



ANNUAL REPORT TO THE MINISTER

Industry Canada

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1.0 Introduction

CANARIE's Funding Agreement with Industry Canada requires the organization to "...provide to the Minister by July 31st of each year, commencing in 2008, an Annual Report approved by its Board, in both official languages, of its operations during the preceding fiscal year in respect of funding under this Agreement." This report addresses those requirements. The financial statements for 2010-11 are attached as Appendix 12.

CANARIE is Canada's advanced research and innovation network, a modern infrastructure required to support a healthy innovation system. It continues to be a foundational aspect and enabler of the Government of Canada's Science & Technology strategy "Mobilizing Science and Technology to Canada's Advantage", released in 2007. CANARIE also directly supports key elements of the Digital Economy Strategy as defined in the consultation paper released in May of 2010. CANARIE continues to support and collaborate with the Canada Foundation for Innovation, the Tri-Councils, and our co-delivery agents at the provincial and territorial level.

One million researchers, scientists and students at over 1,100 Canadian institutions, including universities, colleges, research institutes, hospitals, and government laboratories have access to the CANARIE Network. Together with 12 provincial and territorial advanced network partners, CANARIE enables researchers to share and analyze massive amounts of data, like climate models, satellite images, and DNA sequences that lead to groundbreaking scientific discoveries. During 2010-11 the CANARIE Network carried over 28,000 TB of research data, more than twenty times the total residential Internet traffic in Canada.

2010-11 has been an extremely successful year for CANARIE as it continues to extend the reach of its powerful digital backbone and support projects that connect more researchers to more research data and tools. CANARIE has met or exceeded all objectives for the 2010-11 fiscal year. Programs such as the Network-Enabled Platforms program and initiatives with our provincial network partners ensure the research and innovation communities we serve are aware of the opportunities to collaborate and accelerate research outcomes through the use of the network. In addition, CANARIE responded to the Digital Economy Strategy consultation paper by launching a pilot project to stimulate growth in the ICT sector. This pilot, called Digital Accelerator for Innovation and Research (DAIR), leverages the government's investments in CANARIE to date. It provides digital infrastructure to small- and medium-sized companies to allow them to get their products to market faster and at lower cost to them, providing entrepreneurial advantage to this sector.

CANARIE and its users continue to benefit from an active and engaged Board of Directors whose leadership provides insightful guidance to ensure CANARIE addresses the evolving needs of our stakeholders and remains aligned to the strategies and requirements of the federal government and its departments and agencies.

On behalf of the Board of Directors, CANARIE would like to thank the Minister of Industry, his staff and officials at Industry Canada for their continued support and confidence in CANARIE.

2.0 Statement of Objectives for 2010-11 and report on the extent to which CANARIE met these objectives

CANARIE's 2010-11 Business Plan objectives were as stated below. A report on the extent to which each objective was achieved is contained in the paragraphs following each objective.

2010-11 Objectives:

A. To acquire any additional or replacement equipment or network capacity needed for the effective management of the core network facility;

In early 2009, CANARIE undertook a network capacity study to ensure that CANARIE had adequate network resources to meet user needs for the next few years. Based on estimated growth, CANARIE identified a number of areas that had limited resources and that would require either network or equipment expansions to meet the projected areas of growth. During the last fiscal year CANARIE invested in equipment and bandwidth to address these forecasted capacity requirements and to respond to the actual demand increases measure on the network.

CANARIE also invested in equipment and network resources to increase the availability of the network (i.e. the perceived "up-time" from the users' perspective). During the fiscal year, the IP network availability was 99.84%, which compares favourably both to other R&E networks around the world as well as to world-leading commercial Internet providers.

In addition to investing in the core network, CANARIE also introduced two new services during 2010-11. The first service is delivered in partnership with CUCCIO, the Canadian University Council of Chief Information Officers. Called Canadian Access Federation (CAF), this new service allows researchers visiting other institutions to seamlessly use the network to access their data and tools at their home institution. The second service, called Peering, allows researchers to access data at select Canadian and international websites at much higher speed than using the commercial Internet (the only access method previous to Peering). Both of these new services allow Canadian researchers to collaborate more efficiently, improving the effectiveness of their work. Moreover, these services also save Canadian universities millions of dollars in IT costs by leveraging the capacity and capability of the CANARIE Network.

B. To manage the "Infrastructure Extension Program" initiated in 2007 and design, implement and manage a follow-on program if required;

The purpose of the Infrastructure Extension Program (IEP) is to support the creation of extensions to the CANARIE Network (Canada's advanced research and innovation network) that will enhance or accelerate research, enable national and international collaboration, improve access to knowledge, and contribute to the development of cyberinfrastructure and e-research in Canada. The program specifically supports connections of government laboratories, educational institutions and similar facilities. These connections are in addition to the hundreds to institutions that are connected to the CANARIE Network via provincial and territorial partner networks (the ORANs).

In 2010-11, CANARIE designed and implemented a follow-on program of the same name to accommodate the high demand for new connections to the network. The new program used the same criteria for and the same competitive process as the original IEP. However, the call for new connection requests happened more frequently (every six months) and the timeframes were dramatically compressed (to weeks from months) so that interested parties could get more frequent opportunities to apply and faster responses to their requests. The original allocation to IEP was \$15.0 million. CANARIE allocated an additional \$2.0 million to the follow-on program, resulting in \$17.0 million allocated for IEP in total.

Through the IEP program, CANARIE has now funded sixty-four new connections to the national network: thirty-one to federal departments, twenty-one to government laboratories, eight to educational institutions, two to research hospitals, one to a museum and one to a private-sector laboratory. Beyond these, CANARIE plans to complete seventeen additional connections before the end of the current mandate period (ending in March 2012).

As a result of the Infrastructure Extension Program – and in addition to the hundreds of institutions currently connected through the ORANs – dozens of laboratories, government departments and other institutions will be able to leverage the capacity of Canada's advanced research and innovation network.

C. To manage the “Network-Enabled Platforms Program” initiated in 2007 and design, implement and manage a follow-on program if required;

This \$27 million program further develops CANARIE's advanced network for Canadian researchers and scientists by enabling network-based technology innovation. It supports the development of tools and infrastructure to enable the sharing of complex data sets, the use of remote equipment and the capabilities of collaborative research teams. Ten projects were announced in June 2008 and an additional ten in June 2009.

The program teams met for the third Technical Synergy Workshop in Montreal in October 2010. Each team presented its project goals and software architecture to other Network-Enabled Platforms Program participants. Demonstrations were extremely well received by projects participants, CANARIE staff, and Board members alike. Continued progress on the Program is being made and measured through close monitoring by CANARIE staff and through regular reporting by the project teams. The first of the projects was completed in late 2010.

D. To hold an annual *Users' Forum*;

CANARIE held its fourth annual Users' Forum in November 2010 at the University of Toronto. Over fifty attendees from across the country discussed the progress of the CANARIE programs and shared their views of digital infrastructure in Canada. The input from this and past Users' Forums will be used to steer the development of CANARIE's strategy for the next five years.

E. To continue to work with the ORANs regarding the ways in which they can address and extend their role as “co-deliverer” of parts of the CANARIE mandate;

Responding to the needs of the Optical Regional Advanced Network (ORAN) community, CANARIE launched the second ORAN Infrastructure Program to further develop research network capabilities across the country. CANARIE is providing a total of \$4.05 million in

support of ORAN infrastructure projects, which were selected and announced in fiscal year 2010-11. Projects approved for funding under the OIP program were selected through a competitive process. All project proposals were reviewed relative to the mandatory criteria, the evaluation criteria, and the ability to contribute to CANARIE's objectives as defined in the current funding agreement with Industry Canada. Evaluation of proposals relative to these criteria constituted the basis for the decision whether or not a project received CANARIE funding. Projects that failed to meet the criteria, or failed to meet such criteria to an acceptable degree, could not be funded.

CANARIE assisted ORANs to migrate from IPv4 to IPv6 by providing \$0.5 million in funds through a competitive process to allow ORANs to upgrade equipment as required to successfully transition to this key new technology. CANARIE also provided training to ORANs on the deployment of IPv6.

CANARIE continued efforts to improve the synergy between the national backbone and the regional research networks by increasing the frequency of meetings with the ORAN Advisory Committee and ORAN Technical Committee.

During the last four years, every dollar invested by the federal government in the national R&E network (the CANARIE Network plus the ORAN networks) leveraged one dollar and fifty cents from provincial governments and user fees paid to the ORANs.

F. To engage the Board, through quarterly meetings held in various locations in Canada, in strategic decision-making and in the governance of the organization;

The 2010 Annual General Meeting of members was held in St John's, Newfoundland in June 2010. Board of Directors meetings during the 2010-11 fiscal year were held across Canada in Saint John's, Ottawa, Toronto, and Vancouver. An additional board meeting was held in San Jose, California, the heart of Silicon Valley. During this meeting, the board also met with senior executives from Cisco, Google and other companies; with leading researchers at Stanford University; and with executives from an international R&E network organization called ESnet.

CANARIE prepares and circulates a policy / governance manual for the Board of Directors to assist them in good governance matters.

The CANARIE Board of Directors has committed to bi-annual evaluations, has devoted committee time and resources to evaluating best practices and strengthening policies, and has taken responsibility for providing educational opportunities for Board members.

G. To produce communications products that will demonstrate the value of network based research to Canadians;

During the year a communications strategy was implemented to increase the visibility of the corporation with respect to its user community, emphasizing the fundamental value CANARIE provides and the significant impact it is having on facilitating innovation in Canada. The communications strategy also focused on articulating CANARIE's critical contribution to the Government of Canada's Science & Technology Strategy and Digital Economy Strategy.

The Annual Report 2009-10 was released in June 2010. CANARIE has increased its visibility through timely and targeted press releases and nineteen news releases announcing such things as upgrades to network equipment and capacity and calls for proposals for technology innovation and network extension programs were issued during the year.

