynamic as stated by the FCC in its agenda for 2006.

On the legislative side, this is what triggered the numerous bills (and the hearings that followed) introduced by the United States Congress, all aiming to update the Telecommunications Act of 1996. One can identify three

² The FCC adopted this action on August 5, 2005.

³ Wireline broadband Internet access service is a service that uses existing or future wireline facilities of the telephone network to provide subscribers with Internet access capabilities.

approaches: a continuing deregulation to boost broadband (Senate bill), the promotion of the Internet ⁴ combined with some regulation around “Broadband Internet Transmission Services” (BITS) to enforce net neutrality, and a minor tinkering backed by the RBOCs to deal mostly with the issue of video franchising. There are some legitimate grounds to be somewhat sceptical about a full-fledged reform of the Act⁵. Moreover, one may suspect that Congress will rather concentrate on more popular issues such as digital TV or security.

Framing the debate

To sum up, the issues can be classified in five categories:

- Economic issues dealing with the problem of value captured between access providers and application providers, and the balance of commercial power between the two,
- Issues related to commercial offers dealing with those types of interconnection services that access providers would offer,
- Regulatory issues dealing with the legislative and regulatory toolset at the disposal of lawmakers,
- Political and social issues dealing with the value of an open Internet as a component of modern society,
- Technical issues dealing with the feasibility of the commercial offers and regulations envisioned.

The economic stakes: towers of power

The telecom operators’ business model is changing dramatically, shifting more and more towards the supply of “content” (vague as this notion could be) with the introduction of the so-called triple play or quadruple play. From an economic viewpoint the issue is about sharing the value of Internet applications driving customers’ demand.

US telcos are beefing up their networks with fibre-optics, benefiting from the deregulation of broadband that took place over the last two years. They obviously need to recoup their investments and plan to use price differentiation or tiered service levels to that end. Operators are looking for ways to monetize content distribution instead of keeping a « pure bandwidth market » recognising that such a commoditised market will mostly benefit application providers.

⁴ Representative Barton characterized the draft as, “... a fresh new approach that will encourage Internet providers to expand and improve broadband networks, spur growth in the technology sector and develop cutting-edge services for consumers.”

⁵ Too many vested interests may delay or block the process.

Some may want to keep proposing their own broadband services in a controlled “walled garden” environment (especially video and voice), hoping to capture value on these services.

Application providers claim that they are bringing the «killer application » to the customers, and that subscribers are not buying access but applications or services. They add that access is already paid for and any additional fees extracted from application providers would amount to some form of “double recovery”. Application providers want to better use increased bandwidth on the open Internet to deliver more sophisticated applications like video or voice with PSTN-like reliability, without changing the interconnection model.

However the balance of power between access providers and applications providers may not be the expected one, or the one foreseen by regulators. Whereas the US broadband access market is a fragmented nationwide, the Internet application “powerhouses” have high market share in the application sector. Verizon controls roughly 10% of the broadband access in the US. So the question is how severely would Google be hurt without Verizon’s customers?

Financial markets tend to estimate that the value is located in content and applications rather than in access as illustrated by this chart:

Access Providers	Fixed Revenue (\$M)	Gross Margin	Market Cap (\$B)
VZ*	37,616	36.1%	94.21
AT&T*	37,445	29.7%	85.48
Bellsouth	18,512	42.6%	52.79
Comcast	7,552	42.0%	37.89
Earthlink	1,382	43.7%	1.52

Content Providers	Revenue (\$M)	Gross Margin	Market Cap (\$B)
Yahoo!	5,257	63.0%	49.73
Google	3,189	54.3%	126.15

Market cap as of January 30th, 2006

*VZ and AT&T: market caps reflect equity of partially-owned wireless assets
Earthlink and Google’s results are from 2004 annual report (yet to publish 2005 results)

Consumers want, of course, cheaper, faster broadband access, whilst they are used to and expecting high quality of service (QoS) on video and voice services. This means that triple-play on a single broadband pipe requires at least some segmentation of bandwidth / network prioritization between applications. Consumers may fear that their access to the services and applications they would like to use may be restricted. As stated by Mark Cooper (Consumer Federation of America): « *Once they decide what’s normal and what’s fast, (phone companies) are gatekeepers* ». Some more radical movements (libertarians) even question the shift to “pay and play”, i.e. the

quest to monetize the Internet, and consider it as a lethal threat for “*global civic-related communications*”⁶.

A much heated debate: a hidden consensus?

C. Yoo summarized the debate and the different views in the following fashion: “*The debate over network neutrality reflects a fundamental difference of opinion over the lessons of the past. Network neutrality proponents argue that it is the transparent architecture that is responsible for the Internet’s success and that the government should take steps to protect that architecture. Others contend that it is the tradition of non-regulation of Internet-based services that has been the driving force behind the Internet’s success*”.⁷

Is there anything to fix?

Some US economists like Robert Crandall (Brookings Institution) are wondering how to identify the real issue asking if there really is anything to fix. He stresses that the question of the enforcement of rules, as they may only apply to telecom operators and not to cable is not an easy one. According to R.Crandall the mere application of the non-discrimination principle will suffice as discrimination is a short-term approach that favours mostly the applications of the past.

