ECN

NB PEI Educational Computer Network

Supporting higher education in Atlantic Canada for over 50 years

ANNUAL REPORT 2019-2020

April 1, 2019 - March 31, 2020

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

VALUES

Honesty

Collaboration

Collegiality

Openness

Trust

Visit our website at:
http://www.nbpei-ecn.ca (English)
http://rie-nbipe.ca (French)

NEW BRUNSWICK and PRINCE EDWARD ISLAND EDUCATIONAL COMPUTER NETWORK MEMBERS

COLLÈGE COMMUNAUTAIRE DU NOUVEAU-BRUNSWICK

725 College Street P.O. Box 266
Bathurst, New Brunswick E2A 3Z2

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

HOLLAND COLLEGE

140 Weymouth Street
Charlottetown, Prince Edward Island C1A 4Z1

Tel.: (800) 446-5265
Fax: (902) 629-4239
www.hollandcollege.com

MARITIME COLLEGE OF FOREST TECHNOLOGY

1350 Regent Street
Fredericton, New Brunswick E3C 2G6

Tel.: (506) 458-0199
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MARITIME PROVINCES HIGHER EDUCATION COMMISSION

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Fredericton, New Brunswick E3B 5H1

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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
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ST. THOMAS UNIVERSITY

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Fredericton, New Brunswick E3B 5G3

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Fax: (506) 450-9615
www.stu.ca

UNIVERSITÉ DE MONCTON

18 Antonine-Maillet Avenue
Moncton, New Brunswick E1A 3E9

Tel: (506) 858-4113
Fax: (506) 858-4544
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UNIVERSITY OF NEW BRUNSWICK

P.O. Box 4400
Fredericton, New Brunswick E3B 5A3

Tel.: (506) 453-4573
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Message from the Chair

On behalf of the NB/PEI Educational Computer Network, I am pleased to present our 2019-2020 Annual Report highlighting our activities and accomplishments over the past fiscal year. The ECN has an outstanding track record of effective collaboration for the benefits of its members and continues to lead in Network and Communication Technology. This document highlights the ECN's activities and accomplishments over the past fiscal year.

I would like to begin by thanking Scott Chamberlain (UNB Fredericton) for chairing the Network Committee this past year and to acknowledge the talented and dedicated members of the Network Committee who generously provide expertise and guidance to achieve their mandate. I would also like to thank our respective provincial governments, fellow Board members, partners and stakeholders for their continuous support, hard work and dedication, which combined, has made this network successful for close to 50 years.

The NB/PEI ECN continues to build on its policy development and framework around its number one priority, security. By adding tools such as Password Manager Solutions it continues to build successful security strategies against threats.

As you read the pages ahead, you will find out more about the accomplishments of the ECN this year and I hope that you will be impressed with the significant return on our collaborative investment.

Dr. Alexander (Sandy) MacDonald

Chair, ECN Board of Directors

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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, cyber security 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. The ECN reduces overall IT expenditures for its members by an average of $1.3 million annually, resulting in 100% return on investment. Through economies of scale, and with expertise contributed by all, ECN members pay less for many software applications, connections to commercial internet services, and equipment, than they could independently. 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, l'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. The current five-year agreement (January 1, 2017 to March 31, 2022) witnessed the addition of the

Collège communautaire de Nouveau Brunswick (CCNB) and the New Brunswick Community College (NBCC) to the list of member institutions.

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 some of the institutions.

In addition to providing connectivity among its members, both NB and PEI portions of the network also connects member institutions to the wider world through a shared connection to the Canadian Advanced Research Network (CANARIE) and through CANARIE to the world. ECN has been highly successful in attracting capital investment from the federal government with over one million dollars contributed to the development and expansion of the NB research and education communications network and the Security Information and Event Management (SIEM) project over the last three years. Inestimable value from collaboration, cooperation, and highly professional relationships among the members has contributed greatly to ECN's reputation across Canada as having one of the best governance, management, and operating models among similar organizations.

ECN highlights for 2019-2020 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 50 years.

