"From all my teachers I have grown wise[1], and from my students more than anyone else[2]:" What Lessons can the U.S. learn from Broadband Policies in Europe?

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[1] Psalms 119:99
[2] Taanit 7:71

Introduction

Fearing the eventuality of economic colonization by the United States and Japan, that had demonstrated far greater success in adopting and using information society technologies (Schneider, 2001), the European Commission began taking charge of policymaking in the continent in the 1990s, revolutionizing the European political structure and regulatory landscape (Sanholtz, 1996). While making use of policy terminology coined in the United States, the European Union launched its own innovative industrial scheme, which included enforcing local loop unbundling (LLU), a policy which helped it almost catch-up (on average), and in some locales, even plunge ahead of the United States in broadband penetration levels, after starting out far behind.

While this study describes the evolution of the policies that led to European supremacy in broadband deployment it compares European policy development to the policy development in the United States during the same period and concludes that this time around the Europeans may be on the way to taking a more innovative and effective approach to what was once considered a badge of pride of the U.S. telecommunications policy, universal service, by considering the adoption of a universal broadband goal, thus once more adopting an American concept and perfecting it to serve up-to-date policy goals. Highlighting the strengths of the European system – focus, simplicity, relative efficiency and willingness to change the course of policy as needed, an effective balance between centralization and delegation of power, and innovation – the study addresses the question of whether the new European attention to universal service and the apparent disregard of a need for reform by the United States may boost the trend of European leadership in broadband deployment. If so, the question that arises is whether the United

States, in order to stay competitive with the European Union will learn from its mistakes past and adopt an approach that will identify universal service as a policy measure ensuring more rapid diffusion of broadband access, and in an ironic reversal of past trends, will learn from those who once learned from it.

Following a comparison of the development of European and American regulatory frameworks, that takes into account their philosophical roots, this study describes how the American coined "unbundling" terminology was adopted in Europe but evolved in different directions in both regimes to different outcomes. This analysis helps explain the emerging differences in the design of universal service in the current regulatory debate, and demonstrates how the United States may once again be heading on the wrong course by allowing the distortion and misinterpretation of American homegrown policies at the same time European policy makers are refining them to achieve their original social goals. En route to the liberalization of the European telecommunications infrastructure, policy ideas and vocabulary formulated in the United States, namely the idea of the open network architecture, helped European regulators arrive at a sound and focused policy to which the success in proliferation of broadband can be attributed. By reframing the policy debate in the United States this time around, using terminology developed in Europe, the United States may maintain or rather regain its competitive edge.

The usefulness of comparisons

Comparing the policies of different regimes in order to learn from them is commonly seen as a justification for conducting comparative research (Livingstone, 2003). National policymakers, contends Bauer (2003), not only study reforms in other

countries, they often end up adopting similar policies. The revolutionary regulatory framework adopted by the European Union in the early 2000s has already been the focus of comparative studies with Japan (Fuke, 2003) and with the United States (Kubicek, Dutton & Williams, 2001; Marcus, 2003). However, when differences in institutional frameworks are not taken into account, research findings may be more anecdotal than systematic, and their value is questionable. Addressing possible confounding variables, therefore, becomes critical. It is easy to downplay the significance of comparisons and argue that certain things defy comparison. In the case of policies geared toward liberalizing telecommunications markets, however, these comparisons can and should be undertaken, because of the very basic similarities that stem from the common elements that characterize telecommunication networks. Some would argue that the policies of the United States and the European Union defy comparison. While the former is a national unit, the latter is a loose federation of 27 independent nation-states; while the former has been institutionalized as a uniform political and economic unit for more than 200 years, the latter has been in a constant state of flux, with regards to organizational form and membership; while the former's national policies are guided by an established and court-tested constitution, the latter is unable to form a binding constitution. The European Union is a weak confederation, as it has no national sovereignty. Its member-states have strong political ties to the incumbent telecommunications operators (the PTTs) they owned during most of the period reviewed in this study, and unlike the Brussels bureaucracy, member-state governments and lawmakers are held accountable to their constituents. Just like the case in the United States, however, there is constant tension in the European Union between federal and state rights, although the balancing acts that

have eventually evolved in Europe have spawned different approaches to policy formulation. This study takes into account these differences, their effect on policy formulation and outcomes, and it will demonstrate that much can be learned from them.

The state of things

When it comes to broadband penetration, the United States has been consistently lagging behind members of the Organization for Economic Cooperation and Development (OECD), the original 15 members of the European Union (the "E.U. 15") and even countries that traditionally had no prior success in ICT development and boast fewer financial resources than the United States (Frieden, 2005).

In fact, between 2003 and 2006, the United States dropped from 10th to 15th place in broadband deployment among the OECD countries[3]. In 2001, broadband penetration in U.S. households was 4.5 subscribers per 100 inhabitants, compared with 1.6 in the "E.U. 15." By the end of 2006, this gap had narrowed, with the penetration rate among U.S. households at 19.6 subscribers per 100 inhabitants, compared with 18.6[4] among "E.U. 15" households. It should be noted, however, that the E.U. figure represents an average among countries as diverse as Greece, on the one hand, where the penetration rate is 4.6 subscribers per 100 inhabitants, and the Netherlands and Denmark, on the other hand, where penetration rates exceed 31 subscribers per 100 inhabitants. In 2001, both these countries had similar (or lower) penetration rates than those prevailing in the United States.