Finally, throughout the year CANARIE continued to reach out to audiences through sponsorship and active participation in numerous international, national and regional research symposia and conferences such as the BCNET conference in Vancouver, BC; the ORION Summit in Toronto, ON; Canadian Science Policy Conference in Montreal, QC; Canada 3.0 in Stratford, ON; Research Money Conference in Ottawa, ON; and many more.

H. To ensure that CANARIE is managed efficiently, effectively, and with full accountability and transparency to Industry Canada and in keeping with the requirements of the Funding Agreement;

During the 2010-11 fiscal year, CANARIE submitted the following documents to Industry Canada: Annual Business Plan 2011-12; Annual Performance Report for 2009-10; and the 2010 Annual Report to the Minister that was included with the corporate annual report. A Performance Audit (value-for-money) was completed and submitted in September 2010.

I. To manage the “Green IT” Pilot program launched in 2009.

CANARIE’s Board of Directors approved a “Green” Information Technology pilot program in January 2009. This program helped to establish CANARIE as a global leader in exploring the use of optical networks to reduce greenhouse gas emissions.

CANARIE announced \$2.4 million in funding for four ground-breaking Green IT projects aimed at reducing ICT’s carbon footprint and measuring the impact of ICT and cyberinfrastructure on university electric consumption. CANARIE’s biggest Green IT funding recipient was the GreenStar Network, an alliance of Canada’s leading IT companies, universities and international partners, led by Quebec’s École de technologie supérieure (ÉTS) in Montreal. The GreenStar Network project will receive up to \$2 million to develop the world’s first Internet network, where the network nodes will be powered entirely by wind and solar energy and yet will provide the same reliability to users as the current Internet does.

3.0 Statement of Objectives for 2011-12 and for the foreseeable future

CANARIE’s objectives for 2011-12 are as follows:

The objectives for the final year of the Funding Agreement period were first listed in the July 2008 Report to the Minister as:

- To acquire any additional or replacement equipment or network capacity needed for the effective management of the core network facility;
- To manage the “Infrastructure Extension Program” initiated in 2007 and the follow-on program of the same name initiated in 2010;
- To manage the “Network-Enabled Platforms Program” initiated in 2007;

- To hold an annual *Users Forum*;
- To continue to work with the ORANs regarding the ways in which they can address and extend their role as “co-deliverer” of parts of the CANARIE mandate;
- To engage the Board, through quarterly meetings held in various locations in Canada, in strategic decision-making and in the governance of the organization;
- To produce communications products that will demonstrate the value of network-based research to Canadians;
- To ensure that CANARIE is managed efficiently, effectively, and with full accountability and transparency to Industry Canada and in keeping with the requirements of the Funding Agreement;
- To manage the “Green IT” Pilot program launched in 2009;
- To manage the “Digital Accelerator for Innovation and Research” program launched in 2010; and
- To manage the mandate renewal process to achieve an appropriate level of investment by the Government of Canada from 2012 to 2017 in the national research and education network and associated programs through CANARIE.

4.0 Statement of CANARIE's investment policies, standards, and procedures

CANARIE's investment *strategy* is specifically tailored to the short duration of most investments and constraints in terms of investment options imposed by the Statement of Investment Policy and the Funding Agreement with Industry Canada. These constraints, while appropriate and necessary to meet the overall objectives of CANARIE, preclude a more active approach to investment management.

As a result, rather than taking a more active approach to investment management, the strategy adopted by CANARIE is “buy and hold”, based on the following framework.

- Investment maturities will, wherever possible, match the forecasted cash requirements of CANARIE.
- The quantitative limits on investment holdings provide ample structural liquidity to meet the needs of CANARIE. It is appropriate, therefore, to hold less liquid types of approved investments. Value added will be achieved by moving out the “liquidity curve” when possible.
- At all times CANARIE will hold investments deemed eligible under our *Statement of Investment Policy* (see Appendix 1). For greater clarity, the determination of eligibility shall be made at the time of purchase. CANARIE will not be obliged to dispose of investments which become ineligible after the date of purchase, but will favour (subject to market conditions) disposing of such securities should assets need to be liquidated. (Refer to the Liquidity policy (s 7) in the Statement of Investment Policy.)

Within this context, CANARIE's official *Statement of Investment Policy* as adopted by the Board of Directors, and reviewed in the year by the Audit & Investment Committee of the Board, is contained in Appendix 1.

5.0 Statement of Compensation

Directors on CANARIE's Board, including officer positions such as Chair, Vice-Chair and Secretary/Treasurer, receive no compensation. During the 2010-2011 fiscal year one of the Directors served as Interim President and CEO. Compensation was paid in the form of consulting fees to a company controlled by the Board member for his services as interim President and CEO.

The President and CEO of the organization typically has a compensation package that is benchmarked regularly against external comparators by an external consultant and overseen by the HR (Executive) Committee of the Board. All other staff positions at CANARIE are classified according to a structured system that assigns a salary range to each position. The system is benchmarked against comparator organizations regularly by an external consultant.

The 2010-11 compensation remuneration paid to directors and the 2010-2011 salary ranges for positions above \$100,000 and the number of staff in each category follows:

Chairman of the Board acting as Interim President & CEO	Contract	\$339,740	1
	Lower salary range	Upper salary range	Number of Staff
President and CEO	\$178,561	\$297,600	0
Senior Management	\$114,792	\$191,320	4
Engineers & Directors	\$ 79,732	\$132,887	4
Technology Specialist	\$ 66,484	\$110,807	1

6.0 List of Eligible Projects, the funding provided detailed by Expenditure type, and a description of progress achieved to date

6.1 Infrastructure Extension Program

The Infrastructure Extension Program (IEP) is a \$15 million program launched in September 2007. An additional \$2 million was added to the program bringing the total budget to \$17 million. The purpose of the program is to support the creation of extensions to Canada's research and education network that will enhance/accelerate research, enable national and international collaboration, improve access to knowledge, and contribute to the development of cyber infrastructure and e-research in Canada. Specifically, connections of government laboratories, educational institutions and other facilities were to be supported. During the 2010-11 fiscal year, 8 connections were either established, or renewed for a total of 64. The specifics of the program are detailed in the table below along with expenditures to March 31, 2011.

	Totals
Federal Department Connections	31
Government Laboratory Connections	21
Educational Institution Connections	8
Museum Connections	1
Private Sector Connections	1
Hospitals	2
Total Current Connections	64
Fiscal 2007/08	\$ 2,920,161
Fiscal 2008/09	\$ 9,142,210
Fiscal 2009/10	\$ 1,141,923
Fiscal 2010/11	\$ 1,132,621
Total IEP Spending	\$14,415,835

6.2 Network-Enabled Platforms Program

The Network-Enabled Platforms Program (NEP) is a \$15 million program launched in September 2007. The purpose of the NEP Program is to encourage the definition and implementation of collaborative projects that accelerate the development of, and participate in, national and international cyber infrastructure and e-Research platforms. All NEP projects were provided with funding during the 2010-11 fiscal year. Eight of the ten projects are completed with the remaining two projects to be completed by December 31, 2011. Funding provided to March 31, 2011 represents 92% of the total project commitments.

Project Number/Name	Lead Contractor	Project Commitment	Funding Provided to March 31, 2011
NEP 01 Science Studio	University of Western Ontario	\$ 1,700,102	\$ 1,664,128
NEP 02 Service Grid computing	University of Victoria	500,542	500,542
NEP 10 Oceans 2.0	University of Victoria	1,282,701	1,282,701
NEP 11 HSVO	Lakehead University	2,043,489	1,999,295
NEP 12 GeoChronos	Cybera Inc.	919,244	919,244
NEP 20 POKM	Dalhousie University	1,719,151	1,309,931
NEP 21 CSSDP	Cybera Inc.	1,123,586	1,123,586
NEP 34 CBRAIN	McGill University	2,315,625	1,925,398
NEP 39 CANFAR	University of Victoria	2,294,287	2,052,206
NEP 44 ONE ITS	University of Regina	721,658	672,746
	Total	\$ 14,620,386	\$ 13,449,777

6.3 Network-Enabled Platforms Program v2

The Network-Enabled Platforms v2 Program (NEP-2) is a \$12 million program launched in February 2009. The purpose of the Program is to encourage the definition and implementation of collaborative projects that will accelerate the development of, and participation in, national and international cyber infrastructure and e-Research platforms. All projects are progressing towards their goals. Architectures and frameworks are being developed and executed with 88%

of project expenditures going to Labour, Sub-contractor and Fee-for-Service contracts, 7% of expenditures going to demonstration and workshop costs and the remaining 5% on Equipment and Materials costs. All NEP-2 projects claimed funding during the 2010-11 fiscal year.

Project Number/Name	Lead Contractor	Project Commitment	Funding Provided to March 31, 2011
NEP 52 HEP Legacy Data	University of Victoria	\$ 577,626	\$ 321,129
NEP 53 GBRAIN	McGill University	1,843,500	369,107
NEP 54 Open Orchestra	McGill University	927,649	422,503
NEP 59 CBRASS	University of British Columbia	926,592	419,394
NEP 61 CESWP	Cybera Inc.	933,195	607,925
NEP 63 DR-NEP	University of British Columbia	1,507,749	521,066
NEP 64 ANISE	University of Western Ontario	1,164,600	557,428
NEP 66 GeoCENS	Cybera Inc.	1,080,157	682,526
NEP 67 Data from the Deep	University of Victoria	981,398	382,081
NEP 71 Cyber-SKA	University of Calgary	2,057,535	1,038,905
	Total	\$ 12,000,000	\$ 5,322,064

6.4 ORAN Activity Support Program

The ORAN Activity Support Program (OASP) is a \$2.1 million program launched in February 2008. The purpose of the ORAN Activity Support Program is to provide funding support to facilitate the addition of staff or support operating costs of the regional networks in order to enable them to better serve CANARIE's objectives as defined in our Funding Agreement with Industry Canada. All projects are progressing towards the objectives of the program by the focusing on CANARIE's technology innovation and/or network operations mandates.

