



TELECOMMUNICATIONS and CONNECTIVITY

Winnipeg provides business solutions that work - now and in the future. Winnipeg boasts one of the world's most advanced fibre optic networking and digital switching platforms, providing you with the highest quality standards in network integrity, flexibility and reliability. Winnipeg offers a fully competitive range of network providers including MTS Allstream, Shaw Communications, Rogers (Sprint Canada), Bell Canada (GT Group Telecom), Telesat, Fibre.ca and Manitoba Hydro as well as a myriad of service resellers. Corporate alliances with companies such as Ameritech, MCI Worldcom, AT&T, Sprint US and Global One ensure a seamless provision of cross-border products and services.

Broadband services are available to the majority of Manitobans, including fibre deployment to most major office buildings and industrial parks in the province. The Manitoba government is working to ensure that all Manitobans, including those in remote areas, have access to broadband services.

Manitoba has one of the world's most advanced fibre optic networking and digital switching platforms, with 100% digital switching throughout the province and over 200 switches to support the network grid - the third largest concentration in Canada.

MTS Allstream has three fibre rings in Winnipeg and one in Brandon, and 100% digital switching throughout the province. Its network provides access to high-speed Internet to 85% of Manitoba households, making Manitoba one of the most broadband-enabled provinces in the country.

Additionally, MTS has a 1xRTT wireless network that covers 97 per cent of Manitoba's population. 1xRTT provides the capacity to support leading-edge high-speed wireless data transfer, picture messaging and WAP 2.0 – a standard which provides colour and enhanced graphics for Internet access over a cellular telephone.

MTS Allstream Inc.

MTS Allstream Inc. ("MTS Allstream") is the largest operating subsidiary of Manitoba Telecom Services Inc., the third largest national telecommunications provider in Canada. MTS Allstream delivers advanced connectivity, infrastructure management and professional services to business customers across Canada. The company owns and operates one of the largest OC-192 optical switching networks in Canada, and in 2000 was the first in Canada to deploy a national IP Multi-protocol Label Switching (MPLS) network.

MTS Allstream recently announced a strategic relationship with global telecommunications provider British Telecom, giving customers access to an IP-based network with truly global reach. With offices in major cities across Canada, MTS Allstream has about 100,000 business customers, which includes approximately 40% of Canada's largest businesses. MTS Allstream is the main telecom provider in Manitoba and is the Number Two provider in every other business market in Canada.

Dedicated Internet Services

MTS Allstream offers a broad range of dedicated access solutions. For "always on" access, Allstream's Dedicated Access solutions cover the full spectrum of LAN, traffic and bandwidth requirements from Small Office ADSL to OC3.

TELECOMMUNICATIONS and CONNECTIVITY

Page 2

OC3 Internet

OC3 Internet provides high bandwidth, high availability and the flexibility to scale to large bandwidth requirements quickly and easily.

Features:

- Access to the MTS Allstream backbone through a scalable OC3 fibre optic connection
- Fully monitored and managed, high performance Cisco 7204 router
- Access speeds from 2Mbps to 135Mbps
- Usage-based and fixed rate pricing options
- Usage-based option provides flexibility for your bandwidth needs by allowing you to pay only your minimum commitment plus incremental usage as you need it
- Option to configure OC3 Internet for BGP-4 multi-homing with one or more providers
- Optional high availability Internet access
- Network Utilization Reports

OC3 Internet is available in Vancouver, Victoria, Calgary, Edmonton, Winnipeg, Toronto, Hamilton, London, Kitchener / Waterloo, Ottawa, Montreal, and Quebec City.

High Availability Internet Access

Combined with MTS Allstream's high performance national network, multiple access links, multiple customer premise equipment and network routers companies are assured maximum performance and service reliability. To meet the needs of businesses, High Availability Internet Access supports failover configurations via OC3, T1, ISDN and ADSL Internet access connections. Available load sharing between the dual accesses allows businesses to share data traffic between the primary and secondary connections and maximize the bandwidth of their secondary access.

