Open Internet Advisory Committee
Federal Communications Commission
Summary of Meeting
May 7th, 2013

The Open Internet Advisory Committee for the FCC was convened for its fourth meeting at 10:30 A.M CDT on May 7, 2013 at Northwestern Law School. A full video transcript of the meeting is available at the FCC website at http://www.fcc.gov/events/open-internet-advisory-committee together with a copy of all materials presented at this meeting.

In accordance with Public Law 92-463, the entire meeting was open to the public.

Committee Members Present:

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<th>Brad Burnham, Founding Partner, Union Square Ventures – attended remotely.</th>
<th>Matt Murphy, Disney and ESPN Media Networks.</th>
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<td>David Clark, Senior Research Scientist, Massachusetts Institute of Technology Computer Science and Artificial Intelligence Laboratory.</td>
<td>Jennifer Rexford, Professor of Computer Science, Princeton University.</td>
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<td>Alissa Cooper, Chief Computer Scientist, Center for Democracy &amp; Technology.</td>
<td>Dennis Roberson, Vice Provost &amp; Research Professor, Illinois Institute of Technology (representing T-Mobile).</td>
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<td>Charles Kalmanek, Vice President of Research, AT&amp;T.</td>
<td>Chip Sharp, Director, Technology Policy and Internet Governance, Cisco Systems.</td>
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<td>Leslie Daigle, Chief Internet Technology Officer, Internet Society.</td>
<td>Charles Slocum, Assistant Executive Director, Writers Guild of America, West.</td>
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<td>Shane Greenstein, Professor and Kellogg Chair of Information Technology, Kellogg School of Management, Northwestern University.</td>
<td>Marcus Weldon, Chief Technology Officer, Alcatel-Lucent.</td>
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<td>Jessica Gonzalez, Executive Board, Media and Democracy Coalition; Vice President for Policy &amp; Legal Affairs, National Hispanic Media Coalition (representing NHMC) – attended remotely.</td>
<td>Michelle Zatlyn, Co-Founder &amp; Head of User Experience, CloudFlare – attended remotely.</td>
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<td>Kevin McElearney, Senior Vice President for Network Engineering, Comcast.</td>
<td>Jonathan Zittrain, Professor of Law and Computer Science and Co-Founder of the Berkman Center for Internet and Society, Harvard University.</td>
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FCC staff attending: Tejas Narechania, Designated Federal Officer.
Chair Zittrain began the meeting with a round of re-introductions, and began the meeting by inviting the various working groups to present their reports, taking questions and comments from the wider committee. Highlights from the discussion included:

**Mobile Broadband**

Jennifer Rexford, the chair of the Mobile Broadband working group presented its report on openness in the mobile broadband ecosystem. Following-up on the report on the AT&T’s handling of Apple’s FaceTime app on its 3G network last meeting, Prof. Rexford reported on the complicated relationship between the five major sectors that converge in this space: device manufacturers, OS developers, mobile carriers, network equipment vendors, and application developers – all of which face various pressures from consumers and from each other.

The working group discussed five specific relationships between these parties: (1) App Stores (app developers and OS developers); (2) SDK and handset agreements (app developers and device manufactures); (3) Carrier service agreements (users and mobile carriers); (4) Network-unfriendly applications (app developers and mobile carriers); and (5) WiFi offloading (users, mobile carriers, and third-party commercial WiFi providers). The report concluded by reiterating that this ecosystem is complex and the working group will continue to work on these case studies and attempt to identify a set of principles that will lead to greater transparency and a more harmonious relationship between these various stakeholders.

In the discussion following the presentation, committee members suggested that the FCC may not have authority to regulate all aspects of this ecosystem – although spectrum policy, which was not one of the working group’s five case studies, is part of the FCC’s purview. Nevertheless, the working group emphasized the importance of the educational role the FCC could assume in shaping this ecosystem, in addition to whatever regulatory authority it did possess. Members noted the complexity and dynamism of the mobile broadband ecosystem, and that service providers can no longer exercise the same degree of control as before. Finally, members discussed the Open Internet Order and its application to various types of WiFi operators, in contrast to wireline and cellular connections.

**Specialized Services**

David Clark, the chair of the Specialized Services working group, began by explaining the difficulty with defining “specialized services” with specificity. Rather than debating the definition in abstraction, the working group has turned to specific case studies to test their proposed criteria. The two case studies for the day, which other members of the working group presented, were set-top boxes and third-party purchases of services for customers.