Project Number/Name	Lead Contractor	Budget	Funding Provided to March 31, 2011
OR-01	BCnet	\$ 200,000	\$ 118,525
OR-02	Cybera	200,000	150,000
OR-03	SRnet	200,000	150,000
OR-04	MRnet	200,000	144,430
OR-05	ORION	200,000	150,000
OR-06	RISQ	200,000	105,781
OR-07	NB-PEI	300,000	57,925
OR-09	ACORN NS	200,000	148,502
OR-10	ACORN NL	200,000	132,243
OR-11	Yukon	200,000	86,438
	Total	\$ 2,100,000	\$ 1,243,844

6.5 ORAN Communications Program v2 (OCP-2)

The ORAN Communications Program v2 (OCP-2) is a \$200,000 program launched in February 2010. The purpose of the Program is to extend the current funding program for ORAN communications initiatives that demonstrate the value of national and regional partnerships in the provision of advanced networks, networking technologies and the applications and services which they enable. Funding was allocated to the 2010-11 and 2011-12 fiscal years. The table details the projects that utilized OCP-2 funds for communications initiatives.

Project Number/Name	Lead Contractor	Budget	Funding Provided to March 31, 2011
OR-01	BCnet	\$ 29,800	\$ 9,900
OR-02	Cybera	19,800	9,900
OR-03	SRnet	10,000	10,000
OR-04	MRnet	19,800	9,900
OR-05	ORION	29,800	7,500
OR-06	RISQ	29,800	5,000
OR-07	NB-PEI	-	-
OR-09	ACORN NS	31,200	8,736
OR-10	ACORN NL	-	-
OR-11	Yukon	29,800	-
	Total	\$ 200,000	\$ 60,936

6.6 Green IT Pilot Program

The Green IT Pilot Program is a \$3 million program launched in June 2009. The Green IT Pilot Program had two major objectives:

- (i) To demonstrate the technical viability and usability of a network architecture that involves relocating servers to zero-carbon data centers and deploying network nodes that are powered by renewable resources; and
- (ii) To develop the business case for individual sites such as universities to use carbon offsets to finance the relocation of computers and related facilities to zero-carbon data centers.

It is expected that the Green IT Pilot Program will promote new Canadian business and research opportunities and enhance the country's cyberinfrastructure capabilities.

An evaluation of the Green IT program has been initiated. The objectives of the summative evaluation and analysis are as follows:

- (i) A review of the program's objectives and relevance to IC funding agreement;
- (ii) A review of the policy environment at the time the program was created – i.e. the promise of cap and trade;
- (iii) A review of each of the 4 projects, in terms of the respective objectives of each project and corresponding results and outcomes; and

- (iv) Comments and recommendations as to future Green IT programs or possible research directions for CANARIE in this area.

The table details the funding claimed under the Green IT program to March 31, 2011.

Project Number/Name	Lead Contractor	Budget	Funding Provided to March 31, 2011
213	McGill University	\$ 163,262	\$ 163,262
216	Ecole de Technologies Supérieure	1,999,986	1,255,974
219	International Institute for Sustainable Development	99,865	96,006
224	University of British Columbia	105,537	21,855
	Total	\$ 2,368,650	\$ 1,537,097

6.7 ORAN Infrastructure Program v1 (OIP-1)

The ORAN Infrastructure Program (OIP-1) is a \$15 million program launched in March 2009. The purpose of the Program is to provide funding support to the ORANs to further develop their research network capabilities. The table details the projects that have utilized OIP-1 funds for extending their network infrastructure during the 2010-11 fiscal year.

Project Number/Name	Lead Contractor	Budget	Funding Provided to March 31, 2011
OR-01	BCnet	\$ 900,000	\$ 900,000
OR-02	Cybera	121,687	121,451
OR-03	SRnet	238,350	238,350
OR-04	MRnet	1,458,185	1,266,983
OR-05	ORION	4,800,000	4,800,000
OR-06	RISQ	2,865,630	2,010,109
OR-07	NB-PEI	3,148,000	-
OR-09	ACORN NS	1,500,000	1,414,980
OR-10	ACORN NL	419,970	205,842
OR-11	Yukon	-	-
	Total	\$ 15,451,822	\$ 10,957,715

6.8 ORAN Infrastructure Program v2 (OIP-2)

The ORAN Infrastructure Program (OIP-2) is a \$4 million program launched in March 2011. The purpose of the Program is to provide further funding support to the ORANs to develop their research network capabilities which will complement the national network infrastructure. The table details the projects that have utilized OIP-2 funds for extending their network infrastructure during the 2010-11 fiscal year.

Project Number/Name	Lead Contractor	Budget	Funding Provided to March 31, 2011
OR-01	BCnet	\$ 1,100,000	-
OR-02	Cybera	289,678	289,678
OR-03	SRnet	227,075	-
OR-04	MRnet	-	-
OR-05	ORION	780,000	-
OR-06	RISQ	452,000	-
OR-07	NB-PEI	39,274	-
OR-09	ACORN NS	502,050	-
OR-10	ACORN NL	140,000	-
OR-11	Yukon	520,000	-
	Total	\$ 4,050,077	\$ 289,678

6.9 Digital Accelerator for Innovation and Research (DAIR) Program

The DAIR program was launched in December 2010. CANARIE developed the DAIR Program to:

- support made-in-Canada technology development and commercialization.
- speed time to market for small and medium-sized technology companies.
- stimulate the high-tech sector by removing a competitive barrier for small and medium sized high tech companies.

The DAIR Program is a system that delivers a set of services to the user community. The set of services that DAIR will make available are:

- Computing and Storage Resources – DAIR provides computing and storage as a cloud based service. The user is able to use prebuilt operating system images or store their own images in the cloud and instantiate as many as required. They can be instantiated in two geographically separate locations interconnected by CANARIE's high-speed network. The service also provides persistent storage that can be attached to running images.
- Wireline Access – Access to the compute and storage nodes is available through the Internet or through CANARIE's high-speed optical network. Internet VPN access to the CANAIRE network is also available for enhanced security.
- Wi-Fi Access – Wi-Fi access to DAIR is available at selected university and college campuses across Canada.
- Cellular Testing – Cellular access to DAIR is available via a partnership that CANARIE has established with Wavefront.

There is currently one project underway with Cybera Inc. in Alberta. Cybera, in partnership with Compute Canada, is building and delivering the DAIR computing and storage infrastructure (the test nodes) that DAIR users will make use of. Pilot users will be selected through a competitive call for proposals, where the first users are expected to be able to access the DAIR infrastructure in Q1 of the 2011/12 fiscal year.

The budget for the Cybera / Compute Canada test node infrastructure project is \$905,687 with funding provided to March 31, 2011 of \$426,666.

6.10 ORAN IPv6 Program

IPv6 is the next generation Internet layer protocol. It has several advantages over the current protocol (IPv4), but the most dramatic is the greatly expanded address space. That expanded address space is becoming increasingly important as the world runs out of IPv4 addresses and as more and more everyday devices such as appliances and cars are becoming computerized.

IPv6 has been supported for Research and Education on the CANARIE network since 2002, allowing CANARIE members to exchange IPv6 traffic with other R&E networks around the world.

The adoption of IPv6 by Canadian commercial service providers has been slow. In fact, only a small number of commercial ISPs in North America are currently offering IPv6 as a standard service. Most of the Canadian ORANs and universities are unable to set up cost effective IPv6 peering with commercial ISPs. IPv6 connectivity is becoming critical to the Canadian research network as major networks in Asia can only be accessed through IPv6. Finally, lack of good IPv6 connectivity causes issues to various University Campus departments as new platforms are primary IPv6 platforms. With the exhaustion of IPv4 address space, the global IPv6 adoption is gaining momentum.

In January 2010, CANARIE's Board of Directors recommended that \$0.5 million be committed to an ORAN IPv6 Program to assist and support ORANs in their transition to IPv6 readiness. The purpose of the program was primarily to provide funding support to the ORANs to successfully transition to IPv6. In addition, CANARIE supported an online training program for all the ORANs. The program, which was well subscribed, was led by one of Canada's foremost IPv6 experts. Some of the provincial networks are replicating the training for their own users.

The following table details the ORANs that took advantage of IPv6 funding to support their IPv6 transition during the 2010-11 fiscal year.

Project Number/Name	Lead Contractor	Budget	Funding Provided to March 31, 2011
OR-01	BCnet	\$ 39,508	\$ 32,075
OR-02	Cybera	22,500	20,197
OR-03	SRnet	139,110	139,110
OR-04	MRnet	45,000	-
OR-05	ORION	184,413	184,413
OR-06	RISQ	-	-
OR-07	NB-PEI	-	-
OR-09	ACORN NS	18,400	18,400
OR-10	ACORN NL	41,471	40,234
OR-11	Yukon	-	-
	Total	\$ 490,402	\$ 434,429

7.0 Criteria applied to select Eligible Projects

The published criteria used to select the projects under the ten programs detailed above are provided in Appendices 2-11.

8.0 Summary of the results of audits and evaluations carried out during the year

Performance Audit: CANARIE was required to undertake a performance (value-for-money) Audit. The audit was to be done by an independent third-party, to ensure the economy, efficiency and effectiveness with which funds have been used. The performance audit was carried out in accordance with the performance audit policies of the Office of the Auditor General of Canada (2004) and informed by CANARIE's Performance Audit and Evaluation Strategy (PAES).

