

## Letters of Support

### State and Regional Networks

Arkansas Research and Education Optical Network (ARE-ON)  
Connecticut Education Network (CEN)  
CIC-OmniPoP  
Drexel University  
Florida LambdaRail (FLR)  
Front Range GigaPoP (FRGP)  
Great Plains Network (GPN)  
I-Light  
Indiana GigaPop  
Idaho Regional Optical Network (IRON)  
Kansas Research and Education Network (KANREN)  
Kentucky Regional Optical Network (KyRON)  
Louisiana Regional Optical Network (LONI)  
MCNC  
Memphis Coalition for Advanced Networking (MCAN)  
Merit Network  
Metropolitan Research and Education Network (MREN)  
Mid-Atlantic Crossroads (MAX)  
Missouri Research and Education Network (MOREnet)  
Network for Education and Research in Oregon (NERO)/Oregon GigaPoP (OGIG)  
Networkmaine  
NetworkVirginia  
NJEdge.Net  
Northern Crossroads (NOX)  
Northern Lights GigaPoP  
NYSERNet  
OARnet  
OSHEAN  
Pacific NorthWest GigaPoP (PNWGP)  
South Carolina GigaPoP  
Three Rivers Optical Exchange (3RoX)  
Utah Education Network (UEN)/University of Utah  
University of South Florida System  
WiscNet

### Universities

Mississippi State University  
University of Mississippi

### Community and Technical Colleges

Kentucky Community & Technical College System (KCTCS)  
Pine Technical College  
Rose State College  
Western Oklahoma State College

### Health Organizations

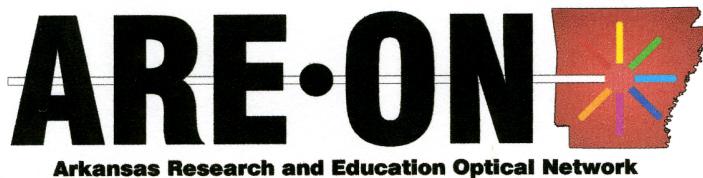
Alaska eHealth Network  
HealthBridge  
Healthcare Information and Management Systems Society (HiMMS)  
Medisys  
Michigan Public Health Institute (MPHI)  
UNM Health Sciences Center

### Other Network Organizations

Axcess Ontario  
ECC Technologies  
Illinois Century Network  
Ramsey Broadband Coalition

### Non-Profits

American Association of Community Colleges  
EDUCAUSE  
K20 Initiative Executive Committee  
National Emergency Number Association (NENA)



March 17, 2010

U.S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

Dear U.S. UCAN Planning Team:

The Arkansas Research and Education Optical Network (ARE-ON) is the research and education network in Arkansas. We support the United States Unified Community Anchor Network (U.S. UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

ARE-ON intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nation-wide U.S. UCAN network offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area. Additionally, ARE-ON will work together with U.S. UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions.

We recognize that implementation of U.S. UCAN is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will empower ARE-ON and our member institutions with the ability to extend national and international research and education applications and facilities to every portion of our state/region, eliminating the bandwidth-related barriers which have previously existed. We believe that the use of the U.S. UCAN by ARE-ON will significantly enhance services available and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,

Michael D. Abbiatti  
Executive Director

March 18, 2010

U.S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

Dear U.S. UCAN Planning Team:

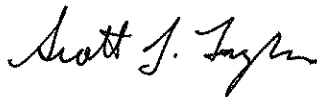
Connecticut Education Network (CEN) is the state educational connector for the research and education network in Connecticut. We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

CEN intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nation-wide U.S.UCAN network offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area. Additionally, CEN will work together with U.S.UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions. CEN hopes to receive funding from BTOP Round 2 for regional middle mile infrastructure. If funded, this national middle mile proposal will substantially strengthen all such regional middle mile BTOP-funded efforts.

We recognize that implementation of U.S.UCAN is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will empower CEN and our member institutions with the ability to extend national and international research and education applications and facilities to every portion of our state/region, eliminating the bandwidth-related barriers which have previously existed. We believe that the use of the U.S. UCAN by CEN will significantly enhance services available and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,



Scott J. Taylor  
Technical Program Manager  
Connecticut Education Network



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COMMITTEE ON INSTITUTIONAL COOPERATION

March 22, 2010

Dear U.S. UCAN Planning Team:

CIC OmniPoP is the network collaboration of Committee on Institutional Cooperation (CIC), comprised of the top tier research universities in the Midwestern region including the Universities of Chicago, Illinois, Illinois-Chicago, Indiana, Iowa, Michigan, Minnesota, Wisconsin-Madison and Michigan State, Northwestern, Ohio State, and Purdue Universities. We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

CIC OmniPoP intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nation-wide U.S.UCAN project offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area. Additionally, CIC OmniPoP will work together with U.S.UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions.

We recognize that deployment of the U.S.UCAN network is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will empower CIC OmniPoP and our member institutions with the ability to extend national and international research and education applications and facilities to every portion of our region, eliminating the bandwidth-related barriers which have previously existed. We believe that the use of the U.S. UCAN network by CIC OmniPoP will significantly enhance the available services and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely and on behalf of the CIC OmniPoP,

Karen M. Partlow  
Associate Director for Technology Collaboration  
Committee on Institutional Cooperation



Office of Information Resources and Technology

March 22, 2010

U.S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

Dear U.S. UCAN Planning Team:

Drexel University is an aggregator for the research and education network needs of the fourteen universities in the Pennsylvania State System of Higher Education. We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

Drexel intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nationwide U.S.UCAN network will offer greater resiliency and redundancy than currently availability and will usher in leading edge broadband services to community anchor institutions within our service area. Drexel will work together with U.S.UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions. Drexel is a founder member of KINBER, the Keystone Initiative for Network Based Education and Research; KINBER has received funding from BTOP Round 1 for regional middle mile infrastructure. This national middle mile proposal will substantially strengthen all such regional middle mile BTOP-funded efforts.

We recognize that implementation of U.S.UCAN is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will empower Drexel and our partner institutions with the ability to extend national and international research and education applications and facilities to every portion of our state, eliminating the bandwidth-related barriers which have previously existed. We believe that the use of the U.S. UCAN by Drexel will significantly enhance services available and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,

John A. Bielec, Ph.D.  
Vice President/CIO



Florida's Research and Education Network

J. Phillip Halstead, Ph.D.  
Chief Executive Officer  
Phil.Halstead@flrnet.org

March 18, 2010

The Honorable Larry Strickling  
Assistant Secretary of Commerce  
Administrator  
National Telecommunications and Information Administration  
U.S. Department of Commerce  
1401 Constitution Ave. NW  
Washington, D.C. 20230

Dear Assistant Secretary Strickling:

Florida LambdaRail, LLC (FLR), Florida's Research and Education Network, is a nonprofit consortium of 12 public and private Florida universities. FLR is pleased to support the United States Unified Community Anchor Network (U.S. UCAN) proposal and its collaborating partners, Internet2 and National LambdaRail, in seeking support from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

Florida LambdaRail has developed a statewide broadband backbone network to support advanced research and education needs in Florida and is supporting the private and public college round two BTOP proposal to extend broadband access to numerous additional anchor institutions throughout the state. The high-performance nationwide broadband network depicted in the U.S. UCAN proposal, along with the state anchor institution proposals such as those in Florida will both support and amplify one another. A nationwide network alone lacks the ability to reach a critical mass of anchor institutions. Through funding both the national U.S. UCAN proposal, as well as state and regional anchor network proposals, NTIA can achieve significantly greater impact in the shortest period of time, thus fulfilling the vision of our nation's leaders and taking a meaningful step toward achieving the goals stated in the FCC's Nationwide Broadband Plan.

The nationwide U.S. UCAN project will offer resiliency, redundancy, and leading edge broadband services to community anchor institutions both within our state and nationwide. Florida LambdaRail will work with U.S. UCAN to provide critical elements of the nationwide solution that will be required to meet the advanced networking needs of community anchor institutions. For example, through its 1,540 mile fiber optic network FLR can link U.S. UCAN to AMPath's International Exchange Point located in Miami.

The Honorable Larry Strickling  
March 18, 2010  
Page 2

In summary, access to the capacity of U.S. UCAN will empower Florida LambdaRail and our member research universities and affiliate anchor institutions to extend national and international research and education applications and facilities to every region of our state and nation, eliminating the bandwidth-related barriers that have previously existed. We look forward to working with U.S. UCAN to bring this network and the anchor institutions it will serve to our constituents.

Sincerely,

A handwritten signature in cursive script that reads "J. Phillip Halstead". The signature is written in black ink and is positioned below the word "Sincerely,".

J. Phillip Halstead, Ph.D.



Tuesday, March 02, 2010

U.S. UCAN

Dear U.S. UCAN Planning Team:

The Front Range GigaPoP (FRGP) is the regional network aggregator for the research and education network in Colorado and Wyoming. We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

The FRGP intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nation-wide U.S.UCAN project offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area. Additionally, the FRGP will work together with U.S.UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions. The FRGP hopes to receive funding from BTOP Round 2 for regional middle mile infrastructure. If funded, this national middle mile proposal will substantially strengthen such regional middle mile BTOP-funded efforts.

We recognize that deployment of the U.S.UCAN network is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will empower the FRGP and our member institutions with the ability to extend national and international research and education applications and facilities to many portions of our state/region, reducing the bandwidth-related barriers which have previously existed. We believe that the use of the U.S. UCAN network by the FRGP will significantly enhance the available services and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,

A handwritten signature in black ink, appearing to read 'Marla J. Meehl', is written over a light blue rectangular background.

Marla J. Meehl  
Manager of the Front Range GigaPoP



## Great Plains Network



### Members:

Arkansas State University  
Black Hills State University  
Dakota State University  
Kansas State University  
Iowa State University  
Northern State University  
Oklahoma State University  
South Dakota School of Mines & Technology  
South Dakota State University  
University of Arkansas  
University of Arkansas, Little Rock  
University of Arkansas for Medical Sciences  
University of Kansas  
University of Minnesota  
University of Missouri, Columbia  
University of Missouri, Kansas City  
Missouri University of Science & Technology  
University of Missouri, St. Louis  
University of Nebraska, Lincoln  
University of Oklahoma  
University of Oklahoma Health Sciences Center  
University of South Dakota  
University of Tulsa  
Wichita State University

### Executive Council:

**Robert Zimmerman**  
University of Arkansas

**Denise Stephens**  
University of Kansas

**Gary Allen**  
University of Missouri

**Mark Askren**  
University of Nebraska

**James Deaton**  
OneNet

**Claude Garelik** (chair)  
South Dakota  
Board of Regents

**William A. (Bill) Mitchell**  
**Executive Director**  
573-268-7214  
3212 LeMone Industrial Blvd.  
Columbia, MO 65201

**Gregory E. Monaco, Ph.D.**  
**Director for Research & CI**  
785-554-9657  
1313 Pembroke Lane  
Topeka, KS 66604

<http://www.greatplains.net>  
<http://collaboration.greatplains.net>

U. S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

March 5, 2010

Dear U.S. UCAN Planning Team:

The Great Plains Network (GPN) is the regional network aggregator for the research and education network in six mid-western states. We support the United States Unified Community Anchor Network (U.S. UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

The GPN community continues to push the envelope as innovators in major scientific research projects like the Large Hadron Collider (LHC), the Deep Underground Science and Engineering Laboratory (DUSEL), advanced climate modeling and interactive educational experiences – among many others. GPN intends to use the services of U.S. UCAN to expand access to these projects and other research applications and educational opportunities via the facilities offered by the network.

The nation-wide U.S. UCAN network offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area. Additionally, GPN will work together with U.S. UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions, eliminating the bandwidth-related barriers that have previously existed.

We recognize that successful completion of the U.S. UCAN project is contingent upon the award of funding from the NTIA BTOP program.

We believe that use of the U.S. UCAN network by GPN will significantly enhance the available services and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,

A handwritten signature in black ink that reads 'William A. Mitchell'.

William A. Mitchell

### CERTIFICATION REGARDING LOBBYING LOWER TIER COVERED TRANSACTIONS

Applicants should review the instructions for certification included in the regulations before completing this form. Signature on this form provides for compliance with certification requirements under 15 CFR Part 28, "New Restrictions on Lobbying."

#### LOBBYING

As required by Section 1352, Title 31 of the U.S. Code, and implemented at 15 CFR Part 28, for persons entering into a grant, cooperative agreement or contract over \$100,000 or a loan or loan guarantee over \$150,000 as defined at 15 CFR Part 28, Sections 28.105 and 28.110, the applicant certifies that to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure occurring on or before October 23, 1996, and of not less than \$11,000 and not more than \$110,000 for each such failure occurring after October 23, 1996.

#### Statement for Loan Guarantees and Loan Insurance

The undersigned states, to the best of his or her knowledge and belief, that:

In any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

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**As the duly authorized representative of the applicant, I hereby certify that the applicant will comply with the above applicable certification.**

NAME OF APPLICANT

University Corporation for Advanced Internet Development

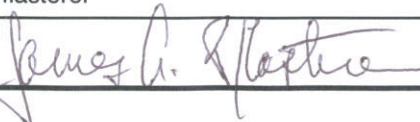
AWARD NUMBER AND/OR PROJECT NAME

4589: US Unified Community Anchor Network

PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

James A. Pflasterer

SIGNATURE



DATE

5/10/10

## CERTIFICATION REGARDING LOBBYING LOWER TIER COVERED TRANSACTIONS

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### LOBBYING

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- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

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**As the duly authorized representative of the applicant, I hereby certify that the applicant will comply with the above applicable certification.**

NAME OF APPLICANT

**National LambdaRail, Inc.**

AWARD NUMBER AND/OR PROJECT NAME

PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

**Glenn Ricart, President & CEO**

SIGNATURE



DATE

**May 12, 2010**

### CERTIFICATION REGARDING LOBBYING LOWER TIER COVERED TRANSACTIONS

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(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

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**As the duly authorized representative of the applicant, I hereby certify that the applicant will comply with the above applicable certification.**

NAME OF APPLICANT

The Trustees of Indiana University

AWARD NUMBER AND/OR PROJECT NAME

U.S. Unified Community Anchor Network  
NTIA EGD 4589

PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

MaryFrances McCourt, Treasurer

SIGNATURE

*M. McCourt*

DATE

5.12.2010

*bcc*

### CERTIFICATION REGARDING LOBBYING LOWER TIER COVERED TRANSACTIONS

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- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
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**As the duly authorized representative of the applicant, I hereby certify that the applicant will comply with the above applicable certification.**

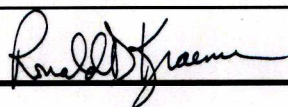
NAME OF APPLICANT

AWARD NUMBER AND/OR PROJECT NAME

Ronald Kraemer, CIO & Vice Provost of Information Technology

PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

SIGNATURE



DATE

May 10, 2010

### CERTIFICATION REGARDING LOBBYING

Applicants should also review the instructions for certification included in the regulations before completing this form. Signature on this form provides for compliance with certification requirements under 15 CFR Part 28, "New Restrictions on Lobbying." The certifications shall be treated as a material representation of fact upon which reliance will be placed when the Department of Commerce determines to award the covered transaction, grant, or cooperative agreement.

#### LOBBYING

As required by Section 1352, Title 31 of the U.S. Code, and implemented at 15 CFR Part 28, for persons entering into a grant, cooperative agreement or contract over \$100,000 or a loan or loan guarantee over \$150,000 as defined at 15 CFR Part 28, Sections 28.105 and 28.110, the applicant certifies that to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure occurring on or before October 23, 1996, and of not less than \$11,000 and not more than \$110,000 for each such failure occurring after October 23, 1996.

**As the duly authorized representative of the applicant, I hereby certify that the applicant will comply with the above applicable certification.**

#### Statement for Loan Guarantees and Loan Insurance

The undersigned states, to the best of his or her knowledge and belief, that:

In any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure occurring on or before October 23, 1996, and of not less than \$11,000 and not more than \$110,000 for each such failure occurring after October 23, 1996.

NAME OF APPLICANT

UNIVERSITY CORPORATION FOR ADVANCED INTERNET DEVELOPMENT

AWARD NUMBER AND/OR PROJECT NAME

UNITED STATES UNIFIED  
COMMUNITY ANCHOR NETWORK (US-UCAAN)

PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

JAMES A. PFLASTERER, CFO

SIGNATURE

*James A. Pflesterer*

DATE

6/2/10

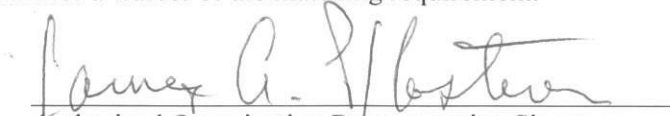
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**U.S. Department of Commerce**  
**Broadband Technology Opportunities Program**  
**Authentication and Certifications**

---

1. I certify that I am the duly Authorized Organization Representative (AOR) of the applicant organization, and that I have been authorized to submit the attached application on its behalf.
2. I certify that I have examined this application, that all of the information and responses in this application, including certifications, and forms submitted, all of which are part of this grant application, are material representations of fact and true and correct to the best of my knowledge, that the entity(ies) that is requesting grant funding pursuant to this application and any subgrantees and subcontractors will comply with the terms, conditions, purposes, and federal requirements of the grant program; that no kickbacks were paid to anyone; and that a false, fictitious, or fraudulent statements or claims on this application are grounds for denial or termination of a grant award, and/or possible punishment by a fine or imprisonment as provided in 18 U.S.C. §1001 and civil violations of the False Claims Act.
3. I certify that the entity(ies) I represent have and will comply with all applicable federal, state, and local laws, rules, regulations, ordinances, codes, orders and programmatic rules and requirements relating to the project. I acknowledge that failure to do so may result in rejection or deobligation of the grant or loan award. I acknowledge that failure to comply with all federal and program rules could result in civil or criminal prosecution by the appropriate law enforcement authorities.
4. I certify that the entity(ies) I represent has and will comply with all applicable administrative and federal statutory, regulatory, and policy requirements set forth in the Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements ("DOC Pre-Award Notification"), published in the Federal Register on February 11, 2008 (73 FR 7696), as amended; DOC Financial Assistance Standard Terms and Conditions (Mar. 8, 2009); the Department of Commerce American Recovery and Reinvestment Act Award Terms (Apr. 9, 2009); and any Special Award Terms and Conditions that are included by the Grants Officer in the award.
5. I certify that any funds awarded to the entity(ies) I represent as a result of this application will not result in any unjust enrichment of such entity(ies) or duplicate any funds such entity(ies) receive under federal universal service support programs administered by the Universal Service Administrative Corporation (USAC).
6. I certify that the entity(ies) I represent has secured access to pay the 20% of total project cost or has petitioned the Assistant Secretary of NTIA for a waiver of the matching requirement.

3/25/2010  
Date

  
Authorized Organization Representative Signature  
JAMES A. PFLASTERER  
Print Name  
CFO  
Title



May 22, 2010

Dr. Douglas Van Houweling  
President and CEO  
Internet2  
1000 Oakbrook Drive  
Suite 300  
Ann Arbor, MI 48104

Dear Dr. Van Houweling:

This joint proposal led by Internet2 and National LambdaRail (NLR) is a blueprint for stitching together the state and regional networks being created and extended by the BTOP program and interlinking them with other existing state and regional networks. As called for in Section 8.22 of the National Broadband Plan, National LambdaRail and Internet2 have consulted with their boards and agree to step up to extending their networks to serve the state and regional optical networks connecting the full range of anchor institutions identified by the NTIA and the FCC.

This letter commits National LambdaRail to our responsibilities under the joint proposal. This includes the contribution to the project of more than 12,000 miles of long-term IRU fiber, common optical layer equipment, and transponders to interconnect state and regional optical networks. Under this proposal, NLR and Internet2 will further extend this infrastructure with joint acquisition (sometimes shared with others) over the Northern Tier, Ogden to Los Angeles, New York City – Boston – Syracuse – Cleveland, Chicago to Atlanta via Nashville, and Dallas to Nashville. This proposal will create a 100Gbps backbone for anchor institutions within this network. NLR is committed to its share of the cash match needed to extend the network and light those extensions. Details of NLR's cash match commitments are listed on the attached schedule.

The resultant contributed NLR network and the joint extensions being proposed herein will cover a national footprint with proximity to all of the lower-48 states and the state and regional optical networks that serve them. We plan to continue to work through the existing state and regional optical networks as well as new ones created in response to the BTOP / BIP programs. We especially value the opportunity to serve underserved and not-now-served areas of the country.