- The ECN presented an overview of its operation, governance, strategic plan and achievements along with its NS counterpart Higher-ed IT Shared Services (HISS) to Interuniversity Services Incorporated (ISI) in May 2019. This meeting was a positive step toward promoting the ECN and its successes.
- The Communications Team continued to circulate, promote, provide updates on ECN successes, and keep partner information (NREN and CANARIE) current by using the website as a communication tool.
- Over the course of the year, significant planning and preparation went into the organization of the ECN50RIÉ and AtlanticNet 2020. Due to the COVID-19 restrictions in place, the events have been rescheduled for May 11-12, 2021. An informative video was prepared on the ECN to coincide with the 50th Anniversary celebration.
- The Network Sustainability Team created an Inventory Risk and Projects document containing suggestions where efforts can be made to address improvements to network processes. During the year, most items on the list were addressed. The team identified three top priorities: 1) Monitoring graphing and data collection, 2) Redundant internet and 3) Spare hardware. ECN member sites performed a site survey document which included

a set of photos of the layout of the racks and labelled inventory. A new site connection was established for the CCNB expansion in Moncton and a proposal for the new Climate Change Centre connection in St. Peter's Bay, PEI will be presented to CANARIE in June 2020. This opportunity for the PEI provincial network will establish connection across the province with a failover to Moncton. A 100GB interface between Moncton and Saint John was completed and 10Gig installations in NB were completed and provide greater fail over capabilities. A decommissioned MX480 router was obtained from CANARIE at no cost.

- Internet Service contracts were signed with Eastlink, providing services to Holland College, University of Prince Edward Island and ECN Moncton and with Bell for ECN Fredericton. A spreadsheet was created to track usage for member referral on the MS Team site. A burst rate increase from 1GB to 2GB was secured.

- The ECN partnered financially with CANARIE on a contribution to the Huntsman Marine Project for backbone connectivity between Saint John and St. Andrews, strengthening the network.

- The ECN continued partnering with CANARIE in a Security Information and Event Management solution (SIEM). The FortiSIEM tool is now filtering data from the NB router and the PEI RAN was added to the FortiSIEM environment including all firewall traffic for UPEI.

- The current Anti-Virus solution ESET was extended for two, one-year options.

- The 2019 technical workshop was held in November with over 90 participants. The workshop provided ECN technical staff with training opportunities that are realistic, practical and hands-on with a "bring your own device" model. Training was provided by individuals, from Microsoft and Lumagate. Areas of focus were Securing Office 365 (O365) and Compliance Tools, Managing and Building Solutions in O365, sharing and collaborating tools.

- The ECN purchased LastPass Enterprise as a Password Manager solution for faculty/staff and free for students. This solution is available for the consortium and implementation will take place early 2020-21.

- In January the ECN performed a Project Prioritization exercise to highlight and address high and medium priority issues facing the ECN. Cyber Security is the number one priority for all members. With smaller steps addressed through End Point Security, Password Manager and Advanced Threat Protection, the ECN has identified a need to outsource larger scale, shared security issues. Telephony – solution for business phones has also been identified as a shared service the ECN will pursue as a collective.

- ECN administration for shared documentation and communication was migrated from SharePoint to a Microsoft Teams environment.

Governance (Board of Directors)

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

- The President of Holland College
- The Executive Director of the Maritime College of Forest Technology
- The Chief Executive Officer of the MPHEC
- The President of Mount Allison University
- The President of St. Thomas University
- Le recteur de l'Université de Moncton
- The President of the University of New Brunswick
- The President of the University of Prince Edward Island
- The President and CEO of the New Brunswick Community College
- Le président-directeur général 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 six 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 2019-2020:

June 5, 2019	Maritime College of Forest Technology, Fredericton NB
July 17, 2019	Université de Moncton, Moncton NB
September 25, 2019	University of Prince Edward Island, Charlottetown, PEI
November 6, 2019	University of New Brunswick, Fredericton, NB
January 15, 2020	Skype Conference
March 11, 2020	Microsoft Teams

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.

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

The Prince Edward Island map shows 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 IT products and services, with anti-virus, Office 365, firewalls, anti-spam and Password Manager solution being recent examples of successful collaborations.