The resulting report was made public and a copy sent to the Minister in compliance with the terms of the Funding Agreement. The report is available at:

<http://www.canarie.ca/templates/about/publications/docs/2010-09-28%20Final%20Performance%20Audit%20Report.pdf>

Program Evaluation: In consultation with Industry Canada, CANARIE is required to carry out an evaluation of its activities and projects, according to a strategy to be approved by the Board, to be done by March 31, 2012, by an independent third-party chosen by the Board, using recognized evaluation standards. The evaluation must measure the overall performance of CANARIE in achieving the outcomes identified in the Funding Agreement. The evaluation report must be made public and a copy sent to the Minister. This program evaluation was commenced during the 2010-11 fiscal year, however the final reports will not be completed and available for publication until the first quarter of the 2011-12 fiscal year.

Technology Projects: In agreements with Eligible Recipients for Technology Projects, CANARIE is required to provide for the conduct of an audit of:

- (i) any Eligible Project where CANARIE's contribution exceeds \$1,000,000,
- (ii) any Eligible Project where CANARIE deems that an audit is appropriate, and
- (iii) a representative sample of projects to which CANARIE has contributed less than \$1,000,000, according to the terms and procedures set out in the performance, audit and evaluation strategy.

The following table outlines the audit schedule for the Network-Enabled Platform Program (NEP). These are the only audits that have been scheduled to date.

Project Number/Name	Lead Contractor	Audit Schedule
NEP 01 Science Studio	University of Western Ontario	January, 2012
NEP 02 Service Grid computing	University of Victoria	April, 2011
NEP 10 Oceans 2.0	University of Victoria	April, 2011
NEP 11 HSVO	Lakehead University	June, 2011
NEP 12 GeoChronos	Cybera Inc.	June, 2011
NEP 20 POKM	Dalhousie University	November, 2011
NEP 21 CSSDP	Cybera Inc.	June, 2011
NEP 34 CBRAIN	McGill University	August, 2011
NEP 39 CANFAR	University of Victoria	August, 2011
NEP 44 ONE ITS	University of Regina	June, 2011

Appendix 1: Statement of Investment Policy

Purpose

The purpose of this document is to establish an investment policy best suited to meet the needs and objectives of CANARIE's CANet 5 investment portfolio. This document is specifically intended to meet the requirements of ss 5.3, 5.4, 5.7, 5.8, 5.9, 5.10, and 5.11 of the Funding Agreement between CANARIE Inc. and Her Majesty in Right of Canada dated March 28th, 2007.

All aspects of this Policy are governed by the Prudent Person Principle (refer s 5.1 of the Funding Agreement) and the principal objective of investment decisions shall be the preservation of capital to meet future disbursement requirements.

This policy is reviewed annually, was most recently reviewed and approved on September 14, 2010.

Investment Policy

(1) Long-term return objectives and expectations:

The long term objectives of the portfolio are twofold: (a) to provide funds on an "as needed" basis to meet the disbursement needs of CANARIE and (b) to maximize the investment income earned by CANARIE, subject to the Investment Strategy and Investment Policy adopted by CANARIE.

(2) Ratings of Securities:

The deemed rating (the "Rating") of any Eligible Security will be established, at the time of CANARIE's acquisition of the Eligible Security.

Reference to the "issuer" shall include the unconditional guarantor, if applicable.

The rating category for Investment Policy purposes shall be based on the ratings of at least two of the following four rating agencies: Dominion Bond Rating Service (DBRS), Standard and Poors (S&P), Moody's and Fitch.

In the case of Commercial Paper and other short-term investments:

To be included in the AAA category, the security must have at least two of the following, where two are available:

- i. R-1 (high) from DBRS
- ii. A-1+ from S&P and the issuer's bonds are rated "AAA" by S&P
- iii. P-1 from Moody's and the issuer's bonds are rated Aaa by Moody's
- iv. F-1+ from Fitch and the issuer's bonds are rated AAA by Fitch

To be included in the AA category, the security must have at least two of the following, where two are available:

- i. R-1 (middle) from DBRS
- ii. A-1+ from S&P
- iii. F-1+ from Fitch
- iv. P-1 from Moody's and the issuer's bonds are rated Aa by Moody's

In the case of bonds and other longer term investments:

To

be included in the AAA category, the security must have at least two of the following:

- i. AAA from DBRS
- ii. AAA from S&P
- iii. Aaa from Moody's
- iv. AAA from Fitch

To be included in the AA category, the security must have at least two of the following:

- i. AA from DBRS
- ii. AA from S&P
- iii. Aa from Moody's
- iv. AA from Fitch

(3) Diversification policy of the investment portfolio, including quantitative limits on investments:

Throughout the life of CANARIE's portfolio, CANARIE's investments in the securities of **any one issuer (or two or more affiliated entities)** will be limited to an aggregate market value limit based on the Rating of the security:

Rating of Security	AA	AAA
Government Securities	no limit	no limit
Provincial / Municipal Financing Authority	10% of portfolio	10% of portfolio
Municipal Securities	10% of portfolio	10% of portfolio
Other Eligible Securities	10% of portfolio	10% of portfolio

Throughout the life of CANARIE's portfolio, CANARIE's investment in the securities of **any one category** will be limited to an aggregate market value limit of the category, as set out below:

Rating of Security	AA	AAA
Government Securities *	30% of portfolio (minimum Government Securities is 20% of the portfolio)	no limit
Provincial / Municipal Financing Authority	70% of portfolio **	same 70%
Municipal Securities	70% of portfolio **	same 70%
Other Eligible Securities	70% of portfolio **	80% of portfolio

* For greater certainty, the phrase "Government Securities" means all securities issued, guaranteed by, or that have the full faith and credit of the federal government or a provincial government.

** The 70% constraint applies to the aggregate of AA securities

(4) Asset allocation strategy:

The portfolio will, at all times, be invested in Eligible Securities (refer (5) below).

(5) Permitted investment instruments and trading activities:

CANARIE shall invest in Eligible Securities. Eligible Securities are defined as bankers acceptances, bank certificates of deposit, commercial paper, bonds, notes and bills issued by the federal government, provincial governments, municipal governments and corporations, deposits at a deposit-taking institution, the commercial paper or short-term securities of which have a credit rating of at least AA, asset-backed securities, and collateralized mortgage obligations, with a maximum maturity date of March 2012. For greater certainty, CANARIE shall not invest in derivatives, swaps, options or futures.

Any securities acquired shall have a Rating of at least AA.

All securities will be denominated in Canadian dollars.

Investment transactions in Eligible Securities as defined in this Statement of Investment Policy, in amounts up to \$500,000 for up to 100 days, may be authorized by any two CANARIE Inc. signing officers, and in amounts greater than \$500,000 and up to \$120,000,000 for up to 365 days, may be authorized by the President and CEO and any one of the following two signing officers: the Treasurer or, the Chief Financial Officer. Investment transactions in all other authorized investments will require the approval of the Board's Audit and Investment Committee. The Board's Audit and Investment Committee will be advised of the transaction details by email or facsimile the same day that the transactions are authorized or as soon as practical thereafter.

Shelly Lairar or Tom Gougeon, Investment Advisors/Managers, will have authorized power to recommend and execute all trades on behalf of CANARIE Inc. through BMO Nesbitt Burns Inc.. She/he will notify CANARIE Inc. and include all details of all confirmations of trades. The trades will be executed with the full knowledge of authorities as defined above.

(6) Prohibited investment instruments and trading activities:

Prohibited investments consist of all investments not defined as permitted investment instruments.

(7) Liquidity policy:

- (a) In cases where the timing of disbursements is unknown, investments shall be held in securities with term to maturity of one year or less.
- (b) Should an unexpected disbursement or series of disbursements made by CANARIE reduce the total market value of the portfolio, CANARIE shall immediately take the steps necessary to comply with the requirements set by the diversification policy (refer (3) above) within a period of 60 days from the date as of which CANARIE first failed to meet those requirements. Under no circumstances shall CANARIE materially fail to comply with the diversification requirements of section 3 for a period of more than 90 consecutive days.

(8) Risk management policies:

The purpose of CANARIE's investment portfolio is to earn investment income until such funds are needed to finance CANARIE objectives. The principal risks therefore are liquidity and capital preservation. Both risks, and steps taken to manage such risks, are specifically addressed in CANARIE's Statement of Investment Policy and Statement of Investment Strategy. In addition to the constraints contained in these documents, certain processes are in place to further manage these risks:

- On a weekly basis the Investment Advisor/Manager receives reports from CANARIE management regarding upcoming short term cash requirements. This is compared to the upcoming maturity schedule with corrective action, if any, being initiated.
- On an annual basis the Investment Advisor/Manager receives a long term projection of CANARIE liquidity requirements. This is compared to the long term maturity schedule. Based on the comparison of the two, corrective action, if any, is taken. Note that corrective action in this instance may be taken over an extended time period.
- On a quarterly basis the Investment Advisor/Manager reviews the credit ratings of all holdings. This is intended to act as an early warning as to potential, upcoming capital impairment issues.
- On a quarterly basis (or more frequently if necessary) the Investment Advisor/Manager reports to the Investment Committee on portfolio matters. Such matters include diversification compliance and potential capital impairment situations and recommended corrective actions.

(9) Policy on the lending of cash or securities:

The lending of cash or securities is not permitted.

(10) Performance measurement and monitoring procedures:

Performance is measured first by the prime objective of safety of investment and, secondly, by the ability of the investment portfolio to have funds on hand to meet all expenditure requirements. After those considerations in importance comes performance measurement. This will be addressed in ongoing fashion in reporting on new investments and reinvestments in terms of their yield relative to the Canada Curve (the yield that would be achieved from a benchmark Government of Canada bond of similar duration). Less attention will be paid to annual comparisons with other bond managers, unless they operate under similar constraints.

(11) Review:

This Statement of Investment Policy shall be reviewed at least once a year.

