

October 2014

Geoff Huston

Internet Regulation: Section 706 vs Title II

At the NANOG meeting in Baltimore this week I listened to a presentation by Patrick Gilmore on “The Open Internet Debate: Section 706 vs Title II” (Patrick’s presentation can be found in the NANOG proceedings at https://www.nanog.org/sites/default/files/tuesday_general_gilmore_interconnect_62.10.pdf). It’s true that this is a title that would normally induce a comatose reaction from any audience, but don’t let the title put you off. Behind this is an impassioned debate about the nature of the retail Internet for the United States, and, I suspect, a debate about the Internet itself and the nature of the industry that provides it.

The topic of network neutrality and the issue of video streamers is causing considerable industry angst. Video content apparently stresses out the capacity of access networks in many areas, and while it is the actuality of traffic congestion, or the threat of traffic congestion, its a situation that has attracted considerable public comment (John Oliver’s satirical commentary, <https://www.youtube.com/watch?v=fpbOEoRrHyU>, is perhaps the best example, although in this case I’m not entirely sure it was satire!). This is a matter that affects consumers not only in the United States, but following in the footsteps of Netflix’s global expansion we’ve seen a similar debate about the positions of content and carriage providers in various European countries and within South America and Asia. When we pump very large quantities of streaming video across an access network then many access providers are tempted to see this as an opportunity rather than a problem, and look for ways to extract a premium revenue stream from what many consumers appear to regard as a premium service.

How does Title II and Section 706 enter the picture?

In the United States in January 2014, the U.S. Court of Appeals sent the regulatory framework of what is commonly referred to as “network neutrality” back to the US Federal Communications Commission (FCC), claiming that the Commission had overreached its authority in barring broadband network service providers from slowing or blocking selected content. In other words the court was saying that the FCC’s adopted framework, that was intended to ensure that these carriers treated all content on an equal and non-discriminatory basis, was beyond the authority of the FCC in this context. This stems from an earlier move by the FCC almost two decades ago, in 1996, when the FCC elected not to classify Broadband Internet Access Service providers as recognized Common Carriers, and instead classified these service providers as “Information Service Providers”. It may have been an administrative convenience at the time, and it may have served the interests of the cable access industry at the time, but the full extent of the consequences of this administrative action are only now emerging. The US Court of Appeals ruled that as these providers are, strictly speaking, not classified as common carriers then the US Telecommunications Act expressly forbids the FCC from regulating these providers as if they were common carriers. At the time it appeared that this judicial decision was, for the Internet in the US at least, a possible death knell for the concept of network neutrality for the Internet.

While everyone is beholden to the rule of law, it’s not exactly a highly desirable position to have your national telecommunications policies being made through a judicial process in a Federal Court of Appeals. The FCC undertook to respond to this judicial ruling with further policy making that was

intended to restore a clear framework in support of an open Internet, and it has now issued a Notice of Proposed Rule Making (https://apps.fcc.gov/edocs_public/attachmatch/FCC-14-61A1.pdf), and over the past four months sought comment on the options described in this document. This public consultation process being undertaken by the FCC is a far more appropriate process for determining policies for the nation's communications infrastructure, and the matters being considered by the FCC merit serious attention. As reported by the FCC to the NANOG meeting the day after Patrick's presentation (https://www.nanog.org/sites/default/files/wednesday_general_delnero_fcc_62.46.pdf) the FCC has certainly attracted voluminous public attention, with some 3.8 million responses received to their call for comments on the proposed rule making notice.