In order to provide highly reliable service to those US-UCAN anchor institutions that require them, such as public safety and medical applications, anchor institutions will want to have reliable connections to their state and regional optical networks. Those networks will, in turn, want to have diverse and reliable connections to the totality of the US-UCAN fabric including the portion being contributed to the project by NLR. We are committing phased-in fees for new state and regional networks being connected to the NLR network under this proposal to help with transition.

Some readers of this letter may be aware that National LambdaRail has made an arrangement with Darkstrand, Inc., which encumbers a portion of its network for commercial uses by Darkstrand. Those portions of the network so encumbered are not included in this proposal. We have reduced the in-kind contributions to recognize the maximum encumbrance by other organizations including Darkstrand. In addition, other portions of NLR's operation which support Darkstrand have been removed from and are not present in this proposal. Conversely, all of the resources pledged in this proposal are available for use by higher education, research, and NTIA community anchors.

NLR is also committed to the creation of the US-UCAN organization as described in the organizational section of this proposal. NLR will loan staff members (as will Internet2 and possibly other organizations) to get US-UCAN started.

Finally, I'd like to note that this joint proposal represents a watershed in higher education research and education cooperation. NLR and Internet2 have worked on this proposal jointly through scores of phone calls and hundreds e-mails and shared document editing sessions. We've involved multiple private sector partners, and included significant additional partners such as the Northern Tier Networking Consortium and the IU Information Technology Services Group. I want to thank all of these groups for their goodwill and flexibility in submitting this joint proposal. Internet2 deserves special credit for the coordinating role they've played as the submitting organization, as well as their openness in making this a true partnership among the parties involved. It's that true partnership that that makes National LambdaRail every bit as committed as Internet2 and the other partners to deliver the national synergy among anchor institutions, state networks, and regional networks that this proposal brings to the table.

Sincerely,



Glenn Ricart  
President and CEO  
National LambdaRail, Inc.

## Appendix

National LambdaRail's financial commitments to the US-UCAN proposal are as follows:

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

16 March 2010

Thomas Vilsack, Secretary  
U.S. Department of Agriculture  
1400 Independence Ave. SW  
Washington, DC 20250

Lawrence Strickling  
Assistant Secretary for Communications and Information  
National Telecommunications and Information Administration  
U.S. Department of Commerce  
1401 Constitution Ave. NW  
Washington, DC 20230

Re: National Telecommunications Information Administration (NTIA) Broadband Technology Opportunities Program (BTOP) Grant Application – March 2010 - The Northern Tier Network Consortium component of the national Internet2-led 'UCAN' application

Dear Secretary Vilsack and Assistant Secretary Strickling:

The Pacific Northwest Gigapop, as a multi-state not-for-profit research education and clinical networking organization based in Seattle; the BOREAS consortium, which is comprised of the major research universities from Minnesota, Wisconsin, and Iowa; Montana's universities and colleges, as formally represented by the University of Montana; and the State of North Dakota and research universities of North Dakota, as formally represented by North Dakota State University, all of whom work together as the Northern Tier Network Consortium (NTNC), are teaming together in the UCAN proposal being led by Internet2 as the "applicant."

The capability that would be realized through the efforts delineated in this proposal will establish true broadband capabilities to underserved anchor institutions across the enormous underserved and unserved areas between Chicago and Seattle along the Canadian border and Great Lakes, also known to us as the "Northern Tier" (NT). Our fiber paths and network support, combined with NTIA funding, will yield a self-supporting sustainable broadband infrastructure which will provide extended middle mile infrastructure, which, in turn, will enable underserved anchor tenant institutions in clinical, educational and other domains across the entire northern tier to achieve broadband connectivity to the broadband general commercial internet in Chicago and Seattle, as well as to crucial research, education and healthcare based networks largely only available in the metropolitan areas of Seattle, Minneapolis and Chicago.

Each of us as individual organizations, and all of us together as proven networking consortia, are part of, and committed to, the UCAN proposal. We not only strongly support the UCAN proposal, but we also commit to providing the related fiber optic cables (which we have under long term IRU's) as well as the huts and other collocation facilities which we control, for both matching value and use to the UCAN proposal.

We are all economically sound not-for-profit or state agency-based institutions with strong track records in local, state and regional networking, including active outreach to the underserved. We each already have and operate self-sustaining broadband infrastructures on statewide or multi-state levels.

We have individually and collectively conducted analyses of the outcomes and financial realities should the UCAN proposal be successful for the 'Northern Tier,' and we are highly confident that the deployment of the infrastructure entailed in the UCAN proposal will result in a network which will easily be self supporting and financially, technically and operationally sustainable for the long term.

We urge you to support this extraordinarily important and exceptionally solid proposal.

Sincerely,

*Amy Th. Philipson*

---

Amy Philipson, Executive Director, Pacific Northwest Gigapop

*Ray Ford*

---

Dr. Ray Ford, Chief Information and Technology Officer, University of Montana

*Bonnie Neas*

---

Bonnie Neas, Vice President for Information Technology, North Dakota State University

*Steve Cawley*

---

Steve Cawley, Vice President for Information Technology and Chief Information Officer, University of Minnesota

*Steve Fleagle*

---

Steve Fleagle, Associate Vice President and Chief Information Officer, University of Iowa

*James Davis*

---

Dr. James Davis, Vice Provost for Information Technology and Chief Information Officer, Iowa State University

*Ronald D. Kraemer*

---

Ronald D. Kraemer, Vice Provost for Information Technology and Chief Information Officer, University of Wisconsin-Madison

cc: Douglas Van Houweling, Internet2  
Dr. Glenn Ricart, CEO National LambdaRail



## INDIANA UNIVERSITY

OFFICE OF THE VICE PRESIDENT  
FOR INFORMATION TECHNOLOGY  
AND CHIEF INFORMATION OFFICER

US-UCAN c/o  
Douglas E. Van Houweling  
President & CEO, Internet2  
1000 Oakbrook, Suite 300, Ann Arbor, MI 48104

Doug,

I am writing to express the commitment of support from Indiana University and the Global Research Network Operations Center (GlobalNOC) to the U.S. UCAN project and our desire to provide full network engineering and operations center services.

As you are aware, the Global Research Network Operations Center and Engineering Group at Indiana University has a long and successful record of outstanding achievement in the areas of network services and we are committed to provide these services to the U.S. UCAN project. With the strong backing of our institution's administration and State of Indiana government, we have established the premier network operations and engineering facility in higher education today. We have been providing similar services to the Internet2 network since 1998 and National Lambda Rail since 2003. We have expanded our services to include support of the TransPAC2 connection to the Asia-Pacific region, the ManLAN optical exchange point in New York City and over ten other national and international networks. The GlobalNOC has also selected by the NSF to play a leading role on the GENI project which will develop the next generation of network for researchers.

Indiana University has several key related resources to bring to bear in the area of advanced network management. In addition to its Global NOC and Engineering Group, Indiana is also home to the Research and Education Networking, Information Sharing and Analysis Center (REN-ISAC). The REN-ISAC has a responsibility to receive and analyze operational, threat and warning, and actual attack information within the R&E Networking infrastructure. The REN-ISAC provides reports to its constituency (i.e.: all U.S. universities and colleges connected to national R&E networks) as well as to the federal agency which coordinates all of the ISACs. This added service function will most certainly benefit the members of the U.S. UCAN community in the highly critical area of securing network infrastructure.

Through its efforts on projects like the GlobalNOC, Indiana University (IU) has worked hard to establish a tradition of leadership excellence in the area of networking engineering and operations. IU was a founding member of Internet2 in the 1990's, played a key role in the development of the NLR network, and has continued to play an increasingly active and substantial role in the developing national network research infrastructure. As well, all of the recent network initiatives within the state of Indiana (I-Light, Indiana GigaPoP, etc.) were the result of Indiana University and the GlobalNOC's leadership. The GlobalNOC at Indiana University is committed to leveraging this expertise and operational leadership to the U.S. UCAN network through the engineering and operation center services offered by the GlobalNOC.

Organizationally, the GlobalNOC's support for U.S. UCAN will consist of 2 tightly coordinated groups: the GlobalNOC Service Desk, and GlobalNOC Engineering.

The GlobalNOC Service Desk will provide 24x7x365 redundant tier1 support for the overall UCAN infrastructure, serving as the primary hub for proactive monitoring and communications among the project's organizational partners. The Service Desk will be the first stop and the final stop for all trouble tickets associated with U.S. UCAN.

The GlobalNOC Engineering organization is made up of 3 teams: the Network Engineering Team, the Network Planning Team, and the Tool Development and Systems Support Team.

The Network Engineering Team will provide Tier2 network engineering services on a 24x7 basis for the U.S. UCAN optical and IP networks. Members of the Network Planning Team are senior engineers who are focused on individual programs. One of these engineers will provide assistance with overall planning and design for U.S. UCAN. This engineer will also serve as the tier3+ operational escalation point.

The Tool Development and Systems Support team develops the extensive GlobalNOC suite of tools for network management, measurement, and control. They provide system administration and programming expertise for managing the tools used by the GlobalNOC operations, such as the GlobalNOC Database, Trouble Ticket System, the login hosts, syslog servers, email servers, and internal and external web hosts. Finally, this team deploys and supports research and measurement platforms on networks, including specialized tool development as needed, developed in consultation with our partners. These services will be leveraged for the needs of U.S. UCAN.

I am prepared to commit our organization by making implementing and operating U.S. UCAN a top priority. I believe the GlobalNOC staff of engineers and network technicians to be the finest networking professionals in the nation, if not the world. And I will support them in their efforts to bring U.S. UCAN to the forefront of the research network community by delivering outstanding services to this network and our community.

Sincerely,



David E. Jent  
Associate Vice President, Networks  
Office of the Vice President for Information Technology  
Indiana University



169 Java Drive  
Sunnyvale, CA 94089-1016, USA  
TEL +1.408.572.5200 FAX +1.408.572.5454  
www.Infinera.com

March 23, 2010

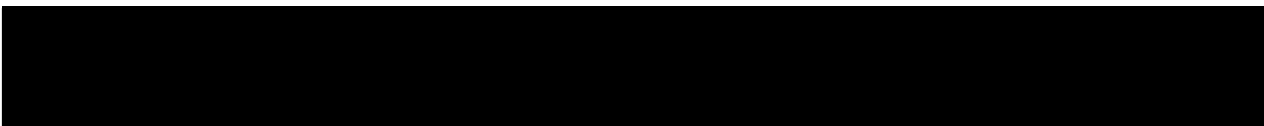
Mr. Doug Van Houweling  
President and CEO  
Internet2  
1000 Oakbrook Drive  
Ann Arbor, MI 48104

Dear Doug;

Re: United States Unified Community Anchor Network (U.S.UCAN) proposal

Infinera Corporation is pleased to support Internet2 and National LambdaRail in their United States Unified Community Anchor Network (U.S.UCAN) proposal, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program. U.S. UCAN will provide a resilient, redundant network and extend the reach of high performance networking beyond higher education to community colleges, healthcare and public safety.

Infinera supports the creation of U.S. UCAN to expand access to research, health and educational applications and opportunities via the facilities offered by the network. The nation-wide U.S. UCAN offers leading edge broadband services to community anchor institutions within our service area. Additionally, U.S. UCAN provides critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions.



Infinera is a publicly traded global company (NASDAQ : INFN) that provides Digital Optical Networking systems (the DTN System) to telecommunications carriers, Research & Education institutions, cable operators, and other service providers worldwide. Infinera is headquartered in Sunnyvale, CA USA, which is also the primary product development center. Infinera's switched DWDM optical transport systems utilize revolutionary photonic integrated circuit (PIC) and planar lightwave circuit (PLC) technologies that blur the economic and scalability differences between analog optical and digital electronic switching, permitting optical transport networks to be simultaneously optimized for performance and cost.

Infinera is uniquely positioned to support the U.S. UCAN effort by combining the benefits of PIC and PLC technology with a Digital ROADM architecture and GMPLS service intelligence to provide a high-capacity optical networking platform supporting a wide range of service capabilities with unsurpassed network flexibility required for Bandwidth Virtualization. Bandwidth Virtualization is the use of digital technology



169 Java Drive  
Sunnyvale, CA 94089-1016, USA  
TEL +1.408.572.5200 FAX +1.408.572.5454  
www.Infinera.com

to decouple the service layer from the underlying optical transmission infrastructure. It allows any transport service (e.g. GbE, 2.5G, 10G, 40G, etc) to be immediately provisioned to any network location without regard to optical engineering and without hardware modification inside the network. Bandwidth Virtualization enables a common pool of service-ready optical bandwidth to be used for a mix of service types and service data rates.

Sincerely,

A handwritten signature in black ink, appearing to read "Dave Welch".

Dave Welch  
Executive Vice President & Founder  
Infinera Corporation  
169 Java Drive  
Sunnyvale, CA 94089



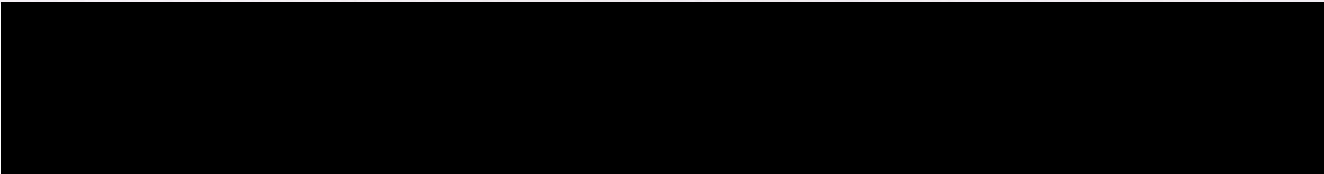


STEVEN CAMPBELL  
SR DIRECTOR  
AMERICAS FIELD FINANCE & OPERATIONS  
JUNIPER NETWORKS, INC.  
10 TECHNOLOGY PARK DRIVE  
WESTFORD, MA 01886  
PHONE: 1 978 589 0847  
EMAIL: SACAMPBELL@JUNIPER.NET

March 22, 2010

Internet2  
Doug Van Houweling, President and CEO  
1000 Oakbrook Drive  
Suite 300  
Ann Arbor MI 48104

Dear Mr. Van Houweling,



As an American manufacturer of advanced networking equipment, Juniper is pleased to support this proposal and to be the provider of the routers and switches that will be used to support the Internet2 portion of the US-UCAN infrastructure. Juniper's contribution and advanced products will include routers and switches that provide layer 2 and layer 3 functionality.

Juniper has been an Internet2 corporate partner and the principle provider of networking equipment (routers) to Internet2's national backbone since 2002. Juniper is also the network provider to numerous government, education and community networks in the US and around the world, including the US Department of Energy, Energy Sciences Network (ESnet), the Canadian national research & education network (CANARIE), the pan-European research & education network (GEANT), MERIT in Michigan, Arkansas Research & Education Optical Network (ARE-ONE), and many others.

Juniper delivers a high-performance network that enables the organizations, accelerating growth and innovation, while creating operational efficiencies and cost savings. Put simply, Juniper offers the industry's leading service-enabling network infrastructure. We provide the agility needed to take advantage of a broad range of service models — and to offer any type of service on any network across any device. Juniper's infrastructure extends the range of opportunities and enriches the end-user experience for clients. At the same time, it reduces the complexity, costs, and risks along the way.

Juniper's Donation will be distributed proportionately over three years against and contingent upon your ordering the Bill of Material shown as an appendix to this document. The donations will be disbursed following the payment by Internet2 for the materials ordered.

Letter to Internet 2

Page 2

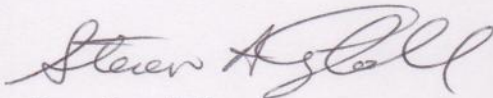
Internet 2 shall provide Juniper Networks with an official letter of receipt within 30 days from that date of receipt of any portion of the above discussed Donation. This receipt shall at a minimum contain:

- a) the name and address of recipient (donee),
- b) the purpose for which the Donation will be used (funding the US-UCAN infrastructure.
- c) the date that you received the Donation.

The receipt to Juniper Networks should be sent to: Juniper Networks, Attn: Legal Dept., 1194 North Mathilda Avenue, Sunnyvale, CA 94089-1206, with a copy to Juniper Networks, Attn: Tax Dept., 1194 North Mathilda Avenue, Sunnyvale, CA 94089-1206. The telephone contact is 408.745.2000

We sincerely appreciate the ongoing partnership with Internet2 and look forward to future success together.

Sincerely,



Steve Campbell  
Senior Director,  
Americas Field Finance and Operations

5 Pages

Withheld in their entirety  
pursuant to FOIA Exemption 4  
(5 U.S.C. § 552 (b)(4))



1201 Winterson Road  
Linthicum, Maryland 21090-2205

410 694 5700 phone  
410 694 5750 fax  
[www.ciena.com](http://www.ciena.com)

March 22, 2010

Douglas E. Van Houweling  
c/o U.S. UCAN Planning Group  
Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

Dear Mr. Van Houweling:

Ciena is pleased to offer its support for the United States Unified Community Anchor Network (U.S. UCAN) proposal and its key partners Internet2 and National LambdaRail. The U.S. UCAN will provide a resilient, redundant network and extend the reach of high performance networking to additional higher education institutions and to community colleges, healthcare and other underserved community anchor institutions. Currently many of these institutions, and the communities they serve, are challenged educationally, economically, and culturally by the unavailability of high performance networking to other institutions regionally and nationwide.

We at Ciena feel that this application, if awarded, will result in creation of a network that will serve as an ideal foundation in meeting the full range of end user networking requirements, supporting vital network interconnectivity needs of targeted institutions throughout the United States. We believe that the network can serve current network requirements for US research and higher education institutions, healthcare, and other anchor institutions with an approach that will support both large capacity needs of research centers while extending the network to locations that today are underserved by high performance bandwidth.

As a corporation headquartered in the United States focused on design, manufacture and delivery of fiber optic networking systems and related services, Ciena has a proud history of serving the research, higher education and healthcare communities across the nation. We look forward to the creation of a flagship network for community anchor institutions nationwide.

Sincerely,

James R. Kiefer  
Senior Director, Commercial Management  
Ciena Government Solutions

## **BTOP Comprehensive Community Infrastructure Pro Forma Financial Projections**

Please complete the Income Statement, Balance Sheet, Cash Flows, and NPV-IRR Table worksheets. Key assumptions used to formulate these financial projections should be listed in the Key Assumptions worksheet. Please note that these are **project-specific** projections, in contrast to the historical financial information which is provided at the organizational level.

**Please refer to the Comprehensive Community Infrastructure Grant Guidance for detailed instructions on the completing this attachment.**

Applicants are required to provide this attachment as an Excel file, and not to convert it to a PDF when submitting a copy of their application on an appropriate electronic medium, such as a DVD, CD-ROM, or flash drive. Applicants may make adjustments to the format of the templates as necessary to provide the most effective presentation of the data for their specific project, but should not remove major headings (*e.g.* Revenues and Expenses on the Income Statement) or provide less detailed information than would be required to complete the provided templates.

