

**MSLN
Annual
Report**

December 2

2011

**Report from the Maine State Library and the Maine Department
of Education to the Maine Public Utilities Commission for
Funding Year 2012 (July 1, 2012 through June 30, 2013)**

**Maine School
and Library
Network**

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Overview

The Maine Public Utilities Commission (MPUC) requires that the Maine State Library (MSL) and the Maine Department of Education (MDOE) present to the MPUC an annual plan that addresses how Maine Telecommunications Educational Access Fund (MTEAF) funds will be spent to address the connectivity needs of Maine schools and libraries. The Executive Director of Networkmaine was tasked with this responsibility on behalf of the MDOE and MSL by the Networkmaine Council and respectfully submits this Annual Report for FY 2012-2013. This report highlights the successes of the Maine School and Library Network Project over the past year, details how the requested funds will be spent to address the connectivity needs of Maine Schools and Libraries in the year to come, and includes the MDOE and MSL's request for Maine Telecommunications Educational Access Fund (MTEAF) funds.

Great progress has been made in the past year. The final circuit upgrades from the FY 2010-2011 were completed by the transport providers¹ and twenty seven (27) schools and libraries chose to return to the MSLN Project after having left in previous years because their bandwidth needs were not being met. These twenty seven locations include twenty five (25) schools and two (2) libraries. It is anticipated that additional schools and libraries will return to the MSLN Project in the coming year as their existing contracts expire. In addition to these returning schools and libraries, eleven (11) superintendent offices and transportation buildings, or Non Instructional Facilities (NIFs), were served for the first time. By allowing these NIFs to participate in MSLN, school districts have been able to achieve greater efficiencies and cost savings in their daily operations thereby freeing up funds to be redirected to the classroom.

Not only is the MSLN Project enjoying a regrowth in its number of participants, it is also experiencing growth in overall usage. This past year, twelve (12) schools and fifteen (15) libraries required upgrades to faster connections based on their previous bandwidth utilization and projected needs. The connectivity provided through the MSLN Project, perhaps considered a secondary priority by some back when the project began in mid-1990's, is now considered a mission critical component in the daily operation of Maine's schools and libraries.

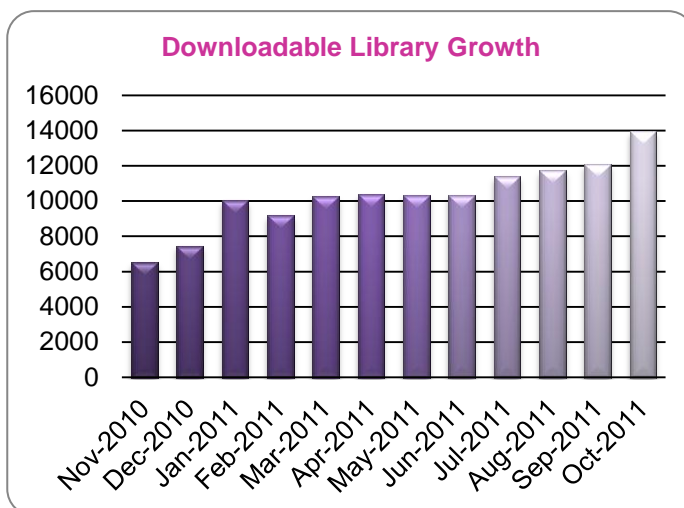
Many of the libraries that received bandwidth upgrades are participating in the *Maine Public Library Information Commons Project*² as video conferencing hub sites. The Information Commons Project is the result of a 1.3 million dollar Broadband Technology Opportunity grant awarded to the Maine State Library. This project has upgraded public computer centers at 107 public libraries statewide and increased the number of available broadband workstations by as much as 41% by deploying approximately 500 new workstations. It has also provided and enhanced training opportunities by deploying 11 video conferencing regional hubs and three mobile computer labs to enable hands-on training in remote rural locations. MSL's partners in this project include: Maine Information, Networkmaine, Department of Labor, Career Centers and Workforce Investment Boards, Maine Adult Education, Get Better Maine.org, and Maine InfoNet. In 2012 partnerships and programs will include the Maine Equal Access to Justice and the Maine Center for Entrepreneurial Development.

¹ Connections to a number of island-based schools and libraries were delayed due to the need to upgrade the microwave links that provide connectivity to the islands from the mainland.

