

**Before the
Federal Communications Commission
Washington, DC 20554**

In the Matter of)	
)	
International Comparison and Consumer)	GN Docket No. 09-47
Survey Requirements in the Broadband Data)	
Improvement Act)	
)	
A National Broadband Plan for Our Future)	GN Docket No. 09-51
)	
Inquiry Concerning the Deployment of)	GN Docket No. 09-137
Advanced Telecommunications Capability to)	
All Americans in a Reasonable and Timely)	
Fashion)	
)	
Schools and Libraries Universal Service)	CC Docket No. 02-6
Support Mechanism)	
)	
Comprehensive Review of the Universal Service)	WC Docket No. 05-195
Fund Management, Administration, and Oversight)	

VERIZON AND VERIZON WIRELESS

COMMENTS – NBP PUBLIC NOTICE #15

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INTRODUCTION

Broadband is a powerful tool that has the potential to positively transform how we educate ourselves and our children. Verizon and Verizon Wireless¹ are fully committed to providing services that bring the benefits of broadband to students across the nation. Verizon has been instrumental in assisting educational institutions and other organizations – large and small – in obtaining the facilities and services necessary to obtain and maintain broadband connectivity. In addition, we are actively engaged in developing and implementing online and digital educational content to enhance student achievement in traditional classroom settings and to expand learning opportunities for disadvantaged, homeless, and at-risk children. Verizon has partnered with several public interests groups to develop innovative programs to improve digital literacy – a key to increased broadband adoption. Consistent with the Commission’s National Broadband Plan objectives,² these educational initiatives in which Verizon is engaged provide a viable model that can be scaled for use on a nationwide basis to enhance learning opportunities across the country and to improve digital literacy.

In getting us where we are today, perhaps more than any other initiative the federal Universal Service Fund “E-rate” program has also put us in a position to harness the educational power of broadband. E-rate brought the benefits of broadband to schools and libraries throughout the nation, improving the quality of our education system and equipping students with the tools required to compete in the 21st Century. E-rate requests for broadband Internet access services get first priority for funding every year and have been fully funded since the

¹ In addition to Verizon Wireless, the Verizon companies participating in this filing are the regulated, wholly owned subsidiaries of Verizon Communications Inc. (“Verizon”).

² *Comment Sought on Broadband Needs in Education, Including Changes to E-rate Program to Improve Broadband Deployment*, NBP Public Notice #15, DA 09-2376 (rel. Nov. 3, 2009) (“Public Notice”).

beginning of the program, which underscores the impact and sufficiency of the existing E-rate program. For many schools and libraries, the E-rate program is the primary source of funds by which they enjoy these benefits of broadband connectivity, and it should be an important component of the Commission's National Broadband Plan. The success of the E-rate program is attributable to the fact that it is focused and predictable. The program provides schools and libraries with discounts for defined eligible telecommunications services, Internet access, and internal connections within an annual budget. While the program is flexible enough to accommodate changes in the types and nature of supported services as broadband technology continues to evolve, the fundamental emphasis and size of the E-rate program should remain the same.

DISCUSSION

As requested in the Public Notice, Verizon and Verizon Wireless provide the following responses to the Commission's specific questions:

I. Broadband and Digital Content (Q. 3)

Broadband plays a critical role in ensuring the availability of online and digital educational content, which is transforming the learning environment. As part of this transformation, the Verizon Foundation has created Thinkfinity, which is the cornerstone of Verizon's literacy, educational, and technology initiatives. Thinkfinity provides a free, comprehensive digital learning platform, with the goal of improving student achievement in traditional classroom settings and beyond by providing high-quality content and extensive professional development training.³

³ See "About Thinkfinity," available at <http://thinkfinity.org/about.aspx> (last visited Nov. 12, 2009). Additional information regarding Thinkfinity is contained in Attachment 1.

Thinkfinity draws on the strength of several content partners to provide discipline-specific, standards-based educational resources. These partners include the American Association for the Advancement of Science, the Council for Economic Education, the International Reading Association, the National Center for Family Literacy, the National Council of Teachers of English, the National Council of Teachers of Mathematics, the National Endowment for the Humanities, the National Geographic Society, ProLiteracy, the Smithsonian National Museum of American History, and The John F. Kennedy Center for the Performing Arts.