3 Pages

Withheld in their entirety  
pursuant to FOIA Exemption 4  
(5 U.S.C. § 552 (b)(4))

Revenue Assumptions	
Factor	Specific Metric Used in Analysis
Anchor Institutions Available to Serve	
US-UCAN Anchors served (year 1-3)	Reasonable & conservative estimate of number of anchors that will be connected in each year through US-UCAN
US-UCAN Anchors served (year 4-8)	Reasonable & conservative estimate of number of anchors that will be connected in each year through US-UCAN
US-UCAN Regional Networks Served	Reasonable & conservative estimate of number of regional networks that will be connected in each year through US-UCAN
US-UCAN Commodity Connections	Reasonable & conservative estimate of number of commodity ports that will be connected in each year through US-UCAN
Take Rate (should likely vary across 8-Year Forecast)	
US-UCAN Anchor Institutions	Conservative Adoption rate per year
US-UCAN Commodity ISP Fees	Conservative Adoption rate per year
US-UCAN Connector Fees	Conservative Adoption rate per year
Fee Setting	
US-UCAN Anchor Institution Fees	Fee set to institution ability to pay as part of larger fees

US-UCAN Commodity ISP Fees	Fee set as small pass-through
US-UCAN Connector Fees	Fees are a flat rate port fee for 1G and 10G connection po
State / Regional Network Connections	
Dual network connections	Number of connected state / regional networks
RON / SON fee ramp-up	Reduced membership fee in the first two years

Expense Assumptions	
Factor	Specific Metric Used in Analysis
Network Expenses	
Optical Transport Equipment	Competitive analysis among 6 optical vendors and selection of middle of the field cost factors for similar equipment
Optical Fiber Acquisition	Competitive analysis among multiple vendors and selection of most cost effective and complementary routes for the service areas.
Router Equipment	Competitive analysis among 2 router/switch vendors and selection of complementary equipment for resiliency and diversity
Maintenance	Competitive analysis of typical discounts for maintenance contracts from vendors and analysis of self-sparing and on-site service contracts for individual components of the equipment
Utilities	Cost per DC Amp, A&B Fed at collocation sites



Leasing	Annual Percentage Rate for Debt and effect on cash flow of financing versus direct purchase
Depreciation	Depreciation of optical equipment on a 5 year schedule and of router equipment on a 5 year schedule to allow for continuous refresh of the equipment.
Sales & Marketing	
Meetings	Ability to meet potential network participants and host them for forums to aggregate interests and facilitate adoption of UCAN services
Print & Communications Materials	Ability to develop and print materials to communicate the value proposition of US-UCAN to potential network participants
Salaries	
Customer Care & Billing	
Systems	Necessary billing capabilities to expand Internet2 billing capabilities
Personnel	Accounting staff to support US-UCAN
General & Administrative	
Professional Services	Legal and advocacy support to support US-UCAN at federal and state forums
Insurance	Ability to insure employees and operations of US-UCAN
Travel	Given the national focus of US-UCAN and requirements to market and support regional networks and professional associates within the anchor institution communities, travel budget adequate to support substantial travel by staff.
Adjustments	
Inflation	Increased costs due to inflation
Support	Increased support costs due to new US-UCAN anchor institutions
Usage	Anchor tenants will increase usage
Miscellaneous	
Interest Expenses	
Debt Instrument - Installment Note	Ability to receive a 5 year \$2-4M installment note, if required at 5% or less

Taxes	
Federal Tax Rate	N/A
Other Tax Rates	N/A

Rationale (Cite Basis)
<p>estimates assume a slow ramp start on revenue, particularly in the first 2 years. During these two years, we will be hiring staff, developing policies and coordinating with regional network providers to reach out to the anchor institutions. Because Internet2/NLR already serve over 66,000 anchor institutions that are funded through non US-UCAN fees, these years will also be a transition to the new US-UCAN revenues. Therefore projections in the BTOP proposal are conservative estimates of new US-UCAN participants beyond the existing 66,000 through the 3-year build out of this proposal and startup of US-UCAN as a marketing organization.</p>
<p>In years 4-8, we expect to complete transition of the existing 66,000 anchors to the new US-UCAN revenue structure and to begin substantial growth in to the remaining 158,000 anchors. Given the FCC national broadband plan's ambitions for a UCAN network, we expect reaching the total percentages projected by year 8 can be achieved or exceeded.</p>
<p>There are currently approximately 30 state and regional networks attached to Internet2 and NLR that will become part of the US-UCAN ecosystem. Based on the past 5 years and the new emphasis in the national broadband plan for anchor institution connectivity, we expect state-based initiatives in another 10 states to be likely in the next 8 years. Our estimates reflect this total of 40 networks conservatively.</p>
<p>The US-UCAN regional network providers already provide commodity services to many of the community anchors that US-UCAN will serve. Many of these partners have options for diverse commodity services at aggressive fees. US-UCAN will offer a complementary service offering to bring additional commodity internet services in to each service area. The regional network and last mile partners will be able to leverage these where it makes sense to extend their diversity and redundancy. US-UCAN assumes initial adoption of these services will be low and will grow as regional anchor networks extend to additional anchor institutions</p>
<p>We completed a workup of the number of anchor institutions in the categories of schools, higher education sites, libraries, public safety entities and health facilities and calibrated conservative adoption rates over the term of the grant based on existing adoption in Internet2 and NLR, round 1 btow award connectivity to anchors and a conservative view of what is reasonable over 8 years, We are confident our numbers can be met or exceeded and can provide several cross-checked rational for our estimates</p>
<p>Commodity adoption predictions are somewhat more volatile because of the changing marketplace for commodity which is compressing cost/resale ratios in the anchor institution market. The US-UCAN proposal relies on partnership with the regionals who also provide commodity outside of the US-UCAN structure to the potential subscribers. Our estimates predict a number of 1G, 5G and 10G subscriptions to commodity.</p>
<p>US UCAN connector fees are the actual port fees used to connect to the network infrastructure at 1G or 10G. The fees are set based on historically sustainable rates in the US anchor tenant community through Internet2 and NLR. We believe the take rate is achievable in that it represents a connection to each of the existing NLR and Internet2 regional networks (approximately 20) plus growth to approximately 10 additional anchor regional networks over the next 8 years. This assumption allows for newly funded BTOP proposals to be implemented and connected to US-UCAN, but does not assume substantial overbuilding or duplication of existing regional networks.</p>
<p>Because the US-UCAN network will indirectly connect to anchor insitutions through regional networks, we set the US-UCAN fees to be small enough that they will likely be insignificant in the fees charged to the anchors by the regional networks while still providing the necessary revenue for US-UCAN growth and operations. By example, \$250 per connected school building per year is a reasonable rate for inclusion within the regional networks' fee to connect that building. Likewise, for a library, \$50/yr to be part of US-UCAN is a reasonable rate for inclusion in their local loop fees provided by the regional partner.</p>

There is a simple \$1/mbps/mo surcharge proposed on pass-through of ISP rates. Given that US-UCAN and its regional network partners already purchase commodity services at nearly 75% below (<\$10/mbps/mo) the market rate (>\$40/mbps/mo) paid by most anchor institutions, we believe this surcharge is reasonable even as commodity prices compress in coming years.

US-UCAN will provide ports to regional network middle-mile and last-mile partners to connect to anchor institutions. Fees for ports will be set as flat rate based on substantial input from stakeholders in both US-UCAN and the regional partners to assure sustainability of US-UCAN and competitiveness of regional network partners.

This proposal adds diversity, resilience, and capability on top of the two national R&E networks (National LambdaRail and Internet2 in order to better serve anchor institutions like healthcare and public safety that will require high availability, even in times of natural disaster or other crisis situation. In order to provide this diversity of backbone coverage, state and regional networks will want to connect to both the National LambdaRail network and the Internet2 network. Many regional optical networks (RONs) do so already. Others may choose to do so to offer the anchor institutions they connect additional bandwidth, diversity, and reliability. In addition, BTOP is funding many state optical networks (SONs). These SONs will also want to connect to one or both national backbones. New connections are assumed as follows: two new connections in each of the first three quarters of 2011 and one in the last quarter of 2011, One in 2012, two in 2013, and one in 2014. These ten new connections are quite conservative because we would expect a large fraction of new BTOP SONs to dual connect as well as many of the following RONs: Nox, NYSERNET, MREN, OARNET, Northern Tier, MAGPI, MAX, and UEN.

To encourage additional connections by anchor institutions outside of higher education, we propose to phase-in new dual connection fees at 1/3rd rate in the first year (billed quarterly), 2/3rds rate in the 2nd year, and full fees in the 3rd year

#### Rationale (Cite Basis)

The US-UCAN evaluation team looked at six optical transport vendors and asked the top 3 to provide detailed quotes for the national footprint contemplated for BTOP. Among the 3, two were almost identical while another deemed to be slightly inferior was 10% lower. The technical team had selected one of the two similar costed systems, which is what we used for development of this proposal. We are confident the estimated costs in this proposal are supportable from multiple vendors.

The US-UCAN evaluation team looked at no less than 3 national fiber providers and several fiber locator services with regional or national networks provided from multiple providers. The evaluation looked at physical diversity from fiber already owned to assure a complementary footprint. The lowest cost options among the available options also had the appropriate routes. Letters of commitment and proposal packages are in hand from vendors are in hand and are executable upon award of funding.

The US-UCAN team looked at switches and routers from Juniper and Cisco and compared available discounts and proposal structures to assure budget projections. Detailed analysis and projections were completed for both providers.

All US-UCAN equipment will require annual equipment maintenance and remote hands support contracts. These contracts provide on-site replacement spares and remote hands to install and change parts provided by both on site spares and maintenance contracts.

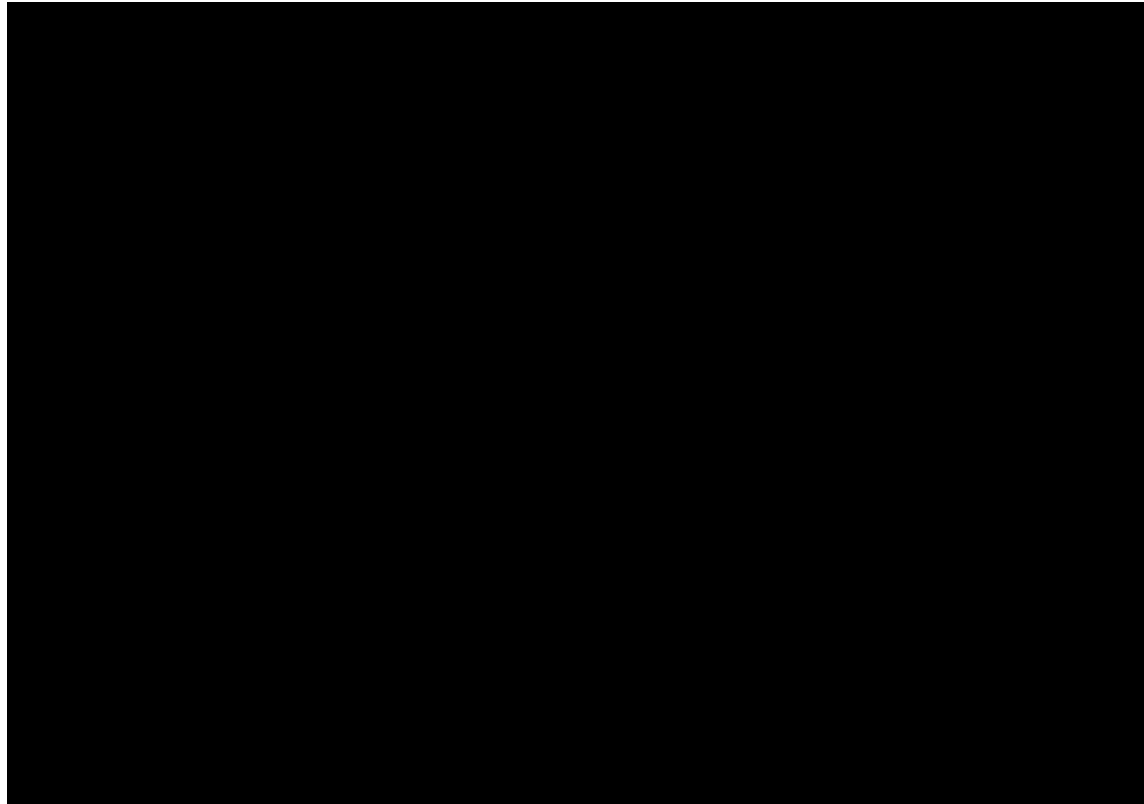
All US-UCAN equipment will require power in collocation facilities throughout the country. Power is measured in DC-ampres and is charged by the amp on a monthly basis. A detailed rack by rack and component by component accounting of all power draws from all proposed equipment is calculated across all collocation sites for all equipment to build the budget.

<p>The US-UCAN project will consider financing equipment purchases to increase cash balances while project income is ramping up. Annual interest income expense has been included in the expense budgets to allow for financing options</p>
<p>Internet2 and NLR have substantial experience in deploying advanced networks and use a depreciation schedule that assures the ability to replace equipment before it is end-of-lived by manufacturer's for their support contracts. For the optical transport equipment this is calculated at 5 years, for the routers and switches, it is calculated at 5 years.</p>
<p>Experience from running meeting services in Internet2 which supports meetings and dialogue with its participating organizations is the origin of the meeting services projections.</p>
<p>Experience from running communications and marketing in Internet2 which supports similar services for its participating network members serves as the experiential data for these budget line items</p>
<p>Salaries are projected to build marketing staff from a small initial staff to eventually support marketing and outreach staff throughout the country in partnership with the regional networks. Initial staff is sized to help startup US-UCAN, with growth in staff matched to future growth in revenues.</p>
<p>US-UCAN will use a fee system charged through its regional network partners who will be responsible for billing to their end-user customers. US-UCAN anticipates its billing load to be similar in terms of number of invoices to Internet2 and NLR's existing billing requirements.</p>
<p>US-UCAN will need to provide additional checks on participating institutions to assure compliance with participation agreements with its partners.</p>
<p>Legal expenses and professional advocacy during startup of US-UCAN and finalization of the FCC's broadband plan are expected to be larger in the startup years while incorporation, corporate policies, federal advocacy and agreement development with partners is completed.</p>
<p>As Internet2 and NLR are responsible for insurance and liabilities associated with the network assets, US-UCAN is responsible only for insurance related to employees of US-UCAN and support of its advocacy and business operations.</p>
<p>Travel estimates are based on Internet2's experience running a national organization with outreach and support requirements for participants in 50 states. Estimates allow for US-UCAN staff to aggressively engage and build support for US-UCAN participation during its development.</p>
<p>Where appropriate, costs have been increased by 5% per year to reflect anticipated inflationary increases. This is in line with historical trends that prevailed before 2009.</p>
<p>Support costs are increased at 7% per year to reflect anticipated growth in support activities; the reason it is limited to 7% is because much of the support will be handled by the RONS / SONs.</p>
<p>Usage (traffic on the network) is expected to increase as follows with 2010 = 10%; 2011: minimum of 7.5%, 2012: minimum of 15%, 2013: minimum of 20%, and an additional minimum of 5% per year. Actual growth is expected to be larger. The numbers given here are used to project the minimum income from additional capacity expected due to anchor tenants compared to R&amp;E usage today.</p>
<p>Internet2 may use an installment payment note to finance cash flow during the build out years of the proposal. Internet2 has been effective in both vendor and bank financing of similar types in the past and does not expect this to be a problem.</p>

Internet2 is a not for profit corporation and is exempt from federal taxes. Internet2 does pay federal fees, where appropriate for items like Universal Service.

Internet2 is a not for profit corporation and is exempt from many state and local taxes. Internet2 uses a telecommunications tax and fee specialist firm to coordinate state and local property taxes and universal service fees for assets throughout the country. Internet2 also has received tax exemptions in many localities across the country.

## NPV/IRR Table



**General Waiver Request of Discretionary Requirement Concerning Community  
Anchor Institutions Worksheet**

Summary Request

Contact Information: Kathleen Johnson, 1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104  
(734) 913-4264; (734) 913-4255

Project Information    United States Uniform Community Anchor Network (U.S. UCAN)

Type of Waiver Requested – General Waiver Request of Discretionary Requirement

Basis for Waiver Request (See also Exhibit A)

It is unclear if a waiver is needed here, but in an excess of caution, pursuant to Section X.N of the Second Round NOFA (and consistent with Sections 1.12.5.1, 7, and 18.14 of the CCI Grant Guidelines), a waiver is hereby requested, if it is necessary, with respect to completing the Community Anchor Institutions worksheet, as referenced in Section VI (D) (1) (k) (viii) of the Second Round NOFA (and as expressly referenced in Section 18.4 of the CCI Grant Guidelines). That is, a waiver might be necessary with respect to the response concerning the Community Anchor Institutions worksheet and corresponding Section VI (D) (1) (k) (viii) of the Second Round NOFA. See Part II, Department of Commerce, National Telecommunications and Information Administration, Department of Agriculture, Rural Utilities Service, Broadband Technologies Opportunities Program; Notices, 75 F.R. 3792, 3805 (Jan 22, 2010) (“Second Round NOFA”), Section VI (D) (1) (k) (viii); see also, Round 2 Grant Guidance, February 11, 2010, Broadband Technologies Opportunities Program, U.S. Department of Commerce, National Telecommunications and Information Administration (“CCI Grant Guidelines”), Section 18.4. The waiver requested herein, if even necessary, is for a discretionary requirement that is not mandated by statute or other applicable law.

Internet2 and NLR, working with collaborators across 50 states, have proposed a national infrastructure project called U.S. UCAN. U.S. UCAN will immediately serve and benefit (i) the 66,000 anchor institutions connected to Internet2’s and NLR’s national networks today through their state and regional collaborators (“RONs”), the (ii) 14,500 new anchor institutions which will be served by BTOP round one grants announced as of March 11, and (iii) an estimated 30-50,000 additional anchors that will be connected by additional round one and two BTOP projects.



### **A Waiver May Not Be Necessary Here**

An applicant completing the Community Anchor Institutions worksheet is required to provide, for each community anchor that will be directly connected by the proposed project, among other things, its facility name, name of organization running the facility, address of the facility, facility type, minority serving institution type, and project role. See CCI Grant Guidelines, Section 18.4; see also Second Round NOFA, 75 F.R. at 3805.

Pursuant to Section 18.4 of the CCI Grant Guidelines, the Community Anchor Institutions worksheet must be completed for “community anchor institutions that will be directly connected by the proposed project.” Thus, a waiver will not even be necessary here if NTIA concludes that under its instructions for the Community Anchor Institutions worksheet, because U.S. UCAN connects to anchors through a state or regional operating network or some other network, that the Community Anchor Institutions worksheet is inapplicable to this project. That is, if NTIA concludes that given the manner of the connections involved, U.S. UCAN does not “directly” connect to community anchor institutions (for purposes of providing responses to the Community Anchor Institutions worksheet), then a waiver is not necessary here.

### **If a Waiver is Necessary, it Should be Granted**

If a waiver is necessary, NTIA should grant the waiver requested herein, as extraordinary circumstances exist warranting such grant. As discussed in further detail in Exhibit A to this waiver request, which is hereby incorporated by reference, as a result of U.S. UCAN’s national scope and other highly beneficial attributes, this project will provide more far reaching benefits than any other BTOP infrastructure proposal and will greatly advance the purposes of BTOP.

This waiver request, if necessary, should be granted in light of the tremendous benefits of this project as detailed in Exhibit A, and because the national scope of U.S. UCAN makes it unduly burdensome to complete the Community Anchor Institutions worksheet. That is, if NTIA concludes that the Community Anchor Institutions worksheet requires a response for all community anchors that connect to U.S. UCAN through a state or regional operating network or some other network, then a waiver is necessary and should be granted. U.S. UCAN will benefit more than 100,000 community anchors initially (and will eventually benefit all or virtually all anchors), and thus it would be unduly burdensome to complete the Community Anchor Institutions worksheet for each community anchor.

Moreover, what makes this U.S. UCAN proposal extraordinary is, among other things, that it is an infrastructure proposal that benefits anchors throughout the nation (initially more than 100,000 U.S. anchors and eventually all or virtually all of them). Accordingly, given the tremendous number and percentage of U.S. anchors benefited, the identity of each of those anchors should be of far less importance than in any application that

benefits only a few hundred anchors. The reason for this is simple: where so many anchors are benefited the project can be evaluated based on its overall benefit to the nation as a whole, rather than as to one, or a couple, of particular communities. And given the numbers and percentages of anchors benefited, there is no doubt that a multitude of anchors in unserved and underserved areas will benefit from the project, and as noted above eventually all or virtually all anchors will benefit. In addition, we do provide the total number of anchors that we anticipate will benefit, and we also classify them by type of anchor.

**Clarification**

Finally, as to a related matter concerning community anchors, we also wish to clarify one of our responses to another application question. In response to the application question concerning “entering the number of community anchor institutions served by [the] project,” we took the approach consistent with our understanding of the word “served” as it relates to backbone networks, and of providing more information, rather than less. Accordingly, we provided totals of the number of community anchors that we anticipate will be served by the project. We recognize that the instructions in Section 11 of the CCI Grant Guidelines may indicate that the use of the phrase “anchor institutions served by [the] project” could be intended to include only those anchors that connect to the network without connecting through another network first. But the example in the CCI Grant Guidelines involved connections to a customer, and not another network, and also did not involve a national backbone network such as U.S. UCAN. Therefore it is unclear to us how NTIA would want us to respond to the question regarding the “number of community anchor institutions served by [the] project.”

Accordingly, as described above, we responded in a manner that was consistent with how the phrase “served” is used for backbone networks, and consistent with seeking to provide NTIA with more information, rather than less. That is, we believed that it would be most helpful to NTIA in evaluating our proposal to provide NTIA with as much information as possible on the number of anchors that we will “serve” – i.e., that will benefit from U.S. UCAN, which will either initially or eventually reach those anchors. As mentioned in the application, all anchors would connect to U.S. UCAN through a state or regional operating network or some other network.

\* \* \* \* \*

If NTIA requires any additional information regarding this matter, we will make every effort to provide it.

