Testimony of the Advanced Networking With Minority-Serving Institutions Project on S. 414, the NTIA Digital Network Technology Program Act

The Advanced Networking With Minority-Serving Institutions ("AN-MSI") Project strongly supports the S. 414 legislation to establish a digital network technology program. AN-MSI applauds the Committee and the sponsors of S. 414 for undertaking this very critical initiative to help minority-serving institutions ("MSIs") strengthen their digital network technology capabilities. AN-MSI also supports the testimonies and recommendations of our Minority-Serving Institution partners who have already testified before the Senate Commerce Committee.

What is AN-MSI?

The Advanced Networking With Minority-Serving Institutions Project is a four-year initiative funded under a grant from the National Science Foundation to EDUCAUSE, an association of 1800 colleges, universities and companies dedicated to improving higher education through the intelligent use of information technology. AN-MSI assists MSIs to plan and deploy network systems to fulfill their educational goals and to use digital technologies to manage their institutions. By attaining network systems that meet their needs, MSIs and their students can more fully participate and compete in the “information age.”

Approximately 100 Hispanic-Serving Institutions ("HSIs"), Historic Black Colleges and Universities ("HBCUs") and Tribal Colleges and Universities ("TCUs") in 31 states, as well as in Puerto Rico and the Virgin Islands, are members of the AN-MSI consortium. Current partners in AN-MSI include such minority higher education consortiums as: the American Indian Higher Education Consortium, the Hispanic Association of Colleges and Universities, the National Association for Equal Opportunity in Higher Education, and the United Negro College Fund.

What Type of Activities Does AN-MSI Support?

AN-MSI offers a comprehensive array of technical assistance and services to support minority-serving institutions’ efforts to develop state-of-the-art networks and network applications. Key principles guiding AN-MSI’s efforts are: helping consortium institutions to plan and determine their own network needs; training institutions and key staff to train other staff and institutions; using alliances among higher education institutions to support their digital technology needs and promoting collaborations to help MSIs to support themselves; and, providing resources and information to help them to implement their advanced networking projects.

AN-MSI services and products supporting advanced networking include:

- Assessing individual campus needs and capabilities
- Working with institutions to develop strategic plans to improve campus networks and Internet connectivity
• Supporting institutions to apply network tools with which to teach, learn, research and collaborate
• Assisting institutions to deploy network security and monitoring systems
• Providing training for administration and maintenance of networks
• Consulting on campus IT and networking system architecture and implementation
• Establishing remote technical support for networks
• Developing and mentoring student-managed technical services
• Increasing the capacity of and sustaining networking efforts
• Helping institutions develop funding models and plans to pay for networks
• Expanding and educating faculty, students and staff on campus network services
• Evaluating networking efforts

Lessons Learned by AN-MSI

For over two years, AN-MSI has embarked on the mission of helping MSIs attain digital network technology equality. Minority-serving institutions have worked diligently with very dedicated staff to provide the best networking services to their students and faculty that their small staff and meager technology budgets can afford. There simply is not enough money. This is an area where the under-funding of minority serving institutions clearly shows. While each minority-serving institution has its own technology needs and issues, one of the profound lessons learned by the AN-MSI project serving over 100 institutions is that so many MSIs are not fully “network ready” for their students. Campuses often lack a number of critical items: current technologies and capacity, the necessary staffing skills and support mechanisms to manage their technology systems, knowledge of their IT structure and capabilities, sense of their IT needs, a strategic IT plan, the resources to deploy a network to meet their educational and administrative needs, and the additional resources later to refresh their digital technologies.

MSIs’ Capacity to Support Digital Technologies:

Based on these realities, we recommend that the proposed NTIA Digital Network Technology Program be expanded to reflect a broader range of MSIs’ technology needs. The proposed authorization language in Section 171 reads: “to strengthen the capacity of eligible institutions to provide instruction in digital network technologies…” Section 172(1) authorizes a range of acquisitions necessary “to teach students and teachers about technology in the classroom.” Beyond instruction in digital network technologies, a concerted focus needs to be directed at MSIs to provide instruction with digital technology; that is to enhance their capacity to carry out their overall teaching and learning mission. Without funding the institutional capacity to support digital network technologies, a greater MSI need will be overlooked. Put another way, without the basic capacity to sustain campus digital networks, and without teaching by example, little can be derived from classroom instruction on digital network technologies.
Given these “resource” challenges at Minority-Serving Institutions, AN-MSI has applied its limited funding to support innovative and cost-efficient strategies to meet their networking needs. AN-MSI has co-sponsored IT training and produced a campus network architecture guideline document for use by campus network technicians. AN-MSI is disseminating background information on IT issues; has created a website with resource information and links providing practical information on how to plan for campus IT deployment; and will be developing an inventory of effective IT practices deployed by other MSIs and EDUCAUSE institutions. AN-MSI has sponsored technical assistance site visits to MSI campuses to help them with their network documentation, systems assessment, IT planning, leadership education and involvement, technology options, and teaching applications. AN-MSI also supported the development of key collaborations with other MSIs, private sector partners and resource service providers to help them with their digital technology deployment.

Dr. Gerald Monette, President of Turtle Mountain Community College and Chairman of the Technology and Infrastructure Development Committee of the American Indian Higher Education Consortium testified before you on February 27th. He recommended including provisions in S. 414 to support strategic IT planning. “Specifically, planning needs to be focused on the unique nature and mission of institutions of higher education. Possible models include the AIHEC/AN-MSI partnership currently underway to provide technical assistance to NSF-TCUP grantees.”

