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INTRODUCTION AND SUMMARY

The response to the first round of broadband stimulus funding was overwhelming. Both the infrastructure programs and the “demand-side” broadband adoption and public computer center programs were heavily oversubscribed. The avalanche of applications has strained the resources of the agencies and industry as they attempt to assess and prioritize thousands of applications seeking billions of dollars. NCTA’s members have had to make extraordinary efforts to review applications and provide timely information regarding the extent of their existing broadband services in areas that applicants have claimed have insufficient broadband access today. As the GAO recently reported, the agencies are overwhelmed and the tight time schedule established for the stimulus programs likely make it difficult for them to apply the lessons they have learned to the next funding round.

Focus on Broadband Adoption. It is time to step back and reassess. NCTA has long argued that these scarce federal funds should be targeted to increasing broadband adoption among underserved populations and expanding broadband facilities to truly unserved areas. Funding in the next application round should be limited to these two purposes. NTIA should allocate significantly more funding to broadband adoption – in particular, a minimum of \$500 million for digital literacy programs – while restricting remaining infrastructure grants only to those areas that currently have no broadband access at all and that are most in need of this kind of government support.

The Adoption Plus Program. With respect to digital literacy, NCTA proposes that the federal government allocate available funding to support a two-year public-private pilot program to assist up to 3.5 million students in approximately 1.8 million low-income households obtain and use broadband Internet access. The program is called *Adoption Plus* because it represents a comprehensive approach to removing key barriers to adoption among a particularly vulnerable population – middle school-aged students in low-income households that do not currently receive broadband service. Under this program, cable companies and other broadband Internet service providers (ISPs) would complement federal dollars by providing broadband Internet access service at a deep (50%) discount to households without broadband service but with eligible middle school students who have obtained a computer^{1/} and are enrolled in a qualified digital media literacy program implemented by school districts with BTOP funds. For the A+ Program to succeed, however, it must address the interrelated barriers to broadband adoption by vulnerable populations – lack of digital literacy, lack of relevance, computer ownership, and affordability – and it will therefore also require the participation of the federal government, school districts, and computer manufacturers.

Direct Infrastructure Funds to Unserved Areas and Improve Mechanisms for Obtaining Information on Applications. Any further funds for infrastructure programs should be limited to truly unserved areas, and the process for obtaining information from existing broadband providers to help the agencies assess whether areas are served, unserved, or

^{1/} For convenience, we will use the term “computers” to mean the full range of desktops, laptops and netbooks that can access the Internet, including PCs and Macs.

underserved must be improved. NCTA members and other broadband service providers faced tremendous burdens in attempting to provide a complete and accurate picture of their existing broadband offerings in areas applicants claimed were underserved or unserved. The burdens can be substantially alleviated by providing greater electronic access to the data underlying applicants' maps of proposed funded service areas, and by providing additional time to review and respond to the proposals.

These efforts will help the agencies to appropriately prioritize the remaining, scarce broadband stimulus funds to best meet the goals of the Recovery Act and the overarching desire to get more Americans connected to broadband.

DISCUSSION

I. The Next Funding Round Should Be Used Primarily to Improve Broadband Adoption and Digital Literacy

The next round of BTOP funding affords an opportunity to create and support innovative and highly cost-effective programs to increase broadband adoption among the most underserved and vulnerable populations. To this end, NTIA should allocate significantly more funding to broadband adoption programs in general and digital media literacy programs in particular.

As broadband adoption increases, the need to ensure that our children know how to use digital technology in a safe, effective, and responsible manner becomes paramount. Given the importance of digital literacy to promoting adoption in households currently without broadband, NTIA should allocate a minimum of \$500 million of BTOP funds for a Digital Media Literacy Program that provides grants to school districts and non-profits for the development of digital media education tools and training, including online safety training. These tools should be primarily Internet-based and should be designed for use by teachers, parents, and students. Funding for digital literacy should also address technology staffing and provide support particularly for underserved school districts, as well as professional development for teachers to improve their proficiency in media technology and the basic tenets of digital learning.

As part of the Digital Literacy Program, NCTA further proposes a two-year pilot called “Adoption Plus,” or “A+.” As envisioned, A+ would refer collectively to targeted public-private pilot programs that combine common elements and are designed to promote sustainable broadband adoption for a vitally important-but-vulnerable population—middle school-aged children in low-income households. The “Plus” in A+ emphasizes the need for a comprehensive approach; broadband adoption is a multi-faceted problem and requires multi-faceted solutions. The partnership would include participating school districts nationwide, the federal and state governments, non-profit corporations promoting digital literacy, computer manufacturers (including retailers and/or non-profits supplying computers), and broadband ISPs.

Barriers to adoption – *e.g.*, relevance, digital literacy, computer ownership, and affordability – are interrelated and therefore cannot be resolved in isolation. With federal funding and contributions by various participants as described below, the program would promote broadband adoption by offering middle school students from low-income households a comprehensive support structure that includes: (1) digital media literacy education, including online safety training; (2) discounted computers; and (3) discounted broadband service to households that do not currently receive a broadband service. These benefits would be provided by federal funding and by A+ partners, including participating school districts (media literacy training); participating computer manufacturers, retailers, and/or non-profits (discounted computers); and participating broadband Internet Service Providers (discounted home broadband service). The A+ program is summarized below and a more detailed explanation of the program and its benefits is attached as an appendix to these comments.

To date, all of the cable broadband ISPs represented on the NCTA's Board of Directors, reaching approximately 86 percent of U.S. households with broadband service, have agreed to participate in the A+ program as described herein.^{2/} Based on that potential reach and the value of the broadband services described below, NCTA estimates the cable industry's total contribution could reach up to \$572 million. In addition, NCTA and participating cable broadband ISPs would commit to airing local public service announcements (PSAs) explaining and promoting local A+ efforts upon the launch of the program. The value of such PSAs and other promotional efforts has not yet been determined.

A. The A+ Program Provides an Integrated and Cost-Effective Way to Overcome Barriers to Broadband Adoption.

RUS and NTIA seek comment on how they can better target remaining funds to achieve the goals of the Recovery Act.^{3/} It is a critical question in light of the large number of funding requests that have already been made to BTOP and BIP funding categories in the initial funding round. With respect to BTOP adoption programs, entities submitted 320 applications requesting some \$2.5 billion for Sustainable Broadband Adoption projects, for which only \$150 million had been set aside by the NOFA for the first round of funding. Applicants also requested some \$2 billion for public computer centers, for which only \$50 million was allocated for the first round of funding.^{4/}

The extraordinary demand for these programs necessitates two responses. The Agencies must shift substantially more resources to these "demand side" programs, and then carefully prioritize the use of these remaining funds. Nothing prevents NTIA from shifting substantially more funding to BTOP adoption programs. The Recovery Act establishes a minimum amount that must be allocated for adoption and computer centers, but does not impose a ceiling.^{5/} NTIA

^{2/} The participating MSOs to date are: Comcast, Time Warner Cable, Cox, Charter, Cablevision, Bright House, Mediacom, Suddenlink, Insight Communications, Bresnan Communications, Midcontinent Communications, GCI, US Cable, Bend Broadband, Eagle Communications, and Sjoberg's Cable.