Chuck Kalmanek presented the set-top box (STB) case study as a means for examining the three criteria for defining specialized services: reachability, capacity isolation, and
pricing and payment. Mr. Kalmanek discussed three categories of STBs: cable/telco-provided STBs; third-party STBs such as the Xbox; and third-party unaffiliated “over the top” devices such as a Roku or Apple TV. While the third is not a specialized service, as it simply avails itself of the broadband Internet access, the other two are in the middle of the specialized services debate.

Leslie Daigle presented the second case study, which applies to instances in which service providers, such as online games like EVE Online, want to guarantee a high level of end-to-end quality of service to their customers. After outlining several ways by which a provider could provide such a service, and describing how that service might affect general Internet access, she suggested a general rule whereby a service is acceptable as long as normal broadband data isn’t prioritized and no other user’s access is affected.

Dr. Clark concluded by noting that the working group’s focus should be on the consumer, examining the quality of experience in the various public Internet provider services. One way of measuring that would be by picking a “basket” of apps and running them on various networks and have users rate the quality of their experiences.

In the discussion following the presentations, committee members suggested that while capacity isolation seems to be an especially important criterion, services shouldn’t be reclassified simply because they moved to a digital network. It was further pointed out that such distinction between the underlying network technology are often transparent to the end-user. Finally, it was noted that there are many more steps between the user and the content providers for Internet data – including infrastructure items, servers, and content – than for traditional cable TV providers, which may make defining a user quality of experience more difficult.

Economic Impacts of Open Internet Frameworks

Shane Greenstein, the chair of the Economic Impacts working group, presented a progress report that focused on data caps and usage based pricing. The report discussed the current facts and practices regarding data caps, as well as the perception of such practices by users. The report noted that users, especially on wireline data connections, tend not to monitor or control their data usage, which is difficult for users as they do not have control over many elements of data use: web-embedded video, automated updates, auto-play advertising, etc. The report also showed that while ISPs could offer continuous pricing options, they usually offer tiers of plans which often price discriminate against users with a higher need and a higher willingness to pay. Finally, the report noted that there is little data about the effectiveness of data caps or thresholds for incentivizing conservative data usage, and the working group spent some time discussing what ideal data might look like for this issue.

In the discussion following the presentation, committee members discussed the differences between the market in the United States compared to Canada, noting in particular that 50% of users in the U.S. use more than the average limitation in Canada. It was further suggested that mobile caps and throttling are much more of an issue than
restrictions on wireline services, since the caps are usually much higher for wireline plans. Finally, members discussed the kind of information or controls that might be valuable to consumers, such as the ability to control or prioritize one’s devices or content, or labels for applications – like we have for cars or appliances – on either an efficiency or absolute scale.

**Transparency**

Chip Sharp presented on behalf of the Transparency working group, and discussed the group’s latest thinking regarding their logo program, which they’ve renamed a label, akin to a nutritional label. The goal remains the same, which is to provide an apples-to-apples comparison of service providers in an understandable format to consumers looking to purchase a subscription. The three basic elements to include are: (1) performance (upload and download speeds); (2) data caps; and (3) price. The working group is still discussing when and how to calculate price, how to handle bundles and promotions, and the methodology for the self-reporting from service providers. In addition, the working group has discussed including factors such as customer service, ease of use, setup time, quality, and variability.

Following the presentation, committee members discussed the difficulties regarding the details of the labeling program. For example, data speeds vary a great deal within an infrastructure – for example, DSL speeds decrease the further one is from the server, or mobile reception varies from room-to-room within a house – and prices fluctuate wildly based on promotions. One committee member proposed collecting the labels online, either on the ISP’s website or the FCC’s, so that the pricing can be dynamic rather than reflect a trailing average. In addition, some suggested that these labels should include Quality of Experience – which is especially hard to quantify – and Specialized Services. A discussion ensued about whether the goal of the labels should be to provide information for consumers choosing a provider at time of purchase, or whether the labels should provide performance benchmarks about what Quality of Experience is “good enough” – akin to a nutritional label noting how much Vitamin C one should have daily.

**Conclusion & Public Comments**

Chair Zittrain closed the meeting by mentioning the July meeting in Washington, DC, at which the committee plans to have its final report for the term ready, drawn largely from the four working groups’ work.

There were no comments from the public, but additional comments can be emailed at tejas.narechania@fcc.gov. The meeting was adjourned at 12:40 PM. The next meeting is scheduled to take place in Washington, D.C. on July 9, 2013, from 10:00 A.M. to 1:00 P.M. (EST).