Appendix 2: Infrastructure Extension Program Criteria

CANARIE will consider factors such as costing, research value, and synergy with other plans in deciding which facilities will be connected, especially where new fibre connections are to be installed. In the final analysis, CANARIE will be considering the degree to which each element of an extension plan contributes to the objectives defined in CANARIE's Funding Agreement with Industry Canada.

Where appropriate, proposals will be reviewed with ORAN engineering staff so as to identify synergies that can be obtained in terms of the network extension requirements of the ORANs.

Once proposals have been prioritized, CANARIE will issue one or more RFPs to carriers, fibre builders and other interested parties to determine costs and eventually to provide the necessary connectivity. The first preference will be for new fibre builds. If that is not cost effective or practical, then fibre purchase or managed service may be an alternate solution.

Because fibre construction and acquisition is a complex and lengthy process, it may take several months to finalize a list of facilities that will be connected. Right of way and building entrance issues may ultimately prohibit connectivity to a given facility.

Appendix 3: Network-Enabled Platforms Program Criteria

Projects approved for funding under the Network-Enabled Platforms Program are selected through a competitive process outlined below. All project proposals will be reviewed relative to two sets of criteria: mandatory and desirable. In the first EOI stage, evaluation of proposals relative to these two sets of criteria will constitute the basis for deciding whether or not an applicant is invited to submit a full Project Proposal and for the ultimate decision whether or not a project is to receive CANARIE funding. Projects that fail to meet the mandatory criteria, or fail to meet such criteria to an acceptable degree, cannot be funded.

The mandatory requirements that must be met by all Projects that are invited to the second round of review are:

- i. The project must be innovative;
- ii. The project must be based on a viable funding model;
- iii. The applicants must be capable of undertaking the project;
- iv. The project must lead to infrastructure or other results that will be ongoing after CANARIE funding terminates.
- v. The project must respond to specific user needs and bring together the required players to identify requirements, create the collaborations needed and undertake the specific development activity being proposed;
- vi. The lead applicant must be a Canadian corporation or other legally recognized Canadian entity;
- vii. The project must be technically sound and methodologically feasible;
- viii. The work envisaged by the project must be performed in Canada (i.e. funds cannot be allocated to foreign-located participants); and
- ix. CANARIE funding must be required to deliver the results of the project or to ensure the timeliness of the delivery.

Proposals submitted under CANARIE's Network-Enabled Platforms Program should also meet a significant number of desirable criteria to some substantial degree. The desirable criteria are:

- i. The project should address critical issues and challenges that are potentially national in scope, perspective and significance, whether these might arise "vertically" within a particular research field or whether they might arise "horizontally" across fields;
- ii. The project should involve several collaborators from institutions or facilities across Canada, or be part of an international collaboration;
- iii. The project participants should be committed to the project, for example as reflected in the contributions they are prepared to make to it;
- iv. The project should enable the integration and shared use of various instruments, databases and computational facilities;
- v. The project should involve significant data flows or place other significant demands on the underlying network infrastructure;
- vi. The applicants should be familiar with web services, grids, Web 2.0 and/or Service Oriented Architectures and the application of these to the integration and shared use of the resources that will constitute the platform;
- vii. The research field or community of interest relating to the proposed project should be a Canadian strength;

- viii. The project should provide benefits to other network-enabled platforms activities being undertaken by other disciplines or communities of interest.

Projects will be evaluated relative to the desirable criteria, CANARIE's objectives as defined in the Funding Agreement with Industry Canada, and the mandatory criteria defined above, where they admit to being satisfied to various degrees above a minimum threshold.

Appendix 4: Network-Enabled Platforms v2 Program Criteria

Projects approved for funding under the NEP-2 program will be selected through a competitive process outlined below. All project proposals will be reviewed relative to two sets of criteria: mandatory criteria and the ability to contribute to CANARIE's objectives as defined in the current funding agreement with Industry Canada. Evaluation of proposals relative to these two sets of criteria will constitute the basis for the decision whether or not a project is to receive CANARIE funding. Projects that fail to meet the mandatory criteria, or fail to meet such criteria to an acceptable degree, cannot be funded.

The **mandatory** requirements that must be met by all proposals are:

- i. The project must be innovative;
- ii. The project must be based on a viable funding model;
- iii. The applicants must be capable of undertaking the project;
- iv. The project must lead to infrastructure or other results that will be ongoing after CANARIE funding terminates.
- v. The project must respond to specific user needs and bring together the required players to identify requirements, create the collaborations needed and undertake the specific development activity being proposed;
- vi. The lead applicant must be a Canadian corporation or other legally recognized Canadian entity;
- vii. The project must be technically sound and methodologically feasible;
- viii. The work envisaged by the project must be performed in Canada (i.e. funds cannot be allocated to foreign-located participants);
- ix. CANARIE funding must be required to deliver the results of the project or to ensure the timeliness of the delivery; and
- x. The project MUST use the CANARIE Network.

Proposals submitted under CANARIE's NEP-2 program should also contribute to CANARIE's funding agreement objectives to some substantial degree. CANARIE's Technology Innovation objectives are:

- i. To develop, demonstrate and implement next generation technologies to advance CANARIE's Network as a leading-edge research network, and to the extent resources permit,
- ii. develop service-oriented-architecture-based software interfaces and tools that facilitate flexible use of network resources;
- iii. develop service-oriented-architecture-based software interfaces, applications and tools that facilitate flexible and integrated use of distributed equipment and resources; and
- iv. reinforce Canada's position as a recognized leader in the development and use of advanced research networks.

Projects will be evaluated relative to the above evaluative criteria, the complete objectives as defined in the Funding Agreement with Industry Canada, and the specific Technology Innovation objectives enumerated above.

Appendix 5: ORAN Activity Support Program Criteria

Expenses outlined in the submitted ORAN Activity Support Program Proposal should address the objectives defined in CANARIE's Funding Agreement with Industry Canada. These objectives are enumerated as follows:

Network Operations: To continue to operate CANet as essential research infrastructure and to the extent resources permit,

- Expand the provision of advanced network capabilities to Canada's research and education community;
- Upgrade the capacity of the network in keeping with demand;
- Increase access to and use of the network by real and virtual organizations consistent with the network's Acceptable Use Policy (AUP); and
- Enhance Canada's involvement in international networking and networking-focused collaborations.

Technology Innovation: To develop, demonstrate and implement next generation technologies to advance CANet as a leading-edge research network, and to the extent resources permit,

- Develop service-oriented-architecture-based software interfaces and tools that facilitate flexible use of network resources;
- Develop service-oriented-architecture-based software interfaces, applications and tools that facilitate flexible and integrated use of distributed equipment and resources; and
- Reinforce Canada's position as a recognized leader in the development and use of advanced research networks.

CANARIE has defined "performance measurement indicators" (PMIs) that should be used to determine the success of the activities being undertaken with funding provided through this Program:

PMI-1: Network Operations (Connectivity)

- The number of new connected institutions, including the number of researchers and other users at each institution;
- The percentage increase in capacity of the network; and
- The percentage increase in use of the network.

PMI-2: Technology Innovation

- Examples of use of the network by researchers and educators who are world leaders in their fields; and
- Examples of next generation technologies, their use and value (economic, social, quality of life).

Appendix 6: ORAN Communications Program v2 Criteria

Program Criteria identified for the ORAN Communications Program v2 (OCP-2) are as follows:

- i. The objectives of the communications activities should be to address the objectives defined in CANARIE's Funding Agreement with Industry Canada through: increasing awareness of the potential of advanced networking; encouraging collaboration; and demonstrating the value of advanced networking to researchers and institutions;
- ii. CANARIE should be involved in the design of and be a participant in the funded activities;
- iii. All written material will include the CANARIE logo and the statement "<ORAN name> gratefully acknowledges the financial, technical and innovation support of CANARIE Inc., Canada's Advanced Research and Innovation Network";
- iv. Similarly, CANARIE support will be acknowledged on the ORAN website;
- v. CANARIE's logo will appear on the ORAN's website (this logo is available on CANARIE'S website: "Newsroom" under "Mediakit");
- vi. The ORAN website will contain a link to the CANARIE website;
- vii. CANARIE will be informed of and invited to all supported sessions and workshops;
- viii. CANARIE will be informed of and invited to participate in any relevant media relations activities;
- ix. The ORAN will send copies of all promotional written material, collateral, press releases and other media coverage to CANARIE, so that CANARIE can track usage of our logo and brand in ORAN activities; and
- x. Nominal awards should be in keeping with an award reference list.

Regarding guideline (x), currently CANARIE has approved the following reference list:

- ORAN Annual Conference – up to one per year; up to \$7,500.
- Advanced Networking Days, in conjunction with a university, research institute or R&D lab – up to three per year; up to \$800 each.
- Survey of researchers – up to \$10,000 annually.
- Awareness and outreach activities that promote relationship to CANARIE's advanced network – up to \$7,500 annually.
- In addition, special initiatives might be considered and dealt with by CANARIE on an ad-hoc basis.

CANARIE has defined "performance measurement indicators" (PMIs) that should be used to determine the success of the activities being undertaken with funding provided through this Program:

PMI-1: Network Operations (Connectivity)

- Increased recognition of the CANARIE brand and capabilities of the CANARIE network by ORAN members;
- User satisfaction with the capacity of and access to the network; and
- Marketing and educational activities directed to potential users.

PMI-2: Technology Innovation

- Number and quality of demonstrations utilizing capabilities of the CANARIE network; and
- Increased collaboration at local, regional, national and international levels

ORANs, in consultation with CANARIE, may develop additional PMIs.

Appendix 7: Green IT Pilot Program Criteria

Program Criteria identified for the Green IT Pilot Program are as follows:

- (i) To demonstrate the technical viability and usability of a network architecture that involves relocating servers to zero-carbon data centers and deploying network nodes that are powered by renewable resources; and
- (ii) To develop the business case for individual sites such as universities to use carbon offsets to finance the relocation of computers and related facilities to zero-carbon data centers.

