Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Preserving the Open Internet	)	GN Docket No. 09-191
	)	
Broadband Industry Practices	)	WC Docket No. 07-52

COMMENTS OF
The Association of Research Libraries, the American Library Association, and
EDUCAUSE

I. Introduction

The Association of Research Libraries[1] (ARL), the American Library Association (ALA)[2] and EDUCAUSE,[3] are pleased to respond to the two issues raised by the Federal Communications Commission (FCC) in its Sept. 1, 2010 Public Notice (hereinafter cited as the *Further Inquiry Notice*).[4] Specifically, the FCC asked for additional comment on the following two issues:

> The first is the relationship between open Internet protections and services that are provided over the same last-mile facilities as broadband Internet access service (commonly called "managed" or "specialized" services). The second is the application of open Internet rules to mobile wireless Internet access services, which have unique characteristics related to technology, associated application and device markets, and consumer usage.

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[1] The Association of Research Libraries (ARL) is a nonprofit organization of 125 research libraries in North America. ARL's members include university libraries, public libraries, government and national libraries. ARL influences the changing environment of scholarly communication and the public policies that affect research libraries and the diverse communities they serve. ARL member libraries make up a large portion of the academic and research library marketplace, spending $1.3 billion every year on library materials and resources.

[2] The American Library Association (ALA) is the world's oldest and largest professional association for the library community – representing over 61,000 members. Its mission is to provide leadership for the development, promotion, and improvement of library and information services and the profession of librarianship in order to enhance learning and ensure access to information for all.

[3] EDUCAUSE is a nonprofit association whose mission is to advance higher education by promoting the intelligent use of information technology. The current membership comprises more than 2,000 colleges, universities, and educational organizations, including 200 corporations, with 15,000 active members.

[4] *See Further Inquiry into Two Underdeveloped Issues in the Open Internet Proceeding*, GN No. 09-191; WC No. 07-52, DA 10-1667, Public Notice, FCC Rec'd __, __, (2010) (*Further Inquiry Notice*).

We applaud the FCC for fostering a consensus around the need to codify the *Internet Policy Statement's* four principles, as well as the two additional nondiscrimination and transparency principles.[5] A free and open Internet is fundamental to the mission of public and school libraries, academic and research libraries and colleges and universities to enhance access to information and encourage public discourse as part of the democratic process. The Internet provides students, teachers, and library patrons a platform to engage in research, teaching, learning, and healthy scholarly debate. High-capacity broadband fosters the development and use of innovative learning services, including wiki-collaborations, cloud computing, job-training, e-learning, online government services, access to subscription-based databases, telemedicine applications By codifying network neutrality principles, the FCC will ensure that the Internet continues to be a platform for innovation and democratic debate.

Given the consensus reached around so many of the principles in the Open Internet proceeding, the Commission must now ensure that future developments in services, applications and networks do not undermine the central goal of preserving an open and robust public Internet.

Before launching into the specific issues raised in the Notice, it may be useful to provide a basic explanation of the variety of ways in which public libraries, research libraries, and colleges and universities interact with broadband networks and services:

1. Libraries and higher education often purchase broadband access to the Internet from wireline and wireless broadband Internet access providers. In this regard, libraries and higher education are "consumers" of broadband services much like residential and business consumers.

2. In addition, libraries and higher education often operate their own private networks, which are networks that connect a defined set of users (not the general public). These private networks sometimes take the form of "intra-nets", which provide connections between several users physically located at the same location (e.g. on a college campus, or within a library building) or to users employed by the same institution but physically located at several locations (for instance, networks connecting together several satellite community college branches or several libraries in a municipal system). These private networks can also include "inter-institutional" networks that link several different but related institutions directly to each other (such as colleges and universities, or research institutions). There may be other forms of these private networks as well that allow colleges, universities, libraries and other similar institutions to communicate directly with each other without travelling over the Internet. The primary difference between these private networks and the public Internet networks is that private networks are not open to the general public. Rather, their purpose is to serve the needs of a specifically-identified (i.e. "closed") set of users.

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[5] See, *Further Inquiry Notice at 2-3*, (mentioning that much of the disagreement related to the codification of the Internet Policy Statement's principles as well as nondiscrimination and transparency principles was narrowed through the Open Internet comment process).