Building on these many successful collaborations, ECN is updating its strategic plan to focus on the following areas:

Communication and collaboration tools: The ECN continues to expand the use of Office 365 (a Microsoft software platform used for file sharing and co-editing, document and records management, and collaboration). Support by a dedicated employee at UNB will continue to be accessible for all member institutions. Further deployment of services offered through other

Office365 applications that will benefit the consortia will continue, for example, VOIP telephony.

Consortium Security: Security issues identified through the joint external threat risk assessment last year will continue to occupy the ECN. In addition to addressing the everyday threats all members deal with, ECN will continue to support policy development at member institutions to provide the essential framework upon which successful security strategies are built. We will also continue to add tools and services to expand the security toolkit available to ECN members, including password managers for students, faculty, and staff. The first phase of the national security incident and event management (SIEM) project led by CANARIE is complete; ECN is now undertaking data gathering to extend the SIEM to all RAN data traffic among the individual institutions.

Network sustainability and improvement: To ensure the network continues to perform efficiently and economically in a time of increasing demand by members and their use of cloud-based solutions, the ECN is focusing on network development, extending it where needed, while building in resiliency and redundancy wherever possible. Equipment renewal is a challenge, and ECN will thoughtfully yet creatively manage its resources to ensure future reliability, stability, and capacity. Finally, with critical optic fibre cable agreements coming up for renewal in 2021, planning is underway to ensure the network remains stable and sustainable for the following decade.

A table of strategic objectives is in Appendix III.

Financial operations

A copy of the approved budget vs actual expenditures for 2019-2020 (showing a deficit of $72,948 (NB: -$73,312); PEI: $364) as well as the balance of the ECN committed funds as of March 31, 2020 is included in Appendix IV. New Brunswick's deficit was the result several increases to budget line items but largely reflected in the purchase of equipment for the SIEM project, expended entirely in the one year rather than over the two years of the project, the ECN financial contribution to the CANARIE/Huntsman Marine Project for backbone connectivity between Saint John and St. Andrews and the purchase of a Combat Network Switch to upgrade the network equipment and capability. Internet Access was higher than budgeted carrying some additional costs from the previous year but also being a learning year as the ECN settles in to the new model with delivery of services between two vendors and separating the traffic between ECN Moncton and Fredericton. Software was higher as a three-year contract for VMWare was secured for cost savings purposes and expended entirely in one year rather than over three. Maintenance was higher due to the addition of a decommissioned router received from CANARIE at no cost but adding to the equipment maintenance costs. The CAF membership and SharePoint services expenses remained stable as forecasted. Meetings and training saw an increase largely due to the turnout for the Fall Workshop attended by ECN technical staff with over 90 participants. The Network operation continue to see savings and is below the expected budgeted amount. In PEI, a small surplus was realized due to savings on maintenance, travel and collaborative projects. Most PEI budget line items fell in line with what was proposed although Internet Access was higher,

as mentioned previously, it was a learning year with the new delivery model. The ECN's accumulated surplus of $1,207,786 (NB: $1,136,301; PE: $71,485) will be used to fund initiatives such as Cyber Security, Network maintenance and Disaster Recovery, if necessary, as identified in the strategic plan.

Appendices

Appendix I: Members, Representatives, Alternates, and Chair

The Board members as of March 31, 2020 were:

Institution	Representative
Mount Allison University	Dr. Jean-Paul Boudreau
St. Thomas University	Ms. Dawn Russell
Université de Moncton	M. Jacques Paul Couturier
University of New Brunswick	Dr. Paul Mazerolle
University of Prince Edward Island	Dr. Alaa Abd-El-Aziz
Holland College	Dr. Alexander MacDonald (Chair)
Maritime College of Forest Technology	Mr. Tim Marshall
Maritime Provinces Higher Education Commission	Ms. Catherine Stewart
Collège communautaire du Nouveau-Brunswick	M. Pierre Zundel
New Brunswick Community College	Ms. Mary Butler

The Network Committee Representatives and Alternates as of March 31, 2020 were:

Institution	Representative	Alternate
Mount Allison University	Mr. John Gillis	Mr. Peter Crawshaw
St. Thomas University	Mr. Dan Crabbe	Mr. Robert Brewer
Université de Moncton	M. André Lee	Mr. Jocelyn Nadeau
University of New Brunswick	Mr. Terry Nikkel	Mr. David Totton
New Brunswick Network	Mr. Peter Jacobs	Mr. John Jackson
University of Prince Edward Island	Mr. Dana Sanderson	Mr. Blair Vessey
Holland College	Mr. Richard MacDonald	Mr. Greg Mermuys
Maritime College of Forest Technology	Mr. Jim Bowen	Mr. Mike Boucher
Maritime Provinces Higher Education Commission	Ms. Rachael Anderson	Mr. Scott Stonehouse

- Collège communautaire du Nouveau-Brunswick — Mr. Tony Roy   Mr. Marc-André Arseneau
- New Brunswick Community College   Ms. Carole Daley   Mr. Edgar Lazar

The Chair of the Network Committee was Scott Chamberlain.

The Network Sustainability Team as of March 31, 2020 were:

Institution	Representative
Mount Allison University	Mr. Peter Crawshaw
St. Thomas University	Mr. Tim O'Brien
Université de Moncton	M. Philippe Boudreau
University of New Brunswick	Ms. Ying Zhang
New Brunswick Network	Mr. David Totton
University of Prince Edward Island	Mr. Doug Burton
Holland College	Mr. Greg Mermuys
Collège communautaire du Nouveau-Brunswick	M. Marc-Andre Arseneau
New Brunswick Community College	Mr. Edgar Lazar

The ECN Communication Team as of March 31, 2020 were:

Institution	Representative
St. Thomas University	Ms. Andrea Hanson
University of Prince Edward Island	Mr. Dana Sanderson
University of New Brunswick	Mr. Scott Chamberlain
Collège Communautaire de Nouveau-Brunswick	Mr. Tony Roy

The Firewall Change Management Team as of March 31, 2020 were:

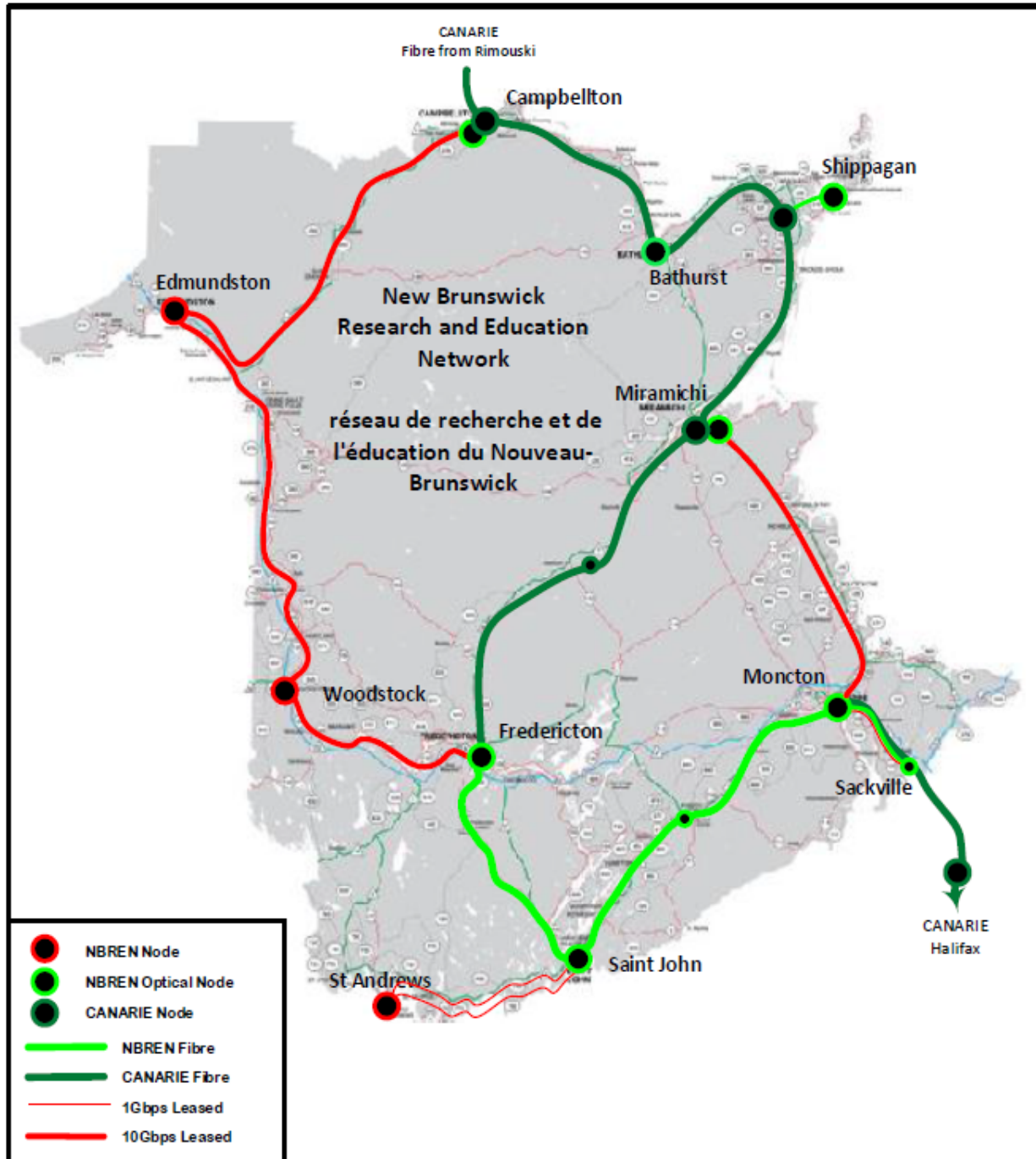| Institution	Representative
Mount Allison University	Mr. Peter Crawshaw
St. Thomas University	Mr. Rob Brewer
St. Thomas University	Mr. Tim O'Brien
Université de Moncton	M. Daniel Poirier
Université de Moncton	M. Denis Richard
Université de Moncton	M. Denis Pelletier
Université de Moncton	M. Jocelyn Nadeau
Université de Moncton	Mr. Brahim Benahmed
Université de Moncton	M. Luc Bosse
University of New Brunswick	Mr. John Debique

- University of New Brunswick Ms. Ying Zhang
- University of New Brunswick Mr. Stephen Gamblin
- University of New Brunswick Mr. Dave Totton
- University of New Brunswick Mr. Jonathan MacAdam
- University of Prince Edward Island Mr. Walter Pirch
- Holland College Mr. Greg Mermuys
- Maritime College of Forest Technology Mr. Bob Ross
- Maritime Provinces Higher Education Commission Mr. Scott Stonehouse
- Collège communautaire du Nouveau-Brunswick M. Eric Bellefleur
- Collège communautaire du Nouveau-Brunswick M. Denis Landry
- Collège communautaire du Nouveau-Brunswick M. Marc-André Arseneau
- New Brunswick Community College Mr. Edgar Lazar
- New Brunswick Community College Mr. Georges Leblanc
- New Brunswick Community College Mr. Jamie Coughlan

