### **ANNUAL REPORT 2016-2017**



# NB/PEI EDUCATIONAL COMPUTER NETWORK

Supporting higher education in Atlantic Canada for over 45 years

April 1, 2016 - March 31, 2017

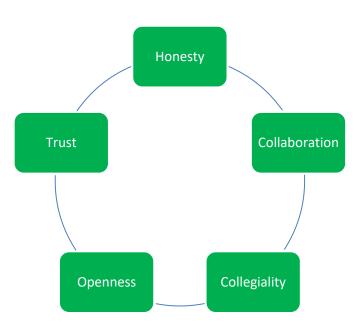
#### Mission

To ensure high quality Information and Communication Technology (ICT) services to all member institutions in New Brunswick and Prince Edward Island

#### VISION

To apply our collective skills and resources to the betterment of the New Brunswick and Prince Edward Island higher education communities through the deployment of state of the art technology while saving money for our provinces and institutions

#### **V**ALUES



Visit our website at: <a href="http://www.nbpei-ecn.ca">http://www.nbpei-ecn.ca</a> (English) <a href="http://rie-nbipe.ca">http://rie-nbipe.ca</a> (French)

## NEW BRUNSWICK and PRINCE EDWARD ISLAND EDUCATIONAL COMPUTER NETWORK MEMBERS



















#### COLLÈGE COMMUNAUTAIRE DU NOUVEAU-BRUNSWICK

725 rue Collège P.O. Box 266

Bathurst, New Brunswick E2A 3Z2

Tel.: (506) 547-2063 Fax: (506) 547-2741 www.ccnb.ca

#### **HOLLAND COLLEGE**

140 Weymouth Street

Charlottetown, Prince Edward Island C1A 4Z1

Tel.: (902) 629-4217 Fax: (902) 629-4239 www.hollandcollege.com

#### MARITIME COLLEGE OF FOREST TECHNOLOGY

1350 Regent Street

Fredericton, New Brunswick E3C 2G6

Tel.: (506) 458-0199 Fax: (506) 458-0652 <u>www.mcft.ca</u>

#### MARITIME PROVINCES HIGHER EDUCATION COMMISSION

82 Westmorland, Suite 401

P.O. Box 6000

Fredericton, New Brunswick E3B 5H1

Tel.: (506) 453-2844 Fax: (506) 453-2106 www.mphec.ca

#### **NEW BRUNSWICK COMMUNITY COLLEGE**

284 Smythe Street

Fredericton, New Brunswick E3B 3C9

Tel.: (506) 462-5012 Fax: (506) 462-5008 www.nbcc.ca

#### **MOUNT ALLISON UNIVERSITY**

155 Main Street

Sackville, New Brunswick E4L 1B5

Tel.: (506) 364-2300 Fax: (506) 364-2299 <u>www.mta.ca</u>

#### ST. THOMAS UNIVERSITY

51 Dineen Drive

Fredericton, New Brunswick E3B 5G3

Tel.: (506) 452-0640 Fax: (506) 450-9615 <u>www.stu.ca</u>

#### **UNIVERSITÉ DE MONCTON**

18 Antonine-Maillet Avenue

Moncton, New Brunswick E1A 3E9

Tel: (506) 858-4113 Fax: (506) 858-4544 <u>www.umoncton.ca</u>

#### UNIVERSITY OF NEW BRUNSWICK

P.O. Box 4400

Fredericton, New Brunswick E3B 5A3

Tel.: (506) 453-4864 Fax: (506) 453-5016 www.unb.ca

#### **UNIVERSITY OF PRINCE EDWARD ISLAND**

550 University Avenue

Charlottetown, Prince Edward Island C1A 4P3

Tel.: (902) 566-0400 Fax: (902) 566-0420 www.upei.ca

## Message from the Chair



On behalf of the NB/PEI Educational Computer Network, I am pleased to present our 2016-2017 Annual Report. The ECN continues to exemplify interinstitutional collaboration in the post-secondary educational sector in the Maritimes. This document highlights the ECN's activities and accomplishments over the past fiscal year.