[3] Source: OECD Broadband Statistics (http://www.oecd.org/document/7/0,3343,en_2649_34225_38446855_1_1_1_1,00.html) retrieved on 8/13/07 (hereinafter: OECD Broadband Statistics)
[4] Source: OECD Broadband Statistics

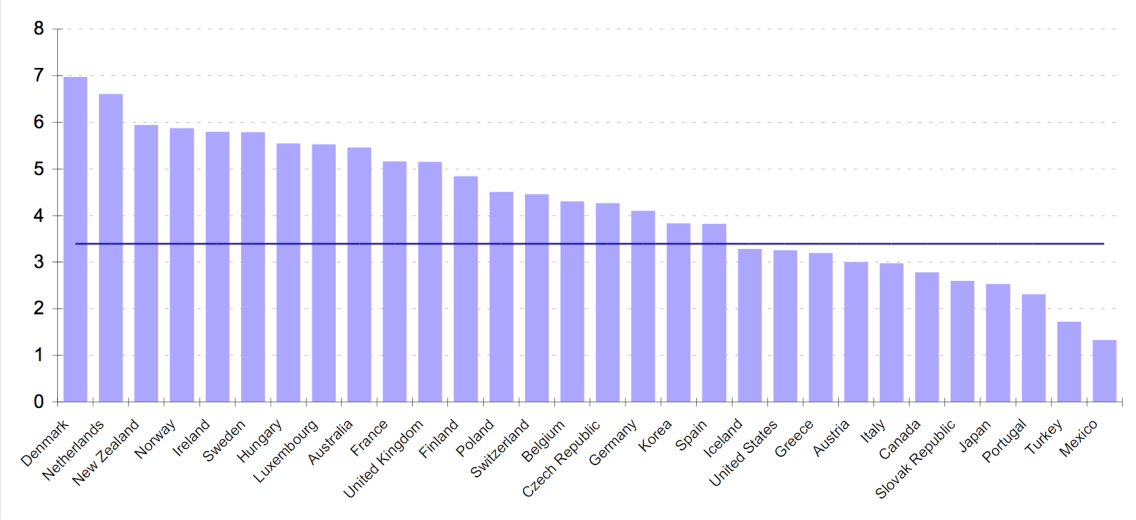

Figure 1: OECD Broadband Penetration (per 100 inhabitants) net increase Q4 2005 – Q4 2006, by country (source: OECD)

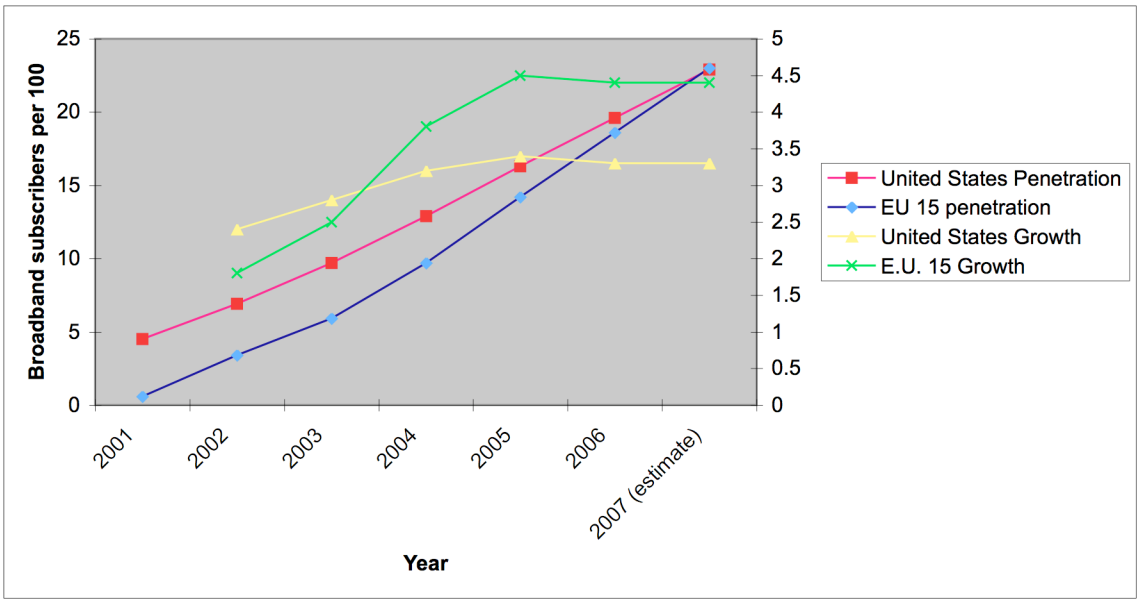

Figure 2: U.S. and E.U. 15 Broadband Penetration (per 100 inhabitants) net increase 2001 – 2007 (source: OECD)

Between the end of 2005 and the end of the U.S. stands 20th among the 34 OECD members in the growth rate of broadband adoption (see **Figure 1)**. Since 2003, the EU 15 growth rate has passed that of the United States, predicting total penetration rate to match that of the United States by the end of this year (see **Figure 2**).