^{3/} The Joint Request for Information ("RFI") released by RUS and NTIA (the "Agencies") poses a series of questions regarding possible revisions to NTIA's "demand" side funding programs. Broadband Initiatives Program and Broadband Technology Opportunities Program, Joint Request for Information, 74 Fed. Reg. 58940 (Nov. 16, 2009) ("RFI"). It asks how funds for the Public Computer Centers and Sustainable Broadband Adoption projects can best be targeted to increase broadband access and use among vulnerable populations; whether more funds should be shifted for these programs; how this targeted allocation of funding resources can best be accomplished under the statutory requirements of the program; and, whether libraries should be targeted for public computer access. RFI, 74 Fed. Reg. at 58943.

^{4/} See Press Release, NTIA, *Commerce and Agriculture Announce Strong Demand for First Round of Funding to Bring Broadband, Jobs to More Americans* (Aug. 27, 2009), available at http://www.ntia.doc.gov/press/2009/BTOP_BIP_090827.html ("NTIA First Round Press Release").

^{5/} See American Recovery and Reinvestment Act of 2009, Public Law 111-5, 123 Stat. 115 (2009); see also Broadband Initiatives Program and Broadband Technology Opportunities Program, Notice of Funds Availability, 74 Fed. Reg. 33104, 33106 (Nov. 16, 2009) ("NOFA") (noting that "at least \$200 million will be made available for competitive grants for expanding public computer center

thus has substantial discretion to allocate additional funds for increasing broadband adoption. Targeting funds to underserved, vulnerable populations is a far more effective use of scarce federal dollars than funding duplicative broadband facilities in already-served areas.

Equally important is a renewed emphasis on targeting remaining funds on the most cost-effective programs that directly confront barriers to broadband use. NCTA and others have consistently advocated that increasing broadband adoption in underserved populations and enhancing digital literacy should be among the Agencies' highest priorities.^{6/} As the FCC stated in a recent public notice seeking comment on broadband adoption, "[s]uccessful efforts to increase broadband adoption will spur additional demand for access, in addition to ensuring effective utilization of both existing and newly deployed access by consumers as envisioned by the Recovery Act."^{7/} The A+ program would enhance broadband adoption in a highly cost-effective way.

1. How the A+ Program Would Work

The A+ program is a proposed two-year pilot program consisting of a partnership among participating school districts nationwide, the federal and state governments, non-profit corporations promoting digital literacy, computer manufacturers (including retailers and/or non-profits supplying Internet access devices), and broadband Internet Service Providers (ISPs).

Under the A+ program, local school districts (or their equivalent) would provide digital media literacy training, including online safety and the responsible use of broadband, to middle school students^{8/} who qualify for the federal free or reduced price school lunch program.^{9/} The program would consist of a training initiative for eligible students that promotes digital media literacy education, including online safety and training on how to use a computer or other

capacity," and that "at least \$250 million will be available for competitive grants for innovative programs to encourage sustainable adoption of broadband services.").

^{6/} See, e.g., Comments of National Cable & Telecommunications Association, GN Docket No. 09-40 (filed Apr. 13, 2009) at 2 ("NCTA Broadband Comments"). A number of others have made similar recommendations. See e.g., Letter from U.S. House of Representatives, Committee on Small Business, to Lawrence E. Strickling, NTIA, and Jonathan S. Adelstein, RUS (Nov. 17, 2009) at 1, available at <http://www.house.gov/smbiz/democrats/PressReleases/2009/pr-11-16-09-broadband-letter.html> ("To ensure that new infrastructure projects reach communities with the greatest need, prioritization should be given to areas without access to broadband.") ("House Small Business Committee Letter").

^{7/} Comment Sought on Broadband Adoption, GN Docket Nos. 09-47, 09-51, 09-137, National Broadband Plan Public Notice #16, DA 09-2403 (rel. Nov. 10, 2009) at 1.

^{8/} NCTA recognizes that school districts vary in their definition of what constitutes a middle school. Some include grades 6 through 8 while others include grades 7 through 9. Either group would potentially be eligible, as would low income children in similar grades attending private or parochial schools.

^{9/} We emphasize that the target population contemplated by this proposal is broader than just students who actually participate in the National School Lunch program. Not all students who are eligible actually receive a reduced or free lunch. Our intention is to capture a broader universe based on students' eligibility to participate in the school lunch program.

hardware to access the Internet. Training programs could be provided directly through participating schools or through partnerships with appropriate non-profit partners under A+ program rules. School districts would be encouraged to extend training programs to parents or guardians of participating students. The content of an approved A+ program training would have to meet minimum standards established by the NTIA and U.S. Department of Education.^{10/} Where appropriate, all training would have to be accessible to all eligible students and conform to other programs in instances where English is a student's second language. School districts would also administer the program, ensuring that only eligible households obtain discounts and enforcing eligibility criteria.

Once an eligible student is enrolled in an A+ digital media literacy program, he or she would be eligible to purchase a single discounted computer. For any household with a computer and an eligible student enrolled in an A+ digital media literacy program, participating ISPs would (1) provide broadband service at a 50% discount; (2) provide a modem at a 50% discount, whether purchased or rented; and (3) provide free installation of broadband service. Each eligible and participating student would receive such discounted broadband service for two years. Eligible households would receive the entry-level tier of broadband Internet access already offered by the broadband ISP serving the area, but with a minimum advertised downstream transmission speed of at least 1 megabit per second (Mbps).^{11/} Participating broadband ISPs would also provide parental control software and other online safety/security tools.^{12/}

The A+ program contemplates federal funding for two distinct support payments – to school districts for the digital media literacy training and to computer manufacturers and retailers to provide computers to eligible students at substantially reduced prices. ***The A+ pilot program does not contemplate any federal subsidy for participating broadband ISPs.*** NTIA would

^{10/} NTIA and the Department of Education would develop these guidelines prior to the award of any funds to school districts for such programs. There are numerous models already available from which such guidelines could be adapted. See, e.g., Partnership for 21st Century Skills, Information, Media and Technology Skills, available at http://www.21stcenturyskills.org/index.php?option=com_content&task=view&id=61&Itemid=120; College of Education at the University of Maryland, C3 Framework (Cybersafety, Cybersecurity, Cyberethics), available at <http://knowwheretheygo.org/c3matrix>.

^{11/} While we have established a minimum advertised speed of 1 Mbps in order to take into account differences among providers and industries and to ensure a quality broadband experience for the student, we note that at least some cable broadband ISPs who have committed to participate in the A+ Program will offer higher speed tiers.

^{12/} The A+ program would build on the experience of programs like the “Computers for Families” project under taken by Cox Communications and Santa Barbara County. Under that program, the county identifies low-income children in the fourth grade based on their participation in the federal school lunch program, the school district provides them with computers donated by local businesses, and Cox Communications provides either dial-up or high-speed Internet access at a substantial discount off of the standard rate. See Comments of Cox Communications, GN Docket No. 09-51, at Attachment (filed June 8, 2009). Since 1997, the program has placed more than 7,000 computers in the homes of Santa Barbara County school children whose parents could not otherwise afford these learning tools.

make funding available through BTOP grants and by reprogramming funds from the State Broadband Data and Development Grant Program.