**General Waiver Request of Discretionary Requirement Concerning Census Tracts  
Listed as Part of the Service Area**

Summary Request

Contact Information: Kathleen Johnson, 1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104  
(734) 913-4264; (734) 913-4255

Project Information United States Uniform Community Anchor Network (U.S. UCAN)

Type of Waiver Requested – General Waiver Request of Discretionary Requirement

Basis for Waiver Request (See also Exhibit A)

While we do not believe a waiver is needed here, in an excess of caution, pursuant to Section X.N of the Second Round NOFA (and consistent with Sections 1.12.5.1, 7, and 18.14 of the CCI Grant Guidelines) a waiver is hereby requested, if necessary, with respect to the possibility that the proposal is over-inclusive as to its listing of census tracts in the service area. Thus, a waiver might be needed with respect to that response and corresponding Sections VI (D) (1) (c) and VI (D) (1) (k) (v) of the Second Round NOFA. See Part II, Department of Commerce, National Telecommunications and Information Administration, Department of Agriculture, Rural Utilities Service, Broadband Technologies Opportunities Program; Notices, 75 F.R. 3792, 3804-05 (Jan 22, 2010) (“Second Round NOFA”), Section VI (D) (1) (c) and VI (D) (1) (k) (v); see also, Round 2 Grant Guidance, February 11, 2010, Broadband Technologies Opportunities Program, U.S. Department of Commerce, National Telecommunications and Information Administration (“CCI Grant Guidelines”), Section 10. The waiver requested herein, if even necessary, is for a discretionary requirement that is not mandated by statute or other applicable law.

Internet2 and NLR, working with collaborators across 50 states, have proposed a national infrastructure project called U.S. UCAN. U.S. UCAN will immediately serve and benefit (i) the 66,000 anchor institutions connected to Internet2’s and NLR’s national networks today through their state and regional collaborators (“RONs”), the (ii) 14,500 new anchor institutions which will be served by BTOP round one grants announced as of March 11, and (iii) an estimated 30-50,000 additional anchors that will be connected by additional round one and two BTOP projects. As a result, the majority of census tracts in the country will also benefit from U.S. UCAN. In addition, it is our intent for U.S. UCAN to reach the remaining community anchors and census tracts as well, and while we believe that will occur, it is impossible to know with certainty because it depends upon which other networks agree to interconnect with U.S. UCAN.

**We Believe a Waiver is Not Necessary Here**

In light of the foregoing, while we seek a waiver in an excess of caution, for three reasons we do not believe a waiver is necessary here. First, for this national infrastructure project we have taken the conservative approach of listing all of the census tracts in the U.S. because the U.S. UCAN is intended to impact all census tracts in the country. See CCI Grant Guidelines, Section 10 (service areas “are intended to reflect the geographic areas to which a project’s impact will extend”). As indicated above, the majority of census tracts will be impacted, and all of the others very well may be impacted also.

Second, given that we are open to interconnections that will enable community anchors in every census tract in the country to benefit from U.S. UCAN’s unique and cutting-edge national middle mile 100 gigabit network, every census tract may benefit from the project. That is, there are no census tracts that we can conclude will not benefit from the project, and thus listing all census tracts was proper for this reason as well.

Third, and in any event, a waiver should not be necessary here because we have taken the conservative approach of including every census tract that will be impacted, which is what is required. That is, the listing of census tracts in the proposal is either completely accurate, or at most, somewhat over-inclusive. Given that it is impossible to know for some census tracts whether they will benefit during the project period (at the very least, the majority will benefit), we have listed them all. Our reasoning is as follows: where absolute certainty as to the accuracy of the response is not possible, it is better to respond on the side of potential over-inclusiveness of census tracts, rather than under-inclusiveness.

### **If a Waiver is Necessary, it Should be Granted**

If, notwithstanding the foregoing, NTIA concludes that a waiver is necessary with respect to the response in the proposal relating to the potential over-inclusiveness of the listing of census tracts for the service area, and corresponding Sections VI (D) (1) (c) and VI (D) (1) (k) (v) of the Second Round NOFA, NTIA should grant the waiver. Extraordinary circumstances exist warranting such grant. As discussed in further detail in Exhibit A to this waiver request, which is hereby incorporated by reference, as a result of U.S. UCAN’s national scope and other highly beneficial features, this project will provide more far reaching benefits than any other BTOP infrastructure proposal and will greatly advance the purposes of BTOP. If a waiver here is even necessary (and we do not believe it is for the reasons stated above), it is only necessary because the national scope of U.S. UCAN, and the interplay with third parties (i.e., which additional networks will also interconnect with U.S. UCAN) makes it impossible for us to know with certainty, which census tracts, if any, will not benefit from U.S. UCAN. That is, we know that the majority will benefit, but as to the remaining census tracts, while we believe they will also benefit it is impossible for us to know with certainty at this time, as it depends upon which other networks agree to interconnect with U.S. UCAN.

What makes this U.S. UCAN proposal extraordinary is, among other things, that it is an infrastructure proposal that benefits census tracts throughout the nation (initially the majority of census tracts and eventually all or virtually all of them). Accordingly, given

that the majority of census tracts will benefit, the identity of each of those census tracts should be of far less importance than in any application that benefits only a relatively small number of census tracts in one given location. The reason for this is simple: where so many census tracts are benefited, the project can be evaluated based on its overall benefit to the nation as a whole. In addition, given that the majority of census tracts will be impacted by this project, there is no doubt that a multitude of census tracts in unserved and underserved areas will benefit from the project, and as noted above eventually all or virtually all census tracts will benefit.

Moreover, we understand that having accurate information with respect to census tracts is helpful with respect to determining which other networks, if any, may already be adequately serving the needs of community anchors that would otherwise be served by a proposed project. But here, for the reasons set forth in Section 1 of Exhibit A, no other entity has a network in place or is building a network that can address the community anchor needs of national connectivity for advanced broadband applications that will be served by U.S. UCAN.

In sum, this is an extraordinary project as detailed in Exhibit A, and we are not aware of any additional information that can be provided on this issue at this time, and thus a waiver, if needed, should certainly be granted. If, however, NTIA needs more detail, we will work diligently with NTIA to provide whatever information it may need.

## Exhibit A to Waiver Requests

If one or both of the waivers are even necessary, NTIA should grant the waiver requests submitted in connection with U.S. UCAN, and for which this exhibit is incorporated by reference. In addition, if NTIA determines that any other waivers are necessary with respect to U.S. UCAN, it should on its own initiative grant those waivers as well to the extent permitted by law. (NTIA is allowed to issue waivers even without a request).

The reason that NTIA should grant or issue any waivers with respect to U.S. UCAN, to the extent necessary and permitted by law, is that the reason such waivers may be necessary is because the BTOP application was designed with a view towards local infrastructure applications, but this project is a unique and terrific national infrastructure application. It will provide extraordinary benefits to this country's broadband efforts with respect to community anchors. As described below,

1. U.S. UCAN will address a critical broadband problem for community anchors on a national basis that no other BTOP project will address.
2. U.S. UCAN will benefit more than 100,000 community anchors initially, which is orders of magnitude more than other BTOP infrastructure projects.
3. U.S. UCAN is the glue required to connect the winning BTOP projects to each other, and to 66,000 other anchors, thereby rendering these projects far more valuable to their users.
4. U.S. UCAN dovetails perfectly with the Federal Communication Commission's National Broadband Plan, and would jump start the implementation of a critical recommendation in the National Broadband Plan.
5. U.S. UCAN addresses a primary purpose of BTOP to a far greater extent than any other BTOP infrastructure project, and would also in one fell swoop greatly advance the objectives outlined in the Second NOFA.
6. U.S. UCAN also addresses the other four purposes of BTOP.
7. U.S. UCAN will be a building block that spurs more local investment even for projects and areas that were not funded under BTOP.
8. U.S. UCAN will act as a test bed for new technologies and will greatly support scientific discoveries.
9. U.S. UCAN compliments and supports sustainable broadband adoption programs.

## **1. U.S. UCAN will Address a Critical Broadband Problem for Community Anchors on a National Basis that No Other BTOP Project will Address**

U.S. UCAN will address a critical broadband problem on a national basis that no other BTOP project will address. Community anchors must be able to engage in advanced broadband applications with other anchors throughout the nation, and not just with a tiny percentage of anchors, i.e., just nearby anchors. The other BTOP infrastructure awards do not address this problem, as they only ensure that anchors can engage in advanced broadband applications with nearby anchors. Moreover, the commercial backbone is also not a solution to this problem. U.S. UCAN, however, is a solution, as explained herein.

For each and every community anchor, the benefit that it and its constituents derive from having advanced broadband capabilities depends upon which, and how many, other institutions that anchor can engage in such advanced applications. To the extent that the percentage of anchors for which a community anchor can engage in advanced broadband applications is extremely small, then the benefit is also limited. But where anchors have “national” connectivity – that is, can engage in advanced broadband applications with other anchors throughout the country -- rather than just “local” connectivity, with respect to applications such as telepresence, distance education, telemedicine and job training, the benefits are extraordinary.

For example, with national connectivity for advanced broadband applications, (i) countless rural hospitals will not be limited to engaging in advanced applications with just nearby hospitals, but can do so with the nation’s top hospitals; (ii) emergency 911 centers will be able to exchange data nationwide; (iii) underprivileged youth can take a course, or learn a life skill, from the best instructors in the nation; and (iv) unemployed citizens can, via video conferencing, interview for jobs, or receive job training, from anywhere in the U.S., rather than just in their local area. In short, connection to an advanced nationwide network for advanced broadband applications can transform healthcare, education, public safety and libraries.

With respect to health care, for example, to receive the best neonatal care, fragile, premature babies born at Adena Regional Medical Center in rural Ohio used to have to endure a costly, dangerous helicopter ride to Nationwide Children’s Hospital in Columbus, as well as separation from their mothers, often not healthy enough to make the 80-mile trip. Today, however, thanks to high-definition videoconferencing, Columbus-based specialists examine babies, review x-rays and lab results, and consult with Adena doctors without moving the babies. But, there is absolutely no reason that other rural hospitals throughout the country should not have this same benefit as Adena. And with national connectivity for advanced broadband applications, Nationwide Children’s Hospital could offer its expert neonatal care to rural hospitals throughout the U.S.

Each of the other BTOP infrastructure proposals of which we are aware, concern upgrading or building more local networks, and therefore (while beneficial) do not

resolve this critical problem of ensuring national connectivity for anchors with respect to advanced broadband applications.

The commercial backbone is also no answer here for a variety of reasons. Because of commercial providers' business models, their networks deliberately run near capacity, which ensures that they maximize profits. This, however, produces congestion, which in turn causes packet loss and increases jitter. Congestion, packet loss and jitter, however, cause completely unreliable and unacceptable performance for community anchors that want to use advanced broadband applications. For example, a high definition two-way video conference (telepresence) will not work on a congested network. In addition, because commercial providers do not share network performance data (they consider it competitive and proprietary information), commercial networks also do not provide the necessary transparency required to immediately trouble-shoot application-crippling problems across multiple networks. Yet, with respect to critical, time-sensitive advanced broadband applications, community anchors need to have such problems immediately resolved. In addition, commercial networks also do not generally offer next generation Internet technologies like IPv6 and IP multicast, which are critical to certain advanced applications (e.g., IPv6 is essential to the transferring of electronic medical records).

U.S. UCAN, however, is a solution to the problem of national connectivity for community anchors with respect to advanced broadband applications. Internet2's and NLR's national networks, which would be the foundation for U.S. UCAN, currently permit more than 66,000 U.S. community anchors to connect to each other for advanced broadband applications. These networks have already been doing the work of ensuring national connectivity for advanced applications for nearly 1/3 of the anchors in the country.

But that will change for the worse without the BTOP funding requested for U.S. UCAN, which funding would support the addition of 11,811 new, diverse 100 Gbps-capable route miles, and support upgrades over 10,000 existing network route miles to 100 Gbps. This BTOP project is critical because these national networks urgently need significant upgrades and extensions (i) to support the ever-growing number of users and the increase in the bandwidth needed for continually-evolving advanced applications, and (ii) in light of the BTOP program itself, which will drive even further network traffic to these national networks, as the BTOP winners, who will collectively add tens of thousands of anchors to their networks, either already connect to these national networks (e.g., Merit, MCNC, and I-Light) or almost certainly will want to do so.

With U.S. UCAN, all of the benefits of national connectivity for advanced broadband applications for community anchors referred to above (as well as many other benefits) will be realized. For example, U.S. UCAN will connect over 58,000 medical and healthcare providers through regional partners and projects funded by the FCC's Rural Health Care Pilot Program. Providers will be able to share critical resources with each other, and connect to over 100 university medical centers that deliver cutting-edge care, clinical research data and medical education for doctors and other healthcare workers. Through U.S. UCAN, they will also have access to the National Institutes of Health, the



National Library of Medicine, the Mayo Clinic and the U.S. Department of Veterans Affairs.

**2. U.S. UCAN will Benefit More than 100,000 Community Anchors Initially, which is Orders of Magnitude More than Other BTOP Infrastructure Projects**

U.S. UCAN will benefit orders of magnitude more community anchors than other BTOP infrastructure projects. It will benefit more than 100,000 community anchors initially (and eventually all or virtually all of the 200,000+ U.S. anchors) in comparison to other projects that benefit 100's of anchors. It will benefit a multitude of anchors in all 50 states initially, including schools, community colleges, universities, libraries, health institutions, public safety entities, local government, public media and other community centers. Given that it will benefit nearly half of the U.S. community anchors initially and eventually all or virtually all anchors, it will certainly benefit numerous community anchors in unserved and underserved areas.

U.S. UCAN will immediately serve and benefit the 66,000 anchor institutions connected to Internet2's and NLR's national networks today through their state and regional partners ("RONs"), the 14,500 new anchor institutions which will be served by BTOP round one grants announced as of March 11, and an estimated 30-50,000 additional anchors that will be connected by additional round one and two BTOP projects. Thus, U.S. UCAN will ensure that initially more than 100,000 anchors, including those connected to round 1 winners -- which otherwise would have only local connectivity for advanced applications -- will have the needed national connectivity. Eventually all or virtually all anchors will have such national connectivity using U.S. UCAN.

In terms of people benefited by this project, based on the percentages of currently connected higher education and K12 schools alone, we estimate that the 66,000 currently-connected community anchors serve as many as 25 million people (50% of the 18 million students in higher education, 33% of the 48 million K12 students). When both rounds of BTOP projects are added to U.S. UCAN, the reach will extend to well over 50 million people, particularly when you add in users of libraries, and employees and patients in hospitals.

**3. U.S. UCAN is the Glue Required to Connect the Winning BTOP Projects to Each Other and to 66,000 Other Anchors, Thereby Rendering these Projects Far More Valuable to their Users**

As discussed above, U.S. UCAN would tie together all anchor networks funded by BTOP, link them to each other, and to the 66,000 anchors already using Internet2's and NLR's networks, and provide all of those anchors with national connectivity for advanced broadband applications. As a result, all of those anchors will have unique and cutting-edge national middle mile 100 gigabit interconnect optimized for community anchor use of advanced broadband applications.

And by gluing the winning BTOP projects together as a whole, and to 66,000 other anchors, U.S. UCAN makes each of those projects far more valuable to users. If U.S. UCAN is funded, all of the community anchors connected to other winning BTOP projects will be able to engage in advanced applications with each other, and with anchors throughout the nation, rather than just with their local anchors. U.S. UCAN does not compete with other BTOP projects; it completes them.

The U.S. UCAN national backbone will reach anchor institutions through their partner RONS, as well as other BTOP-funded anchor networks. For example, current partners for Internet2 and NLR include Merit in Michigan, MCNC in North Carolina, and I-Light in Illinois – all first round BTOP winners. The U.S. UCAN will allow high performance traffic to flow between these winners, nationwide, who are already connected to the network, but who also need these national networks to be upgraded.

We will also permit, at very reasonable costs, all other BTOP-funded anchor networks to connect to U.S. UCAN, as well as anchor networks (schools, libraries) operated by local governments and other non-profits. Anchor institutions will want to be connected to those networks, as they will receive immediate benefits from U.S. UCAN – high performance connectivity both nationally and internationally, rather than just locally.

#### **4. U.S. UCAN Dovetails Perfectly with the Federal Communication Commission’s National Broadband Plan and Would Jump Start the Implementation of a Critical Recommendation in the National Broadband Plan**

U.S. UCAN will make BTOP a national success by not only tying together all of the other BTOP local anchor institution projects into a national whole, but by jump starting the expansion of a model that will enable, post-BTOP, anchor institutions to get the advanced broadband national connectivity, applications and services they need for years to come.

As discussed above, this proposal expands the model used today by Internet2 and NLR for 66,000 anchor institutions -- of ensuring national connectivity for them for advanced broadband applications -- to 45,000 to 65,000 more anchors initially, and eventually all or virtually all anchors (while also ensuring there are sufficient upgrades to continue to adequately serve the original 66,000 anchors). Yet, it is precisely this model of Internet2, NLR and the Research & Education Community that the Federal Communications Commission stated in its National Broadband Plan (NBP) “should be expanded to other community institutions” and that doing so “would offer tremendous benefits” including “lower costs and a far more efficient and effect utilization of broadband by these [anchor] institutions.” See Supplemental Information.

In the NBP, the FCC discusses the critical issues surrounding connectivity for anchor institutions and recommends a national, non-profit, coordinating entity to carry these tasks forward. Specifically, in Recommendation 8.22 of the NBP, the FCC states that Internet2 and NLR have performed these kinds of functions in the past for their

constituencies, and recommends that the “Research and Education (R&E) model” be expanded to cover all other anchor institutions.

This proposal creates a joint venture between these two experienced organizations, Internet2 and NLR, with a governance structure that would include major anchor institution “user” communities – libraries, K12 schools, community colleges, health organizations, and public safety. U.S. UCAN is designed not only to provide a high performance national network infrastructure for anchor institutions, but to put in place the organizational and human infrastructure needed to implement the FCC’s vision as stated in the NBP. Funding the U.S. UCAN proposal would greatly further the government’s objectives in this area and accelerate reaching those goals.

The benefits of this model are outlined in the NBP: aggregation of demand, “smart buying” of connectivity for anchors, collaboration on network design, facilitating use of advanced applications, sharing resources, and training to make more effective and cost efficient utilization of broadband connectivity for anchor institutions. Internet2 and NLR provide these benefits today to their communities – and could expand to serve a broader set of anchors and disciplines in rapid fashion if U.S. UCAN is funded under BTOP. In sum, if funded, these networks will jump start the goal, envisioned in the NBP, of connecting all 200,000+ U.S. community anchors to a high-performance network enabling them to perform advanced broadband applications with all other anchors throughout the nation.

**5. U.S. UCAN Addresses a Primary Purpose of BTOP to a Far Greater Extent than Any Other BTOP Infrastructure Project, and Would Also in One Fell Swoop Greatly Advance the Objectives Outlined in the Second NOFA**

One of the five purposes of BTOP concerns supporting community anchors broadband needs. Each of the other BTOP infrastructure projects that we are aware of will support, to a certain extent, the needs of a few hundred community anchors. But there are more than 200,000 community anchors in the U.S. Thus, it would be extremely beneficial to BTOP if there was at least one infrastructure proposal that would support a far greater number of community anchors – i.e., provide more bang for the buck. And that proposal is U.S. UCAN. As discussed above, it will initially provide tremendous benefits to over 100,000 community anchors, and eventually to all or virtually all U.S. community anchors. While the other BTOP award winners provide benefits to anchors, none of them can match the breadth of the benefits that would be provided by U.S. UCAN, which will provide benefits on a national – and not just a local – scale. Thus, U.S. UCAN benefits one of the five purposes of BTOP – concerning supporting the broadband needs of community anchors – to a far greater extent than any other BTOP infrastructure project.

Indeed, this project has broad significance in every state, and for every type of community anchor. Accordingly, it will have a more far reaching – and national -- impact on health care delivery, education and children than any other single BTOP infrastructure project.

Moreover, many other groups recognize the tremendous benefits that U.S. UCAN would provide. For example, the American Association of Community Colleges (AACC) supports this proposal. In its letter of support, AACC states that “The U.S. UCAN proposal will provide the national infrastructure that will serve as the foundation for connecting all of the nation’s community anchor institutions, including community colleges, to each other through a linked, high-performance network that enables advanced applications... U.S. UCAN would jump start an effort to get all community colleges connected to each other, nation-wide at gigabit speeds or higher...”

In addition, NTIA previously announced that for this round of BTOP funding it will focus its infrastructure grants on projects that emphasize new or substantially upgraded connections to community anchors. NTIA found that by adopting an approach of focusing on broadband to community anchors, it will “maximize the benefits of BTOP funds.” Given the focus on community anchors in this round of funding and the objective of upgrading their connections, what better way to implement that goal than to fund a project that will improve connections for more than 100,000 community anchors in one fell swoop.

