



VIEWS AND NEWS

ECONOMICS AND TECHNOLOGY, INC.

November 2010

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De-linking video content from video delivery: Are longstanding business models now at risk?

From their birth as “community antenna television” (CATV) systems that were created to capture the weak over-the-air broadcast TV signals in fringe areas and distribute them to subscribers via coaxial cable, to modern broadband digital hybrid fiber/coax systems owned by national multisystem operators (MSOs) such as Comcast, Cox, TimeWarner and Cablevision, all have one thing in common: The cable operator is in total control of the video content that is delivered over its facilities. The early CATV systems had a passive relationship with the content they carried – they picked up the broadcast TV signals using large antenna arrays, amplified those signals and re-transmitted them over their cable networks. The earliest systems had extremely limited capacity – sometimes as few as 12 video channels – and produced little or no content of their own. But even though current state-of-the-art digital systems have the capacity to support hundreds of individual channels, the cable operator maintains absolute control over their assignment to specific content providers – broadcast TV stations, “free” and “premium” cable channels, and on-demand and pay-per-view content.

Those early CATV systems were typically locally owned and not affiliated with any regional or national parent company. But by the mid-1990s, large-scale consolidations had become the norm, and when the dust had finally settled some 83.9% of all US video subscribers were being served by one of ten large MSOs. Significantly, that massive restructuring of the US cable TV industry fundamentally changed the relationship between those that *produced* video content and those that *distributed* it.

The post-consolidation MSOs had each achieved a scale of operations sufficient to exert market power vis-a-vis nonaffiliated content providers – something that no small, independent cable system could have ever hoped to do – and could, among other things, refuse to carry any content whose providers failed to agree to the MSO’s terms. Vertical integration of content and distribution got underway, culminating in Comcast’s planned acquisition of NBCU, now awaiting government approval. Of course, some content providers themselves possess considerable market power and are often in a position to dictate terms to the cable distributor. This sometimes leads to big-time confrontations, as in the recent Mexican standoff between the Fox TV network and several MSOs regarding the payment of fees being demanded by Fox for the MSOs’ right to carry Fox network programming. The standoff arises because each party actually realizes significant economic benefits from any agree-

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ment – the content provider expands the size of its audience, enabling it to command higher advertising fees from commercial sponsors, and the cable operator is able to offer the additional content to its own subscribers, making its service that much more attractive to existing and potential customers, perhaps even to the point where it is able to increase subscription fees. Both parties enter the negotiation with considerable strengths, resulting in what amounts to a game of “chicken” that will not produce a deal until one of the parties gives in.

The cable operators’ business model is, of course, heavily dependent upon revenues generated by subscriptions to “premium” channels and pay-per-view offerings. And for most of the history of cable, subscribers had limited alternative source of such content – particularly where it was occurring in real time, as with sports, news events, or other shared cultural experiences. Pay-per-view movies compete with DVD purchases and rentals, and premium channels compete with “free” services and, of course, with over-the-air broadcast TV. But if a subscriber wanted the convenience of having the desired content piped into her livingroom, the selected cable service provider was often the only source. The entry of local telephone companies into the video distribution business did little to change that dynamic. Once having chosen between, for example, Comcast or Verizon FiOS, the selected service took on the role of being the only broadband connection to the home, because content and distribution seemed to be inexorably linked.

Enter the Internet

Unlike cable- or ILEC-provided video services, and even though these same companies furnish broadband Internet access over the same physical facility (coax or fiber), they do not control Internet content, effectively *de-linking* content from delivery. That is nothing new – users have been free to access any website, any content, from anywhere on the Internet and, in fact, current FCC “net neutrality” principles are intended to assure that consumers are entitled to “access the lawful Internet content of their choice[;] ... run applications and use services of their choice, subject to the needs of law enforcement[;] ...[and] connect their choice of legal

devices that do not harm the network.” Yet while Internet users have been downloading videos from YouTube and other sources for some time, the nature of content available over the Internet did not place it in head-to-head competition with cable or telco video services. Moreover, for many Internet users, their home computer was typically located in a den or bedroom, not in the livingroom where the TV set lived. So even where entire motion pictures could be streamed or downloaded for viewing on the PC or Mac, for most households this point of delivery was less than ideal. But all of this may change – and possibly quite quickly.