Former chairman Powell seems to share the same opinion and considers that “*blocking Google or Yahoo*” would be suicidal for AT&T⁸. Therefore, according to him “*no service provider would even try to violate one of the freedoms*”⁹. This is echoed by Verizon: if an industry player does not live up to the Internet Neutrality principles, it will be quickly held accountable. Not only does the FCC monitor the situation to protect consumer and company interests, but it will also act where appropriate, as it did in the case of a small company (Madison River Communications¹⁰) last year that tried to block Internet voice calls.

This case illustrates the fact that the FCC has the regulatory tools to intervene. It also shows that targeted prohibitions of the type imposed by the FCC work. It makes the case for the imposition of a more categorical non-discrimination requirement much weaker. In any case, the agency made it clear that it will be monitored thoroughly. In addition to potential federal intervention one should keep in mind that telecom operators are subject to numerous quality obligations enforced by State regulators which are very often used to

⁶ See Jeff Chester , “*The End Of The Internet?*” “*If we permit the Internet to become a medium designed primarily to serve the interests of marketing and personal consumption, rather than global civic-related communications, we will face the political consequences for decades to come*”.

⁷ Christopher S. Yoo, *Network Neutrality and the Economics of Congestion*,

⁸ Op.cit

⁹ Id.

¹⁰ Madison River Communications acknowledged having blocked Vonage and was fined accordingly.

regulate. An example of this is the Californian attempt to regulate mobile telephony, an area out of the scope of state jurisdiction.

Areas of consensus

As a matter of fact, the 4 Internet Freedoms, the Net Neutrality Principles as endorsed by the FCC, or the connectivity principles from the High-Tech Broadband Coalition are difficult to disagree with and most players would claim to back such principles.

Most players do recognise that a balance must be reached between fostering risky investments and allowing accessibility of the new pipes. They often take a rather moderate approach of the issue. Even Google recognises that both sides are interdependent: *"In a very real way, content and application companies like Google need the high-speed access provided by broadband carriers, just as they need the attractive new Internet offerings to drive demand for that access."* (V.Cerf)¹¹.

Advancing the issues

The question of "who has to pay" is a legitimate one as well as the "how". Obviously the answer may vary. However the debate about "net neutrality" should not be confused with other issues that are normal business practises. Price discrimination as well as tiered service levels are normal features of a well functioning market. As the architectural change from a circuit-switched network, optimized for voice, towards a packet-switched network for various traffic types (voice, data, video and multimedia) over broadband access progresses, the role and success of different business models is difficult to predict.

Customers are already familiar with the concept of "tiered service levels". The deployment of networks that can support "tiered service levels" will enable greater consumer choice on the back of new innovative applications and services. "Best effort" networks suffer significant shortcomings in relation to demanding services and applications. This is why major multinational corporations run their applications and services over networks which can support "tiered service levels" rather than "best effort" networks.

The deployment of networks that can support "tiered service levels" will also enable end-users to exercise more control over their own end-user experience. Internet end-users will, as in many other markets, be able to exercise their own discretion regarding the quality of service they receive by prioritising the traffic that flows to them. Consequently the introduction of "tiered service levels" should be looked upon as empowering end-users. A development which should be welcomed, *"...premium broadband services and*

¹¹ Testimony in front of the Committee on Commerce, Science, and Transportation, United States Senate February 7, 2006.

applications....require not only a fat pipe, but also technology that ensures the quality of the service."¹²

Lawrence Lessig (Stanford School of Law), a moderate proponent of some regulation, states¹³ "No one questions the right of network owners to charge Google for the bandwidth it uses"...*"Networks providers need incentives to build better broadband services"*. However, he objects to certain forms of "access tiering" (i.e. ways to discriminate and to 'tax' content or application providers) but backs "consumer-tiering".

Finally, Gregory Sidak, (Georgetown Law University) argues that «*"Net neutrality" obligations are incompatible with what we know about the economics of telecommunications.*»¹⁴

A non-exportable good

The case for regulatory intervention in the US does not look compelling. Network owners should be allowed to experiment with alternative business arrangements as done in other industries and as long as they abide by the "net principles" which seems to be working in the marketplace so far.

Considering the features of the US market and especially the fact that broadband markets are deregulated, a mere comparison between the EU and the US looks pointless. In contrast to the US, broadband markets in the EU are heavily regulated under the existing framework.

This is acknowledged by the proponents of regulation in the US debate who cite the UK structural separation and French unbundling as commendable models from the point of view of companies seeking mandated access.¹⁵

One also has to bear in mind that beyond the existing framework, the EU pioneered some open systems: kiosk system (Minitel) but also iMode.

The key parameters to consider before transposing the debate to other countries are:

- The balance of power between access providers and application providers – a question of scale and differentiation.
- The pre-existing availability of open access at lower layers, e.g. through "full unbundling."

¹² Ovum Euroview, March 2006

¹³ Testimony in front of the Committee on Commerce, Science, and Transportation, United States Senate February 7, 2006

¹⁴ In its Testimony in front of the Committee on Commerce, Science, and Transportation, United States Senate February 7, 2006.

¹⁵ - V.Cerf (Google): UK a « *fundamental policy of non-discriminatory treatment* », L. Lessig (Stanford Law School): France « *vigourously enforced* « unbundling requirements ».

Against this background, the heated US debate looks like a “non-exportable good” to the EU environment, taking into account the profound differences in the regulatory approach for broadband,

In conclusion, the push for net neutrality legislation appears as a classic example of anticipatory regulation. However, this kind of regulatory and legislative overreach is bound to freeze a dynamic marketplace and slow innovation and investment.