The differences between the two unions' performance, however, are not limited to broadband penetration alone. Since the passing of the Telecommunications Act in 1996, there has been no positive change in telephone penetration levels in the United States – a slight decline from 93.9 percent in 1996 to 92.9 percent in 2006 can be observed – even though the FCC has changed the working definition of "telephone penetration" to include wireless access[5]. Most recently, the European Union reports that 97 percent of households in the Union have had telephone access in 2006[6]. What is clearly similar in both unions is the fact that telephone penetration rates vary along socio-economic lines. Schement and Mueller (1996) have long identified the correlation between poverty and connectivity in the U.S., a correlation supported by the FCC's report on telephone subscribership[7]. European statistics demonstrate a similar association between the two (van Zon, 2005).

It would be presumptuous to tie these trends to one specific contributing factor, as several possible configurations of economic circumstances and policy variables can support rapid broadband diffusion (Kim, Bauer & Wildman, 2003), however, it can be hypothesized that the consistent European growth in connectivity for both low- and high-tech applications and the continued stagnant and declining state of connectivity in the United States may be traced to the historical and ideological roots of policy differences between the United States and the European Union and the way both unions have adjusted them to technological and economic changes of late.

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[5] See: FCC report on telephone subscribership in the United States published in November 2006 at: http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-268003A1.pdf

[6] E-Communications Household Survey published by the European Union in July 2006 can be accessed at http://ec.europa.eu/information_society/policy/ecomm/doc/info_centre/studies_ext_consult/ecomm_household_study/eb_jul06_main_report_en.pdf

[7] See above note 5 at page 12.

Differing philosophies of Telecommunication Regulation

Telecommunications policy, or any policy for that matter, reflects the underlying assumptions about social reality that policymakers share. Policymaking is an attribute of political culture (Redford, 1969; Homet, 1976). Information policy in the United States assumes the predominance of the following three ideals: civil liberties, economic efficiency, and social fairness and equity (Bushkin & Yurow, 1980). This assumption relies on patterns of thought that reflect the Western heritage of the Enlightenment (Streeter, 1990, p. 45). It has also been analyzed as the "outgrowth of the dissension of the European settlers who populated North America – men and women seeking to escape from social rigidities, to exercise a larger measure of economic freedom, to form governments and government structures that they might control than the other way around" (Homet, 1976, p. 4). Pool (1983), however, argues that historically, American media policy is one of "soft technological determinism," rather than one of market forces. He notes that whenever a new technology emerges on the scene, it is referred to in terms similar to the idea it most resembled that existed at the time. The new policy model offered is, therefore, technologically determined: Regulation of the telegraph was adopted from policies that governed the operation of railroads, and cable television was viewed more as a form of television than a form of telephone. Even though a technology can be later better understood, developed and changed, the rules governing it and the institutions built around it remain intact. When technologies have converged, Pool notes, the U.S. government has traditionally chosen to subject the new technology to the regulatory framework that applied to the more restricted of the converging technologies. For that reason, for example, cable television, which is comparable both to television and

telephone, is regulated more like the former. Indeed, the U.S. Communications Act, formulated in 1934, has evolved over the years into a technologically biased law in which different policies are applied to different technologies. The laws pertaining to each technology are listed in separate chapters of the law, a technique that assures that changes in the law regarding one technology need not affect any other technology.

The basic European assumptions around which telecommunications policy has developed are remarkably different. In general, notes Garnham (2001), the provision of telephony was governed by the principles of public service, which derived from the absolute powers of monarchy and gave citizens no particular right. Telecommunications were regarded as both a natural monopoly and a public utility and as such their governance and regulation through state-owned post, telegraph and telephone monopolies (often referred to as PTT) was considered justified (Sandholz, 1993). The same can be said of the regulation of mass media, with European governments asserting early on that broadcasting was too important to be left in the hands of the market (Levy, 1999). This commonality in ideological stands allowed for the creation of the European Union as a unifying force. The various E.U. legal apparatuses have developed a dynamic equilibrium between the forces of central authority and member state autonomy, the tension created by this state of affairs most observable in the regulation of telecommunication markets. But unlike the technologically determined American model, the European Union has developed in recent years a unique technologically neutral regulatory framework. Its first manifestation was in the regulatory framework for telecommunications adopted in 2003, subsequently followed-up by the public consultation over amendments to the "Television Without Frontiers" directive that resulted so far in a draft proposal in 2005 and 2006.

Divergent histories of telecommunication development

Indeed, the distinct ideological roots of policy have bred separate avenues of policy development on the two sides of the Atlantic. Committed to private enterprise, the United States encouraged telecommunication policy to develop through private entrepreneurship. Only when it became clear that power was being abused in this emerging industry, in the late 19th century, was antitrust regulation created as a means of combating the emerging telecommunications monopoly. The initial struggles between the regulators and regulated focused on issues that have been at the heart of telecommunication regulation ever since: interconnection, mergers and acquisitions and universal service. While telecommunications was brought under the auspices of antitrust law in 1914 (the "Clayton Act"), it became regulated as a natural monopoly starting in 1921 (the "Willis-Graham Act"). In fact, as of that time and until the break-up of AT&T in 1984, only one difference existed between European and U.S. telecommunication markets: the monopoly in the United States was private, while that in Europe was run by the government. The outcome of this distinction was rather striking: In 1960, the penetration level of telephones in the United States was 27.3 per 100 inhabitants, while in France it was 4.8, in Germany 5.8 and in the United Kingdom 9.6. This gap was maintained throughout the 1970s and 80s, and only began narrowing when European PTTs became corporations in the 1980s and telephone penetration reached near saturation levels in the United States.