Several new consumer devices have recently come on the market that bring Internet-based video content directly into the livingroom, right onto the high-definition TV screen, without the use of the home computer. AppleTV sells for \$99. It receives video streams over the Internet via ethernet or WiFi, and converts them to standard 1080p HDTV signals. The unit is connected to any HDMI-equipped HDTV receiver via an industry standard HDMI cable. Roku offers several versions of its streaming video player, ranging in price from \$59.95 to \$99.95. The Roku products support composite video and audio (for use with conventional TV receivers) as well as HDMI-based HDTVs. Both are menu-driven, permitting the user to choose from a selection of movies, TV shows and other video content offered by the device. Neither enables the customer to surf the web for any content; both limit the customer to selected video content providers with whom Apple or Roku, as the case may be, has contracted. Both, however, offer Netflix subscribers the ability to stream any films in the Netflix library that are available for streaming. Netflix subscribers pay as little as \$7.99 per month for this capability.

Netflix began offering streaming video of certain movies back in 2007, but these generally had to be viewed on the subscriber’s PC monitor. In 2008, Netflix began offering streaming video service over non-PC devices such as video game consoles and set-top boxes. Netflix recently announced that Internet streaming now accounts for more movie viewings than via DVD mailings. The company has adopted a video distribution network architecture that is the electronic analog of its DVD distribution strategy. For DVDs, Netflix maintains multiple local distribution facilities across the country. By bringing the point of mailing and returning close to its customers, postal service delays are minimized, and most often DVDs are received (either by the customer or by Netflix when returned) the day after they are mailed. Similarly, Netflix maintains (caches) online copies of streamable content at thousands of individual servers operated by Akamai or other providers that are located in close geographic proximity to the end user. The initial distribution of the material to be stored at these sites is accomplished over the Internet, but once done, delivery to end users involves little more transport than the “last mile” link from the subscriber’s ISP to his home. Netflix currently has more than 16-million subscribers, and anticipates that growing to 19-million by the end of this year.

Charging customers for their use of alternative video services

While the cable or telco Internet access provider cannot (currently) limit a customer’s ability to obtain video content from these alternative sources, other proactive responses are certainly possible. The broadband access provider, for example, certainly has the ability to revise its pricing model from “unlimited” to one based upon a customer’s use of the Internet access service. Indeed, this may occur sooner rather than later. Instead of offering “all you can eat” flat-rate

pricing, ISPs are beginning to impose limits on the aggregate bandwidth that a customer may use in a monthly billing cycle, with additional or “overage” charges applying for usage in excess of that cap. Several US cable MSOs have begun trials of usage-based pricing, and the practice has been adopted by all US wireless carriers with respect to their data services. In Canada this model is already in widespread use for landline broadband services.

Rogers Communications, Canada’s second biggest Internet provider, recently lowered the usage limits it had previously set on some of its plans. Perhaps not coincidentally, this announcement came just days after Netflix announced it was expanding its video streaming service into Canada; Rogers’ preemptive response may have been well-founded. In the first week following the September 22 launch of Netflix’s Canadian service, some 10% of all Canadian broadband customers had visited its site. Typical movie downloads range between 2 Gb and 5 Gb, depending upon length, standard or high definition, and type of coding being used. Rogers’ current pricing structure offers a range of bandwidth (and speed) choices:

Service	Download speed	Usage cap	Monthly rate	Overage charge
Ultra-Lite	500 kbps	2 Gb	C\$ 27.99	C\$5.00/Gb
Lite	3 mbps	15 Gb	C\$ 35.99	C\$4.00/Gb
Express	10 mbps	60 Gb	C\$ 46.99	C\$2.00/Gb
Extreme	15 mbps	80 Gb	C\$ 59.99	C\$1.50/Gb
Extreme Plus	25 mbps	125 Gb	C\$ 69.99	C\$1.25/Gb
Ultimate	50 mbps	175 Gb	C\$ 99.99	C\$0.50/Gb

Netflix’s impact on the Internet

A recently-issued report by Sandvine Incorporated of Waterloo, Ontario estimates that real-time entertainment services now account for some 42.7% (up from 29.5% in 2009) of peak-hour Internet traffic in North America (US and Canada), *nearly half of which (20.6%) is associated with Netflix downloads.*

While this surge in real-time entertainment traffic may affect the capacity requirements and costs attendant to the provision of broadband Internet access, a potentially much greater concern, from the standpoint of the broadband providers, is the potential loss of premium video content revenue to downstream content resellers like Netflix and Hulu as well as to content owners themselves, such as film studios and sports leagues. For example, Comcast’s entry rate for “basic cable” in the Boston area is \$14.20 per month, for a channel lineup consisting mainly of local broadcast TV stations. At the high end is Comcast’s *Digital Premier* package priced at \$119.30, providing “200+ digital cable channels, over 17,000 movies and shows – most free, On Demand, and 45 commercial-free music channels, from Top 40 to classical to hip-hop,” all in addition to the same local news, sports, kids’ programs and weather that are available with the \$14.30 package. Put differently, \$105 out of the total \$119.30 *Digital Premier* revenues are, potentially, at risk to Comcast, as more, and perhaps ultimately all, of this premium content becomes available online.

Verizon’s *FiOS* business model could well be at even greater risk from Internet-borne content. The company, which earlier this year advised its shareholders of its intent to discontinue further

deployment of *FiOS* after 2010, will have by then invested some \$23-billion and will pass 18-million homes. However, Verizon's "take rate" is running at around 3.5-million – less than 20% of homes passed – suggesting a capital investment per connected *FiOS* customer of more than \$7,000. And that capex estimate likely does not include costs of customer acquisition, operating expenses, or costs involved in the procurement of content. This would suggest a bare minimum break-even revenue "nut" of close to \$200 per subscriber per month – a level that would be problematic even without Internet-based content competition, and that seems quite unrealistic given the growing content choices and sources.

These financial realities facing cable and telco broadband providers go a long way toward explaining the intensity of their resistance to any meaningful net neutrality regulations whose effect would be to undermine their ability to exploit their captive relationship with video and Internet access subscribers so as to force them to purchase content through only those channels allowed by the broadband provider. But in addition to explaining the facilities-based broadband ISPs' conduct, this reality also confirms that what the ILECs and cablecos are seeking from the federal government is *protection from competition*, a result that is only possible if the government is prepared to shut down much of the competitive Internet content market. Despite the political clout of the telcos and cablecos, one would hope that something like this is highly unlikely.

Has the Internet matured to the point where its tax exemption can be safely rescinded?

When Congress originally passed the Internet Tax Freedom Act (ITFA) in 1998, the measure was intended to bar the states from imposing "multiple and discriminatory" taxes on the nascent Internet access market and to provide the time necessary for the development of policy guidelines that would help avoid widely varying and inconsistent frameworks of State and local taxation. As stated in the Report of the House Commerce Committee:

H.R. 3849 was introduced for a number of reasons: (1) to ensure that the Internet service providers and online service providers are free from Federal and State regulation regarding the prices they charge to consumers; (2) to bar special Internet taxes, and multiple and discriminatory taxes on electronic commerce; and (3) to commission a study on State and local taxation of the Internet and to ensure that any taxation of the Internet or electronic commerce does not burden interstate or foreign commerce. These policies are inextricably linked to the success and development of electronic commerce.