NTIA would accept grant proposals from those school districts seeking federal aid pursuant to A+ program guidelines.^{13/} Federal funding would provide support to participating school districts by providing funding to defray: (1) the cost of identifying and verifying eligible children (and their household addresses); (2) the cost of providing appropriate training in digital literacy, online safety, and other online skills; (3) increased costs attributable to ensuring accessibility to the training, including, where appropriate, instances where English is a second language; and (4) other qualifying administrative tasks.

We believe the federal government could fund digital literacy programs and administrative costs for approximately \$100 million over the two year period of this pilot program. As noted above, such an investment would yield five times that amount in discounts on broadband Internet access that cable companies would be prepared to provide in the context of the A+ program we outline here.

NTIA should consider counting at least a portion of the value of the discounted Internet access (and computers, to the extent that the discount is not federally funded) toward the requirement that a school district provide 20% of the costs of the digital media literacy program to be funded by a BTOP grant.^{14/} While the precise value of the discounted equipment and service provided in a given school district will not be known until eligible households actually obtain computers and sign up for service, NTIA is empowered to waive a strict application of the 20% match requirement upon a showing of financial need.^{15/} Given the strained financial situation of many schools districts, particularly those serving eligible households, NTIA can and should factor in the value of discounted equipment and service in establishing the amount of a school district's required contribution to the digital media literacy program. Indeed, we believe it would be appropriate and within the scope of its waiver authority for NTIA to rule that any school district participating in the digital media literacy program need not provide any matching funds for the program.

Payments to computer manufacturers and retailers could be accomplished through a federal subsidy such as a government-coupon program similar to the DTV converter box

^{13/} One recent study raised the question of whether school districts could be directly eligible to receive broadband adoption or public computer center funds. *See* Advanced Communications Law & Policy Institute, *Barriers to Broadband Adoption: A Report to the Federal Communications Commission* (Oct. 2009) at 77, *available at* http://www.nyls.edu/user_files/1/3/4/30/83/ACLP%20Report%20to%20the%20FCC%20-%20Barriers%20to%20BB%20Adoption.pdf (“ACLP Report”). To the extent that there is any question regarding the ability of school districts to apply for broadband grants, the NTIA should take this opportunity to address the ambiguity and confirm or clarify that school districts may apply for broadband adoption or public computer center funds.

^{14/} *See* Recovery Act, § 6001(f) (limiting the federal share of any broadband project to 80%); *see also* NOFA, 74 Fed. Reg. at 33112.

^{15/} Recovery Act, § 6001(f).

program. Under this approach, the federal government would provide support to participating computer manufacturers by providing each eligible and participating student with a “device” coupon distributed by participating schools. Discounted computers could also be provided through direct contributions from consumer electronics manufacturers/retailers or non-profit organizations, or a combination of methods.

The A+ program is highly cost-effective because it leverages private sector contributions with BTOP awards. As noted above, the program contemplates that cable companies and other broadband ISPs would provide discounted access, a discounted modem, and complimentary installation at the home at no cost to the government as their contribution to the overall program. Assuming the program is implemented, hundreds of millions of dollars worth of broadband Internet access services would be made available to supplement the federal government’s funding for digital education. This will enable potentially millions of low-income students to cross over the digital divide and make broadband part of their lives.

2. The A+ Program Precisely Targets Barriers that Prevent Adoption by Critical Underserved Populations

Various recent studies, as well as the information being gathered by the FCC in its broadband plan review, identify a common set of barriers to broadband adoption by vulnerable population groups, such as African Americans, and those with low incomes or lower levels of education.^{16/} The commonly identified barriers to increased use of broadband services include a lack of digital literacy; a failure to understand the relevance of broadband access; computer ownership; and affordability.^{17/} The A+ program directly attacks these barriers by coupling affordable access to the necessary hardware and services with digital literacy education.

Moreover, by limiting eligibility to the families of middle school students that qualify for free or reduced lunches, the program effectively and directly targets a segment of the population that has dramatically lower broadband adoption rates. The ACLP Report, for example, noted a significant gap in home Internet access between those eligible for free or reduced lunches and those that were not. It noted that “just 41 percent of students in the eighth grade who take part in the free and reduced lunch program had home Internet access in 2003, compared to 72 percent for those not participating.”^{18/} NCTA anticipates that the A+ program as currently conceived would reach up to 3.5 million low-income students in approximately 1.8 million households. The program not only makes access more affordable, but ensures that broadband services will be used safely and effectively.

^{16/} See, e.g., Pew Internet & American Life Project, Home Broadband Adoption 2009: Broadband Adoption Increases, But Monthly Prices Do Too (June 2009), available at <http://pewinternet.org/Reports/2009/10-Home-Broadband-Adoption-2009.aspx> (“Pew Report”); ACLP Report; BB4US.Net, Expanding and Accelerating the Adoption & Use of Broadband Throughout the Economy (Nov. 13, 2009), available at http://resources.knightcenter.org/cms/white_papers/ccf903fa54b49ba1/bb4us_adoption_and_use_final_report_2009_11_13.pdf (“BB4US Report”).

^{17/} See generally Pew Report at 35-46; ACLP Report at 37-50; BB4US Report at 13-19.

^{18/} ACLP Report at 81.

B. Increase Funding for Public Computer Centers.

In addition to promoting adoption through the A+ program, NTIA should provide more funding for the Public Computer Center (“PCC”) program in the second round. PCC was the most oversubscribed of all of the broadband programs. Applicants requested some \$2 billion in funding but only \$50 million was allocated in the first round. Assuming all \$50 million will be awarded, more than 97% of the requested funding would be denied. Thus, in addition to increasing funding for adoption programs, shifting additional funds for PCCs would address a vital need. In particular, the NTIA should consider targeting funds to public libraries. In many communities, public libraries are the only source for “no fee” Internet access. They have become increasingly important during the economic downturn. Nevertheless, more than 80% of libraries report that they have insufficient computer capacity to meet their community’s needs. The NCTA encourages the NTIA to target additional PCC funding to public libraries.

II. Limit Second Round Infrastructure Funding to Truly Unserved Areas

In tandem with shifting more funds for carefully targeted broadband adoption programs, the Agencies should limit the remaining infrastructure funding to unserved areas.^{19/} Providing funds for both unserved and underserved areas in the initial round, although consistent with statutory requirements, led to a dramatic level of oversubscription. In response to the first NOFA, applicants submitted more than 1,400 applications to the NTIA and/or RUS requesting more than \$23 billion for a variety of last-mile and middle mile projects in purportedly underserved or unserved areas.^{20/} The Agencies have not identified how many of these applications seek to build out facilities in unserved areas versus areas already being served to some extent.