It is expected that the Green IT Pilot Program will promote new Canadian business and research opportunities and enhance the country's cyber infrastructure capabilities.

Projects approved for funding under the Green IT Pilot Program will be selected through a competitive process. All project proposals will be reviewed relative to two sets of criteria: (i) the mandatory criteria defined below; and (ii) the project's contribution to CANARIE's objectives as defined in the current funding agreement with Industry Canada and to the two Green IT Pilot Program objectives defined above. Evaluation of proposals against these two sets of criteria will constitute the basis for the decision whether or not a project will receive CANARIE funding.

The degree of contribution to the costs of the project from other sources and the extent to which other initiatives have been approached and are providing funding to the project will also be taken into account in assessing the merits of the proposals submitted under the CANARIE Green IT Pilot Program.

The **mandatory** requirements that must be met by all proposals are:

- i. The project must be innovative;
- ii. The project must be based on a viable funding model;
- iii. The applicants must be capable of undertaking the project;
- iv. The project must bring together the required players to identify requirements, create the collaborations needed and undertake the specific development activity proposed;
- v. The lead applicant must be a Canadian corporation or other legally recognized Canadian entity;
- vi. The project must be technically sound and methodologically feasible;
- vii. The work envisaged by the project must be performed in Canada (i.e. funds cannot be allocated to foreign-located participants);
- viii. CANARIE funding must be required to deliver the results of the project or to ensure the timeliness of the delivery; and
- ix. The project must use the CANARIE Network.

Appendix 8: ORAN Infrastructure Program Criteria

Projects approved for funding under the ORAN Infrastructure (OIP) Program will be selected through a competitive process. All project proposals will be reviewed relative to the mandatory criteria, the evaluation criteria, and the ability to contribute to CANARIE's objectives as defined in the current funding agreement with Industry Canada. Evaluation of proposals relative to these criteria will constitute the basis for the decision whether or not a project is to receive CANARIE funding. Projects that fail to meet the criteria, or fail to meet such criteria to an acceptable degree, cannot be funded.

These are the criteria against which proposals to the OIP will be evaluated:

Mandatory Criteria required by CANARIE's Funding Agreement:

- i. The project must be based on a viable funding model;
- ii. The applicants must be capable of undertaking the project;
- iii. The project must lead to infrastructure or other results that will be ongoing after CANARIE funding terminates;
- iv. The lead applicant must be a Canadian corporation or other legally recognized Canadian entity;
- v. The project must be technically sound and methodologically feasible; and
- vi. CANARIE funding must be required to deliver the results of the project or to ensure the timeliness of the delivery.

Evaluation Criteria:

- i. What network-enabled application(s) will be enabled by the proposed infrastructure extension?
- ii. Clearly identify or demonstrate the demand for the connectivity.
- iii. Characterize the architectural or technical compatibility of the proposal with the Network.
- iv. What is the nature of the network service involved in the project?
- v. What is the cost of the project? (provide details)
- vi. What is the contribution to the project by the applicant and other organizations?
- vii. What is the contribution to the reliability, redundancy, and/or availability of the CANARIE Network?
- viii. How does this address the needs of the ORAN and/or the needs of their users?
- ix. How does this meet the goals and objectives of the ORAN as previously set out in the ORAN's strategic plan?

Projects will be evaluated relative to the above evaluative criteria, as well as the complete objectives as defined in the Funding Agreement with Industry Canada.

Appendix 9: ORAN Infrastructure Program v2 (OIP-2) Criteria

The purpose of the ORAN Infrastructure Program is to provide funding support to the ORANs to further develop their research network capabilities. Projects approved for funding under the OIP program were selected through a competitive process. All project proposals were reviewed relative to the mandatory criteria, the evaluation criteria, and the ability to contribute to CANARIE's objectives as defined in the current funding agreement with Industry Canada. Evaluation of proposals relative to these criteria constituted the basis for the decision whether or not a project received CANARIE funding. Projects that failed to meet the criteria, or failed to meet such criteria to an acceptable degree, could not be funded.

Following are the criteria against which proposals to the OIP were evaluated:

Mandatory Criteria required by CANARIE's Funding Agreement:

- i. The project must be based on a viable funding model;
- ii. The applicants must be capable of undertaking the project;
- iii. The project must lead to infrastructure or other results that will be ongoing after CANARIE funding terminates;
- iv. The lead applicant must be a Canadian corporation or other legally recognized Canadian entity;
- v. The project must be technically sound and methodologically feasible; and
- vi. CANARIE funding must be required to deliver the results of the project or to ensure the timeliness of the delivery

Evaluation Criteria:

- i. The advanced nature of the applications and services enabled by the project;
- ii. The extent of user demand for the infrastructure;
- iii. The cost effectiveness of the proposal and the degree of financial and other contributions on the part of the ORAN and other stakeholders; and
- iv. The project's compatibility with and contribution to CANARIE's network and to its other objectives.

Projects will be evaluated relative to the above evaluative criteria, which support the complete objectives as defined in the Funding Agreement with Industry Canada.

Appendix 10: Digital Accelerator for Innovation and Research (DAIR) Program Criteria

Technology organizations in both the commercial arena as well as the academic research community spend a large part of their capital and people resources in building R & D environments to enable product design, prototyping, validation and demonstration. This is particularly true where the products or research involve large scale systems composed of many servers and many clients.

As services migrate to network-based services, the cost of building a suitable environment can consume 50% or more of an overall development budget. In an effort to speed time-to-market and reduce product development costs, CANARIE has augmented the existing Canada-wide high-speed network with computing and storage resources and additional network access technologies.

Test Node Selection Criteria

- (i) Compliance to Requirements
- (ii) Delivery Schedule
- (iii) Company Experience
- (iv) Price
- (v) Strategic Alignment
- (vi) Technical Support

This test node infrastructure will be shared using an Infrastructure as a Service (IaaS) platform and made available on demand to successful DAIR applicants.

DAIR Pilot Users Selection Criteria:

User applications to the DAIR program will be evaluated to ensure that the proposed products and projects are a good technical fit for DAIR, that there are meaningful benefits to the applicant and that the applicant is qualified and able to use the services.

- (i) Applicant must be a Canadian corporation or other legally recognized Canadian entity or a researcher at a publicly funded institution.
- (ii) The applicant must be capable of using the requested resources in the identified time frame.
- (iii) The proposed project must be a technical fit for the capabilities being delivered by DAIR.
- (iv) The benefits to the applicant must be meaningful in terms of reducing capital and people costs and accelerating time to market.

In the event that the number of qualified applications exceeds the capacity of the DAIR system, applicants will be selected on a first-come, first-served basis

Appendix 11: ORAN IPv6 Program Criteria

The purpose of the IPv6 program is to provide funding support to the ORANs to successfully transition to IPv6.

Eligible expenditures are those related directly to the ORAN's transition to IPv6. Expenses outlined in proposals must also address the objectives defined in CANARIE's Funding Agreement with Industry Canada.

CANARIE defined "performance measurement indicators" (PMIs) that would be used to determine the success of the activities being undertaken with funding provided through this program:

PMI-1: Network Operations

- Successful installation of equipment required to transition to IPv6

PMI-2: Technology Innovation

- Successful deployment of IPv6 and availability to the ORAN stakeholders
- The Number of institutions who have transitioned to IPv6 and are benefiting from the implementation of the service
- Examples of where unnecessary bottlenecks were removed by implementing proper IPv6 routing
- Examples of how performance issues caused by network partial routing were reduced

ORANs, in consultation with CANARIE, may develop additional PMIs.

**CANARIE INC.
FINANCIAL STATEMENTS
MARCH 31, 2011**



37 Main Street
Toronto, Ontario M4E 2V5

Tel. 416-690-6800
Fax. 416-690-9919

Web Page:
www.krienslarose.com

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37 Main Street
Toronto, Ontario M4E 2V5

Tel. 416-690-6800
Fax. 416-690-9919

Web Page:
www.krienstarose.com

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INDEPENDENT AUDITORS' REPORT

To the Members of
CANARIE Inc.

Report on the Financial Statements

We have audited the accompanying financial statements of CANARIE Inc., which comprise the statement of financial position as at March 31, 2011, and the statements of changes in net assets, operations, and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian generally accepted accounting principles, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.



INDEPENDENT AUDITORS' REPORT (Continued)

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of CANARIE Inc. as at March 31, 2011, and its financial performance and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.