I would like to begin by thanking Rina Robichaud (UdeM – Shippagan) for chairing the Network Committee this past year. I would also like to thank our respective provincial governments, fellow Board and Network Committee members, partners and stakeholders for their continuous support, hard work and dedication, which make this network such a success.

The NB/PEI ECN welcomed both the New Brunswick Community College (NBCC) and the Collège communautaire du Nouveau Brunswick (CCNB) as the newest members of the ECN. Having worked closely together for several years with great success it seemed to be the next logical step in strengthening this collaborative group. The Data Centre at UNB is now home to much of the IT infrastructure for Mount Allison, St. Thomas and the Maritime College of Forest Technology. The MPHEC is also operating its back-ups through the state of the art facility. Significant cost savings result from joint efforts such as this example and it is hoped that more ECN members will be able to take advantage of this facility. The ECN spent the summer of 2016 executing an ECN Communication Plan that targeted government, stakeholders and the public to promote and create awareness about its work. An ECN video was produced and can be viewed on the new ECN website.

As you read the pages ahead, I hope you will find out more about the accomplishments of the ECN this year.

Chair, ECN Board of Directors

Robert M. Campbell

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#### Overview

The NB/PEI Educational Computer Network (ECN), founded in 1970, connects all of the universities, community colleges and the Maritime College of Forest Technology in New Brunswick (NB) and UPEI and Holland College in Prince Edward Island (PEI). The primary service provided by the network is connectivity among its members and to the wider world. Many additional benefits are enjoyed by members, notably joint purchasing and licensing, shared IT services, professional development, and the delivery of network-based services and information exchange.

This approach has enabled all ECN members to realize the benefits of a high capacity, high speed data communications network at a reasonable cost, regardless of size. It also allows members to take advantage of economies of scale not available to individual member institutions, and ensures that smaller institutions receive the same level of service as larger ones. In fact, ECN reduces IT costs for members by \$1M per year—a 100% return on investment. Finally, members become stronger on the national front by providing a united voice with respect to the collective needs of New Brunswick and Prince Edward Island research and education sector.

ECN is one of the oldest yet most innovative of the higher education IT consortia across Canada. ECN members benefit from a strong governance and management model, and a reasonably secure budget that ensures continuity and flexibility. ECN's collaborative and collegial culture firmly supports its many accomplishments.

#### More about ECN

Following a pilot project in the late 1960's, the NB Educational Computer Network was formed in 1970 when the New Brunswick Higher Education Commission, Mount Allison University, I'Université de Moncton, the University of New Brunswick, and St. Thomas University entered into an agreement to share computer- processing services. In 1974, the newly formed Maritime Provinces Higher Education Commission (MPHEC) assumed stewardship of the Agreement and in 1975, the University of Prince Edward Island joined as a full member, establishing the NB/PEI ECN. The signing of a five-year agreement, from May 1, 1992 to April 30, 1997, formalized the addition of Holland College as the next member of the group. A subsequent five-year agreement (May 1, 1997 to April 30, 2002) witnessed the addition of the Maritime Forest Ranger School (now the Maritime College of Forest Technology) to the list of member institutions of the ECN. Most recently the Collège communautaire de Nouveau Brunswick (CCNB) and the New Brunswick Community College (NBCC) have joined the ECN and are part of the new five year agreement

The latest five-year agreement was signed in January 2017 and covers January 1, 2017 to April 30, 2022. Current members are Mount Allison University, l'Université de Moncton, the University of New Brunswick, St. Thomas University, the University of Prince Edward Island, Holland College, the Maritime College of Forest Technology, the MPHEC and the New Brunswick public colleges (NBCC and CCNB).

The ECN is overseen by a Board of Directors, consisting of the Presidents of the member institutions and the Chief Executive Officer of the MPHEC. The overall management and operation of the network and the associated services is the responsibility of a Network Committee consisting of the Senior IT positions from each member institution. The ECN is funded by the Provinces of New Brunswick and Prince Edward Island, through the funding administered by the MPHEC, and is topped-up with some direct funding from the institutions.