Utilizing these extensive resources, Thinkfinity enables educators to enhance their classroom instruction with lesson plans, interactive activities, and other online resources. Thinkfinity also provides a wealth of educational and literacy resources for students, parents and after-school programs. All of Thinkfinity's 55,000 standards-based K-12 lesson plans, student materials, interactive tools and reference materials are reviewed by leading education organizations to ensure that content is accurate, topical, and appropriate for students. Thinkfinity also offers a comprehensive set of professional development resources to help teachers improve their teaching skills.

Thinkfinity uses emerging technologies and communication tools to provide universal access to expanded learning opportunities, including to disadvantaged, homeless and at-risk children. For example, through a grant from the Verizon Foundation, the California State University Long Beach Foundation created the 2009 Verizon Science Summer Camp, which provided 49 homeless students from five homeless shelters in Long Beach, California, with a

high-quality educational and interactive experience in science.⁴ Students took advantage of broadband connections and Thinkfinity to enjoy an engaging and educational interactive experience. At the Verizon Science Summer Camp, teachers used Thinkfinity to customize standards-based curricula for students by grade level and to assess individually their progress in performing science tasks and understanding science careers. Students participating in the program achieved testing results higher than the general population. Because program content can be accessed from any broadband connection (for example, a computer terminal at a school or library), students can focus on the online educational experience, rather than having to worry about textbooks, which, for homeless students, poses a challenge.

Verizon's partnership with the Jobs for America's Graduates ("JAG") program is another example of how online content solutions such as Thinkfinity can meet the educational needs of students.⁵ The mission of the JAG program is to keep at-risk young people in school through graduation and provide work-based learning experiences that will lead to career advancement opportunities. While this program is not considered a traditional public school, it operates out of public schools, and the partnership with Verizon allows participants to focus on improving educator effectiveness through use of Thinkfinity, which is now part of the JAG learning model in 20 schools. About 100 JAG specialists (teachers) have been trained on Thinkfinity and are incorporating Thinkfinity resources into the JAG curriculum. Because Thinkfinity resources are

⁴ See "Verizon Foundation Gives \$25,000 to Support CSULB's 'Young Scientists' Camp for Local Homeless Children," available at <http://cf.papubs.csulb.edu/news-events/story.cfm?storyid=1196> (last visited Nov. 12, 2009).

⁵ See "Verizon Awards More than \$635,000 to Arkansas Nonprofits to Support Education and Workforce Development," Reuters, available at <http://www.reuters.com/article/pressRelease/idUS148862+11-May-2009+BW20090511> (last visited Nov. 12, 2009).

highly interactive, they support a more manageable classroom environment for at-risk children, who require creative activities and learning approaches.

These initiatives that Verizon sponsors or participates in and other similar efforts (including the digital literacy programs discussed below) could be scaled to include a broader base of participants and beneficiaries, which would enhance broadband-based learning and further the country's larger educational objectives. In particular, because Thinkfinity's resources are web-based they are available without geographic limitations.

II. Digital Literacy (Q. 4)

In order for the United States to achieve its broadband potential, a central focus of the National Broadband Plan must be on programs to encourage Americans to get online. One of the commonly cited factors in the decision not to go online relates to "usability" – accounting for 17 percent of non-adopters in a recent Pew survey.⁶ Many Americans simply feel that they do not have the know-how or physical ability to take advantage of broadband services. In order to address that concern, policymakers must make a concerted effort to ensure that the computer skills needed to function in a broadband world are a core part of this country's education system. In today's economy, computer literacy must go hand-in-hand with literacy writ large, and no child should be denied computer literacy skills that he or she will need in order to succeed.

Verizon has been actively engaged in programs to promote digital literacy. For example, Verizon partnered with the National Council of La Raza ("NCLR") and the National Urban League ("NUL") to fund the creation of an innovative after-school program using resources from

⁶ John B. Horrigan, "Obama's Online Opportunities II," at 2, Pew Internet & American Life Project (2009) ("Pew Study").

Thinkfinity.⁷ The initiative is designed to improve digital literacy and educational achievement among minority students, using culturally focused educational resources with an emphasis on literacy, math, and science. In September, the first pilot programs were launched in three NCLR locations: Boston, Chicago, and Washington, D.C. Nine teachers and 60 students are engaged in this pilot program, using and evaluating Thinkfinity resources in project-based learning. With criteria and benchmarks in place, the program is “pushing the envelope” of academic expectations in an informal educational setting. Teaching sessions are being videotaped and used to evaluate educator effectiveness and student engagement. In early October, students from the Washington, D.C. program participated in a national event at the U.S. Department of Education that featured Thinkfinity for after-school applications.

