

The Mixed Blessing in Subsidized Internet Access

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The Main Points

My paper identifies criteria for distinguishing reasonable sponsored data/zero rating arrangements and unlawful ones in the absence of clarifying legislation.

2 labels for these pricing strategies: Sponsored data emphasizes that a third party and not the carrier or consumer pays for exemption of specific traffic from debiting a monthly data plan. Zero rating highlights the effect on consumers' direct, out of pocket costs. These arrangements offer cost-saving subsidies paid by content providers and even manufacturers of content receiving devices such as game consoles.

Other arrangements include internal subsidies within a company providing both content and carriage, inducements for broadband subscribers to migrate to more expensive data plans, and rewards for viewing specific advertisements, or downloading certain applications.

U.S. opponents consider such arrangements FCC-prohibited paid prioritization while supporters see “free rider” opportunities to stimulate interest in the Internet by prospective users who cannot afford access, or do not see a compelling value proposition.

In some instances, these arrangements have parallels with toll free telephone numbers, “free” shipping and perhaps even parking fee reimbursement by vendors. In other instances, they execute a strategy to harm competition by favoring affiliates, or surcharge payers.

The paper recommends that regulators permit (if not encourage) consumer welfare-enhancing, free rider opportunities, especially in LDCs, but also prohibit anticompetitive, deceptive practices that disadvantage competitors rather than shift access cost burdens from broadband subscribers.

I acknowledge there some so-called marketing/service tiering arrangements could constitute “pay to play,” extortion schemes, but others constitute lawful and beneficial QOS/QOE enhancements.

Regulators should use ex post, complaint investigation rather than ex ante categorization and near absolute prohibitions.

False Positives vs. False Negatives

The network neutrality debate juxtaposes ex ante safeguards aiming to prevent undetected, but actual harms to consumers and competition with ex post remedies that apply only after proof of harm.

Ex ante regulation risks imposing unneeded remedies for false positives; ex post remedies may arrive too late, or never resulting in false negatives.

On 3 occasions, the FCC has opted for ex ante regulatory oversight based on the view that Internet Service Providers (“ISPs”) have the incentive and ability to engage in practices that harm consumers and competitors.

The FCC’s most recent initiative reclassifies broadband Internet access as common carriage thereby securing jurisdiction to apply muscular, ex ante measures.

Opponents of network neutrality favor ex post remedies for proven harms resolved in judicial fora.

Paid Prioritization Prohibited

The FCC's March, 2015 Open Internet Order prohibits surcharges for paid prioritization of specific traffic streams on grounds that ISPs could extort money for fast lane service while relegating cash poor and unaffiliated content providers to slow lanes.

The FCC also prohibits “pay to play” arrangements that condition avoidance of artificial congestion with a surcharge. ISP prohibited from traffic throttling (deliberate delays) and packet blocking/dropping.

Incumbents are quite adept at framing discriminatory practices as positive customer-tailored “solutions,” e.g., routing specific content via a “specialized network” not subject to Internet regulation.

The FCC responded with a general “no-unreasonable interference/disadvantage” standard for evaluating potential barriers to competition such as “sponsored data” and service tiering.

Zero Rating

Zero rating/sponsored data arrangements pay for content switching, routing and transmission from ISPs, content providers, or content distributors located upstream from the ISP providing the “last mile” delivery of traffic.

This payment scheme legitimizes the creation of a two-sided market with last mile ISPs able to create a second revenue streams in addition to monthly retail, broadband service subscriptions.

Like credit card companies, last mile ISPs can shift charges between the 2 payment sources.

Zero rating offsets payment from retail subscribers by stopping the meter that otherwise would debit a monthly data downloading/uploading allowance; exceeding a cap triggers service throttling, or a surcharge for more throughput, e.g., \$10 more for an additional 1 Gigabyte of content (throughput).

Wireless data plans typically provide 1-5 Gigabytes of content that subscribers can exhaust with the streaming of a few full length movies.

Recently the NRAs of Chile, Egypt, India, Japan and several E.U. nations prohibited zero rating, but the pricing strategies exists in many developed and developing nations.

Zero rating constitutes a form of price discrimination, but is it “unreasonable”?

Many Types of Sponsored Data/Zero Rating Arrangements

Face Book's Free Basics ostensibly promotes broadband access in Lesser Developed Countries to a "curated" sliver of content. Generally LDC plans stimulate demand through subsidies and the ability to mine data and consumer use trends. Face Book is not operating as a charity.

TMobile's Binge On encourages migration to a more expensive service tier with a higher data allowance by offering to exempt certain specific types of music, video and game streaming from data plan debiting. See <http://www.t-mobile.com/offer/binge-on-streaming-video-list.html>.