KRIENS-LAROSE, LLP

**Chartered Accountants
Licensed Public Accountants**

June 10, 2011
Toronto, Canada

CANARIE INC.
STATEMENT OF FINANCIAL POSITION
AS AT MARCH 31, 2011

	2011 \$	2010 \$
ASSETS		
CURRENT		
Cash	339,948	1,511,757
Short term investments (note 4)	48,543,945	48,962,782
Accounts receivable	193,967	156,308
Prepaid expenses	5,738,394	5,326,667
	54,816,254	55,957,514
PREPAID DEPOSITS	400,296	5,722,108
LONG TERM INVESTMENT (note 5)	-	574,026
CAPITAL ASSETS (note 6)	4,541,096	9,565,144
	59,757,646	71,818,792
LIABILITIES		
CURRENT		
Accounts payable and accrued liabilities	6,649,550	7,956,818
Deferred funding - CAnet 5 (note 7)	42,611,653	48,254,842
	49,261,203	56,211,660
DEFERRED FUNDING - CANET 4 (note 8)	363,796	363,796
DEFERRED FUNDING - CAPITAL ASSETS (note 9)	4,466,216	9,480,368
	54,091,215	66,055,824
NET ASSETS		
UNRESTRICTED	336,585	1,371,648
RESTRICTED ROYALTY FUND (note 10)	2,096,331	2,157,805
RESTRICTED FOR WINDUP OF OPERATIONS (note 10)	3,233,515	2,233,515
	5,666,431	5,762,968
	59,757,646	71,818,792

Commitments (note 11)

APPROVED ON BEHALF OF THE BOARD:

_____, Director _____, Director

CANARIE INC.
STATEMENT OF CHANGES IN NET ASSETS
FOR THE YEAR ENDED MARCH 31, 2011

	2011	2010
	\$	\$
UNRESTRICTED NET ASSETS		
<i>Balance, beginning of year</i>	1,371,648	1,397,934
(Deficiency) excess of revenues over expenses for the year	(96,537)	155,532
Investment income allocation to Royalty Fund	(17,700)	(7,919)
Transfer to Restricted Net Assets - Royalty Fund	79,174	(173,899)
Transfer to Restricted Net Assets - Windup of Operations	(1,000,000)	-
<i>Balance, end of year</i>	336,585	1,371,648
RESTRICTED NET ASSETS - ROYALTY FUND		
<i>Balance, beginning of year</i>	2,157,805	1,975,987
Net transfer from unrestricted net assets	(79,174)	173,899
Investment income allocation to Royalty Fund	17,700	7,919
<i>Balance, end of year</i>	2,096,331	2,157,805
RESTRICTED NET ASSETS - WINDUP OF OPERATIONS		
<i>Balance, beginning and end of year</i>	2,233,515	2,233,515
Transfer from unrestricted net assets	1,000,000	-
Balance, end of year	3,233,515	2,233,515

CANARIE INC.
STATEMENT OF OPERATIONS
 FOR THE YEAR ENDED MARCH 31, 2011

	2011	2010
	\$	\$
REVENUES		
CAnet 5 funding (note 7)	32,093,337	23,310,685
CAnet 4 funding (note 8)	3,894,924	4,173,356
Royalties	12,102	242,375
Membership fees	172,500	160,000
Investment income	40,220	39,608
	36,213,083	27,926,024
EXPENSES		
CAnet 5 (Schedule I)	32,093,338	23,310,684
CAnet 4 (Schedule II)	3,894,924	4,173,356
Operational expenses (Schedule III)	230,082	217,976
Program expenses - Royalty Fund	91,276	68,476
	36,309,620	27,770,492
(DEFICIENCY) EXCESS OF REVENUES OVER EXPENSES FOR THE YEAR	(96,537)	155,532

CANARIE INC.
SCHEDULE TO STATEMENT OF OPERATIONS
 FOR THE YEAR ENDED MARCH 31, 2011

	2011	2010
	\$	\$
SCHEDULE I - CAnet 5		
Direct expenses (note 13)	26,311,207	18,373,025
Operational expenses	4,188,417	3,893,724
Amortization	1,593,714	1,043,935
	32,093,338	23,310,684
SCHEDULE II - CAnet 4		
Amortization	3,894,924	4,162,152
Direct expenses	-	11,204
	3,894,924	4,173,356
SCHEDULE III - OPERATIONAL EXPENSES		
Salaries and benefits (note 13)	1,903,773	2,320,498
Subcontractors	1,092,929	474,005
Office space	364,854	253,453
Travel	205,771	265,953
Promotion	159,438	85,595
Professional fees	105,244	50,480
Conferences and committees	89,258	147,591
Equipment and maintenance	74,332	96,275
Board meetings	67,293	51,099
Telephone and network	38,603	58,272
Translation and editing fees	29,564	31,038
Insurance	28,323	28,364
Staff training and development	18,852	7,861
Memberships	16,491	16,498
Miscellaneous	12,689	18,973
Stationary and printing	8,558	10,030
Postage and courier	6,774	5,251
Bank charges and interest	4,693	4,657
Loss on disposal of capital assets	-	673
Amortization	191,060	185,134
	4,418,499	4,111,700
Less: Allocated to projects - CAnet 5	4,188,417	3,893,724
	230,082	217,976

CANARIE INC.
STATEMENT OF CASH FLOWS
 FOR THE YEAR ENDED MARCH 31, 2011

	2011	2010
	\$	\$
CASH FROM OPERATING ACTIVITIES:		
CAnet 5 funding	25,000,000	28,000,000
Royalties	12,102	242,375
Memberships	172,500	160,000
Investment income - operations	40,220	39,608
Investment income - programs	330,167	146,481
Operational expenses	(3,866,263)	(4,050,228)
Program expenses	(23,198,502)	(10,398,123)
	(1,509,776)	14,140,113
CASH FROM INVESTING ACTIVITIES		
Proceeds from sale long-term investments	574,026	-
Purchase of capital assets	(655,650)	(1,237,349)
Proceeds from sale of CAnet 4 network equipment	754	114,089
	(80,870)	(1,123,261)
Change in cash and short term investments	(1,590,646)	13,016,852
Cash and short term investments, beginning of year	50,474,539	37,457,687
Cash and short term investments, end of year	48,883,893	50,474,539
Cash and short term investments consist of the following:		
Cash	339,948	1,511,757
Short term investments	48,543,945	48,962,782
	48,883,893	50,474,539

1. **PURPOSE OF THE ORGANIZATION**

CANARIE Inc. was incorporated on March 5, 1993 as a non-profit organization without share capital under Part II of the Canadian Corporations Act. The objective of CANARIE Inc. is to support the development of the communications infrastructure for a knowledge-based Canada.

As a corporation constituted exclusively for the purpose of carrying on or promoting scientific research and experimental development, CANARIE Inc. is exempt from the payment of income taxes under Section 149(1)(J) of the Income Tax Act (Canada).

2. **SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

The accounting policies of the organization are in accordance with Canadian generally accepted accounting principles and their basis of application are consistent with those of the previous year. Outlined below are those policies considered particularly significant.

Basis of presentation

The accounting policies of the organization are in accordance with accounting principles that apply to a going concern. The continued ability of CANARIE Inc. to operate is dependent on obtaining sufficient funding from Industry Canada. The current funding agreement ends on March 31, 2012 and as at the date of these financial statements, a new funding agreement is not in place.

Prepaid Expenses

Prepaid expenses represent assets that are capable of being separated or divided from the organization and sold, transferred, licensed, rented, or exchanged either individually or together with a related asset.

Investments

Investments are classified as held-for-trading and recorded at fair value with unrealized gains and losses included in the statement of operations in the year.

Publicly traded securities are valued based on the latest bid prices. Transactions are recorded on a settlement date basis and transaction costs are expensed as incurred.

Investment income, which consists of interest and realized and unrealized gains and losses, is recorded as other income on the statement of operations, when it relates to unrestricted or internally restricted net assets. Investment income related to externally restricted funds is credited to deferred funding on the statement financial position in accordance with the funding agreement.

2. **SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont'd)**

Capital assets and amortization

Capital assets are stated at acquisition cost. Amortization is provided on a straight-line basis over the estimated useful life of the asset as follows:

Computer equipment	3 years
Furniture and equipment	5 years
Leasehold improvements	3 years

Amortization related to network equipment for CANet 4 and CANet 5 is provided on a straight-line basis over the expected useful life of the asset to the organization. CANARIE Inc. is able to extend the maximum possible useful life to March 31, 2012.

Long lived assets

Capital assets are recorded at cost less accumulated amortization. If circumstances indicate that the carrying value may not be recoverable, recoverability is tested by comparing the sum of the estimated undiscounted future cash flows from operations and expected residual value with the carrying value. If the sum is less than the carrying value of a particular asset, an impairment loss is recognized. As at March 31, 2011 there were no known circumstances that would indicate that the carrying value of the capital assets may not be recoverable.

Deferred funding

Deferred funding relates to (1) funding received in advance of the funding period; (2) funding received for service contracts that extend into the future; (3) funding received with respect to the purchase of capital assets.

Revenue recognition

The organization follows the deferral method of accounting for funding. Restricted funding is recognized as revenue in the year in which the related expenses are incurred. Unrestricted funding is recognized as revenue when received or receivable if the amount to be received can be reasonably estimated and collection is reasonably assured.

Funding related capital assets is deferred and recognized as revenue in the same period as the amortization expense of the related capital assets.

Use of estimates

The preparation of financial statements in accordance with Canadian generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amount of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amount of revenues and expenses during the reported period. These estimates are reviewed periodically and, as adjustments become necessary, they are reported in earnings in the period in which they become known.

2. **SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont'd)**

Donated property and services

During the year, voluntary services (including donated time and travel of board and committee members) were provided. Because these services are not normally purchased by the organization and because of the difficulty of determining their fair value, donated services are not recognized in these statements.

Financial instruments

Other financial instruments include accounts receivable and accounts payable and accrued liabilities. These are initially recognized at fair value and subsequently recorded at amortized cost.

Future accounting changes

In December 2010, the Accounting Standards Board approved a new set of accounting standards developed specifically for not for profit organizations. These standards are effective for fiscal years commencing on or after January 1, 2012 and are to be applied retrospectively. Management has determined that they will adopt these new standards for the fiscal year ended March 31, 2013.

3. **CHANGE IN ACCOUNTING POLICY**

Effective April 1, 2010, the organization adopted the recommendations of CICA 4470, Allocations of Expenses by Not-for-Profit Organizations. This policy was adopted as a result of a verbal approval with Industry Canada and the Board of Directors to, on a staged, go-forward basis, allocate the incremental internal costs of offering new services directly to the program as opposed to indirectly through operational expenses. Since this policy relates to new services/projects commencing in fiscal 2011, retrospective restatement is not appropriate nor feasible. See note 13 for further information regarding the current year allocation.

4. **SHORT TERM INVESTMENTS**

Short term investments consist mainly of bankers acceptances which have annual yields ranging from .93% to 1.4% (2010 - .23% to .55%) and maturities ranging from April 2011 to September 2011 (2010 - April 2010 to September 2010).