As RUS Administrator Jonathan Adelstein noted, the level of demand for funds “underscores the extensive interest in expanding broadband across the country.”^{21/} But it also severely tests the “Obama Administration’s goal ... to target funds to serve areas of greatest need.”^{22/} As the GAO recently found, the NTIA and RUS are straining to review these voluminous filings and identify the most effective and beneficial projects within a relatively short period of time.^{23/} The large number of infrastructure applications, many of which contained multiple proposed funded service areas in underserved areas, also imposed substantial

^{19/} See “Moving the Needle on Broadband: Stimulus Strategies to Spur Adoption and Extend Access Across America,” NCTA White Paper (Mar. 17, 2009), available at <http://www.ncta.com/PublicationType/WhitePaper/Moving-the-Needle-on-Broadband.aspx> and submitted with NCTA’s comments in the FCC’s GN Docket 09-29 (filed Mar. 25, 2009).

^{20/} See NTIA First Round Press Release.

^{21/} See NTIA First Round Press Release.

^{22/} See NTIA First Round Press Release.

^{23/} See Government Accountability Office, Report to Congressional Committees, Recovery Act: Agencies Are Addressing Broadband Program Challenges, but Actions Are Needed to Improve Implementation (Nov. 2009), available at <http://www.gao.gov/new.items/d1080.pdf>.

burdens on NCTA members and other broadband service providers attempting to provide the federal government with information on whether proposed funded service areas overlap with the members' existing broadband service areas.

The Recovery Act's goals of serving the areas in greatest need can best be accomplished by limiting the next round of infrastructure funding to areas that currently have no broadband service.^{24/} In light of the limited funds, enormous demand, and the need quickly to identify the most effective applications, the Agencies should not seek another avalanche of applications for federal funding to build in areas that already benefit from private investment in broadband service. The Agencies should thus accept infrastructure applications only for "unserved" areas, as currently defined. There is no statutory requirement that each funding round include both unserved and underserved areas. Finally, in this regard, the Agencies should make clear that middle mile applications will not be granted to the extent that they propose to fund end user services to served areas.

There are several steps that the Agencies can take to facilitate and encourage cost-effective applications for unserved areas. For one, the RUS should eliminate the requirement that BIP infrastructure grants only be made available to "remote" unserved areas.^{25/} The Agencies should prioritize funding for rural, unserved areas, notwithstanding the "remoteness" of the rural area. A number of Members of Congress and other stakeholders have recommended elimination or revision of the remoteness requirement, and we support the elimination of the "remoteness" requirement to facilitate their goals.^{26/}

Additionally, the Agencies can eliminate or revise restrictions that hampered or chilled the willingness of private sector actors, and small businesses in particular, to apply for broadband infrastructure funds.^{27/} One such restriction, which is specifically identified in the RFI, is the prohibition on the sale or lease of broadband facilities acquired with stimulus funds.^{28/} The terms of the NOFA effectively bar any sale or lease of these facilities for ten years, unless the applicant includes the proposed sale in the application as part of its original request for funding. While the concern over unjust enrichment through blatant flipping of assets is reasonable, the current rules are overly restrictive. Companies backed with private equity or bank financing, and small companies generally, require the flexibility to sell themselves or their assets. Such sales should be allowed so long as the purchaser assumes the obligations of the award and is qualified to operate the broadband network.

^{24/} The NCTA sees no need to revise the current definitions of broadband or unserved areas.

^{25/} NOFA, 74 Fed. Reg. at 33106 ("[Broadband infrastructure] [g]rants under BIP are to be used to fund applications proposing to exclusively serve remote, unserved, rural areas.").

^{26/} See House Small Business Committee Letter, at 3; see also RFI, 74 Fed. Reg. at 58943 ("Comment is requested on the definition of remote area, as well as whether this concept should be a factor in determining award decisions.").

^{27/} See, e.g., House Small Business Committee Letter, at 2.

^{28/} NOFA, 74 Fed. Reg. at 33123; RFI, 74 Fed. Reg. at 58944.

III. Eliminate Constraints to Timely and Effective Responses to Public Notice of Service Areas

Given the likely volume of infrastructure funding applications in the second round, information from existing service providers will again be a critical element of verifying applicants' assertions that proposed funded services areas are unserved or underserved. Coupled with the agency's exercise of its own due diligence, reliance on FCC 477 data, and state broadband maps, to the extent they are available, the response process provides the agency with a means of determining the extent of broadband service availability in proposed funded service areas. As the RFI recognizes, however, the fairness and accuracy of this verification process can be improved for all interested parties.^{29/} Based on the experience of NCTA's members in providing this information in the first round, we offer several suggestions below.

As NCTA and other trade associations have already explained, responding to first round applications within the 30-day time frame proved enormously burdensome and frustrating.^{30/} While we understand that the Agencies could not make any changes to the Round 1 process, we were heartened by their response that, to the extent problems continue, "[they] will explore ways to further improve this process for the next round of funding."^{31/} Improvements are sorely needed, primarily to address the problems with the Mapping Tool and the limits on access to electronic data. Addressing these problems will go a long way toward improving the response process. These issues are discussed in more detail below.

A. Accessible Datasets of Census Block/Group/Tract Information.

Having to provide information about existing services in proposed funded service areas by manually overlaying the existing broadband providers' footprint on top of the proposed funded service area proved to be a very labor- and resource-intensive process. A much more straightforward approach would be for the agencies to simply identify and provide electronic access to all of the census blocks in the proposed funded service area.^{32/} These blocks could then be readily compared with the census blocks in the existing service providers' territory.

The Round 1 process, by contrast, only identified up to 7,500 census blocks in a proposed funded service area, no matter how many were actually included. Given that there are some 8 million census blocks, and that many of the proposed funded service areas included many more census blocks than the 7,500 limit, respondents were left with the time-consuming task of drawing their overlay map and waiting an unpredictable amount of time for the system to

^{29/} RFI, 74 Fed. Reg. at 58943-58944.

^{30/} Letter from NCTA *et al.*, to Lawrence E. Strickling, NTIA, and Jonathan S. Adelstein, RUS (Oct. 19, 2009) at 1.

^{31/} Letter from Jonathan S. Adelstein, RUS, and Lawrence E. Strickling, NTIA, to Kyle McSparrow, NCTA (Oct. 27, 2009).

^{32/} NCTA believes that utilizing census blocks is a reasonable approach so long as those seeking to respond to requests for information on existing services in proposed funded service areas are given electronic access to all the census blocks that comprise the area.

calculate the census block areas covered by the manually drawn map. This was an enormously frustrating exercise, particularly for service providers responding to numerous such requests. The Agencies should eliminate the 7,500 census block limit and provide access to electronic data underlying an applicant's map.

B. Additional Response Time.

A common difficulty for NCTA's members was responding to the potentially numerous proposed funded service area requests within a 30-day period. Particularly for companies whose existing service may span scores of widely dispersed service areas, it was very onerous to identify affected areas, evaluate the data available, respond with all of the information requested, and draw detailed maps, all in the space of one month. This problem was faced by both large and small members of NCTA, as even smaller companies may have numerous discrete service areas.