3. The private networks operated by libraries and higher education may also provide interconnections to the public Internet for the benefit of their students, teachers, administrators, and library patrons. In this regard, library and higher education networks are not offering broadband Internet access to the general public in the same manner as a commercial entity. They are only providing access to an Internet Service Provider (ISP) for a closed set of users determined by the institution. In addition, the private networks operated by libraries and higher education generally do not themselves provide direct connections to the Internet; they usually deliver traffic to an (ISP) that connects to the Internet. These private networks should not be unintentionally caught up in the rules that are meant to apply to broadband services to the general public. These private networks have historically remained free of traditional telecommunications regulation, and they should remain so.

4. Libraries and higher education also are creators of content available on the Internet. For instance, libraries increasingly digitize, organize and archive information for use by the general public and their user communities over the Internet. Libraries offer on-line catalogs, research services, and access to subscription-based databases. Higher education offers Internet-based distance learning, telemedicine, research, collaborative projects, and scientific exploration. These educational services and applications might be de-prioritized if the broadband Internet access service provider is permitted to engage in discrimination or permitted to prioritize traffic based on the content creator's ability to pay.

5. Libraries and higher education also offer wireless (Wi-Fi) connectivity to their users. We appreciate that the Notice of Proposed Rulemaking (NPRM) on Broadband Industry Practices[6] proposed that net neutrality protections should not apply to coffee shops and waiting areas. Libraries, colleges and universities also offer similar "Wi-Fi" services to their students, faculty and patrons, and, like coffee shops and waiting areas, should not be subjected to regulation.

II. Paid Prioritization.

To state the obvious, research libraries, public and school libraries, and colleges and universities are almost always not-for-profit institutions whose mission is to serve the needs of their communities. Many are supported by public funds, which are always limited and are especially limited in the current fiscal climate. These institutions simply do not have the financial resources that may be available to the commercial sector.

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[6] See *Preserving the Open Internet; Broadband Industry Practices*, GN Docket No. 09-191, WC Docket No. 07-52, Notice of Proposed Rulemaking, 24 FCC Rcd 13064, 13086, (2009) (*Open Internet NPRM*), para. 55: "We do not intend that our proposals would apply to 'establishments that acquire broadband Internet access service from a facilities-based provider to enable their patrons or customers to access the Internet from their respective establishments.' For example, we would not intend to include coffee shops, waiting rooms, or rest areas." (Footnotes not included).

For this reason, these institutions are extremely concerned about the proposals that permit paid prioritization over the public Internet. Paid prioritization is fundamentally inconsistent with the public services provided by these institutions. Permitting paid prioritization over the public Internet runs the risk that the open Internet will no longer be the focus of innovation and investment.[7] This would undermine the goal of academic and research institutions to develop network applications that can eventually be offered over the public Internet. For example, Internet2 engineers are currently supporting high-capacity applications in the fields of distance learning, digital anatomy, nuclear physics, music and biology, which they hope to make available for general public use. Similarly, research libraries and public libraries are developing applications and content that are designed to meet the needs of their communities for information and learning. Paid prioritization over the public Internet would undermine the efforts of all these institutions to provide the most vulnerable populations (e.g., older adults, non-English speakers, low-literacy and low-income individuals, and those with disabilities) with access to e-government services, job-training, and other essential tools they need to participate fully in the 21st century economy.

Network operators should not be allowed to sell to application and content providers prioritized service that delivers their content to end users more quickly than other application and content providers. To put it more simply, end-users, not the network operators, should have control over how their Internet traffic is treated. Users should have the choice to access the content, services and applications of their choice, rather than letting network operators decide which content receives priority based on which application or service provider is willing to pay the highest toll.[8]

Without the codification of a net neutrality rule that prohibits paid prioritization, there is a great risk that the network operators will give priority to entertainment over education   Thus, in developing network neutrality rules, the Commission should ensure that libraries, universities and research institutions are not trapped into a 'pay to play' system, where they must pay commercial broadband providers and ISPs merely to ensure that their services and applications are received by end users, including by students, researchers and faculty members, as well as library patrons.[9]

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[7] *See, e.g*., Google Comments at 75; Netflix Comments at 9-10.

