REC/NE/08

Washington Area Next Generation Internet Recurring Costs

FY 2004 Proposal to the NOAA HPCC Program

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| Title Page | Proposed Project | Budget Page |

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Washington Area Next Generation Internet Recurring Costs

Proposal for FY 2004 HPCC Funding

Prepared by: *Bruce Webster*

Executive Summary:

Beginning in FY2000, HPCC has funded establishment of a NOAA corporate membership in, and connectivity to, the Next Generation Internet (NGI). When the current dark fiber construction projects are completed at the end of FY03, a metropolitan area network capable of gigabit data rates will link the Silver Spring Metro Center complex and facilities in Suitland, Camp Springs, and Bowie to the University of Maryland and Goddard Space Flight Center. This network will have recurrent costs both for lease of the installed fiber and for NGI port access fees at the University of Maryland.

In accordance with a special exception to HPCC policy, this proposal seeks funding for these recurring costs ***in full***. However, since actual construction of network segments has lagged behind the original schedule, we are able to significantly lower the amount of this request. In other words, there are previously funded segment leasing contracts whose period of performance won't begin until well into the fiscal year. Consequently, we don't need to buy full year coverage at this time. The annual fiber leasing fees are a constant function of distance and number of leased segments, and the port access fees have undergone a modest increase in price this year.

Problem Statement:

NOAA has performed upgrades of internal network facilities at sites in the Washington, D.C. area to provide infrastructure capable of supporting NGI and has taken the first steps to connect to the NGI. These upgrades have been funded through prior year's HPCC projects (See: Making Silver Spring NGI Capable, Connecting Washington, D.C NOAA Sites to Next Generation Internet, NOAA Corporate Membership Proposal, and A NOAA / NGI Washington Metropolitan Area Network). The use of NGI by NOAA has grown remarkably since the initial startup project. New opportunities, such as the ability to distribute Climate Reanalysis results and the NEXRAD Level II radar data have recently emerged. This project proposal requests funding for the recurring costs associated with the Washington Area Next Generation Internet Connection.

Analysis:

Costs for fiber runs are summarized below. This network provides continuing dark fiber connectivity between NOAA, and NASA sites and the University of Maryland at College Park, with continuing access to the NGI Abilene Network via the UMCP portal. Table 1 shows the annual costs for each segment in the network, together with the (smaller) amounts needed in FY04. Note that although the segment leases to the Census site in Bowie will probably be discontinued after FY04 due to the NWS move to a new supercomputer location in Gaithersburg,

MD—there will probably be an FY05 proposal to extend the dark fiber network to the Gaithersburg site.

Table 1: *Cost Table for Dark Fiber*

Fiber Segment	Annual Cost	FY04 Request
SSMC - UMCP		
UMCP - Goddard (new)		
Suitland FOB4 - UMCP		
Suitland FOB4 - WWB		
Grand Totals:		

* Segment funded previously – no FY04 funding contribution required.

This solution will provide Gigabit / second connectivity among NOAA sites in the Washington, D.C. metropolitan area. These data rates allow for advanced QoS related protocols and applications. Continued connection to UCAID Abilene GigaPoP will provide very high bandwidth connections to the University research community and allow for advanced collaborative research projects.

Milestones

- Month 01 - Place orders for necessary service.
- Month 12 - Project completion.

Deliverables

- One year lease of two dark fiber segments between SSMC and UMCP
- One year access to NGI on Abilene Network via UMCP Gigapop (MAX)
- One year lease of collocation rack space at the MAX