NCTA respectfully asks that more time be provided for existing providers to respond to public notice filings in Round 2. A period of 45 to 60 days is objectively valid given the specificity of information required for each area (*e.g.*, advertised download and upload speeds, number of subscribers, service rate, etc.), the expansive number of proposed funded service areas, and the requirement that respondents respond separately for each proposed funded service area. NCTA respectfully asks that the Agencies allow for a greater amount of time to ensure the accuracy and fullness of existing service providers' responses.

C. Require Public Notice Filing Responses Only for Applications that Have Already Been Selected for Supplemental "Due Diligence" Review.

As noted above, the Agencies received more than 1,400 applications for broadband infrastructure funding in the first round. It is our understanding that all of those applications were posted as public notice filings, regardless of whether they satisfied the Agencies' basic application requirements. Given the reality that not all applications will qualify for consideration or be selected for loans/grants, it seems unnecessary for existing service providers, many of whom expended significant resources to respond to all applications submitted in the first round, to do so again for applications that have not yet reached the "due diligence" phase. Although it is true that existing providers do not *have to* respond, these providers should not be in a position of deciding between expending valuable time and financial resources on responding to requests for funding within one of their areas, and risking not providing critical input that would help the Agencies determine whether an area is "unserved" or "underserved."

A simple solution that should be employed in Round 2 is to seek public comment responses only for applications that have qualified for the due diligence phase. This will reduce the already heavy burden on those existing providers who seek to respond to any requests within the areas they currently serve. In Round 1, NCTA members filed more than 1300 responses, many of which will likely be for applications that would not have made it to next round of review because they were either incomplete or did not meet other basic application criteria. The time and resources spent on these applications is wasteful, and also resulted in a significant additional workload for the Agencies. To correct this deficiency and make existing providers' responses more meaningful, NCTA suggests that existing providers need only respond to

applications that the Agencies have deemed otherwise eligible to proceed to the next step of due diligence review (which would include the determination of whether an area is unserved or underserved).

D. Multiple States Covered by a Proposed Funded Service Area.

At present, the Mapping Tool does not link applications to all states covered by proposed funded service areas. Some applications are linked to only one state in the search tool, but in fact include proposed funded service areas and/or census blocks located in other states. The effect of this is likely to lead respondents to mistakenly believe that an application is limited to a single state, giving the false impression that the respondent need not review other included states. To permit its members to more fully assist with the Agencies' due diligence efforts, NCTA asks that the database be revised to link the application to *all* states in which service is proposed so that respondents are not forced to review all applications to ensure that they are examining every area where they have service offerings.

E. Clear and Consistent Descriptions.

Finally, applicants should be required to provide information in a consistent, uniform fashion. In at least some instances, an application listed only a single county in the area description but characterized a project as statewide and filed maps for the entire state. Ensuring uniformity in the applications and accompanying maps will enable potential responders to more quickly and efficiently identify relevant applications and determine whether any of the proposed funded service areas are truly unserved as claimed. In addition, in the interest of transparency and to allow existing service providers to weigh in with appropriate data, it is critical that applicants provide sufficient substantive, descriptive information about their project and its purpose in the executive summaries that are made available to the public through the public notice process.

CONCLUSION

NTIA and RUS should ensure that the remaining Recovery Act broadband funds are put to their highest and best use by allocating more of those funds to adoption and digital literacy and by limiting broadband infrastructure funding to unserved areas. We encourage the Agencies to support the Adoption Plus proposal advanced by the cable industry, which can connect millions of middle schoolers to broadband and make a substantial contribution to closing the digital divide. As to the BTOP and BIP application processes, the tools provided for public review of infrastructure applications should be refined so that existing providers can provide timely and useful information to the Agencies.

Respectfully submitted,

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APPENDIX – THE ADOPTION PLUS PROGRAM

“Adoption Plus (A+) Program”

A COMPREHENSIVE PILOT PROGRAM TO PROMOTE BROADBAND ADOPTION IN LOW-INCOME HOUSEHOLDS WITH MIDDLE SCHOOL-AGED CHILDREN

The Adoption Plus (“A+”) pilot program is a proposed two-year, public-private partnership designed to promote sustainable broadband adoption for a vitally important-but-vulnerable population—middle school-aged children in low income households that do not currently receive broadband service. The program is called *Adoption Plus* because it is a comprehensive approach that treats broadband adoption as a multi-faceted problem that requires multi-faceted solutions. Barriers to adoption—e.g., relevance, digital literacy, computer ownership, affordability—are interwoven and cannot be resolved in isolation.

The goal of the A+ program is to help give millions of students the opportunity to become digital citizens of the 21st Century by driving sustainable broadband adoption and positively and materially affecting educational outcomes. Meeting this goal would not only advance the economic and social well-being of participating students, it would advance the economic and social well-being of our nation for decades to come.

To date, all of the cable broadband Internet Service Providers (ISPs) represented on the Board of Directors of the National Cable & Telecommunications Association (NCTA), reaching approximately 86 percent of U.S. households with broadband service, have agreed to participate in the A+ program as described herein.³³ Based on that potential reach and the value of the broadband services described below, NCTA estimates the cable industry’s total contribution could reach up to \$572 million. In addition, NCTA and participating cable broadband ISPs would commit to airing local public service announcements (PSAs) explaining and promoting local A+ efforts upon the launch of the program. The value of such PSAs and other promotional efforts has not yet been determined.

A+ Program Overview

The A+ pilot program is a proposed two-year, public-private partnership to assist up to 3.5 million students in approximately 1.8 million low-income households obtain and use broadband Internet access. The eligible population would consist of middle school-aged students eligible for reduced or free school lunch under the National School Lunch Program.³⁴ The partnership would include participating school districts nationwide, the federal and state governments, non-profit corporations promoting digital literacy, computer manufacturers

³³ The participating MSOs to date are: Comcast, Time Warner Cable, Cox, Charter, Cablevision, Bright House, Mediacom, Suddenlink, Insight Communications, Bresnan Communications, Midcontinent Communications, GCI, US Cable, Bend Broadband, Eagle Communications, and Sjoberg’s Cable.

³⁴ We emphasize that the target population contemplated by this proposal is broader than just students who actually participate in the National School Lunch program. Not all students who are eligible actually receive a reduced or free lunch. Our intention is to capture a broader universe based on students’ eligibility to participate in the school lunch program.

(including retailers and/or non-profits supplying computers that access the Internet), and broadband ISPs. With federal funding and contributions by various participants as described below, the program would promote broadband adoption by offering middle school students from low-income households a comprehensive support structure that includes: (1) digital media literacy education, including online safety training; (2) discounted desktop, laptop, or netbook computers that can access the Internet (“computers”)³⁵; and (3) discounted home broadband service to households that do not currently receive a broadband service. These benefits would be provided by A+ partners, including participating school districts (media literacy training); participating computer manufacturers, retailers and/or non-profits (discounted computers); and participating broadband Internet Service Providers (discounted home broadband service). Each of these components is described more fully below.