Verizon also has partnered with the Coalition to Improve Education, which provides direct reading instruction to economically disadvantaged K-12 students in Lake Elsinore, California, with the objective of increasing digital literacy and student achievement in English Language Arts.⁸ In the third quarter of 2009, 54 students were participating in the program, of which 85 percent achieved the objective of a 70 percent increase in English Language Arts scores, based on the California Standards Test. Teachers use a variety of tools over a 10-week neurolinguistic program, an intensive research-based remediation program using direct instruction and Thinkfinity lesson plans. The program has had a particularly positive impact on English language learners in the third to fifth grades, which is a critical age for at-risk children.

⁷ See News Release, “Verizon Foundation Invests \$2.2 Million in Partnership With National Council of La Raza and National Urban League to Create After-School Education Program Using Thinkfinity.org; Program Will Result in Expansion of Free Culturally Sensitive Online Resources on Thinkfinity.org for After-School and Community Programs and Parents,” available at <http://www.nclr.org/content/news/detail/54262/> (last visited Nov. 12, 2009).

⁸ See “Literacy and Advocate Receives \$49,000 Grant,” Los Angeles Chronicle, available at <http://www.losangeleschronicle.com/articles/view/82844> (last visited Nov. 12, 2009).

III. E-rate Modifications (Q. 11)

The E-rate program has been extremely successful. Since its inception in 1997, E-rate funding has provided millions of school children, teachers, and library users access to modern telecommunications and broadband services. According to a study released by the National Center for Education Statistics, nearly 100 percent of public schools in the United States had Internet access, and 97 percent of these schools used broadband connections to access the Internet as of 2006.⁹ For many of these schools and libraries, E-rate discounts are the primary source of funds necessary to obtain and maintain broadband connectivity. Some changes to the E-rate program in order to enhance a focus of broadband facilities may make sense. But overall, E-rate is a program that works and makes a positive contribution to meeting the country's broadband objectives.

Verizon has been fortunate to have been involved in numerous E-rate "success" stories. For example, in one school district in California, E-rate funds were used to deploy a Gigabit network supporting almost 15,000 computers serving more than 22,000 students. The school district used this network to launch an award-winning digital algebra program and to operate a "virtual academy" for students featuring intensive online learning services.

In another school district in Texas serving more than 33,000 students, Verizon deployed a Gigabit network supporting more than 21,000 computers. The school district has implemented fully integrated classrooms that incorporate technology into the curriculum, which has enhanced the educational experience and resulted in increased classroom participation. This school district holds an annual symposium to show other districts and schools from across the country how to implement their technology into the classroom.

⁹ Internet Access in U.S. Public Schools and Classrooms: 1994-2005, U.S. Department of Education, National Center for Education Statistics, at 4-5 (2006) ("*Internet Access Report*").

Whether wireline or wireless, a substantial portion of E-rate funds serve to subsidize broadband services. Although USAC is in the best position to provide information at the level of granularity requested, the fact that 97 percent of schools in the United States had broadband as of three years ago underscores that E-rate funding is being successfully used for broadband connectivity.¹⁰

Furthermore, the data that USAC reports annually reflect that the E-rate program at current levels is meeting the broadband needs of schools and libraries. Under the FCC's rules, "first priority" for available E-rate funding is given to "telecommunications services, voice mail, and Internet access" (so-called "priority 1" services); only after providing support for priority 1 services can USAC allocate any remaining E-rate funds to "internal connections" and other so-called "priority 2" services. *See* 47 C.F.R. § 54.507(g). Since at least 1998, USAC has funded priority 2 services to one degree or another, meaning that priority 1 services – which include broadband connections – are fully funded every year.¹¹

That the E-rate program is narrowly focused on providing schools and libraries with discounts for a specific set of services is one of the reasons it has been so successful. Applicants and providers alike understand the targeted purposes the E-rate program is designed to serve, which facilitates the ability of schools and libraries to obtain and pay for supported services.

Nonetheless, E-rate cannot and should not be viewed as a broadband cure-all. Modifying E-rate to include "colleges, community colleges, pre-kindergarten, Headstart, or other entities to

¹⁰ *Internet Access Report* at 4-5.