It was the perceived advantage of the United States' free enterprise system that led European countries (with the U.K. at the forefront), starting in the 1980s, to introduce two major policy initiatives: liberalization of the telecommunication markets and

privatization of the national PTTs. But it was the publication of the National Information Infrastructure (NII) report in the United States in 1993, a report which prompted fears in Europe of American economic colonization, that provided the impetus for a unified European policy (Schneider, 2001). The first cross-European liberalization policy was only introduced in 1988, but by 1990, the European Union identified the connection between growth in the information sector and economic competitiveness on a global scale and linked it to liberalization policies. By 1993, it set a 1998 deadline for full liberalization of voice telephony, allowing member states and incumbent PTTs a lengthy period of adjustment (Waverman & Sirel, 1997). During this period, universal service was first introduced as a policy goal in Europe, as part of an "open network" policy[8] seemingly influenced by policies adopted in the United States. The American influence is also visible in the policy language adopted. When the concept of an "information society" was introduced by the Clinton–Gore administration, it was quickly integrated into the European discourse (Servaes and Burgelman, 2000), and its principles, namely the predominance of market forces in designing this new reality, became the focus of the ensuing policy report commissioned by the European Union, known as the Bangemann report (Anttiroiko, 2001). The Bangemann report's conclusions were published just as the liberalization of the telecommunications sector was becoming a heated issue in Europe, with the European Commission asserting its position as a supranational governing body (Sandholtz, 1996). The ensuing conflict led to the publication of the "Green Paper on the liberalization of telecommunications infrastructure and cable television networks" in

[8] Directive 97/33/EC of the European Parliament and of the Council of 30 June 1997 - on interconnection in Telecommunications with regard to ensuring universal service and interoperability through application of the principles of Open Network Provision (ONP) *Official Journal L 199 , 26/07/1997 p. 0032 – 0052* http://europa.eu.int/ISPO/infosoc/telecompolicy/en/dir97-33en.htm

January 1995, which in turn led the council in September of that year to urge the commission to create a regulatory framework[9] that resulted, among other things, in the first universal service directive, which was enacted in 1997[10].

This initial European regulatory framework was reconsidered within two years[11], a review which created a new regulatory framework that became law in 2003[12]. One issue, however, deemed more urgent by the commission, was resolved by 2000, the adoption of a compulsory local loop unbundling regime. Mandatory unbundling of the local loop means that the wires linking a telephone subscriber to the nearest operator facility are deemed an "essential facility," an element of the network without which a newcomer cannot enter the market and over which the incumbent has monopoly power. The regulation on unbundled access to the local loop[13] was enacted in order to "help bring about a substantial reduction in the costs of using the Internet." It mandates unbundled access to the local loops belonging to operators designated as having significant market power in the fixed public telephone network supply market by their

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[9] Council Resolution of 18 September 1995 on the implementation of the future regulatory framework for telecommunications *Official Journal C 258 , 03/10/1995 P. 0001 – 0003* can be accessed at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31995Y1003(01):EN:NOT

[10] See footnote 8

[11] See: 1999 Communications Review (http://europa.eu.int/ISPO/infosoc/telecompolicy/review99/com2000-239en.pdf accessed on 8/21/06)

[12] For a general introduction of the 2003 regulatory framework see: http://europa.eu.int/information_society/topics/telecoms/regulatory/new_rf/text_en.htm#Introduction accessed on 8/21/06. The five individual directives that comprise the new framework were: Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services OJ L 108/33, 24.4.2002 (a.k.a "the "Framework Directive"); Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities, OJ L 108/7, 24.4.2002 ("Access Directive"); Directive 2002/20/EC of the European Parliament and of the Council of 7 March 2002 on the authorisation of electronic communications networks and services, OJ L 108/21 ("Authorisation Directive"); Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services OJ L 108/51, 24.4.2002 ("Universal Service Directive"); Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector ("Data Privacy Directive)

[13] Regulation (EC) No 2887/2000 Of The European Parliament and of the Council of 18 December 2000 on unbundled access to the local loop, OJ L 336/4, 30.12.2000

national regulatory authorities. So while the entire regulatory framework was to be accepted by member states as of July 2003, the requirement that the PTTs unbundle their networks became law as early as December 31, 2000, and while the focus of liberalization had been voice telephony in 1998, by 2003 the policy was aimed at enhancing Internet access.

Two unique features characterized the 2003 regulatory framework: It was to be "technologically neutral," and it gave preference to competition law over telecommunication law. In practice, the latter meant that specific communication law provisions would apply only to those product markets that would be deemed uncompetitive by competition law standards. Indeed, the local loop was deemed as such.

L.L.U. in the E.U. and the U.S.: Policy, implementation and outcome

The adoption of a policy that required incumbent operators to unbundle their local loops was one of the highlights of the transition European Union policymakers made while developing a coherent regulatory framework in the 1990s and early 2000s. At the same time, regulators in the United States spent nine years and numerous hours in court only to come up with a formula that, in fact, eliminates the unbundling regime[14]. While the Europeans defined the network element to be unbundled as the local loop and the local loop alone, the American law required mandatory unbundling of all network elements that the FCC would find are necessary and that by refraining from unbundling them a competitor would be significantly impaired. While the Europeans maintained for the regulatory authorities the determination of whether "significant market power" lies with the incumbent while determining *a-priori* the network element regarding which this

[14] See: FCC decision http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-05-150A1.pdf and accompanying news release http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-260433A1.pdf

determination should be made, the American law defined *a-priori* who the incumbents compelled to unbundle are and left the regulators with determining which elements should be unbundled. The result of the European Union's approach was its ability to mobilize a far weaker and decentralized union to adopt policies that conflict with incumbent operators' interests for the sake of promoting competition that the central "government" perceived as serving the public interest, and to do so successfully, contributing to faster penetration of advanced technologies. What is it in the European regulatory mechanism that did the trick?

