

## Overview

Although it asserts that UBP, like “any tool, ... can be used for both productive and destructive ends” (1), the Report focuses heavily on UBP’s alleged harms (though it is somewhat less conclusive with respect to the use of UBP for wireless broadband, stating at one point that “congestion is a legitimate concern” for wireless ISPs (37)). It begins with a summary of important developments in the move toward UBP during 2011 (3-5) and the more general trend in that direction, discussing various trials conducted by broadband Internet Service Providers (“ISPs”) over the past several years (6-13). It briefly addresses the benefits of UBP, focusing on its role in promoting efficient network usage (14), but argues that the principal justification ISPs cite for UBP is its necessity for permitting cost recovery and “controlling heavy users” – contentions that the Report finds “highly questionable” (15).

The Report then criticizes the stated rationales for UBP at some length (15-35). Although this section of the Report is not well organized, its key claims in this regard are as follows:

- “In theory,” there is no limit on broadband capacity, and therefore bandwidth is never actually “consumed” (17).
- It is very difficult to estimate the costs of broadband service, because fixed costs are high and marginal costs are very low (18-19).
- Cable providers are enjoying rising returns on invested capital (“ROIC”), and Verizon and AT&T would be doing so if not for legacy access line loss (21).
- To the extent ISPs have invested in network capacity, they have done so to facilitate next-generation offerings such as IP video, not to address problems created by “bandwidth hogs” (21).
- “[I]f the point of UBP is to provide both a steady flow of profits and a mechanism to ration network usage in a way that obviates the need to make consistent improvement in the network, then the cost recovery rationale is being abused” (22).
- The growing role of content delivery networks (“CDNs”) shows that ISPs can offload costs to content providers rather than to end users (23).
- The annual rate of growth for fixed broadband networks will, according to Cisco, be 29% from 2010-2015, compared to 46% in 2010 (24).
- UBP is an ineffective means of addressing congestion because it will not “guarantee” that users forego usage during times of high demand (28-30).
- UBP may reflect an absence of competition in the broadband market rather than a need to manage usage (30-35).

Next, the Report argues that flat-rated pricing offers benefits not sufficiently appreciated by ISPs and regulators (35-47). For example, the Report contends that customers prefer to purchase a bundle containing more minutes than they need rather than being subjected to overages, usage tiers or caps (39-41), and that customers are “willing to pay extra for the peace of mind” associated with flat rates (41-45): “Choice is good in general, but it can be overwhelming, and what we observe is consumers flocking towards simplicity and usability” (45). It proceeds to argue that UBP would undercut downstream competition for services relying on broadband connectivity – chiefly online video – and that, by depressing usage, such pricing would obstruct other national goals, such as broadband adoption, distance learning, employment, and innovation (47-53).

Finally, the Report offers five broad “recommendations” (54-56). These are based on the Report’s conclusion that “on the wired Internet ... the rate of progress in technology appears to be comparable to the rate at which traffic demand is rising, so that should be possible to support the growth in traffic without increases in the level of investment,” undercutting the need for UBP, whereas “[o]n the wireless side, traffic is growing faster than carriers are investing in capacity improvements,” such that “the case for UBP appears far stronger” (54). The five proposals are as follows:

- ISPs relying on UBP should be required to provide straightforward, up-to-date ways for users to measure their network activity, and should be forthcoming about how caps are set and what goals UBP is designed to achieve (54-55).
- Any UBP framework should operate only during the times of day when usage is greatest (and thus most likely to strain peak network capacity) (55).
- Regulators should vigilantly monitor UBP “schemes” (55-56).
- ISPs should not be permitted to manufacture network scarcity by failing to invest in new facilities (56).
- ISPs should collect and report detailed information regarding their offerings (56).

### **Critique**

The Report teems with inconsistencies and unstated assumptions, severely undermining its points. We wanted to offer our sense of some of these weaknesses:

- ***Presumed Jurisdiction.*** At the outset, the Report presumes that the issues discussed are properly subject to regulatory oversight, never recognizing the Federal Communications Commission’s (“FCC’s”) very limited jurisdiction over broadband Internet access.
- ***Lack of Economic Analysis.*** Although it relies on economic claims, the paper presents no rigorous economic analysis or model. It never even discusses the concept of allocative efficiency, which is the chief economic rationale for setting prices in a manner that tracks costs (and therefore promotes socially optimal consumption decisions); never addresses long-running discussions over how to price service in a high-fixed-cost, low-marginal-cost industry; and never reflects any appreciation of the ways in which UBP would benefit lower-volume users. Rather, the Report assumes that all prices would either stay constant or rise. This assumption “stacks the deck” by framing the debate as one between existing prices and higher prices. The real question is whether, on a holding total prices (revenues) equal, it is better for ISPs to apply flat rates across customers or charge customers by usage, *not* whether ISPs should be permitted to charge the amounts they charge now or increase overall revenues by charging some users more.
- ***Presumption of Unlimited Capacity.*** The Report assumes that network resources are effectively unlimited (17-18), which of course obviates the principal rationale for UBP. It also appears to presume that network demand will not grow over time, even as it mentions predictions showing otherwise (24). Indeed, given ongoing growth, the 29% annual demand growth expected for 2010-2015 will, for most years, reflect a larger absolute year-over-year increase in demand than

