

To: Interim Executive Director Mark Johnson

U.S. UCAN Affiliate Pilot Program Call for Participation

I am pleased to respond to your call for participation in the U.S. UCAN affiliate pilot. Our mission at the Maryland Research and Education Network (MDREN) is to provide advanced network services to education, research, and public service institutions throughout the State of Maryland and connections to regional and national resources.

MDREN supersedes UMATS – The University of Maryland Academic Telecommunications System – with an expanded mission and scope of membership. UMATS, under the guidance of the University System of Maryland Telecommunications Council (USMTC) since 1993, was established to oversee the telecommunications connective infrastructure of the USM family of institutions. MDREN inherits the data network and facilities from UMATS and will offer expanded services to the entire Maryland educational and research community.

MDREN consists of a state data network and a growing list of services that provide the Maryland education, research, and public service community access to cutting edge services at an affordable price. MDREN leverages partnership opportunities to provide services that would be unaffordable otherwise. This network of services connects the many segments involved in Maryland education to include the University System of Maryland members, other Maryland public and private state universities, community colleges, and K12 LEA institutions into a community of shared interests and projects. MDREN provides its members connections to the Internet and the national research network Internet2, as well as access to teleconferencing and distance learning facilities, over facilities ranging from 1.5Mbps to 10 Gigabit Ethernet using MDREN's own fiber core infrastructure.

MDREN has established relationships with many organizations such as MAX, BERNET, networkMaryland, Johns Hopkins, Internet 2, ICBN, as well as commercial providers to strategically obtain unparalleled services for its members. This collaborative approach has reduced costs for all our members as well as provided for excellent redundancy and fault tolerance for MDREN's network as well as our partner networks at a highly reduced cost. This approach is strategic to the mission of the organization.

Collaborative Solutions Maryland (CSM), a part of MDREN

CSM is the new 501c3 being formed to support the new services in a sustainable manner. The purpose of this new 501c3 is to enhance the provision of leading edge technologies to as many innovators and educational sectors as possible within the state of Maryland. CSM will be a member governed organization which will accelerate the cycle of technology evolution, transfer, and diffusion while providing educational and community anchor institutions with an opportunity to shape and utilize the content, services, and applications related to education and research.

CSM will achieve its mission to provide needed services which are not available or affordable on the commercial market by partnerships and collaborations with local,

regional and national organizations. It will help develop a state wide K20 and anchor institution presence that will engage in local, state, and national efforts to develop and deploy capabilities including telepresence, distance education, telemedicine, trust federation, and job training. It will allow flexibility with dealing with services provided by members both within and outside of USM, national organizations, and vendor or grant provided capabilities.

CSM will leverage partnerships to provide services that would otherwise be cost prohibitive to its members. This network of services will connect many segments involved in Maryland education including the University System of Maryland institutions, other public and private universities, community colleges, and K-12 LEA institutions within Maryland into a community of shared interests and projects.

The key to engaging the broadest set of users within the state is our partnership with key players in projects such as the Broadband Technology Opportunities Program (BTOP). The One Maryland Broadband Network (OMBN) is a state-wide network that provides access to all of the anchor institutions. Coordinated by networkMaryland it is a planned 1,294-mile fiber optic broadband network that will link 1,006 government facilities and community anchor institutions in every county in the state, while interconnecting and extending three independent networks:

- [networkMaryland](#), the statewide network operated by DoIT
- the [Inter-County Broadband Network \(ICBN\)](#), a consortium of 10 central Maryland counties and cities
- the [Maryland Broadband Cooperative \(MDBC\)](#), a rural non-profit carrier

To enable “last mile” build-out to homes and businesses, OMBN will pass near approximately:

- 2.2 million households (1.8 million in the ICBN path, 400,000 in the MDBC path)
- 5.6 million residents (4.7 million in the ICBN path, 900,000 in the MDBC path)
- 96,000 businesses (71,000 in the ICBN path, 25,000 in the MDBC path)

OMBN will provide data connections and Internet access to 1,006 “anchor institutions” across the state, including:

- 475 schools
- 248 police and emergency centers
- 209 other government and community support centers
- 52 libraries
- 16 community colleges
- 6 universities

MDREN expects to act as a facilitator and advocate for the MDREN community and to develop the sustainable lifecycle structures. MDREN will work with The Maryland Education

Enterprise Consortium (MEEC), a sister organization, to coordinate and promote educational uses with the other Maryland educational organizations such as:

[MD Association of Community Colleges Office](#)
[MD Independent College and University Association](#)
[MD State Department of Education](#)
[MHEC System Office](#)
[University System of Maryland Office](#)
[Southern MD Higher Education Center](#)

PROPOSED SERVICES

Some of the proposed services that can be provided by MDREN/CSM with cooperation and support from multiple members are listed below. These services use but are separate from the network connections of MDREN, OMBN, and the licensing provided under MEEC.

Virtual Desktop Environment (VDE) and other Virtualization Services
Educational Private Cloud Shared Storage
Federated Identity Management and Trust Federation
Disaster Recovery and Space Aggregation Rental
Video Streaming and Virtual Academic Library Environment
Buying Club for Equipment and Services
IT Security Training and Consulting
Advanced Computing Services

One of our initial service offerings will be the Virtual Desktop Environment (VDE) that will support all segments across the state. An article on this pilot can be found at

<http://www.ecampusnews.com/technologies/umd-to-become-virtualization-hub-for-surrounding-community/>

The Virtual Desktop Environment (VDE) will allow Maryland to innovate and validate new approaches in curriculum design that we feel will be essential for improving student success and degree completion for students in all age groups. This strategic initiative is intended to support academic transformation. While academic transformation will take many forms in coming years, the VDE will be one highly visible tool in the near-term that reflects the flexibility that technology brings to the learning environment. The Maryland Research and Education Network (MDREN), partnering with Dell, UMBC and Montgomery College have identified an opportunity to jointly explore and prove an effective virtualized computing model delivered as a shared service.

We see a partnership with U.S. UCAN as a key part of building on the goals of the Broadband Plan and the Broadband Technologies Opportunities Program (BTOP). The start of new NET+ services, combined with local and regional initiative will provide a wealth of new capabilities and the means to deploy this with a core of support formed from pilot participants from across the country. The synergy of multiple efforts to identify and implement a mix of services that can enhance the mission of our users is a key takeaway value for participation. We see our participation as providing value to the national community as well as helping to develop the support structures and sustainable models required to deploy leading edge services within Maryland.

MDREN is positioned to work with multiple groups within Maryland to help coordinate and deploy new services. We are the SEGP for the state and provide connectivity for a large part of the higher education community. With our close association with the Mid Atlantic Crossroads (MAX) we are already working to support InCommon structures across the state. We also have an extended and on-going partnership with NetworkMaryland to provide access to the state. We were deeply involved with the initial engineering for educational entities under the BTOP proposal and continue to be involved in working with each of the segments to develop services that can make use of the new connectivity being made available under the BTOP OMBN project.