[8] Net neutrality principles should not prohibit a network operator from charging rates to end users based on the service or capacity purchased by the end user. Network operators should continue to be allowed to charge higher rates for greater bandwidth.

[9] Recently, there have been speculative suggestions that universities would be interested in paying to ensure that members of their academic community properly and receive in a timely fashion certain education-related services and applications. In its September 15, 2010 letter to the Commission, AT&T stated that when a university acts as a third party application provider, it could benefit by paying to prioritize traffic for specific services like distance learning applications for rural users. (Letter from Robert Quinn, Jr., AT&T to Marlene Dortch, FCC, GN Docket Nos. 09-191, 10-127, at 8 (Sept. 15, 2010). AT&T's attempt to refer to colleges and universities as users and potential beneficiaries of paid prioritization is inappropriate. AT&T does not provide evidence that colleges or universities are currently paying to prioritize their services over the public Internet, or even that they want to do so. We are confident that properly crafted rules to enforce net neutrality will continue to allow higher education and libraries to provide the full scope of services they need to provide to their constituency without paid prioritization.

With this in mind, we focus our attention on the two specific issues addressed in the Commission's Public Notice related to the treatment of (1) specialized services and (2) mobile wireless platforms.[10]

III. Specialized Services

The *Further Inquiry Notice* issued by the FCC asks for comment on the regulatory treatment of "specialized services." The *Notice* describes specialized services as "other services [provided] over the same last-mile facilities used to provide broadband Internet access service."[11] The FCC states that "specialized services" could bring benefits to consumers, but also expresses the concern that proliferation of unregulated "specialized services" could undermine the net neutrality protections that are intended to protect the public Internet.

ARL, ALA and EDUCAUSE share the FCC's concern that "specialized services" that offer Internet-type capability to the general public might supplant the public Internet. At the same time, the FCC must be careful not to impose onerous regulations on private networks that are not offered to the general public.

For these reasons, we respectfully suggest that the FCC should recognize three distinct approaches:

1. The public Internet, to which the six network openness principles should apply;
2. "Specialized services", to which some regulatory oversight should apply (described below); and
3. Private networks, to which traditional telecommunications regulations should not apply.

These issues are discussed further below.

A. *Specialized Services Should Not Enable Broadband Providers to Avoid Compliance with Network Neutrality Rules.*

We agree with the concerns the Commission raises in its Public Notice surrounding the treatment of "specialized services." While the library, higher education, and academic and research library community supports the development of innovative technology and private investment in networks, we believe that an overly broad exemption for specialized services may enable commercial ISPs or broadband providers to use such services to undermine the robust application of network neutrality rules, including nondiscrimination and transparency.

The Commission must ensure that any policy approach that encourages investment in specialized services does not inadvertently limit investment in broadband Internet access service. If specialized services are allowed to provide the equivalent of Internet-based services without some assurance of nondiscrimination, there is a significant risk that broadband providers will

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[10] *Id.*

[11] *Further Inquiry Notice* at 2.

shift their investment from public Internet access to specialized services. In short, the broadband Internet access providers could "de-invest" in the public Internet access as a way to encourage the public to migrate to paid, discriminatory services offered under the category of "specialized services". The result could be declining bandwidth allocated to the public Internet. The ability of these applications to succeed over the open Internet depends on the continued investment in and expansion of network capacity allocated to broadband Internet access service.

Allowing specialized services to "crowd out" public Internet capacity may also directly impact the ability of libraries to provide their patrons with access to information. Many libraries participate in shared integrated library systems (ILS) and some of these systems operate over the public Internet. The circulation transactions on these systems are very time sensitive and mission-critical. In some public libraries, if an ILS circulation transaction is not acknowledged within a few seconds, it times-out and then must be resent, which further congests the library's bandwidth. Patrons already complain that Internet access in public and state libraries is too slow, primarily because of limited bandwidth. If broadband providers allocate their remaining capacity to "specialized services," thereby reducing the network capacity available for broadband Internet access service, some public and state libraries will face increased congestion and additional patron complaints and yet they will not be able to acquire the additional capacity they need. Public and school libraries depend on the availability of a reasonably priced and robust public Internet whose capacity and expansion are not sacrificed to encroachment by specialized services.

