



# CPI Antitrust Chronicle

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### Network Neutrality & Antitrust

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### I. ARGUMENTS FOR AND AGAINST REGULATING NETWORK NEUTRALITY

The concern underlying the network neutrality debate is that owners of consumer broadband data networks—initially wired networks, but now also wireless networks—might discriminate against, or between, particular types of content or particular content providers.

The debate is often confused by proponents and opponents of network neutrality talking about rather different things.

#### *A. Arguments Against Regulation by Network Operators*

Network operators' argue that they need to manage their networks efficiently, and this might include preventing heavy users from taking up all bandwidth on shared infrastructure. In some measure, this is a "commons" problem. Significant parts of the network are shared among multiple customers; absent some network management (so opponents of network neutrality regulation argue), the commons would be used inefficiently. For example, two users each want to use available bandwidth; one to make a non-time-sensitive file download, the other to make a real-time voice or video call. Absent network management, both may get equal access to the commons of the network, resulting in a poor quality voice or video call for the first user, and a file download faster than the second user needs.

Operators also argue they need to derive additional revenue—for example by charging for quality of service guarantees (which require traffic management)—to justify the rollout of improved infrastructure, or that they should be able to provide new specialized services (which would also require management) for which they should be able to charge.

Further, consumers also benefit from price discrimination—heavy users should pay more than occasional users, lowering the cost for occasional users.

Network operators argue as well that the internalization of complementary efficiencies drives them to support a wide range of services on their platforms—though this incentive is undermined if the other service competes with the service providers' own services, such as television.

Finally, network operators often cite the law of unintended consequences; once regulation is introduced, it risks stifling the free flow of innovation on the internet.

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### ***B. Arguments By Proponents Of Network Neutrality***

Proponents of network neutrality, on the other hand, tend to cite different issues to the ones addressed above. If network neutrality regulation is not passed, they argue, the network owner will have both the ability and the incentive to:

- Block or disadvantage content or service providers that compete with the network owners' own products. For example, a network operator could block access to a video streaming website that competes with its own TV services, or to a Voice-over-Internet-Protocol or video calling service that competes with its own services.
- Enter into preferential access arrangements with particular third-party content or service providers. For example, network operator A could guarantee that the website of bookstore B will be delivered faster across its network than the website of bookstore C.

Both sets of arguments are potentially valid; the trick is in determining what to do about them.

### **III. TWO PROBLEMS UNDERLY THE NETWORK NEUTRALITY CONCERN**

Going back to fundamentals, the problem underlying the network neutrality concern is that telecoms markets tend to have one, or both, of the following problems:

1. First, local infrastructure is expensive to build in relation to the likely return, so in many areas there will be at best an oligopoly, and in some—typically rural areas—there will often be a monopoly. But the number of service providers that can deliver services over the network is effectively infinite, so more people have ideas about how to use the networks than there are networks. That leads to concerns about the network owner artificially limiting use of the network so as to privilege its own services, potentially distorting competition, or even to monopolize markets that use the network.
2. Second, some of these services will have network effects. Depending on the market, these may drive the market for these services towards monopoly, absent interoperability / interconnection. In some cases, particularly where interconnection has been encouraged or mandated, this may lead to the “terminating markets” problem seen in voice telephony services.

Network neutrality is most obviously driven by a concern based on the first of these points. Any service—such as a video on demand service—has to pass through the network. But where there are services that exhibit network effects—a video calling service that needs to offer any user to any user calls—then the second point comes into play as well. The debate about network neutrality sometimes passes too quickly over these different issues.

#### ***A. The Oligopolistic/Monopolistic Nature of Local Infrastructure***

The first issue—the oligopolistic/monopolistic nature of local infrastructure—has long been regulated in both the European Union and the United States.

There are at least two different ways to resolve the concern about distortions of competition flowing from the nature of local infrastructure: either (1) introduce greater competition into the network market by encouraging alternative infrastructure investment

and/or pursuing open network policies, thereby decreasing the control of the incumbent network owners; or (2) impose behavioral restrictions on the network owners.

It is a commonplace in antitrust discussions that structural remedies are preferred over behavioral ones. A typical structural remedy would be a divestiture of an overlapping activity in a merger, but structural remedies are not limited to simple divestiture. Although there is no generally accepted definition of a structural remedy, it is often conceived as one that changes the structure of the market in such a way that the market will operate to avoid the harm to consumer welfare that was being feared. This contrasts with a behavioral remedy whereby the—presumably dominant—company in effect promises to behave in a particular way, and remains subject to regulatory oversight of some form to ensure it keeps its promise.

The early approach in the United States was to enforce behavioral restrictions in the form of common carrier principles; later, the U.S. Federal Communications Commission (“FCC”) continued this approach by distinguishing between basic and enhanced services, and ensuring non-discriminatory access to the network for providers of enhanced services. In the 1990s, both the EU and the U.S. regulatory environments opted for a more structural approach, introducing extensive network access rights for competing third parties.