Digital Media Literacy

Under the A+ Program, School Districts (or their state equivalent) would be responsible for providing digital media literacy training to eligible students, including online safety and the responsible use of broadband.³⁶ Such training may be provided directly or in conjunction with qualified non-profit organizations. School Districts will also be encouraged to extend training programs to parents or guardians of all participating students. In all cases, training under an approved A+ program must meet minimum standards established by NTIA and the U.S. Department of Education. And, where appropriate, all training must be accessible to all eligible students and conform to other programs in instances where English is a student’s second language.

School Districts (or their state equivalent) would also be responsible under the A+ program for applying for federal funds for their area. Federal funds for School District participation in the A+ program would involve a traditional, multi-year grant approach involving a specific grant proposal with estimated costs. At a minimum, however, school districts seeking grant support would be required to demonstrate the ability to accomplish the following:

- Administration of an A+ program including the ability to identify and verify the names of eligible middle school students in grades 6 through 9 (those eligible for free or reduced-cost lunch through the National School Lunch Program) and the home address and telephone number of eligible households (defined as any household that includes at least one eligible student).

³⁵ For convenience, we will use the term “computers” to mean the full range of desktops, laptops and netbooks that can access the Internet, including PCs and Macs.

³⁶ Businesses, educators and parents recognize digital media literacy as a critical element of the 21st century knowledge and skills necessary for success now and in the future. *See, e.g.*, the Horizon Project under the New Media Consortium’s Emerging Technologies Initiative (“digital media literacy continues its rise in importance as a key 21st century skill. . . . Faculty and instructors are beginning to realize that they are limiting their students by not helping them to develop and use digital media literacy skills across the curriculum.”) <http://horizon.wiki.nmc.org/2010+Critical+Challenges>; the Partnership for 21st Century Skills www.21stcenturyskills.org/; “CIC Survey Shows Media Literacy a Vital and Underserved Need in Schools”, Cable In the Classroom Media Literacy Report, News Release, November 2006, <http://i.ciconline.org/docs/CICmedialitreport11-2006.pdf>; Common Sense Media, Joan Ganz Cooney Center Digital Media Study, April 21, 2008.

- Implementation of planned digital literacy education for eligible students, including online safety, and training for participating students on how to use a computer to access the Internet.
- Determinations of household eligibility, including a determination (in coordination with participating broadband ISP(s)) that the household does not currently subscribe to a broadband service.
- How the School District would address lost, stolen or damaged hardware and any other reasonably foreseeable expenses.
- The procedures that the School District intends to follow for helping students receive technical support when necessary to ensure the proper functioning of their computers, and for determining when a student's eligibility (and similarly, a household's eligibility) for the program expires.

Discounted Computers

Under the A+ program, once an eligible student is enrolled in an A+ digital media literacy program, he or she would be eligible to purchase a single discounted computer.

While participating computer manufacturers would be expected to provide their own contribution to discount the cost of computers, the federal government should establish a national partnership with participating consumer electronics manufacturers/retailers of such devices and/or non-profit organizations, and could provide support to participating consumer electronics manufacturers/retailers and/or non-profit organizations, as necessary, to further reduce the cost of the devices to participating students. Discounted computers could also be provided through direct contributions from consumer electronics manufacturers/retailers or non-profit organizations, or a combination of methods.

In designing the program, the federal government would determine both the level of support necessary to induce sufficient manufacturer/retailer participation in the A+ program and a minimal co-payment from each student wishing to receive a subsidized device. For instance, the federal government could provide each participating student with a computer "coupon" similar to the DTV converter box coupon program recently administered by NTIA.³⁷ The coupons could be distributed by participating schools and be redeemed for a qualifying computer at participating consumer electronics retailers to partially offset the cost of making low-cost, computers available to eligible students.

To encourage the participation of computer manufacturers, NTIA would establish minimum performance guidelines for those computers eligible for support. Such guidelines should include:

³⁷ Such a new coupon program could rely on many of the same processing systems and protections against fraud, waste and abuse that NTIA recently used in the DTV converter box context.

- Performance capabilities, including hardware and software requirements for eligible computers, and appropriate means of providing technical support for such devices (e.g., an 800 number).
- A procedure for publishing a list of computers that comply with performance requirements.
- Procedures to inhibit fraud, waste, and abuse, including a mechanism for computer manufacturers to verify student eligibility in advance of providing a discounted computer.
- A requirement that each eligible student enroll in the School District’s digital media literacy training before being eligible to purchase a subsidized computer.
- A requirement that each eligible student receive not more than one subsidized computer.³⁸
- A mechanism to facilitate the prompt payment of support amounts, if any, from the government to computer manufacturers for each computer coupon submitted for payment.

Discounted Broadband Service

For any household with a computer and an eligible student enrolled in an A+ digital media literacy program, participating ISPs would: (1) provide broadband service at a 50% discount; (2) provide a modem at a 50% discount, whether purchased or rented; and (3) provide free installation of broadband service. Each eligible and participating student would receive such discounted broadband service for two years.³⁹

The broadband service provided to these households would be the lowest tier already offered by the broadband ISP serving the area, but with a minimum advertised downstream transmission speed offering of at least 1 megabit per second (Mbps).⁴⁰ Participating broadband ISPs would also provide parental control software and other online safety/security tools. The participating School District (in coordination with participating broadband ISP(s)) would be responsible for verifying whether a household qualifies as an ‘eligible household’.

³⁸ Although families can and do share a single computer, we recommend that this program allow each student to receive a discounted computer, even if more than one participating student resides in the same household.

³⁹ There may, of course, be instances where more than one participating A+ program student resides in the same household. Unlike a computer, which could be issued to each participating student, the discounted broadband service would be provided only once to that household for a period of two years.

⁴⁰ While we have established a minimum advertised speed of 1 Mbps in order to take into account differences among providers and industries and to ensure a quality broadband experience for the student, we note that at least some cable broadband ISPs who have committed to participate in the A+ program will offer higher speed tiers.

To encourage the participation of broadband ISPs and to ensure efficient administration of the program, NTIA would establish service guidelines for participating broadband ISPs. Such guidelines would include:

- A requirement to provide, at a minimum, the provider's entry level broadband Internet access advertised speed offering (of at least 1 Mbps downstream) and modem to each eligible household within its service territory at a discounted monthly price of 50 percent below the regular monthly price of the provider's entry level broadband Internet access service and the provider's applicable modem charge.
- A requirement to provide such discounted services to an eligible household for a period of two years, so long as the participating school district certifies at the outset and at the end of year one that the household contains at least one child participating in the A+ program who is eligible for reduced or free lunch under the National School Lunch Program.
- A requirement to provide installation of the broadband service at no charge to the eligible household.
- A requirement to provide the broadband ISP's standard, or other commercially available, parental control software and other online safety/security tools.
- A mechanism for broadband ISPs to verify household eligibility in advance of providing broadband Internet access service.
- A requirement that each eligible student enroll in the School District's digital literacy training and, if necessary, have purchased a discounted computer before being eligible to receive discounted broadband Internet access service at home.
- An explicit recognition that broadband ISPs shall not be required to provide broadband Internet access service to an eligible household that is outside the provider's service territory, or otherwise in a geographic area where service consistent with the guidelines of the A+ program cannot be reliably provided.

