

NOMINATION FORM

Nominee Information

Public Sector Procurement Project Fastest Education Dark Fiber Network in Canada
Team Name Pembina Trails IT Department Team Leader Don Reece
Organization Pembina Trails School Division, Winnipeg, Manitoba, Canada
Team participants Glenn Tataryn, Garry Wilkinson, Chris Heaman, Jean St. Godard, Luigi Iafolla, Chieu Thang, Amp Inthalangsy.
Category of public sector K-12 Public Education
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Nomination submitted by

Name Don Reece Title Director Information Technology
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Certification

To the best of my knowledge, I certify that the information provided is accurate and true.

Signature _____ Date _____

Structure of the submission

The nomination form must be accompanied by an overview of the project you wish to profile. We provide you with the following outline to help you structure your submission. You are welcome to include additional information that you feel is pertinent but the submission should not exceed five (5) pages. If you have any questions, please contact us at award@summitconnects.com.

- Project objectives
- Brief description of the project
- Summary of project experience – How did it go?
- Contribution of project to key criteria:
 - high degree of innovation – new ideas or approaches in either operational or policy settings;
 - measurable and significant benefit – savings, efficiency and effectiveness, satisfy the stated objectives of the project;
 - transferability – the central idea or approach shows some promise for being used in other areas of the public sector;
 - advancing professionalism within the community.
- The submission must include a letter of reference from a senior manager or procurement supervisor on the project – someone other than the team leader submitting the nomination.



Pembina Trails School Division – Winnipeg, Manitoba, Canada:

<http://technology.pembinatrails.ca/>

1. Identified as the fastest education network in Canada, October 2006. PTSD built its own 47km – 48 strand Dark Fiber Network linking all school division sites. This network was installed, owned and maintained in-house. Profiled on Canada AM and CTV as well as local radio stations and press.
2. Implemented a division-wide Unified Communications strategy utilizing Objectworld software, Dell hardware and Polycom sip end points using Microsoft Active Directory to double the existing clients and transition all maintenance to in-house. The entire UC implementation was installed and is supported in house. Projected savings of \$204,000 annually while doubling the phones in the division.
3. Implemented enterprise division-wide digital printing and copying using Xerox Digital multi-function copiers, WebCRD and Equitrax software to allow remote printing and printing from any workstation to any printer or copier. Utilized division-wide Smart Scan to allow scan to print, scan to fax, scan to PDF, scan to Word, scan to Excel, scan to home drive, scan to email from any copier using LDAP and Active Directory.

Implications:

1. **PTSD Fiber Optic WAN Installation** projected to recover \$275,000 annually. Build money came from surplus so there is no charge for the use of the money. The full project payback without VoIP or IRU's is 12 years. With the current IRU's and VoIP savings it should be a 7 year payback. There are a number of additional IRU's pending.
2. **Unified Communications:** When the rollout is finished (the end of this calendar year, it will be the largest Unified Communications implementation based on Microsoft Active Directory, running through Dell hardware and using generic SIP compliant devices by Objectworld) The business case demonstrates an annual savings of approximately \$200,000 when you consider the cost of doubling the existing clients.
3. **TCO – ROI** Considering a 5 year Total Cost of Ownership and Return on Investment; PTSD has moved to a 4 year cyclic replacement of all technology hardware and software, all Kyocera network printers (saves \$123,000) replacing inkjets with color laser printers (saves \$253,000), replace CRT with LCD screens (saves \$123,000) repairs are decreased by 37%, IT staff reduced by 13 or almost 50% Annual, IT Budget reduced by \$1.3 million, documented aggregated saving of \$2.4 million over 5 years. This doesn't consider the staff reduction from 33 to 25.
4. The projects above have given Pembina Trails School Division a national and international presence in both receiving press and presenting our Case Study.

Dell - Network hardware and software

PTSD has partnered with Dell Canada to power its fiber optic network with high performance, low cost dependable network hardware and software. Pembina Trails has a central Storage Area Network that combines terabytes of storage with gigahertz of processor power to create virtual servers on demand that support any need. PTSD uses VMWare supplied by Dell to maintain and modify these virtual servers. Dell Canada provided, at a significant discount, all the switches that power the 47 kms or 48-strand fiber optic cable that connects all the buildings that make up the Pembina Trails School Division. The network runs at 1 gigabit but has limitless potential with the switching of low cost electronics at the Dell switches. Dell hardware has proven to be reliable and effective in its role as the catalyst to carry the data throughout the division.