As noted, the 1999 communication review brought about a rewriting of pan-European policies. But, while the transition to technological neutrality and the predominance given to competition law were introduced in an orderly fashion through the enactment of five directives, LLU was adopted separately, in a relatively short and unambiguous document. The regulation on unbundled access to the local loop[15] is explained in one paragraph of the preamble: local loops are necessary to gain access to consumers; they are controlled by incumbent operators that rolled them over a long period of time while enjoying monopoly status; competitors cannot match the economies of scale and coverage of incumbents. Based on this rationale, only one conclusion is possible, if competitive access to consumers is desired: Incumbents should be forced to share the local loop with competitors while the prices they charge for this usage need to be regulated. By adopting this policy, the basic elements of network economics are served, as competitors can overcome the main barrier to entry to the market: the cost of gaining access to the most essential facility of the network without which it is impossible to reach the consumer. In doing so, the European Union evoked the "essential facilities"

[15] See footnote 13

doctrine and made it an integral part of telecommunication regulation. The European parliament and council defined narrowly what was to be unbundled, since this was required under the "essential facility" doctrine, and authorized the national regulators to enforce the regulation. It also presented a form of "light touch" or minimal regulatory intervention, due to its focus and simplicity; once technological neutrality was added, the policy took the direction of being even less obtrusive, as the central government could not be seen as dictating technological development, but only overseeing market behavior.

There is, however, considerable controversy regarding the efficacy of LLU. Some maintain it should be adopted as policy only temporarily (Doyle, 2000); that it may deter the development of the economically desired facility based competition (Bourreau & Dogan, 2004); and that it has failed outright as a policy, as it has been poorly enforced (Spiller & Ulset, 2003). The figures, however, appear to support its advocates, and quite impressively. Bauer, Berne & Maitland (2002) conclude that more aggressive policies in the European Union regarding LLU help explain the difference in Internet access among European regions. Marcus (2005) observes that about one in four of the 12 million new Internet subscribers in Europe in the 12 months preceding July 2004 can be explained by regulatory support for competitive access – fully unbundled lines, shared access, bitstream access or simple resale – all made possible as a result of the LLU regime adopted by the Union. Garcia-Murillo (2005) asserts that unbundling has a significant positive impact on the availability of broadband services and that it contributes to a substantial improvement in broadband deployment in middle-income countries, but not in their high-income counterparts. Gideon (2006) asserts that the incentive for investing in cost-reducing innovation did not diminish due to mandatory unbundling, as some

operators often claim. The European Union itself reports that because of new regulatory measures, in particular those pertaining to pricing, and because of increased investment in infrastructure by new operators, the market for shared lines and unbundled local loops increased in 2003-4 by 110 percent[16].

Beyond these economic and network benefits, the policy of enforcing LLU on incumbent operators was also handled in a politically savvy manner. While the principle was defined narrowly and precisely, its implementation was left to national regulators. The latter, knowledgeable of local geographic and economic considerations and held accountable by their constituents, control the pricing of the loop and can maneuver between voter dissatisfaction and incumbent protectionism, whilst the European Union's sanction sword hangs above their heads. Indeed, the relative success of broadband deployment attributed to LLU in some member states created additional pressure on national regulators to act and implement the policy. In perhaps the most dramatic of responses, and through extreme implementation of "technological neutrality," the Dutch parliament adopted in October 2006 a law requiring unbundling of cable television networks for the sake of broadband penetration[17].

By contrast, unbundling in the United States evolved in quite a different manner. Although it only became part of the law with the Telecommunications Act of 1996 it has roots in two parallel historic narratives: the interconnection regime that developed when long-distance competition was introduced in the 1970s and the "open network architecture" regime that emerged from the three rounds of "computer inquiries," which

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[16] Tenth Report on European Electronic Communications Regulation and Markets can be accessed at http://europa.eu/scadplus/leg/en/lvb/l24217e.htm accessed on 8/22/06.
[17] Original texts: http://www.muniwireless.com/reports/docs/res18.pdf; http://www.muniwireless.com/reports/docs/res19.pdf english translation: http://muniwireless.com/municipal/watch/1433

tested the boundaries between the regulation of telecommunication and information services. When MCI started providing long distance point-to-point service in the 1960s, it needed to connect to AT&T's access network in order to reach consumers[18]. The courts awarded MCI this right of access that was termed "interconnection." In fact, though, the right awarded was a form of unbundling, as MCI was connecting to the AT&T network, but it was also using AT&T's network to access its consumers. At the time, the court ruled that AT&T's access network was an "essential facility," it cited the appropriate doctrine and applied it to the case. The "computer inquiries" held throughout the 1960s, 1970s and 1980s concluded that the *sine-qua-non* for the development of competition in data services was the adoption of an "open network architecture," a policy that ensured data providers with access to the consumers of the telephone monopoly (Cannon, 2005). With the development of the Internet, Internet service providers (ISP) were also deemed as "information services" (the new terminology for data providers), thus allowed access to consumers for which the price paid to the access monopoly was determined by cost.