A+ Program Funding

NTIA (in consultation with the FCC, the U.S. Department of Education, and other relevant government agencies) would establish guidelines and requirements for participating School Districts, computer manufacturers, and broadband ISPs and would provide two distinct support payments for major elements of the A+ program. The A+ pilot proposal does not contemplate any federal subsidy for participating broadband ISPs.

1. *Payments to School Districts.* The federal government would provide support to participating school districts by providing funding to defray: (1) the cost of identifying and verifying eligible children (and their household addresses); (2) the

cost of providing appropriate training in digital literacy, online safety, and other online skills that meet standards set by NTIA and the U.S. Department of Education; (3) increased costs attributable to ensuring accessibility to the training, including, where appropriate, instances where English is a student's second language; and (4) other qualifying administrative tasks. Training programs could be provided directly through participating schools or through partnerships with appropriate non-profit partners under A+ program rules. NTIA would accept grant proposals from those School Districts seeking federal aid pursuant to A+ Program guidelines. We believe the federal government could fund digital literacy programs and administrative costs for approximately \$100 million over the two year-period of this pilot program.

Federal funding for the A+ program could be secured by reprogramming funds allocated to NTIA by the American Recovery and Reinvestment Act of 2009, including funds available under the State Broadband Data and Development Grant Program. Grants to school districts could require a 20% match requirement (per existing adoption programs under the Broadband Technologies Opportunities Program), while related support for computers would be made pursuant to the formula support levels established by NTIA as part of the guidelines for the A+ program.⁴¹

2. *Payments to Computer Manufacturers and Retailers.* The program contemplates that computers will be made available by computer manufacturers at substantially reduced prices to eligible students. This could be aided through a federal subsidy such as a government-coupon program similar to the DTV converter box program. Under this approach, the federal government would provide support to participating computer manufacturers by providing each eligible and participating student with a computer coupon distributed by participating schools. In designing the program, the federal government would determine both the level of support per coupon necessary to incent sufficient computer manufacturer participation in the A+ program and a minimal co-payment from each student wishing to receive a subsidized computer. Each computer coupon would be redeemable by the computer manufacturer and would partially offset the cost of making low-cost, broadband capable computers available to eligible students.

Discounted computers could also be provided through direct contributions from consumer electronics manufacturers/retailers or non-profit organizations, or a combination of methods.

⁴¹ NTIA should consider counting at least a portion of the value of the discounted Internet access (and computers, to the extent that the discount is not federally funded) toward the requirement that school district provide 20% of the costs of the digital media literacy program to be funded by a BTOP grant. *See* Recovery Act, § 6001(f) (limiting the federal share of any broadband project to 80%); *see also* NOFA, 74 Fed. Reg. at 33112.

A+ Program Administration

Participating School Districts would be responsible for administering the A+ program for their area. Among other things, the School District would be required to: (1) ensure that the eligibility criteria are enforced; (2) establish and conduct appropriate media literacy training courses; (3) implement, if necessary, government support programs for discounted computers; and (4) coordinate with state and federal government officials, consumer electronics manufacturers and retailers and broadband Internet service providers to implement the A+ program and protect it from fraud, waste and abuse.

A+ Program Eligibility

The A+ Program contains three specific eligibility criteria: (1) participants must be middle school students (grades 6-8 or 7-9, depending on the particular school district);⁴² (2) participants must be eligible for free or reduced school lunches under the National School Lunch Program; and (3) the student's household does not receive broadband Internet service and has not cancelled such service in the three (3) months prior to applying to participate in the A+ program. Based on those criteria, we estimate that up to 3.5 million students in approximately 1.8 million households would be eligible to participate in the A+ program.⁴³

These criteria were chosen to target a population where the A+ program can do a significant amount of good. As an initial matter, broadband has the potential to transform the educational experiences of participating students. As the recent study by the Advanced Communications Law and Policy Institute (ACLP) found, broadband adoption affects education in a variety of ways—from facilitating distance learning to promoting 21st century skill development.⁴⁴ Indeed, students without broadband are at a growing disadvantage vis-à-vis their connected peers. One survey, for instance, found that 71% of teens say the Internet has been the

⁴² NCTA recognizes that individual schools and school districts vary in their definition of what constitutes a middle school. Some include grades 6 through 8 while others include grades 7 through 9. Either group would potentially be eligible, as would low income children in similar grades attending private or parochial schools. The A+ program is limited to this three year cohort of students—students entering grade six during year two, for example, will not be eligible. However, at the expiration of the A+ program, the federal government and school districts may choose to explore other mechanisms and funding streams to create a similar but sustainable program.

⁴³ Thus, depending on what type of middle school participated, once the A+ program launched, all participating students in grades 6, 7 and 8, for example, would participate in a program that lasted two years from launch.

⁴⁴ “*Barriers to Broadband Adoption*”, A Report to the Federal Communications Commission, The Advanced Communications Law & Policy Institute, New York Law School, October 2009, Table 13, Overview of Broadband’s Impacts on Traditional Education Paradigm, at 69 (“*ACLP Report*”), citing the Partnership for 21st Century Skills, “*Maximizing the Impact: The Pivotal Role of Technology in a 21st Century Education System*”, <http://www.21stcenturyskills.org/documents/p21setdaistepaper.pdf> (core skills include digital literacy and fluency in using basic and advanced Internet tools; empowering students with these skills could have positive impact on U.S. economic output; in global education environment broadband enables students to reach overseas resources;); see also Ray Uhalde and Jeff Strohl, *America in the Global Economy*, A Background Paper for the new Commission on the Skills of the American Workforce (Dec. 2006), available at http://www.skillscommission.org/pdf/Staff%20Papers/america_Global_Economy.pdf.

primary source for recent school projects.⁴⁵ It also found that 65% of teens go online at home to complete Internet-related homework.⁴⁶ Moreover, broadband enables students to participate in online and distance learning opportunities, and delivers some of the assistive and adaptive applications that make the educational process more accessible for children with disabilities.