To limit any threat that investment in specialized services might pose to broadband Internet access service, the Commission should employ a combination of the six policy approaches addressed in its *Further Inquiry Notice*.[12] For example, prohibiting broadband providers from marketing specialized services as broadband Internet access, as well as limiting the number of specialized services a provider can offer, reduces the risk that specialized services will eventually supplant the open Internet. Similarly, disclosure rules and broadband capacity requirements will ensure that network operators do not use specialized services to merely avoid network neutrality compliance. The right mix of these approaches will protect public broadband Internet access, while also allowing for continued innovation and private investment in networks and services.

B. *"Specialized Services" Should be Clearly Distinguished from Private Networks.*

While we support some regulatory oversight over "specialized services" as described above, the FCC must be careful not to sweep private networks under this regulatory regime. Private networks (including intra-nets, inter-institutional networks, and other networks not offered to the general public) should not be subject to net neutrality regulation.

Unfortunately, the FCC's proposed description of "specialized services" could be read to unintentionally capture private networks as well. ARL, ALA and EDUCAUSE respectfully

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[12] *See Further Inquiry Notice*, at 2-3 (2010) (explaining the need for (1) definitional clarity, (2) truth in advertising requirements, (3) disclosure requirements (4) non-exclusivity provisions (5) limited offerings of specialized services, and (6) requiring providers to guarantee capacity for broadband Internet access).

suggest that "specialized services" should be defined to include only those services "offered to the general public" in order to distinguish them from private networks that are not offered generally to the public.

As mentioned above, the *Further Inquiry Notice* issued by the FCC describes specialized services as "other services [provided] over the same last-mile facilities used to provide broadband Internet access service."[13] The FCC did not, however, propose a specific definition of "specialized services." In the *Open Internet NPRM* issued last October, the FCC described "specialized services" as follows:

> 148. As rapid innovation in Internet-related services continues, we recognize that there are and will continue to be Internet-Protocol-based offerings (including voice and subscription video services, and certain business services provided to enterprise customers), often provided over the same networks used for broadband Internet access service, that have not been classified by the Commission. We use the term "managed" or "specialized" services to describe these types of offerings.

In that NPRM, the FCC cited AT&T's "U-verse" (an IP-based video service) as a type of "specialized service,"[14] and then went on to speculate that the term "specialized services" could apply to "potential future offerings such as specialized telemedicine, smart grid, or eLearning applications that may require or benefit from enhanced quality of service rather than traditional best-effort Internet delivery."[15]

The FCC's discussion of what is included in "specialized services" might be read to include both "specialized services" offered to the general public, and services offered over private network. For instance, some telemedicine, smart grid or eLearning applications operate over private networks that may be carried over the same facilities as Internet access services. In fact, it is not the uses of the network that define whether or not a network should be subject to regulation; it is whether or not the network offers services to the general public. Whatever approach the FCC decides to take with regard to "specialized services," it should make clear that its definition of "specialized services" does not include private networks.

Private network operators do not face the same conflict-of-interest incentives as commercial providers. "Specialized services" often "compete" with services offered over the public Internet. A commercial provider has incentives to maximize profits by allocating bandwidth for specialized services and reducing its network capacity for broadband Internet access service to

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[13] *Further Inquiry Notice* at 2. Note that the Further Inquiry Notice inserts the term "last-mile facilities" in the explanation of a "specialized service." The term "last-mile facilities" was not included in the description of "specialized services" in last October's *Open Internet NPRM*. We suggest that the Commission consider deleting the limitation to "last-mile facilities," since "specialized services" will traverse last-mile, middle-mile, backbone, and other facilities, and there is no reason to restrict the regulatory oversight of specialized services to the last mile alone.

[14] The FCC described AT&T's U-verse as a "multi-channel, Internet-Protocol-based video service through the same network as its fiber-based broadband Internet access offering," See *Open Internet NPRM*, para. 150.

[15] Id.

the public. In contrast, a private network owes no such duty to the general public but only seeks to ensure that traffic flows over its network in a manner that meets the needs of its specific community.

It is well established in the law that private networks are not subject to the same regulations as services sold to the general public, and there is no reason for network neutrality rules to apply to networks of this kind.[16] We believe that the Commission intends to exclude these private networks from network neutrality regulation,[17] and it should continue to do so when developing its approach to specialized services.