The original Internet Tax Freedom legislation was narrowly tailored to achieve these goals. Actually, with respect to the first goal, it is unclear whether any additional Congressional mandate was even required. At the time, the FCC was already treating Internet and other online services as "information services," making them exempt from rate regulation. The ITFA's goal of preventing "multiple" and "discriminatory" taxation was also narrowly addressed. While barring the taxation of ISP services, the law nonetheless permitted states to tax the underlying *telecommunications* furnished to the Internet access provider and used by it as an input to its Internet access services. In other words, while Internet access was not to be "double-taxed," the telecommunications used by the ISP to create its Internet access information service would be treated no differently

than other telecom services. Finally, as enacted, the law was temporary in nature, and was set to expire after six years, in 2004. During that time, a special advisory commission on electronic commerce was established to study and prepare a report on various aspects of Internet-related taxation (including, *inter alia*, the impacts upon e-commerce activities and on state/local tax collection) That report was completed in 2000.

Since 1998, the ITFA has twice been extended beyond its original 2004 expiration date, and some have advocated that the law be made permanent. Meanwhile, the ITFA as modified no longer serves its original goals. Clearly, there remains nothing "nascent" about Internet access and the Internet economy in general, such that the emerging industry tax preferences embodied in the ITFA can no longer be justified. Moreover, the 2004 law had broadened the definition of "Internet access" in ways that go far beyond insulating ISPs from discriminatory taxes – they actually confer unique advantages not available to other economic sectors that compete directly with those doing business in cyberspace. Beginning with the 2004 law, the tax exemption was extended to *include* the underlying telecommunications used as an input to Internet access, and was further amended in 2007 to also apply to backbone transmission – a change that uniquely benefits ISPs relative to other retail and wholesale purchasers of telecommunications that were and that remain subject to state and local taxes.

To the extent that content accessed over the Internet is taxed differently from content distributed over transmission facilities that are not classified as Internet access, there is a distortion of the economic signals affecting consumer choices. If a state has one tax for telecommunications services and another for cable, and both of these compete with video programming that customers can download from services such as Netflix over their broadband connection, there can be three completely different tax treatments of similar services. (Last year Netflix alone accounted for 20.6% of peak period Internet downloads and real-time entertainment in the aggregate accounted for 47.5% of data consumption on fixed networks in North America. See accompanying article.) Under existing law, states may – and often do – tax video content provided as part of a "cable TV" service, but under the ITFA may not tax the Internet access transmission service (which uses the very same physical transport medium) used to download what is often identical content from the Internet.

The requirement for a "substantial nexus" for states to apply sales tax to a transaction occurring via the Internet creates an additional level of complexity. In its 1992 decision in *Quill Corp. v. North Dakota*, the U. S. Supreme Court held (consistent with precedent) that, for purposes of determining whether a state tax violates the Commerce Clause, there is a "sharp distinction" between mail-order sellers that have a "physical presence" in the state (who may be taxed) and sellers "who do no more than communicate with customers in the State by mail or common carrier as part of a general interstate business" (who may not). This distinction has resulted in a major disparity between sales tax requirements applicable to "pure" online retailers vis-a-vis those that also maintain brick-and-mortar retail outlets in particular states – even though in both cases the online purchase is typically accomplished entirely online, via the company's website. Thus, a book seller that does business online and also at brick-and-mortar retail stores is required to charge sales tax on any online sale

delivered to a jurisdiction where it maintains one or more retail outlets. However, online-only retailers, such as Amazon, have no such requirement. Indeed, earlier this year Amazon notified its Colorado-based “affiliates” (independent online merchants who do business via the Amazon website) that it was eliminating its affiliate program in Colorado in response to a new state law that would operate to confer a Colorado nexus upon Amazon generally and upon other online merchants that maintained relationships with Colorado businesses.

Even without the issue of nexus, legitimate concerns remain about the potential negative impacts of ISPs and Internet merchants having to administer inconsistent rules under fifty or more different tax laws. Although there has been significant study and discussion of how to simplify multi-state taxation of telecommunications and information services, the political and economic complexities (including non-uniformity of actual and perceived interests among various states) have thus far prevented a full consensus from developing. In the meantime, however, rather than being the target of burdensome and discriminatory taxation, activities connected with the Internet frequently enjoy an economic advantage over directly competing commerce in the “brick-and-mortar” economy.