In addition to providing connectivity among its members, the New Brunswick portion of the network also connects New Brunswick member institutions to the wider world through a shared connection to the Canadian Advanced Research Network (CANARIE) and through CANARIE to the world. The Prince Edward Island portion of the network also has a direct connection to CANARIE. ECN has been highly successful in attracting capital investment from the federal and provincial governments-over \$4.3M has been contributed to the development and expansion of the NB and PEI research and education communications networks over the last five years.

#### ECN highlights for 2016-2017 include:

- The NB/PEI Educational Computer Network (ECN) continued to successfully provide connectivity among its members and to the wider world, just as it has for the past 45 years.
- Late summer and early fall of 2016 saw the ECN Communication Plan implemented. A
  series of briefing notes and press releases were prepared to target audiences and create
  exposure for the ECN. The initial plan targeted government, post-secondary institutions and
  the public. A formal Communications Team is now in place, made up of members of the
  Network Committee. The team will launch a new website on May 1, 2017.
- The 2016 technical workshop was held in November. The purpose of the workshop was to engage the technical staff in a review of our current IT security environment and to identify initiatives and areas of focus to achieve the consortium security portion of the ECN Strategic Plan. The initiatives that resulted are as follows: 1) Shared Next Generation Firewall, 2) End Point Device Protection, 3) Hosted External DNS, 4) Automated Third Party Patching, and 5) Admin Level Credential Management. The initial phase of the Security Initiative has started and will see significant progress in the coming year.
- NBCC and CCNB are now officially members of the Network Committee.
- A new 5 year ECN agreement (2017-2022), which was signed by Board members in early January 2017.

#### Governance

#### **Board of Directors**

The ECN is governed by a Board of Directors (Board) consisting of the following members:

- 1. The President of Holland College
- 2. The Executive Director of the Maritime College of Forest Technology
- 3. The Chief Executive Officer of the MPHEC
- 4. The President of Mount Allison University
- 5. The President of St. Thomas University
- 6. Le recteur de l' Université de Moncton
- 7. The President of the University of New Brunswick
- 8. The President of the University of Prince Edward Island
- 9. The President and CEO of the New Brunswick Community College
- 10. La présidente-directrice générale du Collège communautaire du Nouveau-Brunswick

The Chairperson, whose term is five years, renewable for a second five-year term, is elected by the Board. Quorum is five members. Decisions must have the unanimous consent of those members voting (with the exception of a vote declaring that the service of the designated installation is inadequate; in which case the designated member is ineligible to vote). Generally, two meetings are held each year. The MPHEC performs secretarial duties for the Board and manages the budget on behalf of all the members.

#### **Network Committee**

The NB/PEI Educational Computer Network Committee (Network Committee) includes one voting representative nominated by each of the parties of the Agreement as well as a voting member who represents the Network Operations. An alternate representative to the Network Committee is also appointed. Members and alternates are appointed for an indefinite period or are replaced upon recommendation in writing to the Chairperson of the Board. The Chairperson of the Network Committee is nominated by the Network Committee, and is non-voting, and is approved by the Board for a maximum of two 2-year terms. The MPHEC representative is the Secretary of the Network Committee. The Network Committee meets 5-6 times annually. The duties of the Network Committee are listed in Appendix A of the ECN Agreement. The Network Committee makes decisions by unanimous consent of members voting.

The Network Committee submits, on or before January 15, a recommended Network Plan and Budget to the Vice-President (Finance) of each of the member institutions for confirmation. Once confirmed, the Network Committee submits the Network Plan and Budget to the Board for approval. At the end of the year, the Committee drafts an annual report for approval by the Board showing its performance compared to the Network Plan from the beginning of the fiscal year.

#### Designated installation

UNB is the designated, and the major, installation for the Network. Computing facilities and Information and Communication Technology (ICT) services are provided by UNB to all ECN members as detailed in Appendices B and C of the ECN Agreement.