## **6. U.S. UCAN also Addresses the Other Four Purposes of BTOP**

With respect to supporting the broadband needs of public safety, not only does the National Emergency Number Association (NENA) support this proposal, but NENA is proposing a Next Generation 911 project (D:6873) recommending use of U.S. UCAN to connect emergency 911 centers (PSAPs) nationwide. That is, if funded, U.S. UCAN will enable the linking of PSAPs as part of an effort to create a “Next Generation 911” system (proposed by the FCC in its NBP and a pilot proposed to BTOP by NENA). A Next Generation 911 system will significantly enhance emergency response and public safety.

With respect to supporting the provision of broadband access in unserved and underserved areas, U.S. UCAN will provide significant benefits in such areas. For example, U.S. UCAN will join the nation’s public libraries to each other and to other community facilities and resources, and many unserved or underserved citizens use public libraries and public computer centers to search for jobs and for other employment-related services. U.S. UCAN-connected libraries with videoconferencing equipment will be able to offer face-to-face remote job interviews as well as job training from anywhere in the country.

Given that more than 100,000 community anchors will benefit immediately from U.S. UCAN (which are approximately half of the community anchors in the U.S.), countless underserved and unserved consumers will also benefit from U.S. UCAN. Moreover, the resulting fiber builds from U.S. UCAN can be configured to share fiber strands between R&E networks and private ISPs offering expanded broadband service to unserved and underserved consumers.

Finally, as the following three sections below indicate, U.S. UCAN also greatly supports the purpose of BTOP concerning stimulating demand for broadband, economic growth and job creation.

## **7. U.S. UCAN will be a Building Block that Spurs More Local Investment Even for Projects and Areas that Were Not Funded Under BTOP**

As discussed earlier, U.S. UCAN will greatly benefit other BTOP infrastructure projects that receive funding (i.e., the “BTOP winners”). That alone makes U.S. UCAN extremely special. But what makes U.S. UCAN even more special is that it will also benefit areas and projects that did not receive funding under BTOP (i.e. the “BTOP losers”).

Both logic and past history indicate that U.S. UCAN will be a building block that spurs more local investment even for non-funded BTOP projects. Such projects will be more valuable if they are connected to non-profit networks that can support national connections for the advanced broadband applications anchors need. That is, there is more incentive to build-out the local networks for anchors if they can be connected to other anchors throughout the country (rather than just to local anchors) for advanced broadband applications.

Past history supports the same conclusion – i.e., U.S. UCAN will be a multiplier that leads to far more local projects. Internet2 and NLR have over 12 years' experience providing a high-performance national network backbone to the R&E community. During that time, the availability of Internet2 and NLR networks stimulated over \$1 billion in local investments to acquire nearly 30,000 miles of local and regional fiber in over 30 states. The resulting RONS are operated by many BTOP first-round winners. Just as investment in RONS followed the “pull” of the national backbones, we can expect another round of investment to be triggered by U.S. UCAN.

Accordingly, if U.S. UCAN is funded, NTIA can accurately state that it has taken important steps that will benefit not just some anchors in the country – but all anchors in the U.S. And no community anchor in the U.S. will be able to reasonably claim that it will not be benefited at all by BTOP if U.S. UCAN is funded.

## **8. U.S. UCAN will Act as a Test Bed for New Technologies and will Greatly Support Scientific Discoveries**

U.S. UCAN will serve as a testbed for new advanced network technologies, such as dynamic circuit provisioning, and expanding the frontiers of Internet technology. In addition, when used by research universities, this project will support the growing demands of data-intensive e-science, thereby, among other things, helping to uncover new energy sources, reduce cardiovascular disease, help with cancer research, strengthen programs that combat terrorist threats, and develop new materials for numerous industries.

Both new technologies and scientific discoveries have for decades been a significant driver of innovation, new applications, economic growth and job creation. They will be again as well with the deployment of U.S. UCAN if this proposal is funded.

## **9. U.S. UCAN Compliments and Supports Sustainable Broadband Adoption Programs**

This project compliments and supports the activities of sustainable broadband adoption programs. A significant percentage of people who do not use broadband claim that they do not believe it is beneficial to them. U.S. UCAN, by providing national connectivity for community anchors, will make broadband far more valuable to anchors and their constituents. Moreover, by enabling advanced applications with nationwide connectivity in community colleges, schools, and libraries, U.S. UCAN will expose millions of Americans to new and productive uses of broadband, stimulating demand and broadband adoption. In short, far more people will want to use broadband if its benefits are greater, and that will certainly be true if this project is funded. Thus, U.S. UCAN addresses one of the main barriers to greater broadband adoption, thereby complimenting and supporting sustainable broadband adoption programs.

\* \* \* \* \*

Three final points are worth noting.

First, Internet2, NLR, and their over 30 regional and state networking partners (RONs) have a very successful and long history of providing advanced networking to community anchors. Individuals associated with these organizations played key roles in developing NSFNet in the 1980's, and transforming NSFNet into the commercial Internet in the 1990's. For nearly 15 years, Internet2 and NLR networks have been the solution for RONs connecting to community anchors seeking advanced broadband capabilities. Today, they provide cutting-edge networking for the research community, and have expanded their reach to K12 schools, community colleges, libraries, museums, science centers, performing arts centers, hospitals, and other health clinics. They know the needs of anchors, the technology and applications, and how to ensure sustainable business models.

Second, this project involves a terrific public/private partnership. The named partners include Internet2, NLR (private not for profit), the Northern Tier Networking Consortium (public partners), Indiana University Information Technology Services (IU) (public partner), Cisco, Infinera, and Juniper (private partners), and other partners include over 30 RONs. These partners provide technology, equipment and connections to the anchors.

Finally, this proposal commits to the open Internet recommendations of BTOP and the FCC, as U.S. UCAN would accept traffic from other BTOP anchor projects that provide connections or access to transport for business Internet traffic or even for consumer residential service in their communities. Moreover, U.S. UCAN further commits further to making its networks completely transparent. That is, U.S. UCAN will have measurement and trouble shooting tools that allow all operational aspects of the network to be published on the web in near real-time.



**THE FCC NATIONAL**  
**BROADBAND PLAN**

**[EXCERPTS]**



and school system.<sup>144</sup> Because broadband networks—particularly fiber optic networks—demonstrate large economies of scale, bulk purchasing arrangements for forms of connectivity like second-mile and middle-mile access can drive down the per-megabit cost of such access considerably. As a result, policy restrictions that impede the ability of school networks funded by E-rate to share capacity with hospitals funded by the Rural Health Care program, or the public safety system which may be funded by state and other federal sources, drive up the cost of connectivity for those institutions and for others in the community.<sup>145</sup>

At least 30 states have established state networks operated by public agencies or the private sector to aggregate demand among schools, universities, libraries, and state and local government agencies to reduce costs.<sup>146</sup> Better collaboration among government agencies could reduce the potential for waste of federal resources and maximize available federal funding for broadband-related community development projects. Federal and state policy should not preclude or limit networks that serve one category of institution from serving other institutions and the community as a whole.<sup>147</sup> The FCC should explore creative solutions to help schools, libraries and health care providers reduce their broadband-related costs by aggregating demand with other community institutions so that they can purchase the maximum amount of broadband with their USF dollars. For instance, the FCC should remove barriers to the shared use of state, regional, Tribal, and local networks by schools, libraries and health care providers when such networks provide the most cost-efficient choice for meeting broadband needs.<sup>148</sup>

Because community anchor institutions are large—if not the largest—potential consumers of broadband in even the smallest of towns, adopting these recommendations will not only expand broadband options for the institutions themselves but also will improve availability in the community as a whole.

**RECOMMENDATION 8.21:** Congress should consider amending the Communications Act to provide discretion to the FCC to allow anchor institutions on Tribal lands to share broadband network capacity that is funded by the E-rate or the Rural Health Care program with other community institutions designated by Tribal governments.

In recognition of the unique challenges facing Tribal communities, Congress should consider amending the Communications Act to provide discretion to the FCC to define circumstances in which schools, libraries and health care providers that receive funding from the E-rate or Rural Health Care program may share broadband network capacity that is funded by the E-rate or the Rural Health Care program with other community institutions designated by Tribal governments.<sup>149</sup>

**RECOMMENDATION 8.22:** The federal government and state governments should develop an institutional framework that will help America's anchor institutions obtain broadband connectivity, training, applications and services.

Earlier in this chapter, the plan proposes a path to ensure that homes in high-cost areas have access to broadband, largely by reforming the High-Cost program and intercarrier compensation. In other chapters, the plan proposes reforms to USF to improve connectivity to schools, libraries and health care providers. Government should take additional steps to enable these and other community institutions to better utilize their connectivity to provide a better quality of life for all people.

One approach to ensure connectivity for facilities that serve public purposes is to give a non-profit institution the mission and capability to focus on serving the broadband needs of public institutions, including health clinics, community colleges, schools, community centers, libraries, museums, and other public access points. In the past, the connectivity needs of research institutions have been met by non-profit research and education (R&E) networks such as Internet2 and National LambdaRail. R&E networks played a central role in the development and growth of the Internet itself through ARPANET and later NSFNET. Today, similar R&E networks provide high-speed (10 Mbps-1 Gbps) connectivity to 66,000 community anchor institutions.<sup>150</sup> But more can be done—it is estimated that only one-third of anchor institutions have access to an R&E network today.<sup>151</sup> This model should be expanded to other community institutions.

A group of R&E networks, including Internet2 and the National LambdaRail, with the support of the National Association of Telecommunications Officers and Advisors and the Schools, Health and Libraries Broadband Coalition, have proposed that the federal government and state governments create a non-profit coordinating entity, the "Unified Community Anchor Network," that would support and assist anchor institutions in obtaining and utilizing broadband connectivity.<sup>152</sup> Expanding the R&E network model to other anchor institutions would offer tremendous benefits. Many community institutions lack the institutional resources to undertake the many tasks necessary to maximize their utilization of broadband. Facilitating collaboration on network design and how best to utilize applications to meet public needs could result in lower costs and a far more efficient and effective utilization of broadband by these institutions.

Working with the R&E and non-profit community, the federal government and state governments should facilitate the development of an institutional framework that will help anchor institutions obtain broadband connectivity, training, applications and services. One method of implementation

would be to establish federal and state coordinators and consortia of anchor institutions. These coordinators would help secure connectivity and would also provide hands-on experience and capacity in the building and running of networks.<sup>153</sup> A coordinating entity also could have a national procurement role in negotiating bulk equipment and connectivity purchase agreements, acting as a sophisticated buyer, which would then be available to community institutions.<sup>154</sup> There also could be a platform for interconnected networks to share resources and applications and provide training opportunities. Coordinating and building common resources and capacity in this manner at the national and state levels would lower the overall costs of building and running anchor institutional networks.

recommendations span these national priorities.

The connectivity needs of institutions that may further national purposes are varied, and no single solution fits all. But collaboration and coordination between these institutions has significant potential to meet connectivity requirements. Government policy can promote and facilitate that collaboration.

In the past, many institutions have used a collaborative model to achieve connectivity. The Internet2 Project was established in 1996 by 34 university researchers to better support the unique needs of the research community like data mining, medical imaging and particle physics. This partnership and others like it (e.g., National LambdaRail) have emerged to provide the unique capabilities that our nation's top institutions require.

Unfortunately, the job of connecting all of our institutions is not complete. The proposed Unified Community Anchor Network (UCAN) (see Chapter 8) and other networks like it would extend the collaborative model favored by many of our research institutions for the benefit of our other community institutions such as rural health clinics and community colleges. UCAN would enable more demand aggregation and sharing, remove barriers to entry and support efforts to and empower all of our community institutions that need connectivity.<sup>9</sup>

Additionally, national priorities should not be restricted by caps on bandwidth. Broadband usage patterns and pricing models are evolving rapidly. In some cases, fixed and mobile broadband service providers have put in place volume caps that have differential impact on users; in other cases, they have offered specific plans that charge on a usage basis. Such pricing schemes may raise policy issues, but it is premature for this plan to address them, as there are a wide variety of methods by which they can be implemented.

If ISPs adopt volume caps or usage-based pricing as the model for how broadband should be priced, the FCC should ensure that such decisions do not inhibit the use of broadband for public purposes such as education, health care, public safety, job training and general government uses.

It is critical that the country move now to enact the recommendations in this part of the plan in order to accelerate the transformation that broadband can bring in areas so vital to the nation's prosperity. Diffusion of new technologies can take time, but the country does not have time to spare. There are students to inspire, lives to save, resources to conserve and people to put back to work. Integrating broadband into national priorities will not only change the way things are done, but also the results that can be achieved for Americans.



**FINGER LAKES REGIONAL  
TELECOMMUNICATIONS  
DEVELOPMENT CORPORATION**



***Fiber Network Development  
Providing Advanced Connectivity***

U.S. UCAN  
1000 Oakbrook Drive  
Suite 300  
Ann Arbor, MI 48104

March 21, 2010

Dear U.S. UCAN Planning Team:

Access Ontario is the public-benefit corporation that developed and manages the open-access fiber network in Ontario County, New York. The fiber optic network is currently being used by area service providers to provide cost-effective telecommunications, data services and, soon, fourth generation (4G) wireless services. Projects include extending fiber optic services, new hybrid fiber/wireless services and "Fiber to the Home" (FTTH) into unserved and underserved communities.

We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

Access Ontario intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nationwide U.S.UCAN project offers resiliency, redundancy and leading-edge broadband services to community anchor institutions within our service area. Additionally, Access Ontario will work together with U.S.UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions.

We recognize that deployment of the U.S.UCAN network is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will empower Access Ontario and the community anchor institutions we serve with the ability to extend national and international research and education applications and facilities to every portion of our region, eliminating the bandwidth-related barriers which have previously existed. We believe that our use of the U.S. UCAN network by would significantly enhance the available services and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,

Edward E. Hemminger  
Chief Executive Officer  
585-396-4502

[Ed.hemminger@co.ontario.ny.us](mailto:Ed.hemminger@co.ontario.ny.us)



March 21, 2010

U.S.UCAN  
1000 Oak Brook Drive  
Suite 300  
Ann Arbor, MI. 48104

ECC is pleased to offer this letter of support for U.S. UCAN for the development and expansion of collaborative based educational research.

ECC is a national technology firm which specializes among other things in ultra high capacity broadband and infrastructure development for educational, healthcare and technology based research institutions. ECC is in complete support of this project, as it is our opinion that this will provide considerable benefit with respect the global competitiveness for our local and regional educational customers.

We consider this a national model that will provide a secure learning foundation, which we will seek to create collaborative programs internationally.

ECC will work with the team at U.S.UCAN to identify and utilize dark fiber from available municipal Open Access Models in our region. As a result this will be a catalyst for the expansion of broadband into more rural areas. We will seek to expand these services to rural educational entities that will benefit most by having access to these collaborative programs.

In closing, ECC would like to reiterate our support for this project and strongly urge that this project be funded and developed as soon as possible.

Sincerely, *Joseph Starks*

Joseph Starks  
President, ECC Technologies Inc  
845 Fairport Office Centre  
Fairport, NY 14450

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U.S. UCAN  
1000 Oakbrook Drive  
Suite 300  
Ann Arbor, MI 48104

March 12, 2010

Dear U.S. UCAN Planning Team:

Illinois Century Network is a broadband network supporting nearly 8,000 community anchor institutions throughout the state of Illinois. We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

Illinois Century Network intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nation-wide U.S.UCAN project offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area. Additionally, Illinois Century Network will work together with U.S.UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions. The Illinois Century Network is applying for Round Two BTOP CCI funding for regional middle mile infrastructure. If funded, this national middle mile proposal will substantially strengthen all such regional middle mile BTOP-funded efforts.

We recognize that deployment of the U.S.UCAN network is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will empower Illinois Century Network and the community anchor institutions we serve with the ability to extend national and international research and education applications and facilities to every portion of our state/region, eliminating the bandwidth-related barriers which have previously existed. We believe that our use of the U.S. UCAN network by would significantly enhance the available services and we look forward to working with U.S. UCAN to bring this network to our constituents. Please feel free to contact me at 217.557.6565 if I can be of further assistance.

Sincerely,

Lori Sorenson  
Chief Operating Officer  
Bureau of Communications and  
Computer Services

March 22, 2010

Lawrence E. Strickling  
Assistant Secretary  
National Telecommunications & Information Administration  
U.S. Department of Commerce  
Washington, D.C. 20230

Dear Mr. Strickling,

The Ramsey Broadband Coalition (RBC) represents Ramsey County, City of Saint Paul and various area anchor institutions organized to advance the promotion of connectivity serving nearly 200 area anchor institution facilities. Specifically, the Ramsey Broadband Coalition Community Fiber Network (RBC CFN; ID: 5397) proposes an extensive dual conduit fiber deployment in partnership with a private provider, UniTek Global Services, that will result in a comprehensive community infrastructure to meet the needs of local government partners and to address the needs of the community for high speed 'open-access' fiber to support next generation applications.

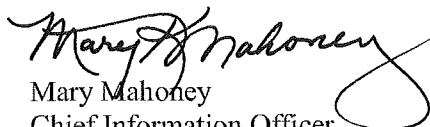
We support the United States Unified Community Anchor Network (U.S.UCAN) proposal in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

The Ramsey Broadband Coalition intends to use the services of U.S.UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The U.S.UCAN project offers resiliency, redundancy and leading-edge broadband services to community anchor institutions within our service area. Additionally, the Ramsey Broadband Coalition will work together with U.S.UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions.

We recognize that deployment of U.S.UCAN is contingent upon the award of funding from the NTIA BTOP program.

Use of U.S.UCAN will empower the Ramsey Broadband Coalition and the community anchor institutions we serve with the ability to extend national and international research and education applications and facilities to every portion of our region, eliminating the bandwidth-related barriers which have previously existed. We believe that our use of the U.S.UCAN network would significantly enhance available services and we look forward to working with U.S.UCAN to bring this network to our constituents.

Sincerely,

  
Mary Mahoney  
Chief Information Officer  
Ramsey County, Minnesota





PMB 1143  
2440 East Tudor Road  
Anchorage, AK 99507  
(866) 966-9030

March 5, 2010

U.S. UCAN

**Re: U.S. UCAN to BTOP Round 2 Application**

Dear U.S. UCAN Planning Team:

Alaska eHealth Network supports the United States Unified Community Anchor Network (U.S. UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program. U.S. UCAN will provide a resilient, redundant network and extend the reach of high performance networking beyond higher education to community colleges, healthcare and public safety.

Alaska eHealth Network supports the creation of U.S. UCAN to expand access to research, educational, and healthcare applications via the facilities offered by the network. The nationwide U.S. UCAN will offer leading edge broadband services to community anchor institutions within our service area. Additionally, U.S. UCAN will provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions.

U.S. UCAN will extend national and international research, education, and healthcare applications and facilities to every portion of Alaska, eliminating the bandwidth-related barriers which have previously existed. We believe that U.S. UCAN will significantly enhance the networking services available across the nation and support the creation of this network.

Sincerely,

Rebecca Madison  
Executive Director  
Alaska eHealth Network



March 4, 2010

U.S. UCAN

Dear U.S. UCAN Planning Team:

HealthBridge is a health information exchange in Cincinnati, Ohio. We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program. U.S. UCAN will provide a resilient, redundant network and extend the reach of high performance networking beyond higher education to community colleges, healthcare and public safety.

HealthBridge supports the creation of U.S. UCAN to expand access to research, educational, and healthcare applications via the facilities offered by the network. The nation-wide U.S. UCAN offers leading edge broadband services to community anchor institutions within our service area. Additionally, U.S. UCAN provides critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions.

We recognize that deployment of the U.S. UCAN network is contingent upon the award of funding from the NTIA BTOP program.

The U.S. UCAN will extend national and international research, education, and healthcare applications and facilities to every portion of our <state/region>, eliminating the bandwidth-related barriers which have previously existed. We believe that U.S. UCAN will significantly enhance the networking services available across the nation and support the creation of this network.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Steffel".

Robert Steffel  
President and CEO  
HealthBridge



230 E. Ohio Street, Suite 500  
Chicago, IL 60611-3269

Tel 312 664 4467  
Fax 312 664 6143

[www.himss.org](http://www.himss.org)

March 2, 2010

U.S. UCAN

Dear U.S. UCAN Planning Team:

Healthcare Information and Management Systems Society (HIMSS) supports the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program. U.S. UCAN will provide a resilient, redundant network and extend the reach of high performance networking for research, education, and health, in the United States, beyond higher education, to community colleges, healthcare and public safety.

HIMSS supports the creation of U.S. UCAN to expand access to research applications and educational and health opportunities, via the facilities offered by the network. The nation-wide U.S. UCAN offers leading edge broadband services to community anchor institutions within our service area. Additionally, U.S. UCAN provides critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions.

