Reconsidering Digital Distribution

Digital Distribution Beyond the Last Mile

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A large portion of this year's digital distribution debate has focused on disputes between content providers like Netflix and Internet Service Providers like Comcast and Verizon. At stake is access: Netflix's access to consumers via the broadband networks owned by ISPs (i.e. the infamous "last mile") and consumers' access to Netflix via the same networks. At the center of this debate are accusations that ISPs throttle bandwidth allotted to Netflix, consequently slowing down streaming video, with the presumed goal of forcing Netflix to pay access fees to ISPs for fast lanes to consumers. These disputes are connected to the larger issue of net neutrality, i.e. the idea that ISPs should be neutral toward all concent flowing across their network and not discriminate against any particular content provider.

An issue that comes up less frequently in these discussions is how Netflix's content reaches the last mile provided by ISPs. There is a vast territory between Netflix's servers and the last mile: there are fiberoptic cables owned or rented by Netflix, there are interconnection points where Netflix meets Comcast and Verizon, and there are content delivery networks, an array of distributed servers that cache Netlix's content for faster distribution. This territory consisting of cables, interconnections, and CDNs is not only occupied by Netflix; rather, almost all content flowing across the web moves through these points. Likewise, this infrastructure is not new, but has a long history of its own, stretching back to the early 1990s before the web was a mass medium (Blum, Chapter 2). The places (like Ashburn, VA) and companies (Equinix or Level 3) dominating this part of digital distribution do not come up frequently even though their role in making sure we can access streaming video is as significant as the parts played by Netflix and Comcast or Verizon.

Indeed, broadening the discussion of digital distribution to include the territory beyond the last mile allows us to recognize how far-reaching the impact of ISPs' demands for access tolls to their networks is. Historically, creating connections among networks owned by various companies—a process known as peering—has happened very amiably. After all, everyone who does business over the internet is interested in getting their data from one point to another as smoothly as possible. Moreover, peering connections have traditionally happened without payment because the direct connection is valuable enough (Brodkin). ISPs' demand for tolls disrupts this long-standing arrangement and can theoretically expand to anyone wanting access to Comcast or Verizon customers, including companies like Facebook or Google.

While the last mile is very tenuously protected by the Open Internet Order (the FCC's version of net neutrality, currently under renegotiation) and thus places nominal constraints on ISPs' interaction with end users, there is no equivalent for peering. The FCC has no oversight over companies that maintain interconnection points and content delivery networks (Holt, 25). The implications are two-fold: there is nothing stopping

ISPs from demanding payment for access at the point where the peering connection happens; likewise, there is no provision for stopping the companies maintaining the peering connections from increasing what they charge for enabling these connections in the first place. In other words, the territory made up of the networks that deliver content to the last mile is as much under negotiation as the last mile itself, and it is even farther outside of the reach of consumers and the FCC than the spaces covered by net neutrality.

References:

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