Private networks are not subject to existing CALEA regulations, and the same logic applies in the network neutrality context.[18] A commercial ISP is subject to CALEA regulations, as it offers a connection to the public at large. In contrast, a private network, such as a research university network, merely acquires a connection from an ISP. The Commission referred to its CALEA order in saying it does not intend to apply network neutrality rules "to establishments that acquire broadband Internet access service from a facilities-based provider to enable their patrons or customers to access the Internet from their respective establishments."[19]

Thus, in developing any regulatory framework for specialized services, it is important that the Commission distinguish between, on the one hand, services offered by commercial providers of Internet access service to the general public, and, on the other hand, private networks, such as library, academic and research university networks, that do not provide access directly to the general public.

IV. Mobile Wireless Platforms

The future of the Internet could depend upon the application of net neutrality principles to mobile wireless services. The growth of mobile wireless technology is simply unprecedented. Most observers expect that mobile wireless services can and should deliver the same quality of Internet access as their wireline networks. [20]

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[16] *See* Telecommunications Act of 1996, 47 U.S.C. § 153(46) (2006) ("The term 'telecommunications service' means the offering of telecommunications for a fee *directly to the public*, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used.") (emphasis added); *see also Preserving the Open Internet; Broadband Industry Practices*, GN Docket No. 09-191, WC Docket No. 07-52, Notice of Proposed Rulemaking, 24 FCC Rcd 13064, 13086, para. 55 (2009) (*Open Internet NPRM*).

[17] *See, e.g., Open Internet NPRM*, para. 55; *Framework for Broadband Internet Services*, GN Docket No. 10-127, Notice of Inquiry, 25 FCC Rcd 7866, 17909-10, para. 107 (2010) ("Nor do we intend here to address or disturb our treatment of services that are not sold by facilities-based Internet service providers to end users in the retail market....").

[18] *See CALEA First Report and Order*, 15006– 07, para. 36.

[19] *Preserving the Open Internet; Broadband Industry Practices*, GN Docket No. 09-191, WC Docket No. 07-52, Notice of Proposed Rulemaking, 24 FCC Rcd 13064, 13086, para. 55 (2009). (quoting *Communications Assistance for Law Enforcement Act and Broadband Access and Services*, ET Docket No. 04-295, First Report and Order and Further Notice of Proposed Rulemaking, 20 FCC Rcd 14989, 15006-07, para. 36 (2005)).

[20] *See, "*Two studies point to explosive mobile broadband growth." July 23, 2009, available at http://www.fiercebroadbandwireless.com/story/two-studies-point-explosive-mobile-broadband-growth/2009-07-23.

Mobile technology is particularly important to public and school libraries, academic and research libraries, and colleges and universities. As explained below, all these institutions are developing new technologies to take advantage of the growing mobile wireless environment to meet the needs of their users and to increase the speed and availability of information. To exclude wireless from the Open Internet rulemaking would leave a significant and growing portion of Internet users without the protection of a free and open Internet.

    A. *Library and Higher Education Communities Increasingly Rely on Mobile Wireless Technology to Access Information and Conduct Research*

While faculty, students and other members of the academic community once relied on handouts, notebooks, and chalkboards as a primary means of communication, today they are increasingly pulling out iPhones and Android devices to engage in academic research, check assignments, and listen to lectures.[21] As American Library Association consultant Tim Vollmer notes, "the adoption rates for mobile wireless technology dwarf those for non-mobile technology."[22] For example, there are eight times more iPhones/iPod touch users two years after their launch than AOL users two years after its launch.[23] Mobile technology is becoming an increasingly dominant mode of communication, and public and school libraries, the research and academic community, and colleges and universities are actively participating in this technological shift.