We recognize that deployment of the U.S. UCAN network is contingent upon the award of funding from the NTIA BTOP program.

The U.S. UCAN will extend national and international research, education and health applications and facilities to every portion of our United States, eliminating the bandwidth-related barriers which have previously existed. We believe that U.S. UCAN will significantly enhance the networking services available across the nation and support the creation of this network.

Sincerely,

A handwritten signature in black ink that reads "Carla Smith". The signature is written in a cursive, flowing style.

Carla Smith,  
HIMSS, Executive Vice President



197 Rt 18 South Suite 3000, East Brunswick, New Jersey 08816  
Tel: (888) 324-1117: Fax: (732) 783-0341

U.S. UCAN  
1000 Oakbrook Drive  
Suite 300  
Ann Arbor, MI 48104

DATE: 03/22/10

Dear U.S. UCAN Planning Team:

Medisys Solutions (Medisys) has developed a sophisticated Electronic Health Record (EHR) system which is offered as Software as a Service (SaaS) Model and is in the process of developing its own Health Information Exchange (HIE) hub. Medisys' state-wide platform leverages broadband to capture, transmit, deliver and serve several kinds of intelligence to the rural and urban healthcare end users in NY.

We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program. The title of our program is Developing Electronic Healthcare Systems & the Economy in Upstate NY Communities (**Easygrants ID: 5783**)

We intend to work with economic development agencies to educate citizens about the benefits and use of broadband to improve their quality of life. Medisys will drive broadband adoption by optimizing the design and alignment of systems and leverage broadband to capture, transmit, and deliver the vital intelligence that end users need (anyplace and anywhere). We will also be able to provide patient and provider educational services (via increasingly interactive media) in several communities with the help of our partners, Axxess Ontario, ECC Technologies and Seamless Communications.

We will combine our advocacy for broadband development by making broadband presentations with County workforce and economic development agencies. Our newest data center at Infotonics (a New York State Center of Excellence in Photonics and MEMs), allows us to bring SaaS to a variety of communities residing on either side of the "digital divide." The SaaS services will be delivered via Axxess Ontario's modern fiber optic services across a variety of networks to remote or underserved communities that have a more traditional telecommunications infrastructure.

Medisys Solutions intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nationwide U.S.UCAN project offers resiliency, redundancy and leading-edge broadband services to community anchor institutions within our service area.

We recognize that deployment of the U.S.UCAN network is contingent upon the award of funding from the NTIA BTOP program.



197 Rt 18 South Suite 3000, East Brunswick, New Jersey 08816  
Tel: (888) 324-1117: Fax: (732) 783-0341

Use of the U.S. UCAN will empower Medisys Solutions and the community anchor institutions

We serve with the ability to extend national and international research and education applications and facilities to every portion of our region, eliminating the bandwidth-related barriers which have previously existed. We believe that our use of the U.S. UCAN network by would significantly enhance the available services and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,

A handwritten signature in black ink, appearing to read "S. Coramutla", followed by a horizontal line and a small flourish.

Siva Coramutla  
President/CTO



CENTRAL OFFICE

2436 WOODLAKE CIRCLE, SUITE 300

OKEMOS, MI 48864

PH: 517/324-8300 FX: 517/381-0260

1115 MASSACHUSETTS AVENUE, NW

WASHINGTON, D.C. 20005

PH: 202/842-2022 FX: 202/842-2006

United States Unified Community Anchor Network

[WWW.MPHI.ORG](http://WWW.MPHI.ORG)

March 9, 2010

Dear U.S. UCAN Planning Team:

Michigan Public Health Institute ("MPHI") supports the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program. U.S. UCAN will provide a resilient, redundant network and extend the reach of high performance networking beyond higher education to community colleges, healthcare and public safety.

MPHI supports the creation of U.S. UCAN to expand access to research, health and educational applications and opportunities via the facilities offered by the network. The nation-wide U.S. UCAN offers leading edge broadband services to community anchor institutions within our service area. Additionally, U.S. UCAN provides critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions.

The lack of network infrastructure is a major barrier to improving the quality of health care. We see the need for the high-speed, high-availability, intra-state network that U.S. UCAN would provide. MPHI is a leader in health information technology and exchange and is the lead organization for the FCC Rural Health Care Pilot Program in Michigan. Our work in this area has made us more aware of the inadequacies in our nation's broadband infrastructure, and we see U.S.UCAN as a major step in the right direction. We recognize that deployment of the U.S. UCAN network is contingent upon the award of funding from the NTIA BTOP program.

The U.S. UCAN will extend national and international research, health and education applications and facilities to every portion of the US eliminating the bandwidth-related barriers which have previously existed. We believe that U.S. UCAN will significantly enhance the networking services available across the nation and support the creation of this network.

Sincerely,

A handwritten signature in blue ink that reads "Jeffrey R. Taylor".

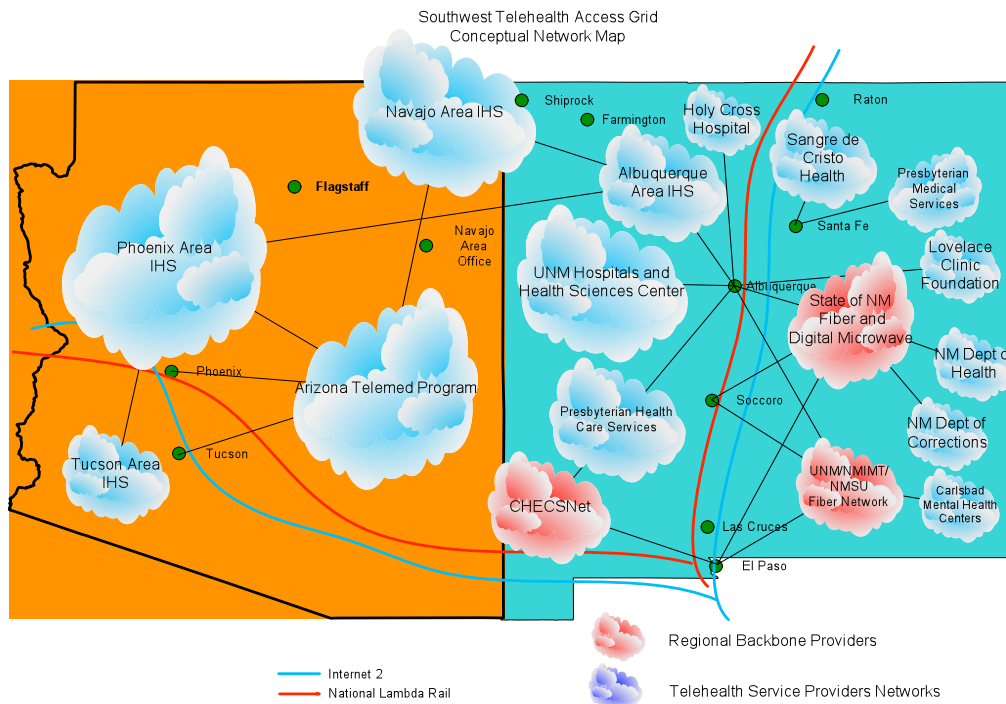
Jeffrey R. Taylor, Ph.D.  
Executive Director

March 2, 2010

United States Unified Community Anchor Network (U.S. UCAN)

Dear U.S. UCAN Planning Team:

The Center for Telehealth and Cybermedicine Research is dedicated to planning, implementation, research and evaluation of telehealth in New Mexico in collaboration with the Four Corners Telehealth Consortium in the southwest. We are also responsible for managing the Federal Communication Commission Rural Health Pilot Program project in the region, called the Southwest Telehealth Access Grid covering New Mexico, Arizona and the Southwest Area IHS Offices and the tribes they represent. This project is addressing the planning, implementation, and operations of a broadband network of networks to support health care activities that includes the integration of Internet 2 (I2) and National Lambda Rail (NLR).



We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 (I2) and National Lambda Rail (NLR), in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program. U.S. UCAN will provide a resilient, redundant network and extend the reach of high performance networking beyond higher education to community colleges, healthcare and public safety.

Our Center for Telehealth and Cybermedicine Research supports the creation of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nation-wide U.S. UCAN offers leading edge broadband services to community anchor institutions within our service area. Additionally, U.S. UCAN provides critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions.

We recognize that deployment of the U.S. UCAN network is contingent upon the award of funding from the NTIA BTOP program. The U.S. UCAN will extend national and international research and education applications and facilities to every portion of our state and region eliminating the bandwidth-related barriers which have previously existed. We believe that U.S. UCAN will significantly enhance the networking services available across the nation and support the creation of this network.

Sincerely,

A handwritten signature in black ink that reads "Dale C. Alverson". The signature is fluid and cursive, with a long horizontal stroke at the end.

Dale C. Alverson, MD  
Founding Member, Four Corners Telehealth Consortium  
Professor of Pediatrics and Regents' Professor  
Medical Director, Center for Telehealth and Cybermedicine Research  
University of New Mexico  
Health Sciences Center  
1005 Columbia, NE  
Albuquerque, NM 87106  
Office: (505) 272-8633  
Fax: (505) 272-0800  
e-mail: [dalverson@salud.unm.edu](mailto:dalverson@salud.unm.edu)

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TRANSFORMING LIVES  
TRANSFORMING  
**KENTUCKY**

300 North Main Street  
Versailles, KY 40383  
(859) 256-3100  
1-877-KCTCS-4U  
kctcs.edu

U.S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

March 2, 2010

Dear U.S. UCAN Planning Team:

The Kentucky Community and Technical College System (KCTCS) is the community college system for the state of Kentucky consisting of 16 Community Colleges with 70 sites. We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program. U.S. UCAN will provide a resilient, redundant network and extend the reach of high performance networking beyond higher education to community colleges, healthcare and public safety.

KCTCS connects to the Internet2 network and supports the U.S. UCAN project to expand access to educational opportunities via the facilities offered by the network. The nationwide U.S. UCAN offers leading edge broadband services to community anchor institutions within our service area. Additionally, U.S. UCAN provides critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions.

We recognize that deployment of the U.S. UCAN network is contingent upon the award of funding from the NTIA BTOP program.

The U.S. UCAN will extend national and international research and education applications and facilities to every portion of our state eliminating the bandwidth-related barriers which have previously existed. We believe that U.S. UCAN will significantly enhance the networking services available across the nation and support the creation of this network.

Best Regards,



Rick Chlopan  
Chief Information Officer



KCTCS is an equal opportunity employer and education institution.

**KENTUCKY COMMUNITY & TECHNICAL COLLEGE SYSTEM**



March 8, 2010

U.S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

Dear U.S. UCAN Planning Team:

Pine Technical College is a rural two-year college in east central Minnesota. We are also members of the Internet2 K20 Initiative, and we use extensively that infrastructure. Through our hub, we also provide access to the Internet2 to 14 independent K-12 school districts in our region. Access to this high-speed connectivity is critical to our ability in this rural region to provide quality education to our college and public school students.

We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program. U.S. UCAN will provide a resilient, redundant network and extend the reach of high performance networking beyond higher education to community colleges, healthcare and public safety.

The U.S. UCAN project will enable small colleges and school districts to expand access to educational opportunities via the facilities offered by the network. The nation-wide U.S. UCAN offers leading edge broadband services to community anchor institutions within our service area. Additionally, U.S. UCAN provides critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions.

We recognize that deployment of the U.S. UCAN network is contingent upon the award of funding from the NTIA BTOP program.

The U.S. UCAN will extend national and international research and education applications and facilities to rural regions throughout the country., eliminating the bandwidth-related barriers which have previously existed. We believe that U.S. UCAN will significantly enhance the networking services available across the nation and support the creation of this network.

Sincerely,

Robert L. Musgrove, Ph.D.  
President, Pine Technical College



U.S. UCAN  
1000 Oakbrook Drive  
Suite 300  
Ann Arbor, MI 48104

March 9, 2010

Dear U.S. UCAN Planning Team:

On behalf of Rose State College, I am writing to express my support for the proposal of the U.S. Unified Community Anchor Network (U.S. UCAN), and its key partners National LambdaRail and Internet2, for funding under the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) Program.

U.S. UCAN would provide a resilient, nationwide broadband network linking community colleges, healthcare providers, public safety agencies and other community anchor institutions to the high-speed national backbone networks of National LambdaRail and Internet2 and through these partners to resources, data and collaborators virtually anywhere in the world.

Rose State College currently connects to National LambdaRail via the Oklahoma State Regents for Higher Education. We support U.S. UCAN to expand access to educational opportunities via the facilities offered by the network, eliminate existing bandwidth barriers to community anchor institutions within our service area and provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community colleges and other community anchor institutions.

The partners involved in U.S. UCAN, National LambdaRail and Internet2, are uniquely positioned to lead this effort. They both have an extensive, impressive track record at managing national, high-performance, highly reliable networks. They have demonstrated their ability to catalyze the broader adoption of emerging technologies within education, such as TelePresence, a life-like, highest quality videoconferencing that brings remote participants literally across the conference table. And they have a demonstrated commitment to public service, with their respective charters being to serve the education and research community.

We recognize that deployment of the U.S. UCAN network is contingent upon the award of funding from the NTIA BTOP program.

OFFICE (405) 733-7356  
FAX (405) 736-0339

6420 S.E. FIFTEENTH  
MIDWEST CITY  
OKLAHOMA  
73110-2799  
[www.rose.cc.ok.us](http://www.rose.cc.ok.us)



Rose State College urges the NTIA to give highest consideration to this proposal. Broadband enabling community anchor institutions is one of the most significant investments we could possibly make as a country to enhance the quality of our education, healthcare and public safety, raise the level of our economic competitiveness and enhance the vitality of our communities.

Sincerely,

John Primo  
Vice President, Information Technology  
Rose State College



## Western Oklahoma State College Learning Support Systems

U.S. UCAN  
1000 Oakbrook Drive  
Suite 300  
Ann Arbor, MI 48104

March 15, 2010

Dear U.S. UCAN Planning Team:

On behalf of Western Oklahoma State College, I am writing to express my support for the proposal of the U.S. Unified Community Anchor Network (U.S. UCAN), and its key partners National LambdaRail and Internet2, for funding under the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) Program. U.S. UCAN would provide a resilient, nationwide broadband network linking community colleges, healthcare providers, public safety agencies and other community anchor institutions to the high-speed national backbone networks of National LambdaRail and Internet2 and through these partners to resources, data and collaborators virtually anywhere in the world.

Western Oklahoma State College currently connects to National LambdaRail via the Oklahoma State Regents for Higher Education. We support U.S. UCAN to expand access to educational opportunities via the facilities offered by the network, eliminate existing bandwidth barriers to community anchor institutions within our service area and provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community colleges and other community anchor institutions.

The partners involved in U.S. UCAN, National LambdaRail and Internet2, are uniquely positioned to lead this effort. They both have an extensive, impressive track record at managing national, high-performance, highly reliable networks. They have demonstrated their ability to catalyze the broader adoption of emerging technologies within education, such as TelePresence, a life-like, highest quality videoconferencing that brings remote participants literally across the conference table. And they have a demonstrated commitment to public service, with their respective charters being to serve the education and research community. We recognize that deployment of the U.S. UCAN network is contingent upon the award of funding from the NTIA BTOP program.

Western Oklahoma State College urges the NTIA to give highest consideration to this proposal. Broadband enabling community anchor institutions is one of the most significant investments we could possibly make as a country to enhance the quality of our education, healthcare and public safety, raise the level of our economic competitiveness and enhance the vitality of our communities.

Sincerely,

Kent D. Brooks  
Chief Technology Officer  
Western Oklahoma State College



One Dupont Circle,  
NW  
Suite 410  
Washington, DC  
20036

[www.aacc.nche.edu](http://www.aacc.nche.edu)

[T] 202.728.0200  
[P] 202.833.2467

U.S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

Dear U.S. UCAN Planning Team:

On behalf of the American Association of Community Colleges, I am pleased to write in support of the proposal entitled "United States Unified Community Anchor Network (U.S. UCAN)" being submitted by Internet2 and National LambdaRail to the Department of Commerce's National Telecommunications and Information Administration Broadband Technology Opportunities Program (NTIA BTOP).

The U.S. UCAN proposal will provide the national infrastructure that will serve as the foundation for connecting all of the nation's community anchor institutions, including community colleges, to each other through a linked, high-performance network that enables advanced applications. Community colleges are key economic anchors in their communities, enabling local innovation and promoting 21<sup>st</sup> century job skills. Community colleges need the kind of national networking that research universities have enjoyed for many years now; networking that promotes distance collaboration through telepresence, for just one example. Community colleges can also serve as community hubs for advanced networking in their region, partnering with K12 schools and other institutions that can benefit from our leadership. U.S. UCAN would jump start an effort to get all community colleges connected to each other, nation-wide at gigabit speeds or higher, which will provide a multitude of benefits to community colleges and the general public.

An important aspect of this proposal is the fact that it is a national complement to the local and regional efforts, both within the BTOP program and outside of it, to expand broadband capacity at community anchor institutions, many of which will include community colleges as partners. We recognize that deployment of the U.S. UCAN network is contingent upon funding from the NTIA BTOP program and offer our strong support of this important initiative.

Sincerely yours,

A handwritten signature in black ink that reads "George R. Boggs". The signature is written in a cursive style with a large, prominent "G" and "B".

George R. Boggs  
President and CEO

# EDUCAUSE

17 March 2010

US UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

Dear Colleagues:

I write to express wholehearted support, on behalf of EDUCAUSE and its members, for the proposal entitled "United States Unified Community Anchor Network (US UCAN)" being submitted by Internet2 and National LambdaRail to the Department of Commerce's National Telecommunications and Information Administration Broadband Technology Opportunities Program (NTIA BTOP). EDUCAUSE joined Internet2, NLR, and many others to advocate UCAN as a mechanism to extend and enhance connectivity for community anchor institutions as part of the FCC's National Broadband Plan. We were gratified to see it endorsed in that Plan.

EDUCAUSE is the largest organization focused on information technology in higher education. Its 2300+ members include community colleges, four-year colleges, universities, professional schools, state higher-education systems, and state and regional networking organizations.

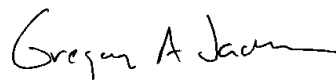
UCAN is of special importance to our community for two principal reasons. First, it will provide many colleges and universities that have been unable to obtain cost-effective broadband connectivity a foundation for using sophisticated multimedia and interactive technologies to extend education broadly beyond traditional campus boundaries, thereby shrinking barriers that currently inhibit educational success for some of the nation's neediest students. Second, it will enable far broader collaboration among researchers in very diverse institutions and disciplines, thereby encouraging participation and enabling research-based economic progress that otherwise might be limited to particular regions or sectors of higher education.

Much work lies ahead translating UCAN recommendations into reality. Providing services like UCAN's requires capabilities different from those of the commercial sector, as the FCC recognized. Those capabilities already exist within the national, regional, and state networking organizations that currently support research and education. Building on and extending these capabilities avoids unnecessary duplication, it does not require creation of entirely new national networks, it will yield substantial economies of scale, and it is the best and most cost-effective way to extend high-speed nationwide connectivity to more than 100,000 qualified community institutions that lack it today.

We are pleased to have helped the FCC choose effective mechanisms for achieving national broadband services, and to see Internet2 and NLR proposing to implement them rapidly. The next steps toward an effective UCAN are to institute it as outlined in the Plan and associated submissions, and then to begin work to implement its networking proposals.

The Internet2/NLR proposal is an excellent way to achieve these ends. We urge NTIA to fund it fully and quickly.

Sincerely,



Gregory A Jackson	1150 18 <sup>th</sup> Street NW, Suite 1010
Vice President for Policy & Analysis	Washington DC 20036
(direct) +1-202-596-9425	+1-202-872-4200 (main)
gjackson@educause.edu	www.educause.edu

Dr. Douglas E. Van Houweling  
c/o U.S. UCAN  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, Michigan 48104

Dear Dr. Van Houweling:

We are writing with great enthusiasm in support of the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program, and to pledge the support of the National Internet2 K20 Initiative in this endeavor.

For the past nine years, the National Internet2 K20 Initiative has been promoting the use of advanced networks among the K20 community by providing state education networks access to the nationwide Internet2 Network – creating, in essence, a “National Education Grid”. To date, 39 state networks are participating in the program through generous sponsorships by Internet2 university members, with another several states’ emerging K-20 connectivity plans underway. These state and regional education networks connect over 60,000 community anchor institutions nationwide, often located in rural and remote under-served communities, including primary and secondary schools, community colleges and universities, science centers, libraries, aquariums, and museums, to the Internet2 backbone network.

