

Washington Area Next Generation Internet Recurring Costs

FY 2003 Proposal to the NOAA HPCC Program

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Proposal Theme: Next Generation Internet

Funding Summary: FY 2003 -- \$131,360

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Washington Area Next Generation Internet Recurring Costs

Proposal for FY 2003 HPCC Funding

Prepared by: [Bruce Webster](#)

Executive Summary:

The successful FY2000 proposal for HPCC funding to establish NOAA corporate membership in--and connectivity to--the Next Generation Internet (NGI) have established our baseline NGI presence. When the current FY2002 projects are completed, a dark fiber metropolitan area network 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 decision made at the HPCC Network Working Group mid-year review, this proposal seeks *reduced funding* for these recurring costs at a rate of 2/3 of the total cost. (Prior years had been funded in full through a special exception to HPCC policy.) The annual fiber leasing fees are a function of distance and number of segments, while the port access fees are relatively constant (subject to decrease as the user population grows).

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](#)). 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, NASA, and Census 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 requested in FY03.

Table 1: Cost Table for Dark Fiber

Fiber Segment	Annual Cost	FY03 Request (2/3)
SSMC - UMCP Fiber	\$15,840	\$10,560
UMCP - Goddard (new)	\$15,840	\$10,560
Suitland FOB4 - UMCP	\$23,760	\$ 15,840
Suitland FOB4 - WWB	\$15,840	\$10,560
WWB - MSC (Bowie)	\$23,760	\$ 15,840
Grand Totals:	\$95,040	\$63,360

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

- Eight months lease of dark fiber segment from SSMC to UMCP
- Eight months lease of dark fiber segment from SSMC to Goddard Space Flight Center
- Eight months lease of dark fiber pair from Suitland FOB4 to UMCP
- Eight months lease of dark fiber pair from Suitland FOB4 to WWB
- Eight months lease of dark fiber pair from WWB to Maryland Science Center (NWS supercomputer site)
- Eight months access to NGI on Abilene Network via UMCP Portal

NB: In order for NOAA to continue NGI access on a permanent basis, the remaining 1/3 of the annual recurring costs must be borne by other (than HPCC) cost centers of the organization.

Budget Summary:

Budget summaries below are based on the current UMCP NGI fee structure and on vendor quotes for monthly lease of various dark fiber segments both in service and presently under construction.

Table 2: Cost to lease dark fiber segments plus connection fees to UCAID/Abilene at UMCP.

<u>Category</u>	<u>Description</u>	<u>Amount</u>	<u>Request</u>
Contracts, Services	NGI Port Fee	\$ 90,000	\$60,000
Contracts, Services	MAX Subscription Fee	\$ 12,000	\$8,000
Communications, Utilities	Fiber pair leases	\$95,040	\$ 63,360
Total Requested:		\$197,040	\$ 131,360

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