#### Meetings

The ECN Network Committee met six times in 2016-2017:

June 7, 2016 Mount Allison University, Sackville, NB
October 12, 2016 Holland College, Charlottetown, PEI
December 14, 2016 Université de Moncton, Moncton Campus

February 9, 2017 Skype Teleconference

March 8, 2017 Skype Teleconference (Firewall Proposal)
March 30, 2017 St. Thomas University, Fredericton, NB

A list of the Board and Network Committee members is included in Appendix I.

#### Appendix II includes:

A New Brunswick map displaying the physical network connections and their relative bandwidth as well as CANARIE links. The red and blue lines are leased carrier services while the green lines are owned fibre optic links. Shared Internet connections are located in Fredericton and Moncton.

New Brunswick map displaying the connected campuses of the partner institutions. There are a total of 36 buildings connected in 15 cities, towns, and villages.

The Prince Edward Island map show the connected locations and the CANARIE link.

#### Strategy

The key shared service of the ECN is connecting member institutions via a high-speed, high-capacity research and education network. Members also jointly purchase and deploy anti-SPAM and anti-virus services, managed by UNB.

Our key strategic plans are being realized, and the following provides an update on our current initiatives:

<u>Data center consolidation and disaster recovery</u>: UNB now offers data center space to ECN members to house production or disaster recovery/backup systems and servers on a simple cost-recovery basis. Much of the infrastructure for St. Thomas University, Mount Allison University, and the Maritime College of Forest Technology is now housed in the new Data Center. The MPHEC is running current backups in the new Data Centre (and intends to move remaining servers in the coming year); other members are planning to do so. This initiative has reduced the need for individual data center facilities at individual ECN locations, providing significant savings and allowing participants to reallocate personnel and financial resources to other priorities.

Communication and collaboration tools: The ECN hosts SharePoint (a Microsoft software platform used for file sharing and co-editing, document and records management, and collaboration projects) at a single ECN site. After a successful trial period, ECN is providing long-term centralized SharePoint support, including a dedicated employee at the host site (to coordinate the SharePoint site for all) and other staff with SharePoint expertise at member institutions (to collaborate to produce SharePoint applications for ECN or individual institutions).

Securing the consortium: A common requirement among all of the ECN membership is to keep our IT networks, equipment, and data secure from a host of external and internal threats. The 24/7, highly volatile nature of IT security strains the resources of all our members, and we are pressed to keep up with even minimal standards. During our annual technical workshop, staff from across ECN were tasked with performing a review of our current IT security environment and identified five initiatives and areas of focus to achieve consortium wide coverage. Evaluation teams worked hard to develop RFP's and to evaluate products for the initial phase of the security project a new firewall product has been selected and is being deployed at several sites; Both the ECN network, and individual campuses, are being protected by state-of-the-art technology acquired at highly favorable prices. These initiatives are increasing the level of protection of institutional data and services, increase security awareness while reducing the risks to each institution. By pooling the resources of the consortium, we will reduce costs to individual members.

A table of strategic initiatives is in Appendix III.

#### Financial operations

A copy of the approved budget and actual expenditures for 2016-2017 (showing a surplus of \$361,442 NB: \$354,593; PEI: \$6,849) as well as the balance of the ECN committed funds as of March 31, 2017 is included in Appendix IV. Once again, for New Brunswick there was significant savings on Internet costs over the year thanks to discounted rates received from the provider. Hardware costs were also lower than budgeted do to the retirement of equipment that was not replaced which in turn reduced the maintenance costs. Software, also lower than budgeted, was a result of the third year of the anti-virus costs being paid upfront in the previous year. The collaborative projects are well under budget, this is largely due to timing of the projects and it is expected that the coming year will see expenditures from this year being realized for the security initiative. Finally, the contribution to NB Research and Education Network (REN) was lower than budgeted again because of reduced rates. In PEI, the amount budgeted for the PEI REN was funded from a different source. As a result of late invoicing from the previous year the actual maintenance costs for PEI were over budget and reflect the maintenance covering two years.