When "unbundling" became law in 1996, it was included in section 251 of the Telecommunications Act, the section dealing with interconnection, even though it is not an interconnection issue, but rather an issue of lowering barriers to entry. Contrary to the narrow European definition made at the legislative level, the Telecommunications Act of 1996 left the FCC with the discretion to decide which network elements need to be unbundled. While the FCC started with as broad as possible a list in its initial Local Competition Order in 1996[19], the eventual objections by stakeholders on all sides of the

[18] The history of the introduction of MCI's service can be found in MCI Communications Corporation and MCI Telecommunications Corporation v. American Telephone and Telegraph Company 708 F.2d 1081, (7th Cir.) (Cert. denied)

[19] http://www.fcc.gov/Bureaus/Common_Carrier/Orders/1996/fcc96325.pdf

debate led to a series of court rulings that one after another voided the FCC's decisions. The FCC could not satisfy the court that its choice of criteria satisfied the law's convoluted definition of what accounts for elements that are "necessary" for the proper functioning of competitors and elements that "impair" their ability to challenge the incumbent local operators. The competitive operators claimed that section 251 of the law "codifies something akin to the essential facilities doctrine"[20], but the court refused to apply that standard and to accept that "essential facilities" was indeed a doctrine that prevails under United States law[21]. In 2005, after nine years of court proceedings, the FCC eliminated the unbundling requirement altogether[22], citing the court decision that established cable modem access as an unregulated information service, and putting both technologies on an equal footing. As a result, not only were new telephone service providers essentially blocked from entering the market, ISPs as well lost their unique status. A policy born and bred in the United States, which served as a model for the European Union, had now become defunct. Ironically, as mentioned before, the Dutch parliament, operating in a country boasting the highest penetration level of broadband Internet access, had also found the need to put cable and landline access on equal regulatory footing, however it chose the exact opposite path, by forcing them both to unbundle their local loops. The fact that cable unbundling is not more widely enforced in Europe can be attributed to the fact that cable penetration levels are not uniform across the continent.

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[20] AT&T Corporation, ET AL., v. Iowa Utilities Board, 525 U.S. 366, 388 (1999)
[21] Verizon v. Trinko, LLP. 540 US 398 (2004)
[22] http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-260433A1.pdf (although this announcement refers to unbundling for the sake of ISP access, by 2005 access by competing local exchange carriers was a moot issue due to growing collusion among long distance and local operators).

Universal Service in the European Union: A Developing Concept

Universal service was not a central element of E.U. policy historically. As Garnham (2001) notes, European policies were designed to guarantee continuity of service and not universality of supply, while protecting the PTT against legal action for damages incurred for failing to provide service. Universal service, as a pan-European goal, was first mentioned in the 1992 "review of the situation in the telecommunications sector." It was deemed an issue to be "noted," "recognized," "considered" and mentioned as a "major goal" next to the liberalization of all public voice telephony services in a 1993 Council Resolution on the review of the situation in the telecommunication sector and the need for further development in that market[23]. In February 1994, the European Council adopted for the first time a specific resolution on universal service principles in the telecommunications sector[24], which stipulated that universal service was "mainly a matter of the provision of a basic voice telephony service at an affordable price to all customers reasonably requesting it" and urged the member states to establish the appropriate regulatory framework to ensure its provision. The Bangemann Report issued that same year, while promoting a market- oriented approach, and widely criticized for its extreme neo-liberal premise, identified the main social risk of the evolving information society in "the creation of a two tier society of have and have-nots" (p. 5), expressing concern that individual members of society would reject the new information society technologies. The solution recommended was to prepare the European populace through education. The report stated that "fair access to the infrastructure will have to be guaranteed to all, as will provision of universal service, the definition of which must

[23] 93/C 213/01 can be accessed at http://europa.eu.int/ISPO/infosoc/legreg/docs/93c21301.html
[24] 94/C 48/01 can be accessed at http://europe.eu.int/ISPO/infosoc/legreg/docs/94c4801.html

evolve in line with the technology" (p. 5-6). With regards to the market mechanisms aimed at ensuring universal service, the Bangemann report recommended ending the PTT monopolies while ensuring that in the future all licensed operators would take responsibility that the universal service obligation is met.

The 1997 directive[25] accepted that the concept of universal service must evolve in order to keep pace with technological and economic changes and defined it as "a defined minimum set of services of specified quality which is available to all users independent of their geographical location and, in the light of specific national conditions, at an affordable price." Member states and their respective regulatory authorities were held responsible for maintaining and developing a universal service and provided with the authority to rule in which cases the universal service obligation was an unfair burden on an operator along with the jurisdiction to establish the appropriate compensatory mechanism. The directive, however, dictated the formula for calculating the burden. This balancing act demonstrates once again the peculiarities of the European model: While the bureaucrats promote a "free market" ideology based within a narrow technocratic vision and dictate mechanisms for calculating universal cost that are purely economic and deny any padding of expenses by the member-state-government-darling-PTT, the member states maintain jurisdiction that reflects both their invested interest in the PTTs and their political responsibilities. The European effort was focused first on creating rate balancing mechanisms, only then on the voluntary member-state intervention in assuring affordable rates by creating a universal service fund (Cherry, 1999). In fact, only two member states (France and Spain) had to establish funding mechanisms for universal service, as the narrow definition of the service allowed fulfilling of the universal service obligation

[25] See footnote 8

without a need for an additional subsidy (Michalis, 2002).