Some arrangements seek to stimulate demand by non-users lacking discretionary income, or interest in access.

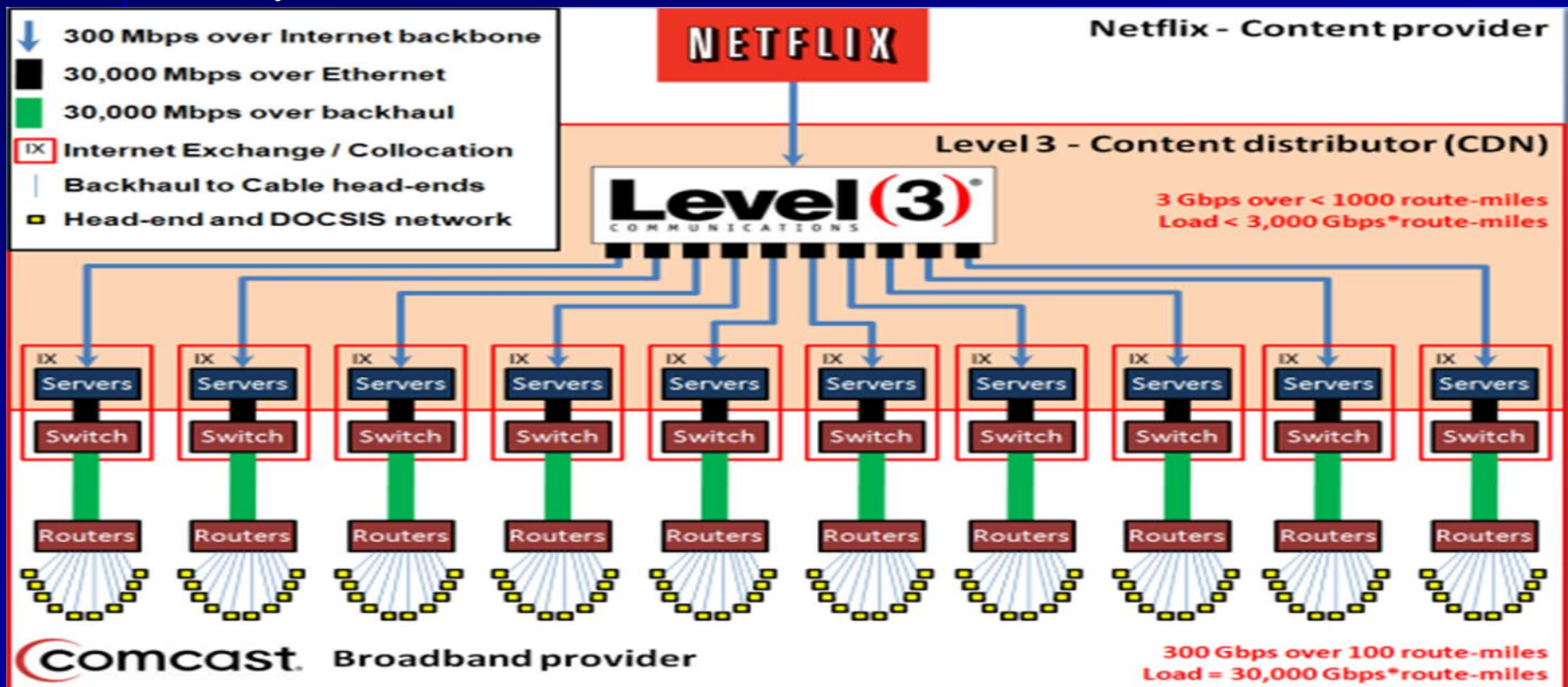
Others appear more oriented at upselling, i.e., offering zero rating as a "deal sweetener" for migration to a more expensive service tier with higher data rate.

Others appear to shift the costs of congestion remediation from retail subscribers to upstream carriers and content providers/distributors. How to characterize the Netflix-Comcast agreement: surcharge, extortion, paid peering, Most Favored Nation treatment, or simply a strategic two-sided market decision by intermediary/platform ISPs?

Growing Dominance of Internet Platform Intermediaries

Internet Service Providers (“ISPs”) operate as intermediaries in a double-sided market with retail, broadband subscribers downstream and other ISPs, content distributors and content creators upstream.

The Internet ecosystem supports powerful platform operators who can capture large market share by exploiting scale economies, network externalities and high switching costs/barriers to market entry.