The ECN's accumulated surplus of \$1,284,461 (NB: \$1,173,122; PE: \$111,339) has been carefully and thoughtfully planned; it will be used to fund new initiatives under the consortium's shared services function, as identified in the strategic plan. Approximately half of the surplus is being allocated to the firewall and other security initiatives.

#### **APPENDIX** I

Board Members as of March 31, 2017 were:

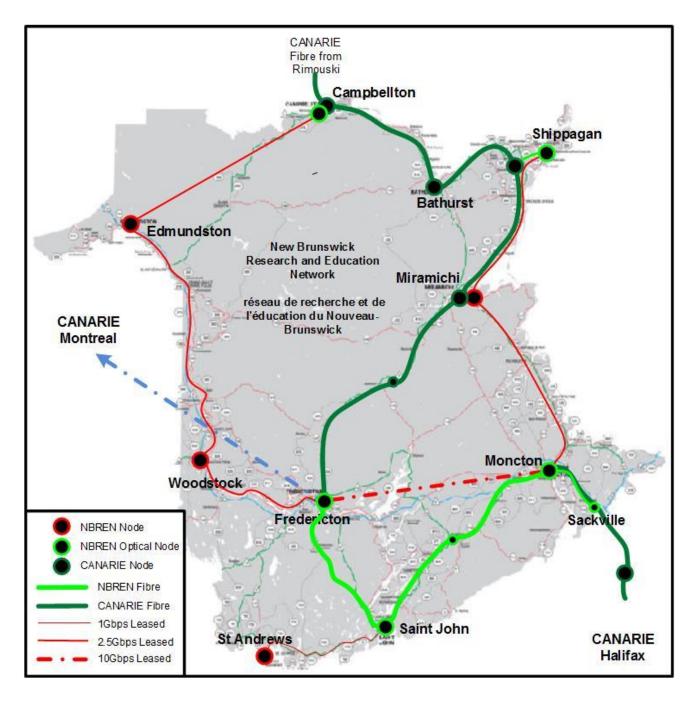
<u>Institution</u>	<u>Representative</u>
Mount Allison University	Dr. Robert Campbell (Chair)
St. Thomas University	Ms. Dawn Russell
Université de Moncton	M. Raymond Théberge
University of New Brunswick	Dr. Eddy Campbell
University of Prince Edward Island	Dr. Alaa Abd-El-Aziz
Holland College	Dr. Brian McMillan
Maritime College of Forest Technology	Mr. Gerry Redmond
MPHEC	Ms. Sylvie Levesque-Finn (Interim CEO)
CCNB	Ms. Liane Roy
NBCC	Ms. Marilyn Luscombe

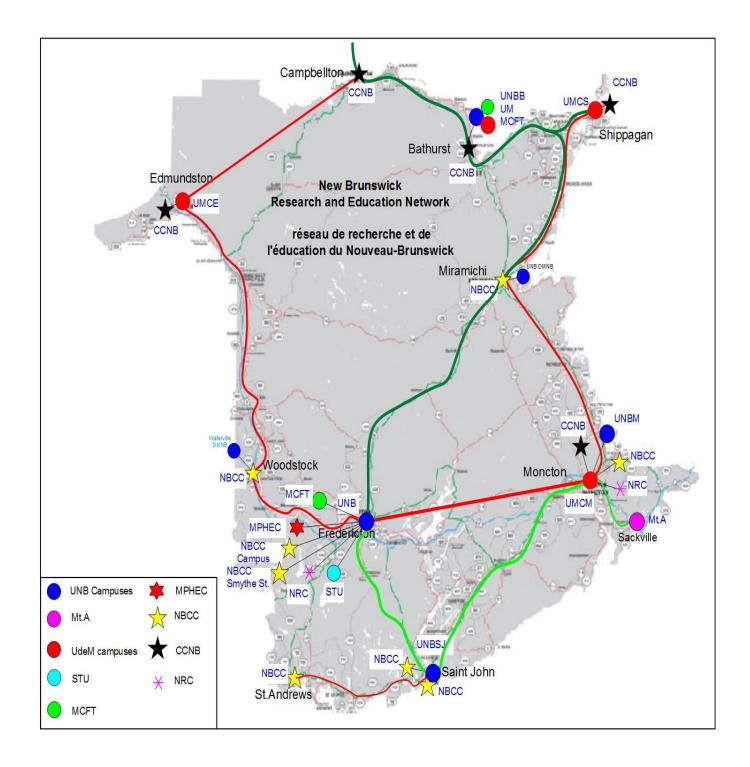
Network Committee Representatives and Alternates as of March 31, 2017 were:

Institution	Representative	Alternate
Mount Allison University St. Thomas University	Mr. Helmut Becker Mr. Dan Hurley M. André Lee	Mr. Peter Crawshaw Mr. Robert Brewer
Université de Moncton University of New Brunswick New Brunswick Network	Mr. Terry Nikkel Mr. Peter Jacobs	Ms. Rina Robichaud Mr. John Jackson TBD
University of Prince Edward Island Holland College Maritime College of Forest Technology	Mr. Dana Sanderson Mr. Richard MacDonald Mr. Jim Bowen	Mr. Blair Vessey Mr. Greg Mermuys Mr. Mike Boucher
MPHEC	Ms. Rachael Anderson	Mr. Scott Stonehouse
CCNB NBCC	Mr. Tony Roy Mr. Darren Rose	Mr. Marc-André Mr. Edgar Lazar

The Chair of the Network Committee was Rina Robichaud.

#### NB REN - Research and Education Network





### Prince Edward Island Research and Education Network



### Appendix III

ECN Service Area / Project	Objectives 2016/17	Objectives 2017/18	Objectives 2018/19
Connectivity	NBCC/CCNB to implement Federated Identity Internet Services contract with Bell Aliant (expires: May 2019); 3 year agreement	NBCC/CCNB to complete implementation of Federated Identity	RFP Internet Services expires May 2019
Shared Services	Data Center Consolidation and Disaster Recovery Hosting agreements Collaboration project - ECN SharePoint foundation deployed and governance created. ECN security initiatives identified projects including Next Generation Firewall, End Point Protection, Automated Third Party Patching & Admin Level Credential Management	Data Center Consolidation and Disaster Recovery project - Phase III – Expansion Collaboration project- SharePoint expansion continued. ECN security initiatives: Implementing projects - Next Generation Firewall, End Point Protection, Automated Third Party Patching & Admin Level Credential Management	
Joint Purchasing	Anti-Virus contract renewal expires July 2017	Anti-virus contract renewal ESET End-Point Protection 3 year contract to July 2020 Anti-SPAM contract renewal (expires: September 2018)	Anti-SPAM contract renewal (expires: September 2018)
Professional Development	CANHEIT/AUCTC ECN Workshop	AUCTC ECN Workshop	AUCTC ECN Workshop
National Representation and Sharing of Information and Best Practices	NREN GC CIO Advisory Committee	NREN GC CIO Advisory Committee	NREN GC CIO Advisory Committee
Organizational	Communication Plan and roll out (Summer/Fall 2016) ECN Agreement Renewal 2017-2022	Communication Team Terms of Reference Launch new website May 2017	

#### **EDUCATIONAL COMPUTER NETWORK** NEW BRUNSWICK AND PRINCE EDWARD ISLAND **STATEMENT OF REVENUE AND EXPENDITURES\* PERIOD ENDED: 3/31/2017**