Indeed, universal service continued to be defined very narrowly, arousing some scholarly criticism. Bauer (1998) lamented the limited nature of the universal service right in Europe, attributing it to the monopolistic history of the industry, the interaction between the European Union and its member states and the slow economic growth that characterized Europe in the 1990s. While he believed the policy adopted maximized the "synergies between market forces and information access" (p. 330), he argued that it "fell short of a more visionary policy." Melody (1999) observed that amid the transition from national PTTs to commercial PTOs (as privatization progressed), many PTOs discovered that universal service funding helped quell competition and pad their bottom lines. "Elaborate mechanisms for calculating and sharing extra universal service costs," he noted, "are primarily to blunt the face of serious competition. Those countries that are serious about universal service, e.g. the Nordic countries, have gone about it in the simplest way possible. Denmark and Finland have not even bothered to calculate it" (p. 23). Kiessling and Blondeel (1998), on the other hand, warned that the tendency of some countries, notably Belgium and the Netherlands, to pursue a broader definition of universal service might lead to higher costs on new market players, thus hindering competition. This assertion contradicted Skogerbø and Storsul's (2000) findings that opposition to an expanded universal service definition in small countries (Denmark, the Netherlands and Norway) came at the time from the incumbent PTTs and therefore reduced the possibility of an expanded definition of universal service in Europe.

Indeed, the 1999 public consultation and communication review, conducted for the purpose of jumpstarting a new regulatory framework for the European community,

failed to revolutionize the definition of universal service. It concluded that the current scope of universal service should be maintained, while introducing procedures for its review and update[26]. The ensuing regulatory framework that encompassed five directives did, however, include, for the second time, a separate directive on universal service. Although the working document published along with the review[27] does not expand the definition of universal service, the 2002 directive on universal service and users' rights[28] does. Although guaranteeing availability, quality and efficient implementation had been left to the member states, universal service was expanded to include the ability to receive and make local, national and international telephone calls, facsimile communications and data communications sufficient to permit "functional Internet access."[29] The latter is to be defined by taking into account the technological choice of the majority of subscribers. At the same time that it added "social obligations" to the universal service obligations – the duty to provide directories, public pay phones, special measures for the disabled and affordability of tariffs – the directive also introduced an important element into the pricing mechanism of the universal service obligations. When calculating the cost of the obligation, regulators are required to subtract any market benefit that arises from providing the service under the obligation. Hence, by 2002, the European Union had both expanded the basic obligations of operators and rights of consumers in major legislation, and has further weakened the position of the national PTTs, by making consumer demand the determinant of Internet access technology and by taking into account the advantages held by incumbents in the role of local access monopolies. Some national regulators,

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[26] COM(2000)239 final, Brussels, 26.04.2000.
[27] can be accessed at http://europa.eu.int/ISPO/infosoc/telecompolicy/review99/wdunisrv.pdf accessed on August 18, 2006
[28] OJ L 108/51, 24.4.2002
[29] Article 4(2)

picking the European cues, embarked on their own ambitious re-examination of their internal policies (Simpson, 2004).

The 2006 Review of the Regulatory Framework[30] was already designed to assess the efficacy of the 2003 regulatory framework. As part of this review, the commission noted that a "broadband gap" is emerging in Europe along geographical lines[31]. The Commission staff working-document, following the review and previewing the imminent green paper, stops short of establishing broadband as a universal service. It does, however, create the conditions for a debate about a new definition for universal service that distinguishes universal access from universal content, in this way tying the debate on universal service to the debate on "net neutrality." The commission staff is under the impression that the technologically neutral analysis of significant market power and the powers granted to the national regulatory authorities in this regard provide the NRAs with the authority to guarantee minimum quality levels for transmission levels that will assure that access to certain content services is not blocked[32]. Access to content emerges here as an issue to be framed within a debate on the meaning of universal service. As such, the European Union has taken upon itself to publish a new green paper on universal service, which will include a road map for a new definition in 2007, yet again setting an expedited timetable to encounter what appear to be problems on the horizon.

Just like unbundling, universal service is a term developed in the United States and further expanded. It seems, however, to be heading in the direction of the unbundling regime. Indeed, while many would prefer to believe that universal service has always been a goal of telecommunications policy in the United States, as Mueller (1997) reveals,

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[30] COM(2006)68 final, Brussels, 20.2.2006
[31] COM(2006) 129 final, Brussels, 20.3.2006
[32] SEC(2006) 816, Brussels, 28 June 2006

it was in fact a ploy to maintain AT&T's monopoly, and instead of meaning universal access for consumers, it meant a universal network controlled by AT&T. Universal service became law only in the 1996 act, incorporating the mechanisms created originally for the purpose of subsidizing the local access of consumers through higher prices on long distance calls. As such, it developed as a subsidy system. Just as it did in the case of unbundling, the law only describes the level of service as "evolving," leaving it to regulators to determine the specifics, except for the unique provision of subsidizing Internet access to schools, libraries and health care providers (known as the "E-rate").