Mobile wireless technology facilitates the goals of colleges, and universities, and public, research and school libraries because it allows students, faculty and other members of the community to have immediate and convenient access to information. A 2010 survey conducted by the California Digital Library[24] ("CDL") found that university students rely on mobile devices for Internet access when it is inconvenient to bring a laptop to class or to the library, and also when they lack an Internet connection at home.[25] One staff clinician interviewed in the CDL survey noted how she commonly uses her mobile wireless device to quickly look up information in medical journals, while she works with patients in the clinic.[26] Students will soon be able to use mobile devices to sign up for courses, request transcripts, plan meetings with faculty advisors, and pay tuition.[27] Patrons at public and school libraries are able to download e-texts,

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[21] Rachel Hu & Alison Meier, "*Mobile Strategy Report: Mobile Device User Research*," (*CDL Mobile Strategy Report*), California Digital Library, (Aug. 18, 2010), at 12 (*available at* https://confluence.ucop.edu/download/attachments/26476757/CDL+Mobile+Device+User+Research_final.pdf?version=1).

[22] Timothy Vollmer, "*There's an App for That! Libraries and Mobile Technology: An Introduction to Public Policy Considerations*," ALA Office of Information Technology Policy, Policy Brief No.3, June 2010, at 1 (*available at* http://www.ala.org/ala/aboutala/offices/oitp/publications/policybriefs/mobiledevices.pdf).

[23] Id.

[24] The California Digital Library works in conjunction with the University of California School System and is one of the world's largest digital research libraries. For more information visit: http://www.cdlib.org/about/.

[25] *CDL Mobile Strategy Report*, at 24.

[26] *Id.* at 27.

[27] *See id.* at 12 (quoting EDUCAUSE, 2010).

listen to podcasts of author book talks, and receive notification of their circulation status on their mobile devices.[28]

Researchers can also utilize mobile wireless platforms to conduct studies and gather data when they lack access to a wired connection. For example, mobile wireless technology allows an oceanographer at sea to transmit images and quantitative data back to a research institution by connecting to wireless sensors over the public Internet. Similarly, mobile technology applications enable sociologists and marketing researchers to conduct real time surveys of consumers facing real-world stimuli in their natural environment, rather than at a research facility.[29] These mobile research applications can require significant bandwidth, and if a broadband provider or ISP is allowed to de-prioritize this type of content, the benefits that wireless technology provides to scholarship and academic research will be lost. As users shift to the mobile wireless platform, so too must the application of network neutrality rules.

B.   Colleges, Universities and Libraries Are Implementing Wireless Technology to Meet the Needs of their Users

To meet the demands of their users and to facilitate research and communication, libraries continue to adapt to new mobile wireless technology. According to Mike Teets, the vice president of the library cooperative OCLC, "[A] strong mobile strategy is fundamental to librarians and librarianship," and libraries will continue to participate in this general transition to mobile wireless platforms.[30]

Already, a growing number of universities and research libraries have implemented new mobile wireless services to more effectively serve their users. Many libraries now offer mobile online public access catalogs (OPACs), mobile versions of library websites, and text-messaging services to correspond with patrons.[31] For example, Duke University has a free iPhone application that allows patrons to browse the library's digital photo archive and other digital resources.[32] With the increased ability to stream a library's audiovisual collection, a mobile user can potentially access library information at any time or place. Because mobile devices offer patrons the flexibility to take advantage of library services at their convenience, Vollmer notes that libraries are taking "a giant step toward becoming a round-the-clock service."[33]

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[28] Jeannie Nuss, "*Libraries Launch Apps to Sync with iPod Generation*," The Associated Press, September 29, 2010. Available http://www.washingtonpost.com/wp-dyn/content/article/2010/09/29/AR2010092901518.html.

[29] See, e.g., Luminosity Marketing, Real-Time Lifestyle Map (explaining the that mobile technology allows for quantitative analysis and qualitative responses, respondents are able to provide deep data into their daily activities . . . . [allowing] researchers to monitor and interact with consumers while they are engaged with products, people and real-world stimuli) *available at* http://luminositymarketing.com/pages/pa/research/realtimelifestyle.php?_kk=mobile%20research%20firm&_kt=0d8b1c8e-ec4f-4c36-950b-f2a001241360&gclid=CPfO6v7ynaQCFZJ95QodfXt0GA.

[30] *See CDL Mobile Device Strategy*, *supra* note 12, at 13 (quoting Mike Teets at OCLC).

[31] *See* Vollmer, *supra* note 14, at 5 (listing mobile applications introduced at public and private research libraries).

[32] *See id.* (citing http://itunes.apple.com/app/dukemobile/id306796270?mt=8).

[33] *Id.* at 3.