5. **LONG TERM INVESTMENT**

As at March 31, 2008, CANARIE Inc. held \$1,000,000 principal amount of third party Asset-Based Commercial Paper (ABCP). As a result of a disruption in the credit markets, particularly in the ABCP market, they did not settle on maturity. On January 21, 2009, pursuant to a court approved restructuring plan, the holders of affected ABCP had their short term commercial paper exchanged for longer term notes. As at March 31, 2010, CANARIE Inc. estimated the fair value of the notes at \$574,026 and during 2011, disposed of the notes for \$568,165, thus realizing a loss of \$5,861 in the year.

Continued...

6. CAPITAL ASSETS

	2011		2010	
	Cost	Accumulated	Cost	Accumulated
	\$	\$	\$	\$
Computer equipment	121,953	81,156	111,204	66,560
Equipment	24,962	19,675	24,962	14,683
Leasehold improvements	362,137	241,425	362,137	120,712
Furniture	120,092	45,212	105,969	21,194
Network equipment (CANet 4)	20,719,361	18,015,048	25,735,232	19,135,995
Network equipment (CANet 5)	5,206,800	3,611,693	4,602,763	2,017,979
	26,555,305	22,014,209	30,942,267	21,377,123
Less: accumulated amortization	(22,014,209)		(21,377,123)	
	4,541,096		9,565,144	

During the year, \$25,367 (2010 - \$10,297) of equipment that was totally amortized was removed from the total cost and total accumulated amortization.

During the year, totally amortized network equipment (CANet 4) of \$5,015,871 (2010 - \$2,717,781) was removed from the total cost and total accumulated amortization.

Some fully amortized network equipment (CANet 4) was sold during the year for proceeds of \$753 (2010 - \$19,200) and these proceeds have been allocated to the CANet 5 project to support future expenses.

7. DEFERRED FUNDING - CANET 5

On March 28, 2007, CANARIE Inc. entered into a funding agreement with the Minister of Industry. The funding agreement grants CANARIE Inc. \$120,000,000 to enhance and extend the technical capabilities of the next generation of the CANARIE Network. CANARIE has received \$67 million of this funding from the Minister of Industry for the 2007/2008, 2008/2009 and 2009/2010 fiscal years and a further \$28 million as requested in the Annual Business Plan for 2010/2011 requirements.

The funding received has been reflected as follows:

Continued...

7. DEFERRED FUNDING - CANET 5 (cont'd)

	2011 \$	2010 \$
<i>Balance, beginning of year</i>	50,839,626	46,134,867
Funding received	25,000,000	28,000,000
Project direct expenditures in the year	(30,499,624)	(22,266,749)
Capital assets (net) purchased for operations (note 9a)	129,551	(245,127)
Amortization of CANet 5 capital assets	(1,593,714)	(1,043,935)
Light path recoveries & sale of equipment	754	114,089
Investment income	330,167	146,481
	44,206,760	50,839,626
Less: deferred funding - capital assets (note 9c)	(1,595,107)	(2,584,784)
<i>Balance, end of year</i>	42,611,653	48,254,842

8. DEFERRED FUNDING - CANET 4

Pursuant to a Funding Agreement signed on March 28, 2002, CANARIE Inc. received funding of \$110,000,000 from the Minister of Industry to support CANARIE Inc. in the design, development, deployment and operations of CANet 4.

The balance of the funds has been reflected as follows:

	2011 \$	2010 \$
<i>Balance, beginning of year</i>	6,963,033	11,136,389
Project direct expenditures in the year	-	(11,204)
Amortization of CANet 4 capital assets	(3,894,924)	(4,162,152)
	3,068,109	6,963,033
Less: deferred funding - capital assets (note 9b)	(2,704,313)	(6,599,237)
<i>Balance, end of year</i>	363,796	363,796

Continued...

9. DEFERRED FUNDING - CAPITAL ASSETS

Deferred funding related to capital assets represents amounts funded by Industry Canada for the purchase of capital assets. In accordance with generally accepted accounting principles, the funding is taken into income on the same basis as the amortization of the related capital assets. Deferred funding related to capital assets on March 31, 2011 is summarized below.

	2011 \$	2010 \$
(a) Operations		
<i>Balance, beginning of year</i>	296,347	51,220
Funding received related to capital asset purchases	38,174	410,236
Amortization/loss on disposal	(167,725)	(165,109)
<i>Balance, end of year</i>	166,796	296,347
(b) CAnet 4		
<i>Balance, beginning of year</i>	6,599,237	10,761,389
Amortization	(3,894,924)	(4,162,152)
<i>Balance, end of year</i>	2,704,313	6,599,237
(c) CAnet 5		
<i>Balance, beginning of year</i>	2,584,784	2,907,573
Funding received related to capital asset purchases	604,037	721,146
Amortization	(1,593,714)	(1,043,935)
<i>Balance, end of year</i>	1,595,107	2,584,784
TOTAL DEFERRED FUNDING - CAPITAL ASSETS	4,466,216	9,480,368

Continued...

10. RESTRICTED NET ASSETS

Royalty Fund

During the 2007/2008 fiscal year, Industry Canada granted CANARIE Inc. the authority to retain royalties collected after March 31st, 2007 and to use these funds in a manner to be determined by CANARIE Inc. and its legal counsel. Annual allocations to the fund include royalties received and investment income. Disbursements from the fund represent payments to approved funded projects.

Windup of Operations

During the 1998 fiscal year, CANARIE Inc. established a fund for the eventual wind up of its operations or for the transition to a new mode of business. In either event, the fund will be used to pay operating expenses. The objective was to allocate to the fund an amount between 50% and 75% of the organization's annual operating budget. The fund cannot be reallocated without the approval of the Board of Directors. Subsequent to the year end, a resolution was passed to transfer \$1,000,000 to this restricted fund effective March 31, 2011.

11. COMMITMENTS

Lease commitment

CANARIE Inc. is currently committed to a lease for its premises which expires on August 31, 2014. Future minimum annual lease payments under operating leases (which includes base rent and the current charge for additional rent) for premises are due as follows:

2012	\$	361,501
2013		361,501
2014		361,501
2015		150,625
		<hr/>
	\$	1,235,128

Contractual commitments

As at March 31, 2011, CANARIE Inc. had commitments relating to its share of funding of expenditures with respect to the following programs:

Network-Enabled Platforms Programs (v1 and v2)	\$	7,799,632
Green IT Program		743,949
ORAN programs		8,936,025
Royalty funded projects		73,659
CAnet 5 Network expenses		3,218,923
		<hr/>
	\$	20,772,188

Continued...

12. RELATED PARTY TRANSACTIONS

During the year, consulting fees totaling \$339,740 (2010 - \$55,000) were paid to a company controlled by an ex-officio member of the Board of Directors for the services of interim President.

These transactions arose during the normal course of operations and have been carried out on the same terms as would apply with unrelated parties.

13. ALLOCATION OF EXPENSES

As indicated in note 3, CANARIE Inc. allocated certain internal incremental operational costs related to new services to CANet 5 direct expenses during the year as follows:

	2011	2010
	\$	\$
Salaries and benefits	173,391	-

The allocation is determined based on actual time spent on the new service projects at the employees actual wage and benefit rates.

14. FINANCIAL INSTRUMENTS

Fair value of financial instruments carried at amortized cost

The carrying value of cash, accounts receivable and accounts payable and accrued liabilities approximate the fair value due to the immediate or short term nature of these financial instruments.

Credit risk

The organization is exposed to credit risk on the accounts receivable from its members/funders. The organization does not have a significant exposure to any individual one of these parties.

Interest rate risk

The entity's marketable securities are not subject to risk in respect of fluctuating interest rates since they are all Canadian notes or bonds with fixed interest. However, there is risk of market value adjustments on these investments which may result in cash flow risk. The short term notes with flexible interest rate will expose the entity to interest rate risk. All other financial assets and liabilities, in the form of receivables and payables, are non-interest bearing. Overall, the organization's interest rate risk is not significant.

Liquidity risk

Liquidity risk is the risk the organization may not be able to meet its obligations. The organization has a plan in place to meet its obligations as they come due, primarily from internally restricted and unrestricted reserves funded through short term investments.

15. COMPARATIVE FIGURES

Certain comparative figures have been reclassified to conform with the presentation adopted for the current year.

16. CAPITAL MANAGEMENT

In managing capital, CANARIE focuses on liquid resources available for operations and to be disbursed to eligible recipients. CANARIE's objective is to have sufficient liquid resources to continue operating in accordance with the Funding Agreement between CANARIE and the Government of Canada, despite adverse events with financial consequences and to provide it with the flexibility to take advantage of opportunities that will advance its purposes. The need for sufficient liquid resources is considered in the preparation of an annual plan and budget. Disbursements to eligible recipients and actual operating results are monitored and compared to the cash flow projections to ensure availability of sufficient liquid resources. As at March 31, 2011, CANARIE has met its objective of having sufficient liquid resources to meet its current obligations. There were no changes to CANARIE's approach to capital management during the year.

The CANARIE investment strategy is specifically tailored to the duration and quality constraints imposed by the Statement of Investment Policy. These constraints, while deemed appropriate and necessary to meet the overall objectives of CANARIE, preclude adding value through active investment management. This conclusion is reached due to the "tightness" of the constraints, tightness which does not allow sufficient latitude for active investment management to be effective. Rather than active investment management, the strategy adopted by CANARIE is "buy and hold", based on the following framework.

- Investment maturities will, wherever possible, match the forecasted cash requirements of CANARIE.
- The quantitative limits on investment holdings provide ample structural liquidity to meet the needs of CANARIE. It is appropriate, therefore, to hold less liquid types of approved investments. Value added will be achieved by moving out the "liquidity curve" when possible.
- At all times CANARIE will hold investments deemed eligible under the Statement of Investment Policy.