THE ANTARCTIC INTERNET DATA DISTRIBUTION SYSTEM 2008

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http://amrc.ssec.wisc.edu/antidd.html

1. HISTORY

The history of the Antarctic Internet Data Distribution (Antarctic-IDD) starts more than a half dozen years ago after the inception of the Antarctic Mesoscale Prediction System (AMPS). Serious effort on the network system began as the result of a discussion during the joint AMRC-AWS-AMRC meeting in Charleston, SC in 2004. Since that time, the Antarctic-IDD has grown with participation from a variety of participants from the Antarctic meteorological communities (Lazzara et al. 2006).

2. CURRENT NETWORK STATUS

As of end of the 2007-2008 field season, the Antarctic-IDD completed its fourth year of service to the Antarctic community. It serves as a critical link between the multiple portions of the United States Antarctic Meteorology community and beyond. Approximately 1 Gigabyte of data per day flows over the network, with over 4 sources of products including from the McMurdo Weather Office, the Remote Weather Forecasting Office, the National Center for Atmospheric Research, the Alfred Wegener Institute and the University of Wisconsin-Madison.

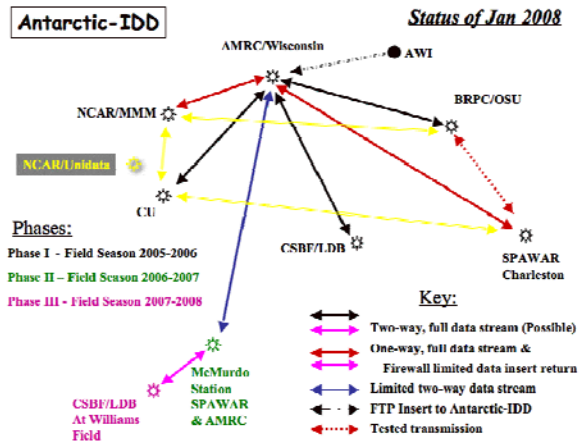

Figure 1. A graphic depiction of the status of the Antarctic-IDD network as of January 2008.

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3. NEXT PHASE

There are five areas that need to be worked on in the future to meet the objectives of the Antarctic-IDD including network robustness, inclusion of new central hubs, data formats, addition of new products and increasing participation.

Removing central failure points currently inherent to the current network need to be mitigated. Two levels of solution are needed here. The first is the addition of an additional primary Antarctic-IDD server system at AMRC in Wisconsin. The second level requires community participation to be a major node in the network. University of Colorado and Byrd Polar Research Center are likely candidates sites to fill this role. Adding additional nodes at the Unidata Program Center and/or Raytheon Polar Services may allow for both improving network robustness and offering needed links to limited portions of the USAP network.

Additional products, both operational and research, would be welcome additions to the network. Efforts in the near future from the AMRC will be to provide as many data sets as possible via the Antarctic-IDD. Equally important is increasing participation at both the national and international level. All are welcome to join the Antarctic-IDD.

An final issue at hand is the plan by the Unidata Program Center to upgrade and potentially significantly change the Local Data Manager software that is the backbone of the Antarctic-IDD. The Antarctic-IDD community needs to file with Unidata its current and future usage plans along with critically desired features and concerns regarding this pending effort. It is important to note the Antarctic-IDD usage of LDM has been a test community for a product naming method that eliminates the need for multiple channel feeds currently hard-coded into the current generation LDM system.

4. ACKNOWLEDGEMENTS

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5. REFERENCES

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