CI-TEAM Minority-Serving Institutions CyberInfrastructure Empowerment Coalition (MSI-CIEC)

The NSF CI-TEAM Minority-Serving Institutions CyberInfrastructure Empowerment Coalition (**MSI-CIEC**) has enabled some initial MSIs to partner with CI projects and resources to enhance education and research needs of MSI faculty and students to be competitive in the global, knowledge-based economy and society of the 21st century. Its **mission** _is to build and enhance the social and technological mechanisms for meaningful engagement of MSIs in CI,_ - the increasingly important collection of scientific, arts and humanities projects and resources joined by the developing Internet that is defining new forms of science, technology, engineering and mathematics, art and humanities research and education. The mainstay of CI is collaboration. **MSI-CIEC** _provides a point of collaboration or engagement to CI for MSIs and to MSIs for CI projects and resources, as a scalable, equitable mechanism for developing a CI-enabled science and engineering workforce inclusive of MSIs as full-partners_. Due to their unique missions to serve their populations, MSIs provide an efficient mechanism to increase the participation of underrepresented minorities- Native Americans, African Americans and Hispanics.

Navajo Technical College (NTC)- being encouraged by their participation in the MSI-CIEC planning meeting and MSI-CI Institute (both held at MSI-CIEC partner San Diego Supercomputer Center (SDSC), as well as the MSI Resource Provider workshop done

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with another partner, The National Center for Supercomputer Applications) and building on a relationship with partner, The TeraGrid- commenced their building of high-performance networking and cluster and grid computing for NTC and the Navajo nation with the "Internet to the Hogan" celebration. Under the strong leadership of Tom Davis, Dean of Instruction, NTC, and highly regarded national leader in technology for TCUs, NTC is working with the University of New Mexico (UNM), a leading HSI, and the SDSC High Performance Wireless Research and Education Network (HPWREN) to connect to the National Lambda Rail and Internet2 at OC-3 (155 Mbps) speeds. HPWREN has trained NTC staff and a talented NTC student who in turn is teaching other NTC staff and students to do the actual building and maintenance of the wireless towers and network connections. Additionally, through Scott Lathrop, TeraGrid education Director and current chair of the Supercomputer '07 education committee, a "Little Fe" supercomputing computer cluster was donated to NTC which is among the first to establish the Diné Grid, part of the Navajo nation's local CyberInfrastructure. NTC will expand their educational degree offerings through the Ph.D. and strengthen the Navajo STEM education pipeline through partnerships with Navajo K-12 schools and other colleges and universities. Jared Ribble, the NTC student who with other NTC staff attended all the MSI-CIEC meetings, is the talented student who will train the other NTC students and together build the Navajo CI. Jared also hopes to pursue his masters and Ph.D. through NTC. _Jared and Navajo Tech are illustrative examples of the vision and mission of_ **MSI-CIEC**. **MSI-CIEC**, _including UNM and MSI-CIEC CI partners, especially SDSC and TeraGrid, will continue to work with Navajo Tech to bring about its CI vision, and broaden the participation of Native Americans into the CI enabled workforce._

An illustrious advisory board of CI project and resource leaders provides expert resources and advice for **MSI-CIEC** implementation. Direction is under strong MSI participation through the Alliance for Equity in Higher Education (consisting of more than 300 MSIs) represented by _co PIs_: _Alex Ramirez_ of the _Hispanic Association of Colleges and Universities_; _Al Kuslikis_ of the _American Indian Higher Education Consortium_; _Karl Barnes_ of the _National Association for Equal Opportunity in Higher Education_, in addition to _Geoffrey Fox, Indiana University_ (internationally renowned expert in grid and social computing), _Diane Baxter, San Diego Supercomputer Center_ and _PI, Richard A. Aló, University of Houston-Downtown_