¹¹ *See, e.g.*, USAC 2008 Annual Report at 53 (for fiscal year 2008, internal connections and basic maintenance – priority 2 services – were funded at the 88% level and above, as of December 31, 2008); USAC 2007 Annual Report at 49 (for fiscal year 2007, internal connections and basic maintenance – priority 2 services – were funded at the 80% level and above as of December 31, 2007).

participate in the E-rate program,” for instance, could undermine continued success of the initiative. Public Notice at 6. Likewise, altering the scope of services eligible for E-rate funds could impact the sustainability of the program. Public Notice at 6. Access to computers and equipment is a critical element of a successful broadband adoption program, but adding computer equipment and training would likely place a significant financial strain on the fund. Computer equipment is constantly evolving and improving and thus could conceivably be replaced every year if E-rate dollars were available to do so. Similarly, a computer requires software in order to function, which would further increase the demands on the E-rate program.¹²

IV. E-rate Disbursement (Q. 12)

Verizon has no objection to proposals to adjust E-rate discounts or establish new priority levels to assist schools and libraries that do not have broadband connections today should the Commission decide that shuffling E-rate policy priorities is most consistent with the national broadband agenda. Public Notice at 7. To the extent particular schools or libraries lack sufficient resources for obtaining a broadband connection, the E-rate program may be an appropriate mechanism to ensure that such facilities and those that they serve enjoy the benefits of broadband.

¹² This is not to say that the E-rate program should remain stagnant. On the contrary, the program is flexible enough to accommodate changes in broadband technology consistent with its core mission. With increased reliance upon wireless broadband services, for instance, telecommunications and Internet providers are developing new and exciting wireless products and services that could substantially benefit schools and libraries. Thus, E-rate funding should be permitted for wireless Internet access applications, wireless modems, laptop cards, other remote access, and wireless routers, all of which can be successfully integrated into an effective education program. In addition, schools and libraries increasingly use wireless broadband technology off-premises, and such uses that serve educational purposes should be supported by the E-rate program as well. *See* Comments of Verizon and Verizon Wireless, Schools and Libraries Universal Service Support Mechanism, CC Docket No. 02-6, filed on June 23, 2009.

V. E-rate Funding (Q. 13)

As discussed above, broadband connections are being fully funded by the E-Rate program. Each fiscal year, funds are available for priority 2 services, which necessarily means that the E-rate program has provided funding to all priority 1 services – which include broadband connections. This strongly suggests that the current funding is sufficient to support E-rate broadband objectives.

Indeed, the E-rate funding cap, currently set at \$2.25 billion annually, contributes to, rather than detracts from, the program's success. This yearly budget makes the E-rate program predictable and provides an incentive for applicants and their service providers alike to focus funding requests and ensure that the requests are consistent with the defined purposes of the program. This focus would likely be lost if there were fewer constraints on the size of the program. Although funding requests by schools and libraries exceed the current cap, millions of dollars in committed funds go unused every year, which are then reallocated for use in subsequent years.¹³ There are many reasons why committed funds go unused, such as a decision by the applicant that it really does not need to purchase services, a determination that funds would be better spent elsewhere to meet the educational needs of students, funds allocated to projects that are never completed, or the difficulty in navigating the E-rate program's rules and procedures. Prior to adopting any changes to the current cap, the Commission should collect the necessary data to determine whether any change is warranted. For example, it should scrutinize the underlying causes of unused funds each year and analyze the extent to which rule changes

¹³ *Telecommunications: Long-Term Strategic Vision Would Help Ensure Targeting of E-rate Funds to Highest-Priority Users*, Government Accountability Office, at 28-29 (March 2009).

may be necessary to address difficulties that applicants may be having in obtaining committed funds.

Any decision to increase the overall size of the E-rate program should not be made lightly or without adequate data conclusively establishing that such an increase is necessary. The Universal Service Fund already faces considerable financial pressures, and the quarterly contribution factor continues to surge because of increasing demand for support and a shrinking assessable base of interstate revenues.

Respectfully submitted,

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ATTACHMENT 1

Thinkfinity

The Verizon Foundation

Literacy Network

About Thinkfinity

Contact Us

Free Thinkfinity Training

Thinkfinity wants to know...

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- Parent
- Student
- Verizon Employee

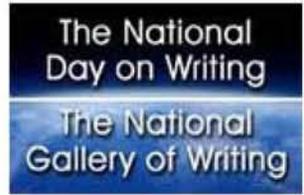
New to Thinkfinity?
Watch our Overview **Go** >

FEATURES

- 1**
- 2
- 3
- 4
- 5
- 6

National Day on Writing is October 20, 2009

Writing is a daily practice for millions of Americans. But few notice how integral writing has become to daily life in the 21st century. Celebrate the [National Day on Writing](#) by submitting your work to NCTE's [National Gallery of Writing](#).