² <http://maine.gov/msl/recovery/index.shtml>

The video conferencing capabilities funded through the BTOP grant enables larger libraries that are hubs to expand access to programs on a statewide or regional level. For example, Portland Public library partnered with Get Better Maine (Maine Health Management Coalition) to host an author talk with T.R. Reid (The Healing of America) and included five (5) libraries across the state utilizing the video conferencing equipment. In February, the Maine State Library will be working with Maine Center for Entrepreneurial Development to broadcast Steve Blank, the #1 Silicon Valley entrepreneurship educator to the MCED Top Gun program and to the Information Commons project video conferencing hubs. Maine State Library staff is also using desktop video conferencing for staff meetings and outreach to libraries saving money on travel costs and time.

Expanded bandwidth in public libraries has enhanced use of the Maine InfoNet Downloadable Library. With the addition of downloadable e-books through this service, 192 libraries offer access to 6,431 audio and e-books. In the past year, there were 123,987 checkouts and growth is continuously building.



Three years ago, MDOE migrated to the New England Common Assessment Program (NECAP) as its annual testing instrument for the eighth grade, joining forces with New Hampshire, Vermont, and Rhode Island. In the spring of 2011, the consortium, working with its assessment provider, began an online testing pilot with over 30 schools participating. Testing during the Pilot was nearly flawless and during October of 2011, thirty (30) schools successfully participated in the Online NECAP Writing assessment. Without the upgrades to the MSLN network that have occurred over the past two years, along with the additional bandwidth the upgrades provided, these online assessments would not have been possible³.

The success of the recent online assessments is a very significant step forward as the State of Maine, along with 45 other states, is expecting to fully transition to online assessments for grades 3 – 12 in 2014-15 as part of the adoption of the Common Core State Standards for English Language Arts and Mathematics. It is well-known nationally that Maine is the state that is most prepared for this transition due to the technology infrastructure provided through the unique combination of the MSLN and MLTI projects. Due to this reputation, Maine is one of the governing states and co-chair of the Technology Committee of a multi-state consortium. This consortium, Smarter Balanced Assessment Consortium, is working to develop a high-quality assessment system that helps all students succeed in college and careers.⁴

³ Beginning in 2003, the Maine Department of Education (MDOE) began piloting online testing for the State's annual Maine Educational Assessment (MEA). These tests leveraged the MLTI-installed wireless networks, MLTI 1:1 computers, and the MSLN Project. At the time, most schools were utilizing T1 connections. The MDOE worked closely with the University and its assessment provider, but after numerous years of development, the program was shut down due to technical challenges related to a lack of available bandwidth.

⁴ <http://www.k12.wa.us/smarter/>

The MDOE and MSL recognize the central role Maine's schools and libraries play in their local communities and how vital high speed Internet Access is in enabling them to fulfill their missions. Therefore, for Funding Year 2012 (July 1, 2012 – June 30, 2013), the MSL and MDOE respectfully submit the following recommendations for funding to the Commission for its consideration:

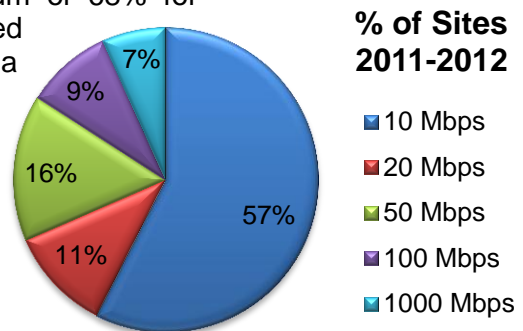
Recommendations for Funding Year 2012-2013

I. Continued Funding for Services

The MSL and the MDOE ask continued funding for services to all qualified schools and libraries pursuant to 35-A M.R.S.A. § 7104-B(1) (referred to as MSLN) as further described below.