The shift to mobile technology also enables libraries to reach a broader range of demographics than they can with traditional at home or wired Internet access service. Mobile technology allows libraries to develop new tools to teach digital literacy to youth and adults, and it is helping to even the playing field between whites and ethnic minorities with regard to Internet access. [34] For example, while African Americans are less likely to have broadband Internet access at home, they are the highest percentage (48%) of users of mobile Internet access.[35] Finally, mobile technology allows for virtual interaction between librarians and patrons with disabilities that might not be able to visit the library physically. In this situation, librarians can send a hyperlink to a video or a digital resource instead of providing a hard copy of a book. Mobile Internet access allows for librarians to respond more quickly and effectively to the needs of patrons.

C.   *The Commission Should Not Wait to Include Mobile Wireless Platforms in the Open Internet Proceeding*

While mobile wireless technology increases access to information and facilitates communication among all demographics in our society, the benefits of mobile wireless depend on the maintenance of a free and open mobile Internet. As these comments show, the use of mobile wireless technology is no longer just an aspiration in the library and higher education institutions; it already plays a significant role in the way they deliver services to their communities, and their reliance on mobile technology will continue to increase. Industry analysts predict that the worldwide mobile data traffic will double every year through 2013, increasing 66 times between 2008 and 2013.[36] This societal shift toward accessing the Internet via mobile wireless platforms requires that any open Internet rulemaking include wireless platforms, as well as wireline.

Applying net neutrality principles to wireless broadband networks is critically important to promote widespread investment in wireless broadband networks. In this respect, the incentives of mobile providers is similar to the incentives of wireline broadband operators – without net neutrality rules, mobile broadband operators will have incentives to invest to serve those wireless applications and content providers who have the most resources to pay for access. In fact, one can argue that the perception that wireless bandwidth is scarce *increases* the incentives of mobile operators to perpetuate that scarcity as a way of extracting greater revenues from applications and content providers.

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[34] *See CDL Mobile Strategy Report*, *supra* note 12, at 13 (noting that the gap between white and African American Internet access shrinks once mobile technology is take into account); *see also* Vollmer, at 3 (noting that mobile technology allows libraries to reach traditionally undeserved groups).

[35] John B. Horrigan, "*Broadband Adoption and Use in America*," Federal Communications Commission, OBI Working Paper Series No. 1, February 2010, pp. 35-37, http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-296442A1.pdf. May 20, 2010].

[36] *See* Vollmer, at 2 (citing "Cisco Visual Networking Index: Forecast and Methodology, 2008-2013," Cisco Systems, Inc., June 9, 2009, http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-481360_ns827_Networking_Solutions_White_Paper.html. [accessed May 20, 2010].).

In addition, if mobile wireless networks develop in the absence of rules prohibiting discrimination, it will be exceedingly difficult to regulate after the fact in a way that will undo the distortions in network technology and consumer expectations that will take place in the meantime. It is more cost-effective and more equitable for public policy to put in place today the rules that incent mobile network operators to build and design their next generation mobile networks to maximize the availability of bandwidth to *all* mobile broadband users. Allowing mobile operators to engage in paid prioritization, for instance, will instead skew their investment decisions toward those who can most afford to pay.

ARL, ALA and EDUCAUSE share the Commission's goal of furthering innovation and private investment in wireless technology, and believe the application of network neutrality rules to wireless from the outset will ensure that any new services and devices develop within a framework that preserves the public interest as well. The Commission must remain committed to the goal of preserving a free and open Internet. It can demonstrate that commitment by applying open Internet rules to all public broadband service providers across all platforms.[37]

V. Conclusion

For the reasons stated above,, ARL, ALA and EDUCAUSE respectfully suggest that the FCC should not allow paid prioritization for Internet traffic, should continue to keep private networks free of FCC regulation, should adopt carefully-tailored regulations over specialized services offered to the general public, and should codify net neutrality principles for wireless as well as wireline broadband Internet access services.

Respectfully submitted,

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[37] To be clear, ARL, ALA and EDUCAUSE are not suggesting that end users, such as colleges, universities, and libraries, that make Wi-Fi connectivity to members of their community, should be subject to net neutrality. As stated at the beginning of these comments, Wi-Fi is an end user activity, not a service offered by a wireless broadband provider.