Microsoft Canada - Sharepoint, SMS and Active Directory

PTSD has enjoyed a long-standing partnership with Microsoft Canada. From the inception of the divisional Active

Directory structure in the PTSD Wide Area Network to the current use of the Sharepoint Portal, Microsoft has supported PTSD with training, software and a place to share the vision. PTSD staff has learned best practice by attending the Microsoft Connected Learning Communities forum. Visits from Sharon Hart and Mike Parkhill have inspired teaching staff to push the IT Department to create a robust network capable of supporting Microsoft technology to allow students to meet their potential. In many ways, the fiber optic network is a result of the potential invited by the power of Microsoft Enterprise software coupled with the strong support for education wrapped in the vision provided by Microsoft staff.

Sun Microsystems Thin Client Project

PTSD has partnered with Sun Microsystems on two occasions, working to develop a project where central servers transmit programs and data to remote terminals located in public areas in schools, like libraries, student lounges, meeting areas and study halls. These terminals would have the ability to browse the Internet, word process, print and save to home directories. The terminals require a login authentication that brings up a specific desktop and file structure, depending on the user who logs in. The terminals are virtually indestructible and only have value when connected to a special server on the network. The terminals have no moving parts like hard drives and can be easily replaced by any staff member if they aren't working properly. The lifecycle of these terminals is 7-8 years, and only the servers have to be updated when software applications change. The speed of the fiber optic network is the foundation that allows this architecture to be spread to any school in the division. This architectural spread allows centralization of servers without duplicating resources or decreasing performance.

Objectworld - Voice over IP and Unified Communications

PTSD has partnered with Objectworld to develop a proof of concept for the first educational rollout of VoIP supporting true unified messaging that fully integrates Active Directory®. This means PTSD leverages all of the work, skills and profiles already in use in the wide area network to support the added opportunities offered by unified messaging. Unified messaging means the division supplies its own telephone exchange to use the existing teacher profiles and give them phone, fax, email, messaging at their desktops. Teachers can view their phone messages on their computer or listen to their email on their phone. The Objectworld structure of VoIP allows the division to use the new VoIP phone system to broadcast messages as a Public Address system, to broadcast audio and video to all or portions of the division's classrooms and buildings at one time, to connect phones in the division, in the city and province and internationally at a dramatic cost savings. Technicians do not need to learn new complex skills, but rather utilize the current skill set they use supporting the existing Active Directory. Any vendor can supply telephone and computer hardware, and additions, number changes, support and maintenance is done by the current IT staff at no additional cost to the division. The fiber optic network provides the bandwidth, security and reliability to support this view into the future of messaging.

Xerox - Divisional Digital Scanning and Printing

PTSD has partnered with Xerox to create an environment that allows teachers to print or scan to any printing device in the division from any computer or copier in the division. Teachers can use Xerox multifunction devices to scan to email, scan to fax, scan to a pdf that goes to their home directory, or scan to print any printing device in the division. Teachers can print from their desktop computers to the print shop, to copiers in any school, to any printer in any school, to color copiers or printers. The print shop offers sophisticated finishing like coil binding, signature booklets, saddle stitching and color printing. Accounting software tracks all printing and teachers use their existing Active Directory credentials to access divisional resources using a single login. All the copiers, printers and print shop tools are configured, maintained and monitored remotely, so technicians do not have to disturb users and clients don't have to wait for service. The one gigabit fiber optic network has made moving these large graphic files and central storage possible without delays or diminished performance.

Polycom International

Polycom is a new partner but already they have supplied SIP compliant end gear for the Unified Communications project and with a new Nondisclosure Agreement PTSD will be privy to upcoming leading edge telephony applications and appliance information to promote prudent planning and take advantage of attractive partner pricing.

Awards

National Microsoft Connected Learning Communities

Education Hero Award 2007

Microsoft National Hero of Innovation
Award 2005



Provincial **Smart Patners Award for
Connectivity 2006**

MINDSet Award 2006 Manitoba Network for
Science and Technology (MindSet)



Presence

International:

- ☆ Get the Facts - International PodCast - (Presenter)
- ☆ CLC - Connected Learning Communities, Quebec City
- ☆ Canon Expo: Forum on the Future of Printing - New York
- ☆ Linux World Conference - San Francisco
- ☆ Dell Executive Briefing - Future of Technology - Austin Texas
- ☆ Published Whitepaper - Reliability: Understanding the Reliability of Evolving Systems

National:

- ☆ National 2nd Annual Public Sector VOIP Conference (Presenter)
- ☆ C.A.S.A. - Canadian Association of School Administrators, Quebec City (Presenter)
- ☆ C.I.R.A. - Canadian Internet Registration Authority, Ottawa (National Nomination Board Member)

Provincial:

- ☆ Riding the Wave of Change Technology Conference, Gimli - (Presenter)
- ☆ M.A.S.S. – Manitoba Association of School Superintendents', Summer Institute, Hecla - Technology (Panel Member)

Representation

National:

- ☆ Canadian Internet Registration Authority (C.I.R.A.) Nomination Committee (Board Member)

Provincial:

- ☆ M.E.R.L.I.N. - Manitoba Education Research Learning Information Networks Advisory Board

(Chair)

- ☆ C.E.C.M. - Computer Education Coordinators of Manitoba (President)
- ☆ M.A.S.S. - Manitoba Association of School Superintendents ITC Committee (Member)
- ☆ Provincial Education Sector Data Networking Committee (Member)

Press and Recognition:

XEROX Division-Wide Digital printing Podcast

http://www.xerox.com/go/xrx/template/Promotions.jsp?view=MP6&active=Active&promoID=Branding_Campaign&ed_name=Feature_Branding_Campaign&metrics=LNK_T013_CurrentAdCampaign_CAN_EN&Xcntry=CAN&Xlang=en_CA

MICROSOFT Division-Wide Active Directory Implementation PodCast

<http://www.microsoft.com/canada/getthefacts/podcasts/default.mspx>

LIPPIS REPORT PodCast Unified Communications PodCast

<http://www.podcastdirectory.com/podshows/915782>

ObjectWorld Unified Communications Case Study

<http://www.objectworld.com/products/casestudies/pembinatrails/index.php>

CTIA SmartBrief All Access Fiber Network and VoIP Article

<http://www.smartbrief.com/news/ctia/industryPR-detail.jsp?id=FEC4C805-5D7F-4AB3-AF38-44D0920DC7B5>

IT World Canada Article

<http://www.itworldcanada.com/a/Network-World/45488e81-19e8-4f29-acfd-df48150640d7.html>

LightReading Article

http://www.lightreading.com/document.asp?doc_id=111521

LightWave Article

[Lightwave - Pembina Trails Launches Fastest Fiber Optic Educational Network in Canada Featuring VoIP Phone System from Objectworld-Forecasts \\$200,000 annually in savings from VoIP, plus internal IT staff replace outside support and maintenance.](#)

Voip Monitor Canada Featuring VoIP Phone System

<http://www.voipmonitor.net/2006/11/27/Canada+Featuring+VoIP+Phone+System.aspx>

Manitoba SmartPartners Award for Connectivity 2005

<http://www.smartwinnipeg.mb.ca/awards2005.htm>

Microsoft Hero of Innovation 2005

Partnerships

- ☆ Sun Microsystems
- ☆ Microsoft Canada
- ☆ Dell Canada
- ☆ ACER Canada
- ☆ Objectworld
- ☆ Colubris
- ☆ Xerox
- ☆ Mayet Information Systems
- ☆ Polycom
- ☆ MERLIN
- ☆ Barrow County Schools - Georgia
- ☆ Dragonfly Software
- ☆ Fiber.CA

Major Projects

- ☆ **Cyclic Replacement** (year 3 of 4) – 1,081 systems replaced
- ☆ **Printshop Upgrade** to Digital and Color Printing
 - Cost drops by 36% per page (\$0.0094 to \$0.0060)
 - Equitrax – digital billing / accounting / tracking for all printing
 - WebCRD – electronic sending from any computer to any copier/printer
- ☆ **School copier Upgrade** to digital hardware and divisional sending process
- ☆ **Unified Communications - VOIP** (Voice Over IP) – Proof of Concept
- ☆ **Fiber Optic Network** – Completion of 1 ghz divisional fiber network
 - IRU – with MRNet
 - Pending IRU's with 6 other institutions
- ☆ **Sun Microsystems** Thin client Project
- ☆ **Mayet transition** to FRC/VMC – Completes the ~~Trevlae~~ to Mayet transition
- ☆ **Technician Professional Development** – and sponsorships
- ☆ **Partnerships** – 13 current corporate sponsors

June 6, 2007

The Leadership in Public Procurement 2006 Summit Award
c/o Summit Magazine and
The Canadian Public Procurement Council

By email: award@summitconnects.com

To Whom It May Concern:

I currently hold the position of Assistant-Superintendent of Education and in July of 2007 I will become the Superintendent of Education for the Pembina Trails School Division. During my tenure as Assistant-Superintendent I supervised the Information Technology Department.

The Dark Fiber build, Unified Communications implementation and Enterprise Multi-function Digital printing strategies have put Pembina Trails School Division on the leading edge of technology not just in education, but technology in the nation.

Don Reece, the Director of Information Technology for Pembina Trails has demonstrated solid leadership in Manitoba, provincially chairing important educational technology organizations and nationally by delivering workshops and agreeing to participate in well respected high level decision-making boards. Pembina Trails is recognized internationally as partners with some of the best known, largest international manufacturers, education institutions attending roadmap briefings, sharing innovative ideas and implementing enterprise projects that will lead the way for others. Pembina Trails has received high praise through awards, press releases and partnerships in recognition of their many accomplishments including those listed in the application.

I have no hesitation in endorsing this application completely.

Sincerely,