Features:

- Guaranteed 99.995% service availability
- Supported configurations include primary access over MTS Allstream's OC3 or T1 Internet with secondary access over either MTS Allstream's OC3, T1, ADSL, or ISDN Internet
- Highly scalable bandwidth options from 128Kbps up to 135Mbps
- Load Sharing
- Two Cisco routers
- Domain name hosting, Domain email hosting
- Network Utilization Reports

High Availability Internet Access via OC3 Internet is available in Vancouver, Victoria, Calgary, Edmonton, Winnipeg, Toronto, Hamilton, London, Kitchener/Waterloo, Ottawa, Montreal, and Quebec City. High Availability Internet Access via T1, ISDN, and ADSL Internet is available across Canada in more than 80 cities and communities.

TELECOMMUNICATIONS and CONNECTIVITY

Page 3

Manitoba Hydro

Manitoba Hydro Telecom owns and operates a communication network installed to protect and control the electric power system in Manitoba. This extensive network, which includes hundreds of kilometres of fibre optic cable, is equipped with next generation Ethernet technology. This network enables Manitoba Hydro Telecom to provide scalable broadband capacity required for high-speed Internet access, data networking, e-business applications, videoconferencing and other advanced communications and multimedia services.

Today Manitoba-based organizations need much more affordable bandwidth to improve their connectedness and effectiveness. The opportunity at Manitoba Hydro Telecom Services is to leverage the all-optical network to provide communications service on a “utility wide basis.”

Services include:

- Ethernet services starting at 1Mbps in 1Mbps increments
- TDM services as either T1's or T3 speeds
- SONET OC3, OC12, and OC48
- Private line services
- Leased dark fibre
- Tower co-location and leased access to co-locate facilities
- Local access to Internet gateways and local extensions to other telecommunication service providers through our telecom meet-me POP.
- Our Network provides transparent LAN connections to all major communities throughout Manitoba separate from the other carriers.
- Future Services: will include a newly built fibre network extension across the USA border into North Dakota.

MRnet

To support our research and education environment, the Manitoba Regional Advanced Network (MRnet) was founded in 1995 as an incorporated not-for-profit consortium of private and public sector research and development organizations dedicated to the development and advancement of research and education (R&E) based high-speed networking and network applications. MRnet is Manitoba's “on ramp” to the CANARIE (Canadian Network for the Advancement of Research, Industry and Education) network and receives in-kind contributions and annual fees from its members as well as funding from CANARIE and the Province of Manitoba.

MRnet offers a reliable, high-speed communications network to its member institutions with no costs associated to the amount of traffic generated by an institution.

Other Major Carriers and Service Providers

The other major carriers and telecommunication companies in Manitoba are:

- Fibre.ca – Fibre.ca is a provider of fibre optic networking solutions to various business sectors, from large enterprise to public institutions, to the carrier.
-

TELECOMMUNICATIONS and CONNECTIVITY

Page 4

- Shaw (Group Telecom) – GT Broadband services are available in Winnipeg, Brandon, Selkirk, Steinbach and Portage la Prairie. GT does not offer telecommunications services. GT has a large fibre optic infrastructure network in Winnipeg that supports their cable installations.
- Bell Canada - With the acquisition of Group Telecom and CSB Systems, in combination with Bell's portfolio of value-added network and business applications, Bell Canada offers a full spectrum of Information and Communications Technology solutions for Manitoba businesses.
- Telus – Telus provides flexible bandwidth solutions, from national private line to managed wavelength services through its national fibre Internet Protocol (IP) backbone network.
- WiBand Communications – Provides Wireless broadband capability in Steinbach, Winkler, Altona and Carmen that ranges from 1 to 3 Mbps.
- SkyCable – Wireless services in Winnipeg that are called high-speed Internet connections. Expansion potential is unknown.
- DirectPC (Telesat) – Wireless services in many areas of Manitoba, in the range of 400 Kbps for download. Service area expansion is possible but the necessary dial-up portion for upload is reliant on MTS infrastructure and is limited to 56 kbps.

Manitoba has one of the world's most advanced fibre optic networking and digital switching platforms. Manitoba has 100% digital switching throughout the province, with over 200 switches to support the network grid - the third largest concentration in Canada.

Source: MTS Allstream Inc., Shaw Communications Inc.

M090