According to the notice, the objective of this proposed rule making measure is to ensure that the Internet remains "open." The options available to the FCC are similar to the options considered in 1996. One option is to classify broadband access carriers under Title II of the US Telecommunications Act, which would classify such carriers as "common carriers" with all the rights and responsibilities that this implies. The positive aspects of this move would clearly protect carriers from liability over carried content, particularly providing carriers stronger protections than the Digital Millennium Copyright Act provides, and at the same time this option includes anti-blocking and anti-discrimination provisions on carriers that would allow users to access content and services without the carrier actively discriminating between content providers and offerings. The carrier would be unable to discriminate or provide unfair competitive access to one content provider over another. However there is another aspect to common carrier measures, and that is the potential to impose regulation of pricing, services and interconnections. The extent to which this would be applied in this context is unclear, but these measures are intended to provide a regulatory control mechanism that counters the potential problems that arise through for formation of local access monopolies. It would be up to the FCC in the first instance to determine to what extent regulatory controls would be imposed in the context of the use of Title II as applied to broadband access providers, and there is some current expectation of a relatively light touch on the part of the FCC. But the risk is that the assumption of the need for regulatory controls that are applicable as a policy control over local access monopolies becomes a self-fulfilling measure. The risk is that such measures would deter further competitive private investments in access infrastructure, with the consequence of further consolidation and aggregation in the access market and further entrenching a set of local access monopolies and further enhancing of their related market and political power. In that case the "light touch" regulatory controls that the FCC would evidently prefer may well be inadequate, and the measures that were intended to foster an open and highly competitive access market would risk producing precisely the opposite outcome.

The other possible approach is to return to Section 706 of the Telecommunications Act, and propose additional rules that would, presumably, withstand subsequent judicial review. Section 706 requires the FCC to promote broadband in the United States. The intent here is allow, and encourage, a so-called "virtuous circle" of investment and innovation in broadband infrastructure. This allows a range of different investment models with a range of possible retail offerings in broadband services without the imposition of regulated process, access services and without what many see as the "dead weight" of regulatory compliance that would stifle further innovation in access offerings. This option presents a far less onerous set of constraints on providers than the common carrier option of Title II, but at the same time it has fewer protections relating to neutrality and non-discriminatory practices. Indeed, one interpretation of Section 706 is that Internet access providers would be able to levy different charges to different content providers in exactly the manner that this proposed rule making is intended to prevent. The provision here is for certain forms of "Quality of Service" within this contemplated framework, which is in effect a polite euphemism for describing the discriminatory treatment of traffic. There is also wording in the section that is intended to identify and rule out some forms of discriminatory behaviors, and its unclear how this meshes with the ability of these carriers to also impose various service grades upon content flows within a QoS framework. Within the overall objectives of carrier neutrality, this sanctioned ability for a carrier to exercise discretionary control over the delivery of certain content appears to be a concept that is diametrically opposed to that of an open, neutral and accessible Internet access infrastructure.

But the leanings towards a new interpretation of Section 706 that cements in differential pricing and erects a tombstone over the aspirations of a neutral non-discriminatory network has, to quote from John Oliver's monologue, "all the ingredients of a mob shakedown". The cable industry has purchased extensive federal political influence, which appears to have grown at the same rate as the level of competition between competitive access providers has declined and local access monopolies have prevailed across much of the country (<https://www.opensecrets.org/lobby/clientsum.php?id=D000000461>). It would be not be surprising to see a revised version of Section 706 that enshrines the differential treatment of traffic under the guise of Quality of Service, and in effect allow the carriers to continue to levy differential tolls on content carriers under the provisions of "promoting" broadband.

The common carriage ethos is the product of a long struggle for supremacy between content and carriage. As long as competitive and substitutable carriage options exist, then content providers and consumers can use choice as a means of placing market pressure on the aberrant behaviour of individual content providers. But when carriage monopolies or cartels form, the balance of power shifts towards the carriage provider, and content finds itself with few options other than to pay what is demanded. And in such a situation the carriage provider can extract monopoly rentals and ultimately it's the long suffering consumer who is left with a poor quality expensive service with no realistic remedy.

Which approach should the FCC take?

While the economic benefits of a highly capable and ubiquitous network infrastructure are clearly evident, the existing industry structures appear to be locked in a mode of exploiting existing infrastructure, and the incumbents evidently lack the necessary incentives to adapt and improve this infrastructure to meet emerging demands. The issues around network neutrality and the tensions about who owes who and how much between content and carriage are perhaps superficial manifestations of a more fundamental issue about public and private roles in the provision and maintenance of common public infrastructure. But doing little other than hoping that Adam Smith's invisible hand will solve all of this through the actions of competitive suppliers to an open market is probably just wishful thinking. It makes as little sense to festoon our streets with a myriad of cables from competing access carriers, as it does to lay down parallel railway tracks for competing railway service providers. In economic study, this is a case of the subadditivity of costs, where the economies of scale do not compensate for the high level of sunk capital in duplicated infrastructure investment. It implies that the costs of service delivery from only one supplier is socially less expensive in terms of average costs than costs of production of a fraction of the original quantity by a number of competing suppliers. In general, an observation that a market has a property of subadditive costs is a necessary and sufficient condition to lead to the formation of natural monopolies in that market. As recently reported in the Australian financial press, in connection with a recent study into the Internet access market in Australia (http://www.afr.com/p/technology/economic_theory_trumps_real_world_FsEzF7sSoqfmTvi5TJfATI), the economist Henry Ergas introduced his personal submission to the Australian Productivity Commission inquiry on Public Infrastructure by stating: "Most of these assets – which go from ports, roads and railways through to power, water and telecommunications networks – have natural monopoly attributes, in the sense that a single system can handle all of demand at least cost."