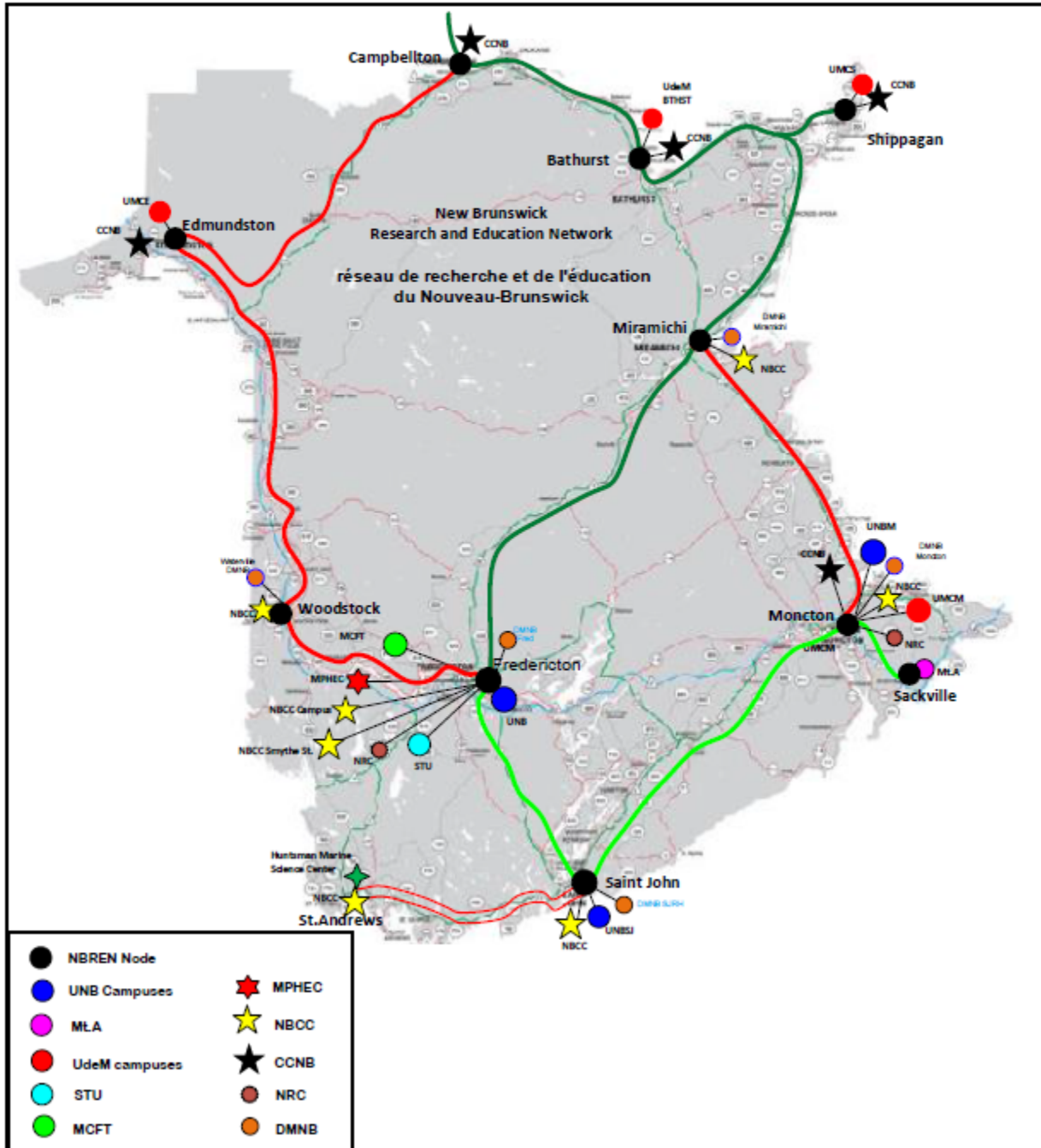# Appendix II: Research and Education Networks (REN)

