

NGI/CE/05

NOAA NGI FY03 Corporate Membership Proposal

Proposal For FY 2003 HPCC Funding

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Executive Summary:

A Next Generation Internet (NGI) project team was formed in 1999 to address how NOAA should seek NGI membership and connectivity. A proposal from this team in FY2000 led to NOAA applying for membership in University Corporation for Advanced Internet Development's (UCAID) Internet2 project. This membership is required in order to connect to the Internet2 NGI backbone called "Abilene". An agreement was reached with UCAID that would allow all NOAA sites to connect to the Abilene infrastructure. The agreement provides for the NOAA DC operations center and the NOAA Boulder campus to be primary affiliate members with collaboration site status, each of the two sites would pay the annual participation fees. All other NOAA sites would be allowed to join as secondary sites without additional participation fees. These memberships are renewable annually and are essential to NOAA's participation in NGI.

The goal of this proposal is to continue NOAA's participation in NGI by maintaining its membership in UCAID and connections to Abilene.

Problem Statement:

Within NOAA there are numerous requirements for organizations to utilize Next Generation Internet (NGI) capabilities. The costs and work required to connect to NGI networks is considerable. Each NGI network has specific requirements that must be met by any organization that wishes to connect or make use of the network.

This proposal focuses on the administrative costs, in particular what would be the most cost effective and optimal manner for NOAA to retain membership with a NGI network provider.

NOAA's network connections to the Internet are strained by the combination of operational data and research data that flows across our networks. Traditionally organizations have been left to their own devices in implementing technologies and obtaining connections to the Internet and with one another. This approach has proven successful but results in a sub-optimization of resources and increase in costs. This proposal takes an "enterprise" approach in obtaining and managing NGI connectivity for NOAA organizations.

Proposed Solution:

Maintaining a connection to Abilene is a two-step process. First, NOAA must maintain an "Associate" membership in the University Corporation for Advanced

Internet Development (UCAID). Second, NOAA must be a "Participant" member of Abilene. Both types of memberships have annual costs associated with them.

The thrust of this proposal is to optimally manage the process by which NOAA organizations connect to the Abilene network. It is proposed that HPCC continue funding the NOAA memberships in UCAID and Abilene. The costs associated with these memberships represent a minimum cost solution for the agency.

The agreement worked out with UCAID\Abilene is that NOAA will have two primary sites, the DC Silver Spring Campus and the Boulder Campus. To provide the day-to-day management and coordination with UCAID\Abilene it is proposed that the NOAA Network Operations Centers (NOC) in Boulder and Silver Spring should be the primary points of contact with UCAID\Abilene. The NOCs will be responsible for contacting or coordinating with the appropriate people and organizations within NOAA that UCAID\Abilene would need information or actions from.

Analysis:

In FY00 the NGI project team looked at the possible NGI service providers that were available (i.e. Abilene, vBNS+, DREN,.....). The team also looked at the requirements for membership that each NGI service provider listed. The results showed that over 90% of the partners that NOAA organizations needed to connect with already had (or are in the process of installing) connection to the Abilene network. The UCAID\Abilene appears to be the least costly NGI network for NOAA to participate in. In addition the appropriate use policies that Abilene requires for membership are more in line with the types of applications that NOAA plans to deploy.

Performance Measures:

Milestones:

- 1) Complete paperwork to continue membership in UCAID and Abilene- 1 month after notification of funding

Deliverables:

- 1) UCAID membership for 2 NOAA sites.
- 2) Abilene membership for 2 NOAA sites.