Can we make the necessary trade offs and compromises to sustain an efficient market in communications access infrastructure through competitive infrastructure services, and at the same time stave off the inevitable pressures that lead to supplier aggregation, greater concentration, less competition and the formation of monopoly positions? Can the mantra of Tom Wheeler, the current chair of the FCC, "competition, competition, competition", truly provide a stable and effective framework for regulatory oversight of a subadditive activity that continues to be dominated by the entrenched position of local monopolies?

Our experience in global aggregation and concentration in large scale industries, such as the car, ship and airplane construction industries, has not proved altogether reassuring, and in such a light the emergence of local monopolies in the access market is probably a relatively assured outcome. "Too big

to fail” is now being used as an excuse to paper over large scale inefficiencies, and introduce a dependence on the public sector to bail out poor decision making and high risk positions being taken by such private sector actors. So this observation relating to the tendency for local monopolies in the access market is not necessarily a benign or even a neutral observation. Economic theory, and conventional industry practice, says that as a private sector enterprise, a local monopoly operator will restrict output to increase prices in order to maximize its economic profit. However from a social perspective the extraction of monopoly rentals is an economically inefficient outcome, and not only does the consumer face inflated prices and poorer quality services, but there is little incentive for further investment or innovation by service providers, with associated broader reaching consequences for the longer outlook for a competitive and efficient national economy. Considerations of economic efficiency for both consumers and the national interest therefore call for clear regulatory attention for such activities, particularly when we are dealing with such a crucially important sector that underpins public communications and the entirety of the digital economy.

So while it may look on the day like the more challenging option, and it may look like a clear step away from the ethos of a light touch of minimal regulation and the fostering of market-based private sector activities in a competitive environment that provides innovative and efficient services to the public, there is nevertheless much to be said for a Title II common carriage approach to the access carriage sector. The Internet access market is not a market that naturally tends towards strong competition. The tyranny of sunk capital investment in infrastructure leads to a market that naturally aggregates, and such aggregation has an inevitable outcome in the formation of local monopolies. The “light touch” framework to Section 706 in Title I is just not an adequately robust regulatory framework for this space.

If Internet access in the wired broadband space is a market that is populated by local access monopolies, and one where effective competition is just not generally visible, then we need to clearly state our expectations of these providers. Simply hoping that an access provider will be incented to act in a broader public interest even when self interest as a defacto monopoly points elsewhere is perhaps overly naive. What are such expectations? The FCC’s efforts, and Section 706, are certainly a good place to start when thinking about this question. Internet access should be a service that is neutral and non-discriminatory. It should be fairly available to all consumers. Providers should charge a fair price for the service, and not impose monopoly premiums. The carriage service should be entirely independent of the content that is passed across it. But perhaps there’s a bit more as well. Distortions in pricing or services in access carriage should trigger regulatory remedies that allow the common public interest in the fairness and impartiality in of a common carrier to be expressed and enforced. If that means, in the context of the FCC and the US Telecommunications Act, that the service of Internet access is one that is entirely consistent with the role of a common carrier of telecommunications services, then it makes a lot of sense to place this activity within the framework of Title II of the Act.

At its heart, the Internet access business really is a common carrier business. So my advice to the FCC is to take a deep breath, and simply say so.

Postscript – November 2014

The FCC’s deliberations still have some time to go, but it was interesting to see the US President weigh in with his case to advocate that the FCC reclassify consumer broadband services under Title II of the Telecommunications Act (<http://www.whitehouse.gov/Net-Neutrality>).

Disclaimer

The above views do not necessarily represent the views or positions of the Asia Pacific Network Information Centre.