From 2003 to 2005, however, the FCC gradually withdrew virtually all network access regulation, aside from local loop unbundling. Given that the net neutrality debate is based in part on concerns about natural monopoly infrastructure providers, it is likely no coincidence that calls for net neutrality regulation first began as the FCC began to move away from network access regulation.

The EU’s network access policy remains in place; competing operators can access the broadband networks of the incumbent telecoms operators and sell broadband to retail customers. The question of how to regulate telecoms/cable duopolies remains controversial, at least in part because the antitrust concept of collective dominance has unclear boundaries; that the regulatory system finds it difficult to decide how to handle perceived market failures absent clear market power is perhaps one of the reasons why network neutrality is such a difficult issue.

Nevertheless, as a consequence of the current regulation all markets typically have multiple competing DSL operators, albeit all using the broadband infrastructure of the incumbent. Because the competitors each determine their own policies when it comes to access to the internet, this mitigates many of the concerns related to (any lack of) network neutrality. If there are a number of competing internet service providers—albeit virtual ones all using the same infrastructure—competition should deliver the type of service that consumers prefer. If consumers prefer neutral access to the internet, then the market will provide that.

Absent network access, the FCC has now laid down network neutrality principles in its 2010 Open Internet Order—transparency, no blocking of lawful content, and no unreasonable discrimination. (As always, the devil is in the detail when it comes to determining what is reasonable.) The U.S. debate is interesting, because it is being conducted almost entirely in behavioral, not structural, terms; in essence the United States is trying to patch a structural problem with a behavioral remedy. If the focus were instead to shift to a search for a structural solution, the likely obvious answer would be to re-open the network access debate that the FCC

closed in 2005, particularly in view of the re-creation of AT&T through a succession of mergers. Although there are some calls for such an approach, they are relatively muted.

The EU's continued network access regime is one of the main reasons that calls for network neutrality have been more limited in the European Union, with much of the discussion focusing on transparency. Some transparency provisions were included in the 2009 telecoms regulatory reforms, and further work is ongoing to see the extent of the problem in Europe and whether additional measures—perhaps going beyond transparency—are necessary.

### ***B. The Terminating Markets Issue***

These differing approaches do not easily grasp the second of the typical telecoms problems—that of network effects, and that these lead in some markets to what in voice telephony terms is often called the terminating markets issue. In telecoms call termination, customer A wants to call customer B, and customer C is not substitutable; so network operators are sometimes regulated as having monopoly control over their own customers for terminating market services. Among other regulatory consequences, this leads to price-regulated interconnection obligations.

There is an any-to-any imperative in some communications services, that, say, the provision of a search engine to potential customers, or the sale of books online, lacks. A web content provider such as an online bookstore wants to access customers, but is in general neutral as to whether it is customer B or customer C that is reached. This is not an issue of every network operator being a monopolist in respect of termination services to its own customers, but only that if one network operator gets market power on the overall customer market, that may lead to foreclosure of non-preferred bookstores.

There is a difference between an economy of scale (more customers may reduce average costs), and a network effect (more customers may increase demand—or, more pertinently, the loss of even a few customers might destroy it). But there is a further difference in that for some network markets, the importance of being able to reach every customer can create market power for every network in respect of their own customers. This is not only relevant to voice over IP or video calling services, but also to a range of other any-to-any services on the internet—email, instant messaging, and arguably even social media services.

The voice telephony model of terminating markets does not necessarily translate into the same problem when the network operator is providing internet protocol services. The advantage that internet protocol services have is that a network operator's control over the terminating infrastructure does not necessarily translate into that network operator's control over the terminating service. Provided that the infrastructure operator is simply delivering bits, then whether those bits are the termination of a communications service or just an informational website makes no difference. (Perhaps the disadvantage is that it leaves the control in the hands of the service provider itself, arguably leading to greater risk of monopoly and an absence of countervailing power than in the old voice telephony world.)

Even where network operators do control terminating points on the network, their control may be more discriminating than simply allowing or disallowing termination as the termination point can be managed (allowing, for example, for differentiated pricing) and not just opened or closed.

This analysis—where terminating markets are of limited concern—reflects the current any-to-any-design of the internet.

#### IV. THE INTERNET AS AN ANY-TO-ANY DESIGN

The internet was designed as an any-to-any network, with the network being blind to the content and designed only to ensure this end-to-end nature. Given the development of the internet over the last twenty years, this design feature can reasonably be seen to have been A Good Thing.<sup>2</sup>

This feature effectively removes any prospect of a terminating market problem. But to the extent that network operators can take steps that undermine this design decision, then there is a risk that they may introduce a terminating markets problem, re-establishing a degree of control over internet services that they currently do not have. That would not be conclusive of a competition law or regulatory violation, but would be a useful indicator to an enforcement authority to look very closely at what's going on.

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<sup>2</sup> [http://en.wikipedia.org/wiki/1066\\_and\\_All\\_That](http://en.wikipedia.org/wiki/1066_and_All_That) (with apologies to Sellar and Yeatman).