What makes these connections transformative is not just the physical networks, but the network of innovators, applications, rich educational content and opportunities they enable. The human community brought together by the network formed to identify and leverage national resources, partner on collaborative projects, and model 21<sup>st</sup> Century learning opportunities. Examples of past innovative educational opportunities for K12 sponsored by the K20 community include:

1. Real time student interaction with underwater divers exploring the Monterey Bay National Marine Sanctuary using telepresence to support the two-way discussion.
2. The Megaconference Jr. event, which connects students across 11 countries and 21 states to share customs and interact real time during the 12-hour program.
3. Student manipulation of remote instrumentation such as the electron microscope at Lehigh University and the bugscope at the University of Illinois.
4. Virtual tutoring of K12 music students by Carnegie Hall masters.

Examples of future opportunities for K12 using R&E networks such as U.S. UCAN include:

1. Global Summit, New York - Students in schools across the State of New York will integrate technologies and applications available over the R&E network and Internet2 to support their presentations. Some projects under consideration



- include: soil and water analysis using a remote electron microscope, creating virtual environments to simulate science experiments and research such as growing crystals in a weightless environment, and creating a virtual orchestra to play a virtual concert.
2. Immigration and Human Movement – Students across four states will research and report on different topics regarding immigration in their region of the country. Students will be using live data from sources such as the U.S. Census Department, INS, and Homeland Security.
  3. U-Compute – Advanced Technology for Teachers – If grant funding is approved, select Texas teachers will learn to use high performance computing to enrich student learning.

U.S. UCAN represents an opportunity to not only reach many more community anchor institutions in the US, thereby providing new and/or improved access to broadband in currently underserved areas of our country, but also expand the diverse collaborative community of K20 innovators and expertise developed by the National Internet2 K20 Initiative and others.

Additionally, the National Internet2 K20 Initiative believes U.S. UCAN will significantly improve the middle mile networking infrastructure critical to connecting all of the local and regional community anchor projects funded by BTOP and create a seamless national fabric of high performance, open networks that significantly enhances networking services available to the research and education communities (both formal and informal) across the nation.

We support the creation of a unified community anchor network.

Sincerely,

National K20 Executive Committee

Carol Willis  
Texas Education Telecommunications Network



Kim Owen  
North Dakota State University



Randy Stout  
Kansas Board of Regents

National Emergency Number Association  
*The Voice of 9-1-1*



March 19, 2010

Douglas E. Van Houweling  
President and Chief Executive Officer  
c/o U.S. UCAN Planning Team  
Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

Dear President Van Houweling,

I write to you today on behalf of the National Emergency Number Association (NENA) in full support of the Internet2 / National LambdaRail Broadband Technology Opportunities Program (BTOP) application seeking funding to build the "United States Unified Community Anchor Network (U.S.UCAN).

The proposal's commitment to serve all community anchor institutions, including Public Safety Answering Points (PSAPs), also offers significant benefits for 9-1-1 and public safety communications systems. The transition to Next Generation 9-1-1 (NG9-1-1) and advanced emergency communications systems depends on access to specialized high-capacity broadband networks, like those operated by the research and education community today. Indeed, a core component of a nationwide NG 9-1-1 system, as called for in national NG9-1-1 industry standards and policies, is the availability a nationwide network capable of serving as a connector for the multitude of state and regional IP-based 9-1-1 networks being planned and deployed today. Therefore, we fully support your proposal's commitment to provide access to a Unified Community Anchor Network for public safety agencies and 9-1-1 centers across the country.

There are strong synergies in your proposal and the Sustainable Broadband Adoption proposal already submitted by NENA. We seek BTOP funds to develop several software services and other NG9-1-1 enabling activities that would directly support, and benefit from, the buildout of the Internet 2/National LambdaRail network. Should our proposals be funded, we look forward to working with you on mutually supportive activities that will leader to increased demand for broadband, economic growth and improved access to emergency services for the public.

Sincerely,

Brian Fontes, Ph.D.  
CEO, NENA



*The*  
**University of Mississippi**

Oxford • Jackson • Tupelo • Southaven

Office of the Chancellor  
Post Office Box 1848  
University, MS 38677-1848  
(662) 915-7111  
Fax: (662) 915-5935  
E-mail: [chancllr@olemiss.edu](mailto:chancllr@olemiss.edu)

March 18, 2010

U.S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

Dear U.S. UCAN Planning Team:

The University of Mississippi supports the United States Unified Community Anchor Network (U.S. UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program. U.S. UCAN will provide a resilient, redundant network and extend the reach of high performance networking beyond higher education to community colleges, healthcare and public safety.

The University of Mississippi currently connects to the Internet2 network and supports the U.S. UCAN project to expand access to educational opportunities via the facilities offered by the network. The nation-wide U.S. UCAN offers leading edge broadband services to community anchor institutions within our service area. Additionally, U.S. UCAN provides critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions.

We recognize that deployment of the U.S. UCAN network is contingent upon the award of funding from the NTIA BTOP program.

The U.S. UCAN will extend national and international research and education applications and facilities to every portion of Mississippi and the southeastern U.S., eliminating the bandwidth-related barriers which have previously existed. We believe that U.S. UCAN will significantly enhance the networking services available across the nation and support the creation of this network.

Sincerely,

Daniel W. Jones, M.D.  
Chancellor



**Office of the Vice President for Research and Economic Development**

March 18, 2010

U.S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

Dear U.S. UCAN Planning Team:

Mississippi State University is pleased to support the United States Unified Community Anchor Network (U.S. UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program. U.S. UCAN will provide a resilient, redundant network and extend the reach of high performance networking beyond higher education to community colleges, healthcare and public safety.

Mississippi State University currently connects to the Internet2 network and supports the U.S. UCAN project to expand access to educational opportunities via the facilities offered by the network. The nation-wide U.S. UCAN offers leading edge broadband services to community anchor institutions within our service area. Additionally, U.S. UCAN provides critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions.

We recognize that deployment of the U.S. UCAN network is contingent upon the award of funding from the NTIA BTOP program.

The U.S. UCAN will extend national and international research and education applications and facilities to every portion of our state, eliminating the bandwidth-related barriers which have previously existed. We believe that U.S. UCAN will significantly enhance the networking services available across the nation and support the creation of this network.

Sincerely,

David R. Shaw, Vice President for Research  
and Economic Development, and



*Mid-Atlantic Crossroads*  
Advanced Regional Internetworking for  
Higher Education and Research

Office: 8400 Baltimore Avenue  
Suite 102  
College Park, Maryland 20740

March 3, 2010

Dear U.S. UCAN Planning Team:

Mid-Atlantic Crossroads (MAX) is a regional optical network consortium founded by Georgetown University, George Washington University, the University of Maryland, and Virginia Tech. The MAX mission is to serve the long-term strategic planning, deployment, operation, and coordination of advanced internetworking services and initiatives in the in the District of Columbia, Northern Virginia, and the State of Maryland. We support the United States Unified Community Anchor Network (U.S. UCAN) proposal, and the partnership of Internet2 and National LambdaRail to collaboratively seek funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program. Internet2 and NLR have recently demonstrated several joint success initiatives and we wish to support their joint efforts creating a new infrastructure suite of services on behalf of our community.

MAX envisions UCAN as a national open access network for public benefit and intends to use the services of U.S. UCAN to expand the reach of community anchor institutions in our region to research applications and educational opportunities via the facilities offered by the broadband networking. The nation-wide U.S. UCAN project offers expanded reach, redundancy and leading edge broadband services. MAX will work together with U.S. UCAN to provide critical pieces of the end-to-end connectivity required to meet the advanced networking needs of community anchor institutions in our region. The Commonwealth of Virginia is a recent awardee of Round 1 BTOP funding and while individual proposals within the State of Maryland were declined, a new statewide proposal will be submitted during Round 2. Both VA and MD proposals are for regional middle mile infrastructure. If funded, this U.S. UCAN national middle mile proposal will substantially strengthen all state and regional middle mile BTOP-funded efforts.

Use of the U.S. UCAN will augment MAX and our member institutions with the ability to extend national and international research and education applications and facilities to every portion of our region, eliminating the bandwidth-related barriers which have previously existed. We believe that the use of the U.S. UCAN network by MAX will significantly enhance the available services and look forward to working with U.S. UCAN and our national partners to bring these network capabilities to our constituents.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Peter O'Neil', is written over a light blue horizontal line.

Peter O'Neil  
Executive Director



March 1, 2010

U.S. UCAN

Dear U.S. UCAN Planning Team:

MOREnet is the network provider for the research and education network in Missouri. We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

MOREnet intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nation-wide U.S.UCAN project offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area. Additionally, MOREnet will work together with U.S.UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions. MOREnet intends to apply for funding from BTOP Round 2 for enhanced regional middle mile infrastructure to connect to all institutions of higher learning in Missouri as well as anchor institutions reasonably accessible from the planned network route. If funded, this national middle mile proposal will substantially strengthen all such regional middle mile BTOP-funded efforts.

We recognize that deployment of the U.S.UCAN network is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will empower MOREnet and our member institutions with the ability to extend national and international research and education applications and facilities to every portion of our state/region, eliminating the bandwidth-related barriers which have previously existed. We believe that the use of the U.S. UCAN network by MOREnet will significantly enhance the available services and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,

John P. Gillispie  
Executive Director



UNIVERSITY OF OREGON

March 22, 2010

U.S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

Dear U.S. UCAN Planning Team:

The Network for Education and Research in Oregon (NERO Network) and Oregon GigaPOP (OGIG) are the statewide research and education aggregation networks in Oregon. We support the United States Unified Community Anchor Network (U.S. UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

The NERO Network and Oregon GigaPOP intend to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nationwide U.S. UCAN network offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area. Additionally, the NERO Network and Oregon GigaPOP will work together with U.S. UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions.

We recognize that implementation of U.S. UCAN is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will empower the NERO Network and Oregon GigaPOP and our member institutions with the ability to extend national and international research and education applications and facilities. We believe that the use of the U.S. UCAN by the NERO Network and Oregon GigaPOP will significantly enhance services available, and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,

Don Harris,  
Vice Provost for Information Services and CIO  
University of Oregon

David Crowe, Jr.  
Director, NERO Network  
University of Oregon

Dale Smith,  
Director, Network and Telecommunications Services  
University of Oregon

VICE PROVOST AND CHIEF INFORMATION OFFICER

1212 University of Oregon, Eugene OR 97403-1212 T (541) 346-1702 F (541) 346-4397 [www.uoregon.edu](http://www.uoregon.edu)

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5752 Neville Hall  
Orono, ME 04469-5752  
[www.networkmaine.net](http://www.networkmaine.net)  
207-561-3501

March 19, 2010

U.S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

Dear U.S. UCAN Planning Team:

Networkmaine, a unit of the University of Maine System, operates Maine's research and education network, MaineREN. We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

Networkmaine intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nationwide U.S.UCAN network offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area. Additionally, Networkmaine will work together with U.S.UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions. The University of Maine System, through its Networkmaine unit, partnered with Biddeford Internet Corp. in the awarded *Three Ring Binder*<sup>1</sup> Round 1 BTOP project for middle mile infrastructure throughout rural Maine. If funded, this national middle mile proposal will substantially strengthen *Three Ring Binder* project and all such middle mile BTOP-funded efforts.

We recognize that implementation of U.S.UCAN is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will empower Networkmaine and our member institutions with the ability to extend national and international research and education applications and facilities to every portion of our state, eliminating the bandwidth-related barriers which have previously existed. We believe that the use of the U.S. UCAN by Networkmaine will significantly enhance services available and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,

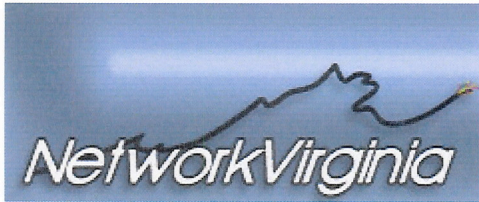
A handwritten signature in black ink, appearing to read "Jeffrey Letourneau". The signature is fluid and cursive, with a long horizontal stroke at the end.

Jeffrey Letourneau  
Executive Director, Networkmaine

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<sup>1</sup> <http://www.ntia.doc.gov/broadbandgrants/applications/factsheets/1149FS.pdf>





Virginia Tech  
Network Infrastructure and Services  
1770 Forecast Drive (0506)  
Blacksburg, VA 24061

March 1, 2010

Dear U.S. UCAN Planning Team:

NetworkVirginia is an outreach program of Virginia Tech to promote the development of broadband access and network services throughout the Commonwealth of Virginia. NetworkVirginia also offers access to regional networks and aggregation facilities in the mid-Atlantic region to provide high performance connections to national research and education networks including National LambdaRail and Internet2. We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

NetworkVirginia supports a variety of community anchor institutions including research universities who are also members of the Mid-Atlantic Terascale Partnership (MATP), the Virginia Community College System, K-12 schools, rural health care locations, emergency responders, state and local governments, community networks, and entrepreneurs. Our program was instrumental in the creation of the Virginia open-access fiber network created with state and federal funds which spans over 1,000 miles throughout southside and southwest Virginia. Through the Virginia Tech Foundation we helped create and participate as a member of the non-profit Mid-Atlantic Broadband Cooperative. The national broadband transport services provided by National LambdaRail and Internet2 are critical to the research, education, and community service objectives of our constituents.

The Mid-Atlantic Broadband Cooperative and the Virginia Tech Foundation are BTOP Round 1 awardees for complementary middle mile fiber projects expanding the Virginia open-access fiber network. NetworkVirginia team members provided primary support for development of the VTF proposal and will manage the project including access to National LambdaRail and Internet2 for all anchor institutions served by the combined projects. We recognize that deployment of the U.S.UCAN network is contingent upon the award of funding from the NTIA BTOP program. If awarded, we intend to use their services to expand access to research applications and educational opportunities via the facilities offered by the network. The nation-wide U.S.UCAN project will offer resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area.

We look forward to working with U.S. UCAN, National LambdaRail, Internet2, and our regional and national partners to continue to strengthen local, regional, and national broadband resources in the United States and to leverage these resources to enhance education, research, and quality of life.

Sincerely,

Richard Hach  
Associate Director, Network Administration  
NetworkVirginia Program Director



Office of the President & Chief Executive Officer  
218 Central Avenue, Suite 5100  
New Jersey's Research & Education Network  
University Heights • Newark • New Jersey 07102-1982  
Voice: 973-596-5490 • Fax: 973-596-5499 • Email:

March 1, 2010

Dear U.S. UCAN Planning Team:

NJEDge.Net is the state network for the research and education community in New Jersey. We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

NJEDge.Net intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nation-wide U.S.UCAN project offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area. Additionally, NJEDge.Net will work together with U.S.UCAN to provide critical pieces of the end-to-end, coast-to-coast infrastructure that is required to meet the advanced networking needs of community anchor institutions. We recognize that deployment of the U.S.UCAN network is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will empower NJEDge and our member institutions with the ability to extend national and international research and education applications to every portion of our state, eliminating the bandwidth-related barriers which have previously existed. We believe that the use of the U.S. UCAN network by NJEDge members will significantly enhance the available services and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,

A handwritten signature in cursive script that reads "George Laskaris".

George Laskaris  
President & CEO, NJEDge.Net

March 19, 2010

U.S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

Dear U.S. UCAN Planning Team:

The Northern Crossroads ([NoX](#)) is a regional network aggregator for the research and education network in New England. We support the United States Unified Community Anchor Network (U.S. UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

The NoX intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities. The nation-wide U.S. UCAN network offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our region. Additionally, the NoX will work with U.S. UCAN to provide critical pieces of the end-to-end, coast-to-coast solution required to meet the advanced networking needs of community anchor institutions.

Use of the U.S. UCAN will enable the NoX and our subscriber institutions to extend national and international research and education applications and facilities throughout our region, reducing long-standing access limitations and bandwidth constraints. We believe the use of the U.S. UCAN by the NoX would significantly enhance access to and development of networked services and resources, and we look forward to working with U.S. UCAN and our partners in bringing this network and its benefits to fruition.

Sincerely,



Michael Krugman  
Associate Vice President  
Information Services & Technology  
Boston University  
krugman@bu.edu

Leo D. Donnelly, Jr  
Senior Technical Analyst  
University Information Systems  
Harvard University  
leo\_donnelly@harvard.edu

# UNIVERSITY OF MINNESOTA

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*Twin Cities Campus*

*Office of Information Technology  
Office of the Vice President & CIO*

*203 Johnston Hall  
101 Pleasant Street S.E.  
Minneapolis, MN 55455*

*Office: 612-626-8735  
Fax: 612-626-0076  
Email: <http://www.umn.edu/oit>*

March 22, 2010

U.S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

Dear U.S. UCAN Planning Team:

On behalf of Northern Lights GigaPOP, at the University of Minnesota Twin Cities, I support the United States Unified Community Anchor Network (U.S. UCAN) proposal, and its partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

In its role as a regional network connection hub for research and education, Northern Lights GigaPOP connects universities, community colleges, and K-12 schools to Internet2 and other regional and national research and education networks. Northern Lights GigaPOP will work together with U.S. UCAN in a way that supports a regional and national solution to meet the advanced networking needs of community anchor institutions.

Northern Lights GigaPOP intends to use the services of U.S. UCAN to extend access to national and international research and education applications to its participants in a way that improves connection and bandwidth issues. Further, I am especially interested ways that will enable health care facilities to participate.

We look forward to working with U.S. UCAN to bring increased capacity and new opportunities to Northern Lights GigaPOP participants.

Sincerely,



Stephen Cawley  
Vice President and CIO for Information Technology  
University of Minnesota

March 18, 2010

U.S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

Dear U.S. UCAN Planning Team:

NYSERNet, the research and education networking organization in New York, supports the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

NYSERNet and its member institutions already use the Internet2 and NLR networks, and house the northeast nodes of each in our collocation facility in Manhattan. This outcome of the U.S. UCAN proposal would be a national infrastructure that is far more than the sum of the existing parts, offering a national backbone with resiliency, redundancy and leading edge broadband services. NYSERNet, as the critical provider of advanced networking from the national network's major nodes (in our case in Manhattan) to the anchor institutions, will work with U.S. UCAN and other regional networks as collectively we provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions.

We recognize that implementation of U.S.UCAN is contingent upon the award of funding from the NTIA BTOP program. But it comes at a time when network applications, from data intensive science like high energy physics, to profound advances in digital extension of the arts, to widely distributed high definition applications in K-12 will, for the first time, push the network more than the reverse. The national and regional R&E networks must be equal to this new level of demand. Our existing infrastructure, extensions enabled by the ION round 1 award in New York, and our continuing efforts with ION on a round 2 request, will help us meet that demand within the state. The U.S. UCAN proposal does the same for the national R&E backbone, with both converging at our global peering point in New York City.

We look forward to working with U.S. UCAN.

Sincerely,



Dr. Timothy Lance  
President and Chair, NYSERNet



March 1, 2010

U.S. UCAN

Dear U.S. UCAN Planning Team:

OARnet is the regional network aggregator for the research and education in Ohio. We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

OARnet intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nation-wide U.S.UCAN project offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area. Additionally, OARnet will work together with U.S.UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions.

We recognize that deployment of the U.S.UCAN network is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will OARnet and our member institutions with the ability to extend national and international research and education applications and facilities to every portion of our state/region, eliminating the bandwidth-related barriers which have previously existed. We believe that the use of the U.S. UCAN network by OARnet will significantly enhance the available services and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,

A handwritten signature in black ink, appearing to read "Pankaj Shah", written over a horizontal line.

Pankaj Shah  
Executive Director  
OARnet

March 1, 2010

U.S. UCAN

Dear U.S. UCAN Planning Team:

OSHEAN (pronounced “ocean”) is the statewide research and education network for Rhode Island. We focus on collaborating with our members from the education, health care and government services sectors to collaborate and deliver advanced technical services to Rhode Islanders. As such, we are actively engaged in the national research and education networking arena and are in full support of the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail. We feel this project is in keeping with the purposes of the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

OSHEAN is seeking CCI funding in round 2 of the BTOP grant process to leverage the OSHEAN Beacon 2.0 Library Computer Center project that will provide almost 700 computers to public libraries across the state. Our Beacon 2.0 project, should it be funded, will significantly increase the capacity of our dedicated optical network to support multiple 10Gbps connections to our members. It is because of this increase in our middle mile infrastructure that we find ourselves in need of greater national-level capacity, such as that which will be provided by U.S. UCAN> OSHEAN intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network

We recognize that deployment of the U.S.UCAN network is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will empower our member institutions with the ability to extend national and international research and education applications and facilities to every portion of our state/region, eliminating the bandwidth-related barriers which have previously existed. We believe that the use of the U.S. UCAN network by OSHEAN will significantly enhance the available services and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,



George Loftus  
President and CEO



March 17, 2010

U.S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

Dear UCAN Planning Team:

The Pacific NorthWest Gigapop (PNWGP) is the long-standing not-for-profit regional research, education, health care and economic development networking organization for Washington, Alaska, Montana, Idaho, Hawaii and northern Oregon, whose roots go back to deployment of the ARPAnet, NSFnet and the original internet throughout the northwest and nationally. We want to express our strong support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

PNWGP intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nation-wide U.S.UCAN network offers resiliency, redundancy and leading edge broadband services, content and applications to a wide range of underserved or unserved community anchor institutions within our service area. PNWGP will also work together with U.S.UCAN to provide critical pieces of the end-to-end, national scale solution that is required to meet the advanced networking needs of our communities' anchor institutions. PNWGP is a part of the 'NoaNet' led team's round 1 NTIA BTOP award of roughly \$84 million for regional middle mile infrastructure. If funded, this national middle mile proposal will substantially strengthen those round 1 regional middle mile BTOP-funded efforts.