A. Transport Services

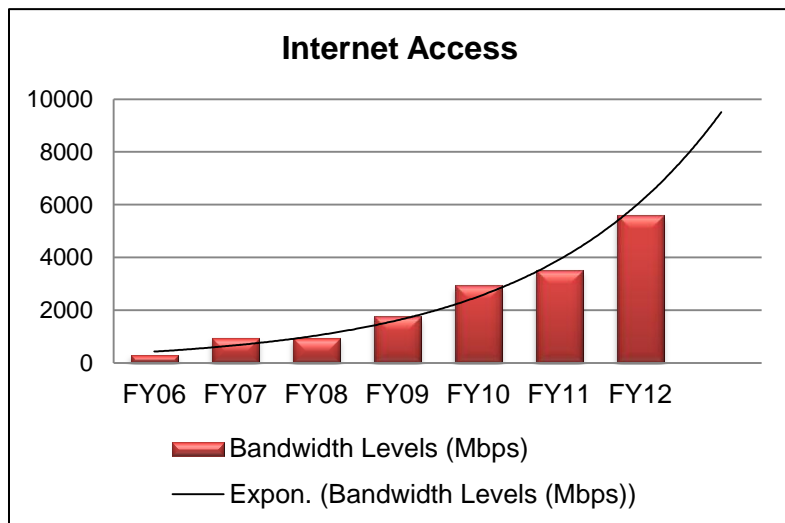
Assuming Federal E-Rate will pay a minimum of 68% for approved schools and libraries, it is anticipated that Transport Services will be provided at a cost to the MTEAF that is 10% above the actual transport costs for the 2011-2012 funding year. This increase in cost is due to the anticipated increase in number of MSLN Project participants and projected bandwidth upgrades based on historical increases in demand by existing schools and libraries.



Anticipated impact on MTEAF is \$ 2,043,547

B. Internet Access Services

Assuming Federal E-Rate will pay a minimum of 68% for approved schools and libraries, it is anticipated that Internet Access Services will be provided at a cost to the MTEAF that is 12% below the budgeted cost for the 2011-2012 funding year despite the fact that Networkmaine has added an additional 1.5 Gbps of Internet Access capacity. The primary reasons for the decrease in cost in this service are an increased use of settlement free peering and the renegotiation of Networkmaine's Internet Access contracts.



The primary reasons for the decrease in cost in this service are an increased use of settlement free peering and the renegotiation of Networkmaine's Internet Access contracts.

Anticipated impact on MTEAF is \$ 75,120

C. CIPA Compliant Content Filtering

The MTEAF currently supports the full cost of providing a centrally managed content filtering solution that helps meet the requirements of the federal Children's Internet Protect Act (CIPA) while minimizing the administrative and technical burden on the schools and libraries. While CIPA compliance is a requirement to receive e-rate reimbursement for Internet Access Service, solutions for meeting the requirement are not eligible for e-rate funding.

Networkmaine is using a new cloud-based solution offered by OpenDNS to provide content filter for the schools and libraries. This service not only has feature parity with the previous filtering solution, it also eliminates both the fiscal and administrative burdens of maintaining servers to run the content filtering software. Networkmaine negotiated an annual licensing fee with OpenDNS that is lower than the cost of the previously used solution. Networkmaine's use of OpenDNS for the MSLN project was recently featured in *Converge*⁵ magazine as the first state-network to leverage cloud-based technology to provide a CIPA compliance solution for its participants.

The MDOE and MSL are requesting a lower level of funding for content filtering for funding year 2012-2013, than was approved for funding year 2011-2012.

Anticipated impact on MTEAF is \$ 87,600

D. Content Databases and E-Discovery Solution

The MSL and the MDOE recommend the continued subscription of electronic databases and E-Discovery solution to provide statewide access for citizens through MARVEL!, Maine's Virtual Library, as permitted by 35-A M.R.S.A. § 7104-B.

MARVEL!

Funding for the MARVEL! databases comes from most of its patron base. MTEAF provides funding on behalf of the public libraries and K12 schools. Additional funding is also provided by the University of Maine System, Bates, Bowdoin and Colby colleges, and the state general fund through the Maine State Library. Appendix A provides the details of the MARVEL! funding sources and related expenses.

E-Discovery

Prior to the implementation of OneSearch, located online at <http://maine.gov/onesearch>, library users in Maine faced challenges in selecting the appropriate resource for their research – to the average researcher, the MARVEL! databases present an often confusing array of options. OneSearch, powered by Serials Solutions' Summon™ technology, provides residents of the state a much needed 'Google-like' single starting point from which the full depth and breadth of the collection – both licensed electronic content and physical items – can be discovered. Combining content from the MARVEL! databases with the MaineCat statewide catalog, OneSearch not only provides a single-search-box interface to the wealth of content available at Maine libraries, it provides a

⁵ <http://www.convergemag.com/infrastructure/Maine-Moves-to-Cloud-Based-Internet-Filtering-for-Public-Schools-Libraries.html>

consistent look and feel to researchers, and allows advanced researchers to refine the combined result sets in ways never before possible.

