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The Data Transport Network [7] coordinates the collection of scientific data from instrument clusters in the Arctic. It provides reliable, automated high-bandwidth data transfers for distributed unmanned instrument clusters in the Arctic.

The Data Transport Network [7] consists of a data transport network, a software framework, and an Internet access conduit. The data transport network consists of satellite links and terrestrial wireless local area networks (WLANs) to connect the instrument clusters to the data transport network. The software framework consists of a software library and a client program. The Internet access conduit consists of satellite links and terrestrial wireless local area networks (WLANs) to connect the data transport network to the Internet.

The data transport network provides a high-speed interconnection between the instrument clusters and the internet, allowing for real-time monitoring of the scientific data. The software framework provides a simple interface for the client programs to access the scientific data. The Internet access conduit provides a reliable connection to the internet, allowing for the transfer of the scientific data to the internet.

The data transport network is reliable and automated, providing high-bandwidth data transfers for distributed unmanned instrument clusters in the Arctic.

autonomy

Remote science instruments are generally accessed by a Campbell CR3000 data logger through the PakBus interface over TCP/IP or serial lines. http://sourceforge.net/projects/pypak/

location

The wireless network infrastructure described in this poster provides a high-speed interconnection between the instrument clusters and the internet, allowing for real-time monitoring of the scientific data. The software framework provides a simple interface for the client programs to access the scientific data. The Internet access conduit provides a reliable connection to the internet, allowing for the transfer of the scientific data to the internet.

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bandwidth/latency

The HughesNet [8] satellite link provides a high-speed connection between the instrument clusters and the internet. The satellite link has a bandwidth of 7.5 Mbps and a latency of 700 ms.

topology

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