the 46% rate experienced in 2010. (For example, if total demand equaled 100 GB in 2009 and increased by 46 GB, to 146 GB, in 2010 (reflecting a 46% increase), an annual 29% increase would amount to an additional 42 GB in 2011, an additional 55 GB in 2012, an additional 70 GB in 2013, and so on.) As network demands grow, usage will routinely push up against peak capacity, requiring management of network resources and the expansion of network plant. By assuming away scarcity except during certain peak usage periods, the Report overlooks the main reasons why UBP can be efficient.

- ***Presumptions Regarding Lack of Investment.*** The Report on several occasions suggests, without any evidence, that ISPs are using UBP as a substitute for network investment (21, 22). As it indicates elsewhere, however, providers have made massive network investments: For example, the Report cites \$12.4 billion in cable infrastructure expenditures in 2010 (19). Wireline and wireless providers have also undertaken tremendous capital expenditures to improve network performance – as of course they have needed to do, and will continue to need to do, as traffic expands dramatically. The Report oddly dismisses those investments as being prompted by the roll-out of triple-play offerings rather than abuse by “bandwidth hogs” (21), but it is not clear why this matters: The ISPs have invested and expanded network capacity to respond to growing demand, and their use of UBP to manage usage cannot be considered less justifiable when used to manage that demand.
- ***Selective Reliance on Moffet.*** The Report’s consistent reference to Craig Moffet’s commentary seems odd, given Moffet’s long-standing pessimism regarding the ability of providers to cover their costs as communications technologies become commoditized. If anything, Moffet’s work seems to support the need for more dynamic pricing mechanisms to monetize the value of the network. (Indeed, the Report quotes Moffet as noting that “building networks is a tough way to make a living” (20).)
- ***Inconsistent Recognition of Historic Reliance on UBP.*** The Report argues that “[r]unning and maintaining a network has always required an ongoing capital expenditure,” and that “[t]herefore, UBP cannot be justified simply because networks need to be maintained and upgraded” (22). But this does not follow, because (as the Report elsewhere acknowledges) networks have also always relied on metered pricing, too – from per-minute local and long-distance rates to per-minute dial-up ISP charges such as those imposed in AOL’s early days to today’s tariffed access service offerings.
- ***Flawed Understanding of CDNs.*** The Report reflects a flawed understanding of the role played by CDNs, arguing that ISPs can address costs by shifting them to CDNs (23-24, 26) (“[N]etwork operators also have the option to shift the costs of congestion management on to third-party content and service providers.”). This claim is doubly flawed: First, ISPs do not have *carte blanche* to pass costs to CDNs; generally, *content providers* hire the CDN to speed delivery of their specific content, entirely independent of the ISP. Second, CDNs do nothing to relieve ISP costs where they matter most – i.e., *in the last mile*.
- ***Flawed Understanding of UBP Incentive Structure.*** The Report criticizes UBP on the basis that per-unit charges “do[] not guarantee” (28) that a particular user will curb usage. This argument is facile: The point is not to “guarantee” non-use but to provide incentives for users to consider

the costs and benefits of usage and to make appropriate economic choices. Indeed, ISPs rely on many users continuing to make use of the network even during the most highly congested periods. Indeed, toward the end, the Report concedes that “usage tends to about double when metering is abandoned” (46). The Report’s conclusions regarding “bundling” and the benefits to consumers of paying extra to avoid “mental accounting costs” (41-46) are odd, in that they seem to recognize that consumers could pay less for the amount of service they actually use than they pay under flat-rated plans. They also seem highly paternalistic, insofar as they assert that consumers and ISPs are both ignorant of their true desires. Indeed, though the Report does not address this point, the wireless space has developed in a manner that reflects a preference for highly specific, targeted bundles, with customers choosing the preferred number of minutes and mobile messages permitted.

- ***Failure to Distinguish Efficient and Inefficient Usage.*** Although it indicates that UBP would lead to lower prices for many consumers, it also concludes that UBP would deter usage for education, e-learning, and other preferred ends (49-53). Here, again, the Report fails to differentiate usage from efficient usage, assuming only that more use is better use. A sound economic approach would consider the value of the usage and compare it against the cost of such usage, and would promote only those uses whose value exceeds the associated cost.