The Summon™ technology and the breadth of indexing that powers OneSearch far outstrips previous technologies that attempted to provide a unified search interface, particularly in areas of user experience and satisfaction, speed of results, consistency of results, completeness of results, and ability to manipulate result sets for further searching.

One unique aspect of this service is the ability to include and highlight locally important content. For example, Maine Historical Society's Maine Memory Network collection of digitized photographs is now available through OneSearch which has never previously been discoverable through MARVEL! or other statewide library resources. Other important features of OneSearch include a mobile interface, putting library resources into the hands of cell phone internet users, and the ability for libraries to add search boxes to their own websites providing access to the full breadth of statewide library resources.

OneSearch is a cutting edge service that remains the only statewide implementation of the technology that is typically found only at top tier universities and colleges.

The MSL and the MDOE recommend maintaining the same funding level for the MARVEL! content databases and Summon™ E-Discovery Solution this year as was provided last year. Please see Appendix A for additional details.

Anticipated impact on MTEAF is \$ 702,599

E. Technical Services

Expenses for technical services that are not E-rate eligible are included as part of this Technical Services category if they are not specifically spelled out in a separate funding request. These services include but are not limited to, constituent premise equipment (CPE) (\$120K), construction costs for fiber optic entrances to schools and libraries (\$50K), Internet 2 Secondary Group Participant fees (\$34K), IPv4 address space (\$5K), hardware and software maintenance fees for core networking equipment (\$75K), colocation fees (\$53K), core network equipment and software upgrades and replacements (\$113K).

In addition, the MSL and the MDOE leverage MaineREN, Maine's Research and Education Network, as the optical backbone for MSLN (\$69K). A 2.5 Gbps optical transport is dedicated for aggregating the traffic to/from the K12 schools and public libraries between MaineREN's optical nodes. Participating schools and libraries also share a 10 Gbps optical transport with other MaineREN participants to connect to both Internet 2 and one of the two contracted Tier 1 Internet Service Providers (Cogent Co.) out of Cambridge, MA.

The 7% savings on Technical Service will be realized by eliminating a 2 Gbps circuit lease that will no longer be necessary due to the completion of an optical ring on the MaineREN backbone and a reduction in co-location needs.

Anticipated impact on MTEAF is \$ 518,466

F. Operational Services

Networkmaine provides the day to day operation and end user support for MSLN. These Operational Services involve Network Operations Center support services including but not limited to:

- network monitoring
- problem tracking and resolution
- constituent premise equipment (CPE) configuration
- transport and Internet access vendor management
- network upgrade and installation management
- technical security services
- onsite technical support through the “Circuit Rider” program

In addition Networkmaine provides schools and libraries with network design consultation, unlimited e-mail accounts with spam and anti-virus scanning, web site hosting, web content filtering, Domain Name Services, DHCP services, and IP address management.

\$542,000 of this request will go towards the salary and benefits of the Networkmaine personnel who provide these services with the remainder to be used for travel (\$30,000), shipping, and miscellaneous office expenses (\$3,000). The MSL and the MDOE request that MTEAF funds be made available to cover the costs to operate MSLN.

Anticipated impact on MTEAF is \$ 575,000

II. Administrative Services

The MSL and the MDOE contribute \$429,000 towards the administrative costs of MSLN through a Cooperative Agreement between the University and MDOE for administrative support of MSLN. Along with this direct financial contribution, both MSL and the MDOE provide in-kind contributions through staffing the State E-Rate coordinator positions for both libraries and schools.

A. Fund Administrator

The MSL and the MDOE ask that the Commission re-authorize the expenditure of funds to pay for a fund administrator to assess carriers, collect funds from carriers and make payments from the Fund (as permitted by 35-A M.R.S.A. §§ 7104-B(2) and 7104(3)).

Anticipated impact on MTEAF is \$ 26,400

B. E-Rate Application Process

Networkmaine manages the certification of the federal E-Rate paperwork rather than hiring an outside consultant to provide that service. As in the past, Networkmaine will be using its web-based E-Rate Assistance Tool⁶. This tool allows Networkmaine to greatly computerize and automate the data collection and form completion process. No longer

⁶ <http://www.networkmaine.net/erate>

are the schools and libraries asked to manually fill out information on paper forms that are readily available in both federal and state government data sources. Instead this data is automatically incorporated into the forms greatly reducing the chance of human error. The participating schools and libraries only need to fill out their site specific information on the web site and confirm various certifications. Once completed the schools and libraries download the various forms (Letters of Agencies, Form 479s, etc...) from the web site which are already filled out with all the appropriate and provided information ready for them to sign and return to Networkmaine.