The strategic support and intervention developed by AN-MSI is essential for the success of MSIs in building their digital network systems and in developing new and innovative digital learning applications. Mr. Monette further stated: “funding to expand this effort and ensure strategic IT planning, possibly through the Department of Education’s Titles III and V programs for Institutional Development, or the National Science Foundation, could be a wise investment.” AN-MSI concurs with AIHEC’s recommendations on the vital importance of investing in strategic planning to support MSI digital deployment. To accomplish this effectively, AN-MSI recommends that collaborative digital technology projects supporting MSIs, be directly eligible to receive funding for technical services to MSIs. The Act strongly encourages and supports activities to implement joint projects regarding technology --in Section 172(4). However, funding for eligible non-profit MSI collaborative organizations is only referenced in Section 3(6)(1)’s definition for HBCUs, as “a consortium of institutions described in this subparagraph.” The Act should make more explicit that all national non-profit MSI consortiums are eligible for direct funding.

A Need to Test New Services and Technologies and to Share the Knowledge

In his testimony before the Subcommittee, Dr. Fred Humphries, President & CEO of the National Association for Equal Opportunity in Higher Education, emphasized in his recommendations: “MSIs should be involved in the research and development of cutting edge technology to assure that they can secure and maintain state-of-the-art technology. Furthermore, they should be involved in the economic development of their communities.
around the new economy, including training as well as entrepreneurial development.”
We support Dr. Humphries’ recommendation.

AN-MSI, cognizant of the uniqueness of MSIs, has seeded pilot projects to develop
digital network solutions, services and applications that can be used by all MSIs. AN-
MSI has funded a wireless broadband infrastructure project to provide multi-media
access to rural tribal colleges; a network security collaborative project with HSIs; a
network system monitoring and reporting project with HBCUs; is assisting the
development of a pilot project to build a collaborative IT human resource knowledge
base among HBCUs in North Carolina; and funded the deployment of a cutting-edge
video-conference collaborative curriculum on IT teaching and learning applications.
Through its grant partner, EOT-PACI, MSIs are participating in workshops on
developing research clusters and are involved in activities and conferences to learn about
and to implement advanced computational research infrastructures and partnerships.

Authorizing collaborative pilot projects to develop new services, applications and
technologies for use by all MSIs will strengthen the bill.

Importance of Knowledge and Resource Bases

Dr. Antonio Flores, President & CEO of the Hispanic Association of Colleges and
Universities, emphasized in his testimony before the Subcommittee: “…the social and
economic impact of the digital divide relates to more than just physical access. It also
involves skill in the use of information technology, especially in ways that help one to
learn, gather information, critically analyze data, and generate new knowledge and
understanding.” AN-MSI fully concurs with Dr. Flores.

A key component often overlooked in the deployment of digital technologies is the
development of the “human network” and “knowledge-network” that is essential to
bridging the digital divide alluded to by Dr. Flores. AN-MSI has embraced this policy by
supporting unique collaborations among MSIs and with private sector partners. AN-MSI
has also funded the dissemination of vital knowledge through training partnerships with
the NSF, EDUCAUSE, the NSF-funded Partnership for Advanced Computational
Infrastructure, Internet2, and others. AN-MSI is also developing a resource base of
knowledge to help MSIs replicate the digital deployment efforts of other MSIs and
institutions in EDUCAUSE.

Collaborations, training and knowledge bases should also be explicitly funded under S.
414. The building and use of knowledge bases and networks is essential to the
deployment of digital network technologies.
Summary of Recommendations

1. Support the use of digital technologies to teach by clarifying the authorization under the Act to include “strengthen the capacity of eligible institutions to provide instruction in and using digital network technologies by providing grants to, or executing contracts or cooperative agreements with, those institutions to provide such instruction and strengthen their digital network technology capacity” (Sec. 171, modifications in bold italics)

2. Further support the use of digital technologies to teach with by adding in Section 172(1) support for activities to include acquiring “… digital technology, and infrastructure necessary to teach students and teachers about technology in the classroom or to teach with.” (Modification in bold italics)

3. Permit use of funds for digital technology strategic planning by the institution and by non-profit MSI collaborative organizations with expertise to assist campuses with their digital technology strategic planning or render other technical assistance to implement digital network technologies; (Sec. 172(2) add-in, or add Sec. 172(6) to activities supported)

4. Permit use of funds to implement a joint project with other institutions, non-profit MSI collaborative organizations, or collaborative partners to provide education regarding technology in the classroom or technology for the institution. (Sec. 172(4), modifications in bold italics)

5. Permit the use of funds to support or develop a collaborative resource network or database to support the development of digital technology by MSIs. (Add Sec. 172(7));

6. Permit consortia of institutions collaborating under the Act or non-profit MSI collaborative associations to be eligible for funding to assist MSIs to develop, enhance and support digital technology systems, and to receive and provide training for digital network technologies. (Sec. 102(a)(6), add “(G)” to definitions of eligibility.)

Conclusion:

The time is very late for minority students and institutions trying to compete in a new technology marketplace. Not only is digital technology an important subject matter to teach and to learn, it is an essential means of learning and teaching. AN-MSI supports the Senate’s effort to strengthen the digital technology capacity of MSIs and stands ready to assist the Committee and Congress in any manner you deem necessary. Thank you for accepting AN-MSI’s testimony.
Respectfully Submitted,

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