New Brunswick Research and Education Network

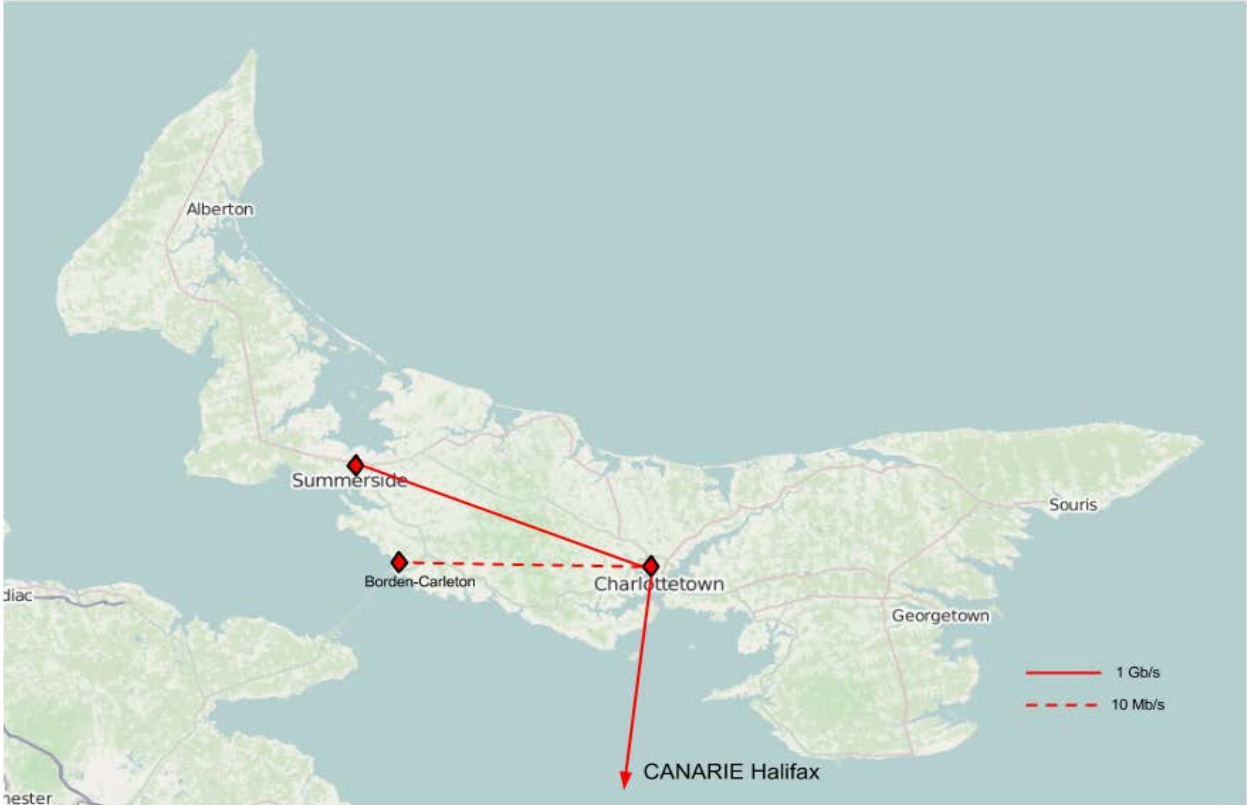## NB REN – Research and Education Network
with
Optical Transport Layer

NB REN – Research and Education Network

Main Campus Locations

Prince Edward Island Research and Education Network

	Objectives 2018-2019	Objectives 2019-2020	Objectives 2020-2021
Connectivity	• Network redundancy to NBCC St. Andrews • 100Gbps upgrades between Fredericton, Saint John and Moncton	• Review network sustainability committee	• UPEI network extension to Saint Peters Bay site • Reconfigure PEI provincial network for redundancy
Shared Services	• Begin migration of SharePoint sites to SharePoint online • SIEM project with CANARIE	• Continue SharePoint Online/Teams migration • Complete SIEM Phase 1a	• SIEM 1b data collection • O365 expansion continued • VOIP-as-a-service assessment
Joint Purchasing	• Review and recommend tools for Cyber Security	• Acquire and deploy Cyber Security tools	• Deploy password manager to students, staff, and faculty across ECN
Professional Development	• AUCTC • ECN Workshop	• AUCTC • ECN Workshop • Atlantic Net 2020/ECN 50th	• Atlantic Net 2021 • ECN 50th • AUCTC • ECN workshop
National Representation and Sharing of Information and Best Practices	• NREN GC • CIO Advisory Committee	• NREN GC • CIO Advisory Committee	• NRENGC • NDRIO • CUCCIO
Organizational	• Communications Plan	• Update Communications Plan • Update ROI calculation	• Strategic planning of surplus spending on large scale initiatives