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| Verizon Foundation | |



Thinkfinity

Verizon Thinkfinity Tools for teachers

National Budget Simulation

Use the pull-down menus to adjust the amount of money spent on each of the listed functions. The changes you make are automatically calculated and displayed in the Spending and Revenue Summary table.

Notes: Numbers are in billions of dollars.

print

Function	2007	% change	New Totals
National defense	571.9	+20%	686.28
International affairs	35.1	Select one...	35.1
General Science, space, and technology	24.9	Select one...	24.9
Energy	1.8	Select one...	1.8
Natural resources and environment	35.2	Select one...	35.2
Agriculture	19.1	Select one...	19.1
Commerce and housing credit	11.2	NO CHANGE	11.2
Transportation	77.7	Select one...	77.7
Community and regional development	95.1	Select one...	95.1
Education, training, employment, social services	94	Select one...	94
Health	268.5	Select one...	268.5
Medicare	372.3	NO CHANGE	372.3

simulations



Multi-media explorations



lesson plans



artifacts



podcasts



Interactive learning games



Videos



Thinkfinity

Verizon Thinkfinity Content Partners



The John F. Kennedy Center for the Performing Arts

Arts



Council for Economic Education

Economics



National Endowment for the Humanities

Humanities



National Council of Teachers of Mathematics

Mathematics



**International Reading Association &
National Council of Teachers of English**

**Reading/English
Language Arts**



American Association for the Advancement of Science

Science



National Geographic Society

Geography



Smithsonian National Museum of American History

American History



**National Center for Family Literacy &
ProLiteracy**

**Adult &
Family Literacy**



The screenshot displays the Thinkfinity game interface. On the left, a 'Score Detail' panel shows: Area: 10×1 (100 points), Efficiency: 33% (You could have earned 300 points by making a 6×5 rectangle), Ships captured: 3 (300 points), and Total score: 400 points. Below this is a control panel with a compass, a radar, and several buttons. The main game area features a grid with a purple and blue ship layout. A central panel shows a math problem: 'CLICK THE PERIMETER OF YOUR RECTANGLE TO COMPLETE YOUR TURN' with numbers 70, 74, 72, and 24, a 'GET NEW NUMBERS' button, and 'USED NUMBERS: 26, 22'. A statistics panel at the bottom shows: WIDTH: 10 HEIGHT: 1 AREA: 10, CURRENT EFFICIENCY: 33%, and OVERALL EFFICIENCY: 56%. At the top, player names 'funkyfritschi' (1000 points) and 'Calculation Nation' (1700 points) are shown with progress bars.

Science NetLinks AAAS Search AboutSNL Email

Lessons Tools Resources Benchmarks

9-12 Lesson Plan Navigator

9-12 and Choose a Benchmark Chapter Display

Benchmark 3

The Nature of Technology

3A Technology and Science #1

Technological problems often create a demand for new scientific knowledge, and new technologies make it possible for scientists to extend their research in new ways or to undertake entirely new lines of research....

- Resources**
- Neuroscience for Kids
 - National Institute on Drug Abuse
 - Seeing, Hearing, and...

Related Lessons

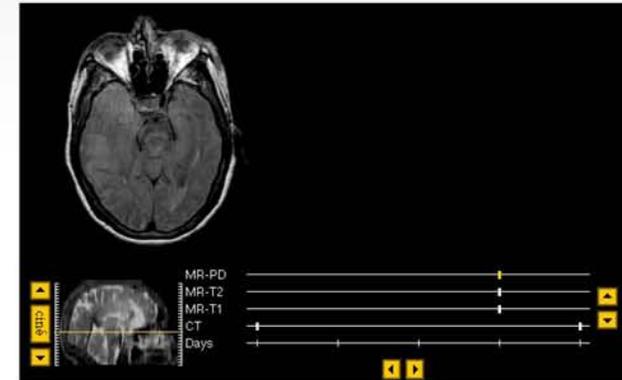
Watch Your Thoughts! Diagnostic Imaging and the Brain

Purpose

To understand the advantages, disadvantages, and potential of diagnostic imaging technologies in brain research.

Context

By the time students reach the high-school level, they should be developing a deeper and broad-based understanding of the relationships linking technology and science. (*Benchmark Literacy, p. 47.*)



fatal stroke

Transaxial# 72 2x Sagittal# 70 2x Coronal# 51 2x

Brain-hemispheric MR-T1 sync

Brain-hemispheric MR-T1 sync

Brain-hemispheric MR-T1 sync

Show pointers Show labels Show list All modalities to MR-T1 Help Home

normal brain