Proliferation of Interconnection Models

- ISPs consider price and QOS discrimination essential for generating new profit centers; “better than best efforts” offered in lieu of a single “best efforts” model.
- New alternatives to the peering/transiting dichotomy: use of Internet Exchange Points; paid peering (Comcast-Netflix); CDN surcharges (Level 3-Comcast), equipment co-location, e.g., Netflix Open Connect Network; “specialized networks” and Intranets; Multiprotocol Label Switching and non-carriers like Google securing Autonomous System identifiers.
- Retail ISPs providing last kilometer service test pricing limits by tiering and raising end user monthly subscriptions at the same time as they impose surcharges on upstream ISPs, and offer paid peering options to highest volume content providers, e.g., Netflix.
- Retail subscribers quickly become agitated when QOS suffers and have no patience with ISP compensation disputes, much like cable television subscribers denied access to particular networks during a retransmission dispute.

Legacy and New Interconnection Models

<p>Peering/Barter—zero cost interconnection based on near parity in traffic volume, or reliance on external subsidy</p>	<p>Paid Peering—traffic volumes not in parity, e.g., CDNs; content source secures higher QOS with closer and earlier interconnection</p>
<p>Transit—volume-based interconnection for pay</p>	<p>Unchanged, but smaller ISPs agree to peer, or meet at Internet Exchange Points</p>
<p>Unwelcomed Hot Potato Routing—“premature” traffic hand-offs; considered abuse of privilege</p>	<p>Welcomed Hot Potato Routing—offered for additional compensation</p>
<p>Primary Reliance on Receiver Pays—end user broadband subscriptions cover cost of service</p>	<p>Receiver + Sender Pays--Last km. ISP seeks to operate in a 2x-sided market combining sender and receiver payments; strategic balancing of financial burdens, including “sponsored data/zero rating”</p>

Economics of Zero Rating

Exploding demand for downloading/streaming video and other “over the top” applications strengthen last mile ISP negotiation leverage, because of terminating monopoly power and near immediate consumer anger at any QOS degradation.

Last mile ISPs have pricing power, particularly in nations lacking robust broadband competition (which includes the U.S. and most LDCs).

Zero rating enables last mile ISPs to shift some of the total content delivery cost away from consumers.

At the very least, this creates “free rider” opportunities; it also may generate positive networking externalities by increasing the overall number of network users which in turn enhances the value of the network used.

On the other hand, it can distort the “marketplace of ideas” by creating discounts for accessing specific “curated” content in a “walled garden.”

Network neutrality advocates fear the next killer application won't get a fair marketplace trial if ventures lack funds to pay surcharges.

Cost/Benefit and Legal Analysis of Zero Rating

Even in LDCs, zero rating provides some existing users with the chance to conserve data allotments.

Content providers like Facebook use it to “groom” future subscribers for migration to full-featured sites.

Significant distortion of the competitive marketplace of ideas; deep-pocketed players (mostly incumbents) can secure a competitive advantage.

Zero rating favors content types as well as specific speakers.

In many LDCs, handsets and capacity are inexpensive; emphasis needed on demand pull stimulation, not the supply-side.

Slippery slope argument: starts the process for expanding loop holes and exemptions to the “best efforts” baseline.

Isn't a half-filled glass better than an empty one?

Why restrict or present free ridership opportunities, particularly by the most impoverished?

Zero rating has many parallels to broadcast advertising and universal service subsidies.

Conclusions

As broadband markets mature, services, compensation arrangements and interconnection types proliferate even as many consider everyone entitled to a low cost, universally available, nondiscriminatory baseline.

The “court of public opinion” likes subsidies and free-rider opportunities.

ISPs will frame zero rating in developed nations as marketing having nothing to do with traffic prioritization, and in developing nations as laudable, universal service promotion.

Opponents suspect ISPs of creating scarcity and rationing access to resources that previously managed to deliver content without surcharge, or congestion.

NRAs will continue to struggle to find a lawful way to impose open Internet rules calibrated to sanction only harmful QOS and price discrimination without creating investment disincentives. Better to use ex post complaint and dispute resolution than ex ante rules and near absolute prohibitions.

NRAs should emphasize commercial peering/interconnection negotiations, including specialized arrangements.

Conclusions (cont.)

ISPs appear to have solidified their control over the Internet ecosystem, despite the conventional wisdom that “content rules.” Last mile ISPs can demand compensation from both downstream broadband subscribers and upstream carriers and content providers.

In most countries ISPs do not have to be treated as public utilities for the NRA to impose good faith, transparency, truth in billing and reporting requirements.

Common carrier regulation has a long and tortuous history of protracted disputes over what constitutes “reasonable” discrimination and “similarly situated” parties.

Zero rating fits within a universal access mission, provided NRAs establish rules on who qualifies, how long the promotion runs and what subsidizers can do with consumer data they generate.

On balance, the benefits of zero rating exceed the safeguards generated by an absolute prohibition.

Conditional zero rating can generate more benefits than harm and comply with nondiscrimination laws and regulations.