Appendix IV: Statements of Revenue and Expenditures

EDUCATIONAL COMPUTER NETWORK
NEW BRUNSWICK AND PRINCE EDWARD ISLAND
STATEMENT OF REVENUE AND EXPENDITURES*

Account Description	Budget 2019-2020	Actual 2019-2020
Revenue		
Provincial Transfers	946,538	946,538
Direct Funding from institutions	354,476	354,476
External fees for service	70,574	0
Committed funds	0	72,948
Total Revenue	**1,371,588**	**1,373,962**
Expenditures		
Network Shared Services		
UNB as the designated installation (service provider)	222,828	222,828
Total Network Shared Services	222,828	222,828
Telecommunications		
PEI Provincial Lines & Internet Access	57,047	66,678
NB Internet Access	66,000	85,535
Total Telecommunications	123,047	152,213
Hardware, software, maintenance		
Hardware	20,000	40,673
Software	69,953	73,869
CAF Maintenance	23,300	23,300
Maintenance	42,433	48,492
Total Hardware, Software, Maintenance	155,686	186,334
Meetings and Collaboration		
Network Committee	25,000	31,173
Collaborative Projects	185,664	106,427
RAN contributions to SIEM Initiative	117,889	151,575
ECN SharePoint Services	65,000	65,342
Total Meetings and Collaboration	393,553	354,517
NBREN and GigaPOP		
NBREN CORE	409,700	392,596
NBREN Additional Connections	21,774	40,474
NB GigaPOP Services	45,000	25,000
Total NBREN and GigaPOP	476,474	458,070
Total Expenditures	1,371,588	1,373,962
Net revenue (net loss)	0	0

PERIOD ENDED: 3/31/2020

NB & PEI Committed Funds Balance as at March 31, 2020:

Balance, April 1, 2019	1,280,734
Net revenue (loss) for the year	-72,948
Balance, March 31, 2020	1,207,786

*as per MPHEC audited financial statements

PERIOD ENDED: 3/31/2020

Account Description	Budget 2019-2020	Actual 2019-2020
Revenue		
Provincial Transfers	860,938	860,938
Direct contributions	328,000	328,000
External Fees for Service	70,574	0
Committed Funds	0	0
Total Revenue	**1,259,512**	**1,188,938**
Expenditures		
Network Shared Services		
UNB as the designated installation (service provider)	211,687	211,687
Total Network Shared Services	211,687	211,687
Telecommunications		
Internet Access	66,000	85,535
Total Telecommunications	66,000	85,535
Hardware, software, maintenance		
Hardware	20,000	40,673
Software	56,853	61,259
CAF membership	18,300	18,300
Maintenance	32,433	39,723
Total Hardware, software, maintenance	127,586	159,955
Meetings and Collaboration		
Network Committee	20,000	26,422
Collaborative Projects	174,876	103,664
RAN contribution to SIEM initiative	117,889	151,575
Shared Services	65,000	65,342
Total Meetings and Collaboration	377,765	347,003
NBREN and GigaPOP		
NBREN CORE	409,700	392,596
NBREN Additional Connections	21,774	40,474
NB GigaPOP Services	45,000	25,000
Total NBREN and GigaPOP	476,474	458,070
Total Expenditures	**1,259,512**	**1,262,250**
Net revenue (net loss)	**0**	**-73,312**
NB Committed Funds Balance as at March 31, 2020:		
Balance, April 1, 2019		1,209,613
Net revenue (loss) for the year		-73,312
Balance, March 31, 2020		**1,136,301**

*as per MPHEC audited financial statements

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

PERIOD ENDED: 3/31/2020

Account Description	Budget 2019-2020	Actual 2019-2020
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)	11,141	11,141
Total Network Shared Services	11,141	11,141
Telecommunications		
Provincial Lines & Internet Access	57,047	66,678
Total Telecommunications	57,047	66,678
Hardware, software, maintenance		
Hardware	0	0
Software	13,100	12,610
CAF Maintenance	5,000	5,000
Maintenance	10,000	8,769
Total Hardware, software, maintenance	28,100	26,379
Meetings and Collaboration		
Network Committee	5,000	4,751
Collaborative Projects	10,788	2,763
Total Meetings and Collaboration	15,788	7,514
Total Expenditures	**112,076**	**111,712**
Net revenue (net loss)	*0*	*364*

PEI Committed Funds Balance as at March 31, 2020:

Balance, April 1, 2019	71,121
Net revenue (loss) for the year	364
Balance, March 31, 2020	**71,485**

*as per MPHEC audited financial statements