The draft bills that circulated in 2006 in the House and the Senate still do not address the level of service that need to be made available to all citizens of the United States. The House version simply ignored the issue, while the Senate bill referred only to the funding mechanisms of the existing level of service.

Regulatory implications for Future Policy

It is probably axiomatic by now to say that it is a matter of national interest to promote access to broadband, at least as much as it is in the public and individual interest. Observing international broadband adoption trends and rates, one cannot fail to notice that while Europe is plunging ahead, with some countries leaving even Asian powerhouses behind, the United States, which was the original leader in both making the first regulatory moves and adopting Internet technology, is slowly falling behind. What is it then that makes Europe different than the United States, and what can the United States learn from the European experience in order to revive broadband penetration?

On the conceptual level, the differences are pronounced: the Europeans stuck to their goal of crafting an "information society," did not take their eyes off the ball, and

tweaked the policy to meet the goals. A comparison of the unbundling process reveals the following differences regarding the practical implementation level:

1. While in Europe, unbundling was treated as a separate and distinct act, in the United States it was buried inside the long and convoluted interconnection section of the law;
2. While in Europe, the law was clear, concise and focused on the particular element to be unbundled, in the United States, it left it up to the regulators and the courts to try and decipher which elements needed to be unbundled;
3. While in Europe, the definitions are made at the highest normative level and the analysis for their application is made at the regulator level, in the United States only principles are set at the highest normative level, while interpretations that lead to definitions are made on a lower normative level;
4. While the Europeans review and adjust their policies to changing technological and market conditions every 2-3 years, it has been more than 10 years since the United States conducted a major overhaul of its laws;
5. While in Europe, the goal of telecommunications policy is clear and defined in unambiguous terms, namely, to promote competition and avoid inequity between "have and have-nots," in the United States, the debate is framed by the stake holders.

As a result of frequent European reassessment of policies, innovative approaches are tested and policy changes are rapid and efficient, particularly when taking into consideration how diverse and relatively flimsy the union is. Centralized control at the highest level of policymaking, where all union members are represented, makes the

eventual enforcement on national regulators relatively painless, or at least less painless than in the United States where a federal administrative body, the FCC, is charged with designing the policy, or in the case of universal service, a joint federal-state board, that apparently lacks the ability to interpret the rules in a creative manner. Perhaps the most striking difference, and apparently the most telling, between the two systems is that the Europeans, unlike the Americans, are able to assign the issues their proper level of importance and define them correctly, leaving less room for chaotic legal interpretation.

In "defense" of the chaotic situation in the United States, it should be noted that its structure of the telecommunications industry is more complex. The European regulators do not have to deal with the remnants of a system that differentiates between local and long distance service and "basic" (or "telecommunication") and "enhanced" (or "information") services, applying different rules to them and regulating them separately. The origin of the European system, a national monopoly providing the entire range of telecommunication and information services, makes operating easier. The fact that the European PTTs were state-owned at the start provided them with greater leverage in some countries, because of their close ties to government and similar organizational cultures. But the fact that in the United States, the players are powerful corporations that leverage their wealth to affect the policy process takes its toll on the final outcome.

How can these differences and the perceived weaknesses of the U.S. system affect the role of universal service in the design of the next stage of telecommunications policy in both Europe and the United States? The European consultation of late is part of a broader initiative, termed "i2010," a grand multi-year master plan that clearly aims to serve Europe's goal of international leadership. The debate in the United States, on the

other hand, has been sparked by the desire of the large telephone companies to enter the multi- platform video distribution market amid a frenzy of mergers and acquisitions. As a result, the European debate focuses on many issues, among them the scope of universal service, while the debate in the United States debate focuses on franchising, with universal service only an issue in the context of the funding scheme and its relevance with the introduction of new technologies and services.

It is remarkable that the United States, where most policy tools developed and whose supremacy in information and communications technology distribution served as the model to be imitated by others, stands to benefit from learning from the Europeans, where 50 years ago the number of telephone lines and penetration rates were only a fraction of those existing in the United States. The differences in the policymaking process are so pronounced that it would be a grave mistake not to rethink them as well. This is especially true of the case of universal service, where the United States still holds an advantage with regard to access to the Internet by public education and health institutions, as a result of the unique E-rate subsidy policy.

Once again, while the European Union has defined its issues focused on their definition at the highest levels of policymaking and seems to be addressing the challenge created by social inequity, Congress is mired in regulating the relationship among the operators. Instead of managing competition it manages the competitors. It perceives the issue as one that arises from the need to allow operators to provide certain services, and as a result the regulator does not deliberate the goals of the policy. Indeed the focus of policy in the United States is on the needs of the industry and not on public service. While Europeans launched their universal service policy as a strategy amid low

penetration levels, saw the blessing in their efforts, and are therefore discussing the universality of broadband at its infancy, the United States is not setting a strategic goal at the initial stage of the introduction of a new technology, but rather submitting to the stake-holders' claim that creating a national broadband strategy would mean dictating technological choices by the government. Not less striking is the fact that the Europeans, for whom industry development through competition was a novelty, developed a focused policy that eventually required minimal government intervention in the creation of funding mechanisms, which in fact have become the focus of the universal service debate in the United States.

As the author of Psalms wrote nearly 3,000 years ago: "from all my teachers I have grown wise[33]," to which later scriptures added "and from my students more than anyone else[34]."

[33] Psalms 119:99
[34] Taanit 7:71

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