It is well-documented that regular access to computers and fluency in using basic and advanced Internet tools improves student performance. As the FCC Broadband Taskforce pointed out, broadband non-adopters are at an educational disadvantage and underperform in educational outcomes.⁴⁷ Likewise, the ACLP report points out:

Students are using broadband as a supplement for in-class learning and as a resource to assist with assignments. Indeed, one study found that, in households with broadband connections, “children ages 6 – 17 reported that high speed access affected both their online and offline activities, including schoolwork. According to these children, since getting broadband, 66 percent spent more time online, 36 percent watched less TV, and 23 percent [improved their] grades.”⁴⁸

The A+ program specifically targets middle school students because—with appropriate guidance and digital media literacy training—this age group is developmentally capable of safely and effectively taking advantage of the benefits of broadband. As the Maine Legislature noted in establishing a technology education program aimed at middle school students:

[M]iddle school is an appropriate, critical beginning point for introduction of high concentrations of learning technology, for several reasons: (1) middle school is an important transition period for many students, where it is crucial to use powerful, personalized learning tools to keep students engaged academically; (2) middle school students and teachers are generally receptive and adaptive to collaborative, integrated approaches to teaching and learning; and (3) middle school students would carry

⁴⁵ FCC Broadband Taskforce Presentation, Commission Meeting, Sept. 29, 2009 at slide 83. Pew Research also showed that 80 percent of parents surveyed said that the Internet helps their children with schoolwork. *Id.* at slide 120. And according to National Education Association (NEA) research, 95 percent of educators agree that “technology [e.g. computers; the Internet], when used properly, improved student learning.” *ACLP Report* at 71, citing “Access, Adequacy, and Equity in Education Technology”, at 23, NEA (May 2008), available at <http://www.edutopia.org/files/existing/pdfs/NEA-Access,Adequacy,andEquityinEdTech.pdf>

⁴⁶ Natalie Carlson, “National Survey Finds Kids Give High Marks to High Speed”, Hispanic PR Wire (April 2007), cited in FCC Broadband Taskforce Presentation, Sept. 29, 2009 at slide 83.

⁴⁷ FCC Broadband Taskforce Presentation, Sept. 29, 2009 at slide 120.

⁴⁸ *ACLP Report* at 70, citing “Connected to the Future”, Center for Public Broadcasting, 2002; see also Linda A. Jackson et al., “Does Home Internet Use Influence the Academic Performance of Low-Income Children,” *Developmental Psychology* 42(3) (2006) 429; Robert Atkinson and Daniel Castro, “Digital Quality of Life: Understanding the Personal and Social Benefits of the Information Technology Revolution: Education & Training” at 22, Information Technology and Innovation Foundation, Oct. 2008.

technology-based skills into high school, where more varied options for computer access sometimes exist.⁴⁹

Moreover, home broadband access also encourages parental engagement in their child's education, as it enables them to connect to school resources and allows them to check their child's grades, homework and progress, and to communicate by email with teachers.

By limiting eligibility to the families of students that qualify for free or reduced-cost lunches, the program targets a segment of the population that has dramatically lower broadband adoption rates than the general population.⁵⁰ As the FCC Broadband Taskforce recently reported, the broadband adoption rate among those with annual incomes of less than \$20,000 per year was only 35%, compared to an adoption rate of 88% among those with annual incomes over \$100,000.⁵¹ Similarly, the ACLP Report noted a significant gap in home Internet access between those eligible for free or reduced lunches and those that were not. It noted that "just 41 percent of students in the eighth grade who take part in the free and reduced lunch program had home Internet access in 2003, compared to 72 percent for those not participating."⁵²

These disparities in broadband adoption rates can only exacerbate existing educational achievement gaps.⁵³ However, in some low-income areas where laptops or netbook-like devices and home broadband connections have been provided to children, and the technology was thoughtfully integrated into learning and instruction, research shows positive effects on student academic performance, engagement, and attitude.⁵⁴ In Henrico County, Virginia, for example,

⁴⁹ Task Force on the Maine Learning Technology Endowment, Final Report, "Teaching & Learning for Tomorrow: A Learning Technology Plan for Maine's Future" at 40, <http://www.maine.gov/mlti/resources/history/mlterpt.pdf>.

⁵⁰ A body of education research shows a correlation between poverty and low academic achievement. While there are many examples of high-performing, high-poverty schools – and failing schools in middle- to upper-income communities – high-poverty schools are disproportionately represented in the ranks of low-performing schools. Therefore, a large proportion of the A+ program's resources would benefit families of children in these schools.

See e.g. Annotated Bibliography: "The Impact of School-Based Poverty Concentration on Academic Achievement & Student Outcomes Poverty & Race Research Action Council"

http://www.prrac.org/pdf/annotated_bibliography_on_school_poverty_concentration.pdf; "Socioeconomic Status and the Fates of Adolescents," José J Escarce, Editor, Health Services Research, October 2003, 38(5) at 1229–1234.

⁵¹ See FCC Broadband Taskforce Presentation, Sept. 29, 2009 at slide 82.

⁵² ACLP Report at 81.

⁵³ FCC Broadband Taskforce Presentation, Sept. 29, 2009 at slide 120 (noting that broadband non-adopters are at an educational disadvantage and that the cost of digital exclusion is growing). See also Id. at slide 115 (noting that the achievement gap is "staggering," e.g., among ACT-tested students with household incomes below \$30,000/year, only 33% had college-level literacy skills, while among students with household incomes above \$100,000/year, the college literacy level was 70%).

⁵⁴ In Green County, NC, students in grades 6-12 received laptops and home connections. High school proficiency scores in this area rose from 53 to 78%, SAT composite scores by 41 points and college applications have tripled. "High Speed Broadband Access for All Kids: Breaking through the Barriers", State Educational Technology Directors Association, June 2008, http://www.setda.org/c/document_library/get_file?folderId=270&name=DLFE-211.pdf. In Lemon Grove, CA, another well-studied example, where Cox Communications provided home connections and students received

where students were provided computers and subsidized home broadband connections, one school principal noted that “laptops were especially beneficial for at-risk students.”⁵⁵

Finally, although it is not the focus of the program, there likely will be positive effects among other members of the household. Children are often more familiar with technological devices and applications than are their parents and often become the informal tech support for the household.⁵⁶ Especially in families where English is not the primary language, children can also be the family’s online navigators, showing parents and caregivers how to connect to health care resources, social services, and employment opportunities.

A+ Program Assessment

The A+ program has two overarching goals: first, drive sustainable broadband adoption in populations that currently do not benefit from broadband; and, second, materially and positively affect educational performance among participating students. But, as with any pilot program of this scale, these metrics should be tested in order to determine success or failure and to determine if any refinements or changes to the program would be required in order to achieve those two overarching goals. The federal government should be responsible for establishing a mechanism for assessing the impact of the A+ program. The Department of Education, working with NTIA and the FCC, should be asked to do an assessment that would include:

- Participation levels in the A+ program, including reasons why otherwise eligible students chose not to participate;
- The impact of the A+ program on broadband adoption rates—both during the course of the program and after the program ends in order to measure sustainable broadband adoption;
- The impact of the A+ program on educational outcomes of participating students; and
- The impact of the A+ program on the broader participating households.

netbook-like devices, the community saw similar results. See LemonLink Press Packet at section V, <http://www.lgsd.k12.ca.us/lemonlink/PressPacket.htm>; “*LemonLINK, One-to-One & Beyond: Managing Change Successfully in Education Technology*” San Diego State University Case Study, 2005; see also <http://www.metiri.com/NSF-Study/MIPProfile.pdf> (reporting on positive impact of similar technology program in the state of Michigan).

⁵⁵ <http://www.sri.com/news/releases/06-22-04.html>; see also http://www.projectred.org/uploads/Henrico_County_FinalReport.pdf.

⁵⁶ Common Sense Media, Joan Ganz Cooney Center Digital Media Study, April 21, 2008.