Forrester Research has projected 2010 online retail sales at \$172.9-billion, with year-over-year growth projected at 7%. While it is not possible to develop a precise estimate of lost sales tax revenue from this aggregate data, state+local sales taxes, where present, generally fall in the 6% to 10% range. On that basis, somewhere between \$12- and \$15-billion in annual sales tax revenues are being lost by state and local governments. Moreover, to the extent that customers are being encouraged to make purchases online from out-of-state retailers due to the opportunity to avoid sales taxes, local retail businesses are being injured, jobs are being eliminated, and other business tax revenues besides those from uncollected sales and use taxes are being lost as well.

Disparities in tax treatment distort technology choices. They may favor video downloads via the Internet over similar content offered by taxable cable television services. They may favor online retail transactions made with out-of-state sellers over taxable retail purchases made at local retail stores. Tax policy should be agnostic as to such choices, allowing the more efficient producers and processes to survive and to replace less efficient business models on their own respective economic merit. There can be no economic justification for these disparities to persist and, given the current challenges facing state and local governments, these loopholes need to be closed.

ETI has extensive experience with telecommunications and Internet taxation issues. For more information, contact Helen Golding at hgolding@econtech.com

ETI paper on reclassification of broadband Internet access to be published in December 2010 *Federal Communications Law Journal*

As the debate over net neutrality and reclassification of broadband Internet access to Title II common carrier status heats up, ETI’s Lee Selwyn and Helen Golding have weighed in on the discussion with

a new article reviewing the factual and legal bases for a far more expansive approach to reclassification than the limited proposal put forth earlier this year by the FCC. The paper is being published in the December 2010 issue of the *Federal Communications Law Journal*.

In their article, “Revisiting the Regulatory Status of Broadband Internet Access: A Policy Framework for Net Neutrality and an Open Competitive Internet,” Selwyn and Golding explore how a decade of broadband access deregulation has landed the FCC at a legal dead-end. After the DC Circuit’s *Comcast* decision last April, the Commission now finds itself unable to enforce its “net neutrality” goals. To reassert its jurisdiction over “net neutrality,” the FCC proposes to reclassify broadband Internet access as a Title II “telecommunications service” while continuing to forbear from most other facets of common carrier regulation.

As the authors explain, the FCC’s current dilemma results from (1) an unfortunate combination of unverified predictive judgments associating deregulation with investment; (2) an overly optimistic assessments of competition in the consumer broadband market; (3) the abandonment of the “bright line” between transmission and content; and (4) the elimination of unbundling requirements for broadband services. The FCC needs now to revisit – and revise – the factual, legal and policy judgments that have brought it to the current situation.

Reclassification is factually and legally the proper regulatory course, but its benefits would be seriously undermined by broad presumptive forbearance. Last mile broadband Internet access offered by incumbent local exchange carriers and cable companies is unambiguously pure transmission, i.e., telecommunications service. Facilities-based Internet access providers should be required to offer downstream rivals equivalent last-mile broadband access as a wholesale telecommunications service on a nondiscriminatory basis; under this framework, telcos and cable companies could continue offering broadband bundled with content and applications as competitive, non-regulated information services. Given the demonstrated ability of facilities-based carriers to use their control of bottleneck last mile access to discriminate against downstream rivals, there can be no justification for the FCC to forbear from applying most Title II obligations to broadband access providers. Combining these two threads, the authors conclude that by restoring competitors’ ability to purchase “basic” broadband access as a platform for their own retail Internet access entry, the FCC has the opportunity to create more competition, with less explicit net neutrality regulation, than by reclassification alone.

The Selwyn-Golding article appears in Vol. 63, No. 1 of the *FCLJ*, at pp. 91-140.

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