Account Description	Budget 2016-2017	Actual 2016-2017
Revenue		
Provincial Transfers	946,548	946,538
Direct Funding from institutions	517,305	514,971
External fees for service	142,106	0.00
Total Revenue	1,605,959	1,461,509
Expenditures		
Network Shared Services		
UNB as the designated installation (service provider)	213,094	213,094
Total Network Shared Services	213,094	213,094
Telecommunications		
PEI Provincial Lines & Internet Access	57,047	57,047
NB Internet Access	89,275	57,350
Total Telecommunications	146,322	114,397
Hardware, software, maintenance		
Hardware	64,886	25,508
Software	78,416	38,425
CAF Maintenance	22,000	17,700
Maintenance	59,622	25,525
Total Hardware, Software, Maintenance	224,924	107,158
Meetings and Collaboration		
Network Committee	15,000	12,944
Collaborative Projects	98,459	1,945
ECN SharePoint Services	95,635	74,939
Total Meetings and Collaboration	209,094	89,828
NBREN and GigaPOP		
NBREN CORE	674,590	575,589
NBREN Additional Connections	79,935	0
NB GigaPOP Services	58,000	0
Total NBREN and GigaPOP	812,525	575,589
Total Expenditures	1,605,959	1,100,066
Net revenue (net loss)	0	361,442
	-	
NB & PEI Committed Funds Balance as at March 31, 2016: Balance, April 1, 2016		923,019
Net revenue (loss) for the year		361,442
Balance, March 31, 2017		1,284,461
*as per MPHEC audited financial statements		

# EDUCATIONAL COMPUTER NETWORK NEW BRUNSWICK STATEMENT OF REVENUE AND EXPENDITURES\*

#### **PERIOD ENDED: 3/31/2017**

Account Description	Budget 2016-2017	Actual 2016-2017
Revenue		
Provincial Transfers	860,948	860,938
Direct contributions	490,829	488,495
External Fees for Service	142,106	0
Total Revenue	1,493,883	1,349,433
Expenditures		
Network Shared Services		
UNB as the designated installation (service provider)	202,440	202,439
Total Network Shared Services	202,440	202,439
Telecommunications		
Internet Access	89,275	57,350
Total Telecommunications	89,275	57,350
Hardware, software, maintenance		
Hardware	64,886	25,508
Software	62,000	30,356
CAF membership	17,000	12,700
Maintenance	45,622	4,039
Total Hardware, software, maintenance	189,508	72,604
Meetings and Collaboration		
Network Committee	12,000	10,245
Collaborative Projects	92,500	1,674
Shared Services	95,635	74,939
Total Meetings and Collaboration	200,135	86,858
NBREN and GigaPOP		
NBREN CORE	674,590	575,589
NBREN Additional Connections	79,935	0
NB GigaPOP Services	58,000	0
Total NBREN and GigaPOP	812,525	575,589
Total Expenditures	1,493,883	994,840
Net revenue (net loss)	0	354,593
NB Committed Funds Balance as at March 31, 2017:		
Balance, April 1, 2016		818,529
Net revenue (loss) for the year		354,593
Balance, March 31, 2017		1,173,122
20101100, HIGH 011 01, 2011		
*as per MPHEC audited financial statements		

#### EDUCATIONAL COMPUTER NETWORK PRINCE EDWARD ISLAND STATEMENT OF REVENUE AND EXPENDITURES\*

**PERIOD ENDED: 3/31/2017** 

I ENIOD ENDED. 3/3 1/2017		
Account Description	Budget 2016-2017	Actual 2016-2017
Revenue		
Provincial Transfers	85,600	85,600
Direct HC/UPEI Transfer	26,476	26,476
Total Revenue	112,076	112,076
Expenditures		
Network Shared Services		
UNB as the designated installation (service provider)	10,654	10,655
Total Network Shared Services	10,654	10,655
	,	,
Telecommunications		
Provincial Lines & Internet Access Total Telecommunications	57,047 57,047	57,047 57,047
Total Telecommunications	57,047	57,047
Hardware, software, maintenance		
Hardware	0	0
Software	16,416	8,069
CAF Maintenance	5,000	5,000
Maintenance	14,000	21,486
Total Hardware, software, maintenance	35,416	34,555
Meetings and Collaboration		
Network Committee	3,000	2,699
Collaborative Projects	5,959	271
Total Meetings and Collaboration	8,959	2,970
Total Expenditures	112,076	105,227
Net revenue (net loss)	0	6,849
PEI Committed Funds Balance as at March 31, 2017:		
Balance, April 1, 2016		104,490
Net revenue (loss) for the year		6,849
Balance, March 31, 2017		111,339

<sup>\*</sup>as per MPHEC audited financial statements