The E-Rate Assistant tool has been well received over the last few years. Networkmaine makes improvements to the tool each year to incorporate feedback received in the previous year. Modifications are also made to reflect any changes in the E-Rate Program for the coming funding year.

Anticipated impact on MTEAF is \$ 0

C. Contract Management

Networkmaine successfully negotiated five year contracts for transport services with three services providers; FairPoint Communications, Oxford Networks, and Time Warner Cable New England and a three year contract for Internet Access Services with Time Warner Cable New England. The entire procurement process from writing the RFPs to final contract negotiations was managed by the University of Maine System's Strategic Procurement Office. As the University of Maine System is the customer of record on all four of these contracts, its Strategic Procurement Office will continue to ensure that the contracts are adhered to and will maintain all required documentation related to the contacts for seven years after their service term as required by the E-Rate program rules. It will also manage all procurement efforts for additional services in the future.

Anticipated impact on MTEAF is \$ 0

D. Invoicing

Networkmaine handles all invoicing activities related to MSLN. These activities include receiving the invoices from the contracted service providers, verifying their accuracy, submitting the invoices for reimbursement from both the MTEAF and the E-Rate Program, reconciling payments, and maintaining records for the time frame required by the E-Rate Program rules. Networkmaine leverages UMS' Accounts Payable department and their electronic document management and imaging system for many of these activities.

Anticipated impact on MTEAF is \$ 0

E. Budgeting and Financial Management

Networkmaine is being assisted by the University of Maine System's Director of Sponsored Programs and Administration. The MSLN Project is being fully budgeted and accounted for by the Director of SPA.

Anticipated impact on MTEAF is \$ 0

Appendix A

MARVEL! Budget Summary

FUNDING			FY 2011	FY 2012 Proposed	\$ Variance	% Variance
		% share FY2012				
1	MTEAF	57%	\$702,599	\$702,599	\$0	0%
2	Colby, Bates, Bowdoin	4%	\$54,000	\$54,000	\$0	0%
3	State Gen. Fund-MSL	22%	\$275,000	\$275,000	\$0	0%
4	UMS	14%	\$175,000	\$175,000	\$0	0%
5	MSL	2%	\$22,000	\$22,000	\$0	0%
6	TOTAL FUNDING	100%	\$1,228,599	\$1,228,599	\$0	0%
7	LIABILITIES					
8	Databases	# Databases	Notes			
9	EBSCO	23	plus other services	\$568,575	\$568,575	\$0 0%
10	Gale	2		\$197,576	\$197,576	\$0 0%
11	ProQuest	1	Plus Newspapers and Aquatic Science in FY11	\$122,338	\$122,338	\$0 0%
12	McGraw-Hill	1		\$27,563	\$27,563	\$0 0%
13	Britannica	1	Several versions of encyclopedia plus related databases	\$81,375	\$81,375	\$0 0%
14	CABI	1		\$7,033	\$7,033	\$0 0%
15	OVID	1		\$10,581	\$10,581	\$0 0%
16	Nature	1		\$50,558	\$50,558	\$0 0%
17	ValueLine	2		\$63,000	\$63,000	\$0 0%
18	Database Total			\$1,128,599	\$1,128,599	\$0 0%
19	Search Tool					
20	Serials Solutions	Summon™		\$100,000	\$100,000	\$0 0%
21	TOTAL LIABILITIES			\$1,228,599	\$1,228,599	\$0 0%
22	NET BALANCE			\$0	\$0	0 0%

Appendix B

Comparison of Funding Requests Funding Years 2011 vs. 2012

Services	2011-2012 (final)	2012-2013 (requested)
Transport Service ⁷	\$1,869,000	\$2,043,547
Internet Service	\$ 85,000	\$ 75,120
CIPA Compliant Content Filter	\$ 105,000	\$ 87,600
Content Databases & E-Discovery	\$ 702,599	\$ 702,599
Technical Services	\$ 559,000	\$ 518,466
MTEAF Fund Administrator	\$ 26,400	\$ 26,400
Operational Services	\$ 556,000	\$ 575,000
Totals:	\$3,902,999	\$4,028,732

⁷ Cost prior to expected E-Rate reimbursement: 2011-2012 - \$5,840,625; 2012-2013 - \$6,386,083