We recognize that implementation of U.S.UCAN is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will enable us and our member institutions with the necessary infrastructure to extend national and international research and education applications and facilities to much more of our region, and will eliminate the severe bandwidth-related barriers under which our communities have suffered. We believe that the use of the U.S. UCAN by PNWGP will significantly enhance services available and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,

A handwritten signature in cursive script that reads "Amy I. Philipson".

Amy Philipson  
Executive Director, Pacific NorthWest Gigapop



March 23, 2010

U.S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104



Dear U.S. UCAN Planning Team:

South Carolina GigaPOP is the state network aggregator for the research and education network in South Carolina. We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

South Carolina GigaPOP intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nation-wide U.S.UCAN network offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area. Additionally, SC GigaPOP will work together with U.S.UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions. Clemson University Research Foundation and CULR, LLC, the legal entities in which SC GigaPOP resides, hopes to receiving funding from BTOP Round 2 for statewide middle mile infrastructure in South Carolina via a proposed project titled *Palmetto State Integrated Fiber Infrastructure: A Statewide Broadband Strategy for South Carolina (PSIFI)*. If funded, this national middle mile proposal will substantially strengthen South Carolina's PSIFI project and all such regional and state middle mile BTOP-funded efforts.

We recognize that implementation of U.S.UCAN is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will empower SC GigaPOP and our member institutions with the ability to extend national and international research and education applications and facilities to every portion of our state/region, eliminating the bandwidth-related barriers which have previously existed. We believe that the use of the U.S. UCAN by SC GigaPOP will significantly enhance services available and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,

A handwritten signature in black ink that reads "James Pepin".

James Pepin  
Technical Director  
South Carolina GigaPOP



South Carolina GigaPOP  
CULR, LLC

Information Technology Center

340 Computer Court

Anderson, SC 29625



March 2, 2010

Dear U.S. UCAN Planning Team:

Three Rivers Optical Exchange (3ROX), managed by the networking group at the Pittsburgh Supercomputing Center, is the regional hub in western Pennsylvania and northern West Virginia for the National LambdaRail and Internet2 research and education networks. We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

3ROX intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nation-wide U.S.UCAN project offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area. Additionally, 3ROX will work together with U.S.UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions.

We recognize that deployment of the U.S.UCAN network is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will empower 3ROX and our member institutions with the ability to extend national and international research and education applications and facilities to every portion of our state/region, eliminating the bandwidth-related barriers which have previously existed. We believe that the use of the U.S. UCAN network by 3ROX will significantly enhance the available services and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,

Gwendolyn L. Huntoon  
Executive Director, 3ROX  
Director, Advanced Networking, PSC

*Pittsburgh Supercomputing Center  
Carnegie Mellon University/University of Pittsburgh  
300 S. Craig Street, Pittsburgh, Pennsylvania 15213  
T\412.268.4960 F\412-269/5932  
WWW.PSC.EDU*



March 12, 2010

U.S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, Michigan 48104

Dear U.S. UCAN Planning Team:

The Utah Education Network (UEN) is the long-standing, state-supported network for public and higher education and academic research in Utah. With its own funding and governance, UEN is a project hosted within the state's flagship research university, the University of Utah. UEN is the recent recipient of an NTIA Broadband Technology Opportunity Program (BTOP) award to support expanded broadband connectivity to numerous community anchor institutions in Utah, including elementary and charter schools, public libraries, and Head Start programs.

Together UEN and the University of Utah strongly support the United States Unified Community Anchor Network (U.S. UCAN) proposal, and its key national partners Internet2 and National LambdaRail, in seeking funding under the NTIA BTOP Comprehensive Community Infrastructure (CCI) program. We firmly believe that based on its long and successful experience in running both leading-edge and production networks for its constituencies and numerous partners, the advanced networking community supporting U.S. research and education, is best suited to lead the effort to develop a platform for sustained broadband innovation in the U.S.

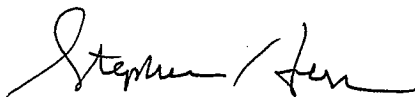
As we have done through Internet2 and NLR over the last decade, both UEN and the University intend to take advantage of the cost-effective and optimized services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nationwide U.S. UCAN network will offer resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area – the state of Utah and southern Idaho in collaboration with our educational colleagues in that state. Additionally, UEN will work together with U.S. UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions. If funded, this national middle mile proposal will substantially strengthen all such regional middle mile efforts supported by BTOP, including UEN's own Round 1 project.

In particular, we believe that U.S. UCAN network design offers two critical fiber segments that heretofore have not been part of either Internet2's or NLR's asset-based optical portfolios - routes emanating from Salt Lake City to both northern and southern California (Sunnyvale and Los Angeles, respectively). These two routes represent important ring closing paths in the sparsely interconnected West and will bring us closer to parity with the higher density of optical paths in the East. This feature is important for improving both distributed application performance and network restoration time. In addition, the path between Salt Lake City and Los Angeles offers the prospect of improved connectivity for Las Vegas and southern Nevada as well as supporting three unique field science installations for astronomy, astrophysics, and ecology located in the western Utah desert. Finally, these paths will enable innovative forms of collaboration in cloud computing among regional higher education institutions in the West. The University is in the process of developing a large, off-campus data center in downtown Salt Lake City and intends to work with partners to explore more efficient approaches in high performance computing, green IT, and disaster recovery among other projects.

We recognize that implementation of U.S. UCAN is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will empower the University of Utah, UEN, and our member institutions with the ability to extend national and international research and education applications and facilities to every portion of our state/region, eliminating the bandwidth-related barriers which have previously existed. We believe that the use of the U.S. UCAN by UEN and the University of Utah will significantly enhance services available and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,



Stephen Hess, Ph.D.  
Vice President and Chief Information Officer  
University of Utah



Michael Petersen, Ph.D.  
Executive Director  
Utah Education Network



March 19, 2010

U.S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

Dear U.S. UCAN Planning Team:

The University of South Florida System was founded in 1956 as the first public university established specifically to address the needs of Florida's rapidly emerging urban regions. Today, the University of South Florida System consists of the main research campus in Tampa, which includes USF Health, and three regional campuses: USF Sarasota, USF Polytechnic in Lakeland, and USF St. Petersburg.

At the University of South Florida, federal funds for academic research and development increased 213 percent from 2000 to 2007. According to the Chronicle of Higher Education, that makes USF the fastest growing research university in the United States. In academic year 2008-2009, USF reached a new high with \$380.4 million in research grants and contracts.

The University of South Florida System endorses the United States Unified Community Anchor Network (U.S. UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

The University of South Florida System intends to leverage services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nationwide U.S. UCAN network offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area. Additionally, University of South Florida System looks to align with U.S. UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions and researchers through the nation. If funded, this national middle mile proposal will substantially strengthen all such regional middle mile BTOP-funded efforts.

Use of the U.S. UCAN will empower our local BTOP proposals and our member institutions with the ability to extend national and international research and education applications and facilities to every portion of state/region, eliminating many of the bandwidth-related barriers which have previously existed. We believe that the use of the U.S. UCAN by the University of South Florida System will significantly enhance services available and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,

A handwritten signature in blue ink, appearing to read "Michael A. Pearce", written over a light blue grid background.

Michael A. Pearce  
System Vice President Information Technology  
University Of South Florida System



March 17, 2010

UCAN  
c/o Doug Van Houweling, PI  
Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

WiscNet is the state research and education network that connects Wisconsin community anchor institutions to the Internet2 research and education network. We support the United States Unified Community Anchor Network (U.S.UCAN) proposal that is being submitted by Internet2 and National LambdaRail to the NTIA for funding available through the Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

WiscNet intends to use the services of UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nation-wide UCAN offers leading edge broadband services that we will deliver to community anchor institutions all across Wisconsin. Additionally, WiscNet will work together with UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions.

We recognize that deployment of the UCAN network is contingent upon the award of funding from the NTIA BTOP program.

Use of UCAN will enhance the work that WiscNet does for our 440 member institutions allowing us to extend national and international research and education applications. UCAN matters to the nation and matters to Wisconsin thus our strong support and our hope that this much needed grant is funded.

Sincerely,

Ross Wilson  
Chairman, WiscNet Board of Directors

David J. Lois  
Executive Director, WiscNet

# MREN

Metropolitan Research & Education Network

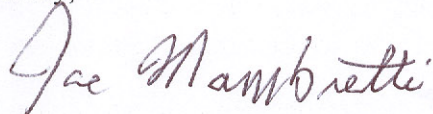
February 26, 2010

To: U.S. UCAN Planning Team:

The Metropolitan Research and Education Network (MREN) is sending this letter to express enthusiastic support for the United States Unified Community Anchor Network (U.S.UCAN) proposal and for efforts of its key partners (Internet2 and National LambdaRail) in pursuing this proposal directed at obtaining funding through the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program. MREN is a regional network that supports universities and national research laboratories in seven states in the upper Midwest.

If this initiative is funded, MREN would use the proposed U.S.UCAN services to provide its communities with additional access to research applications and educational opportunities, including access to important national and international research and education resources. This proposed nation-wide U.S.UCAN infrastructure would provide additional resiliency, redundancy and leading edge broadband services for many key community anchor institutions within our service area. Also, MREN will work with U.S.UCAN to provide required components of the end-to-end, coast-to-coast services and infrastructure required to meet community advanced networking requirements. Currently, there are multiple barriers to providing these types of services and infrastructures to the communities that require them. This project represents a unique opportunity for eliminating the most challenging of those barriers. MREN looks forward to partnering with U.S. UCAN to provide these critical new resources to our constituents.

Sincerely,



Joe Mambretti, Director, Metropolitan Research and Education Network, Co-Director, StarLight International Communications Exchange.



## INDIANA UNIVERSITY

OFFICE OF THE VICE PRESIDENT  
FOR INFORMATION TECHNOLOGY  
AND CHIEF INFORMATION OFFICER

March 23, 2010

U.S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

Dear U.S. UCAN Planning Team:

I-Light is the aggregator for the research and education network in the state of Indiana. We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

I-Light intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nation-wide U.S.UCAN network offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area. Additionally, I-Light will work together with U.S.UCAN to potentially provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions. I-Light has received funding from BTOP Round 1 for regional middle mile infrastructure. If funded, this national middle mile proposal will substantially strengthen all such regional middle mile BTOP-funded efforts.

We recognize that implementation of U.S.UCAN is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will empower I-Light and our member institutions with the ability to extend national and international research and education applications and facilities to every portion of our state/region, eliminating the bandwidth-related barriers which have previously existed. We believe that the use of the U.S. UCAN by I-Light and its member institutions will significantly enhance services available and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,

David E. Jent  
Associate Vice President  
Director, Indiana Gigapop  
Indiana University





## INDIANA UNIVERSITY

OFFICE OF THE VICE PRESIDENT  
FOR INFORMATION TECHNOLOGY  
AND CHIEF INFORMATION OFFICER

Dear U.S. UCAN Planning Team:

The Indiana GigaPop is the state and regional network aggregator for the research and education network in Indiana and parts of the Midwest. We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

The Indiana GigaPop intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nationwide U.S.UCAN project offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area. Additionally, we will work together with U.S.UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions.

We recognize that deployment of the U.S.UCAN network is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will empower the Indiana GigaPop and our member institutions with the ability to extend national and international research and education applications and facilities to every portion of our state/region, eliminating the bandwidth-related barriers which have previously existed. We believe that the use of the U.S. UCAN will significantly enhance the available services and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,

David E. Jent  
Associate Vice President, Networks  
Indiana University



**Board of Directors**

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*President and CEO*

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Victor E. Braud, III

**Charter Associates**

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- BYU-Idaho
- Idaho Hospital Association
- Idaho National Laboratory
- University of Idaho
- State of Idaho
- Washington State University

**Executive Office**

1910 University Dr  
Boise, ID 83725-1414  
208-426-IRON (4766)  
info@ironforidaho.net  
www.ironforidaho.net

March 23, 2010

U.S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

Dear U.S. UCAN Planning Team:

Idaho Regional Optical Network (IRON) is a regional network aggregator for the research and education network in Idaho. We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

IRON intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nation-wide U.S.UCAN network offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area. Additionally, IRON will work together with U.S.UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions. If funded, this national middle-mile proposal will substantially strengthen all such regional middle-mile BTOP-funded efforts.

We recognize that implementation of U.S.UCAN is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will empower IRON and our member institutions with the ability to extend national and international research and education applications and facilities to every portion of our state/region, eliminating the bandwidth-related barriers which have previously existed. We believe that the use of the U.S. UCAN by IRON will significantly enhance services available and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,

*Victor E. Braud, III*

Victor E. Braud, III  
General Manager  
Idaho Regional Optical Network

victor.braud@ironforidaho.net



Kansas Research and Education Network  
1405 Wakarusa Drive, Suite B  
P.O. Box 442167  
Lawrence, KS 66044  
785-856-9800  
785-856-1377 (fax)  
[www.kanren.net](http://www.kanren.net)

22 March 2010

U.S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

Dear U.S. UCAN Planning Team:

KanREN, Inc. is the state aggregator for research and education networking in Kansas. We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

KanREN, Inc. intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nation-wide U.S.UCAN network offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area. Additionally, KanREN, Inc. will work together with U.S.UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions.

We recognize that implementation of U.S.UCAN is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will empower KanREN, Inc. and our member institutions with the ability to extend national and international research and education applications and facilities to every portion of our state/region, eliminating the bandwidth-related barriers which have previously existed. We believe that the use of the U.S. UCAN by KanREN, Inc. will significantly enhance services available and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,

A handwritten signature in black ink, appearing to read "Cortney T. Buffington".

Cortney T. Buffington  
Executive Director



## Kentucky Council on Postsecondary Education

**Steven L. Beshear**  
Governor

**Kentucky Regional Optical Network**  
1024 Capital Center Drive, Suite 320  
Frankfort, Kentucky 40601  
Phone: 502-573-1555  
Fax: 502-573-0222  
<http://www.kyron.ky.gov>

**Robert L. King**  
President

**Allen Lind**  
Vice President,  
Information & Technology

March 1, 2010

U.S. UCAN

Dear U.S. UCAN Planning Team:

The Kentucky Regional Optical Network (KyRON) is the network aggregator for the research and education network in Kentucky. We support the United States Unified Community Anchor Network (U.S. UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

KyRON intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nation-wide U.S. UCAN project offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area. Additionally, KyRON will work together with U.S. UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions. KyRON hopes to receive funding from BTOP Round 2 for regional middle mile infrastructure. If funded, this national middle mile proposal will substantially strengthen all such regional middle mile BTOP-funded efforts.

We recognize that deployment of the U.S. UCAN network is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will empower KyRON and our member institutions with the ability to extend national and international research and education applications and facilities to every portion of our state/region, eliminating the bandwidth-related barriers which have previously existed. We believe that the use of the U.S. UCAN network by KyRON will significantly enhance the available services and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,

A handwritten signature in black ink, appearing to read "Allen Lind".

Allen Lind  
Chief Executive Officer

**KyRON**

C: Vince Kellen, Vice President, University of Kentucky  
Priscilla Hancock, Vice President, University of Louisville





***Louisiana Optical Network Initiative***  
***Under Authority from the Louisiana Board of Regents***  
*LSU Computing Services Center*  
*2<sup>nd</sup> Floor*  
*Baton Rouge, LA 70803*  
*Phone (225) 578-3700, FAX (225) 578-6400*  
[www.loni.org](http://www.loni.org)

U.S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

Dear U.S. UCAN Planning Team:

Louisiana Optical Network Initiative (LONI) is the state/regional network aggregator for the research and education network for Louisiana and Mississippi. We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

LONI intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nation-wide U.S.UCAN network offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area. Additionally, LONI will work together with U.S.UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions. LONI has received funding from BTOP Round 1 for regional middle mile infrastructure. If funded, this national middle mile proposal will strengthen all such regional middle mile BTOP-funded efforts.

We recognize that implementation of U.S.UCAN is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will empower LONI and our member institutions with the ability to extend national and international research and education applications and facilities to every portion of our state/region, eliminating the bandwidth-related barriers which have previously existed. We believe that the use of the U.S. UCAN by LONI will significantly enhance services available and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,

Lonnie Leger  
Director of Networking  
LONI  
[lonnie@lsu.edu](mailto:lonnie@lsu.edu)  
225-578-8391



MCNC

P.O. Box 12889  
3021 Cornwallis Rd.  
Research Triangle Park, NC 27709-2889  
T (919) 248-1900 F (919) 248-1101  
www.mcnc.org

March 19, 2010

U.S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

Dear U.S. UCAN Planning Team:

MCNC is the state network aggregator for the North Carolina Research and Education Network (NCREN). We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

MCNC intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nation-wide U.S.UCAN network offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area.

Additionally, MCNC will work together with U.S.UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions. MCNC has received funding from BTOP Round 1 for regional middle mile infrastructure and proposes to expand its reach and direct connections to North Carolina Community Anchor Institutions further with a round 2 BTOP application. If funded, U.S. UCAN proposal will substantially strengthen all such regional middle mile BTOP-funded efforts.

We recognize that implementation of U.S.UCAN is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will empower MCNC and our member institutions with the ability to extend national and international research and education applications and facilities to every portion of our state/region. We believe that the use of the U.S. UCAN by MCNC will significantly enhance services available and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,

Joe Freddoso  
President & CEO

February 26, 2010

U.S. UCAN Planning Team  
c/o Internet2  
1000 Oakbrook Drive, Suite 300  
Ann Arbor, MI 48104

Dear U.S. UCAN Planning Team:

The Memphis Coalition for Advanced Networking (MCAN) and the University of Memphis are the state network aggregator for the research and education network in Tennessee. We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

MCAN intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nation-wide U.S.UCAN project offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area. Additionally, MCAN will work together with U.S.UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions.

We recognize that deployment of the U.S.UCAN network is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will empower MCAN and our member institutions with the ability to extend national and international research and education applications and facilities to every portion of our state/region, eliminating the bandwidth-related barriers which have previously existed. We believe that the use of the U.S. UCAN network by MCAN will significantly enhance the available services and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,



Russell Ingram  
President



1000 Oakbrook Drive  
Suite 200  
Ann Arbor, Michigan 48104

Phone: 734-527-5700  
Fax: 734-527-5790  
[www.merit.edu](http://www.merit.edu)

March 1, 2010

U.S. UCAN

Dear U.S. UCAN Planning Team:

Merit Network is the Michigan aggregator for the research and education network. We support the United States Unified Community Anchor Network (U.S.UCAN) proposal, and its key partners Internet2 and National LambdaRail, in seeking funding from the NTIA Broadband Technology Opportunity Program (BTOP) Comprehensive Community Infrastructure (CCI) program.

Merit intends to use the services of U.S. UCAN to expand access to research applications and educational opportunities via the facilities offered by the network. The nation-wide U.S.UCAN project offers resiliency, redundancy and leading edge broadband services to community anchor institutions within our service area. Additionally, Merit will work together with U.S.UCAN to provide critical pieces of the end-to-end, coast-to-coast solution that is required to meet the advanced networking needs of community anchor institutions. Merit has already received funding from BTOP Round 1 and is applying for BTOP Round 2 funding under (Easygrant ID:4658) for regional middle mile infrastructure. If funded, this national middle mile proposal will substantially strengthen our regional middle mile BTOP-funded efforts.

We recognize that deployment of the U.S.UCAN network is contingent upon the award of funding from the NTIA BTOP program.

Use of the U.S. UCAN will significantly enhance the available services and we look forward to working with U.S. UCAN to bring this network to our constituents.

Sincerely,

A handwritten signature in black ink, appearing to read "Don Welch", written over a thin horizontal line.

Dr. Donald J. Welch  
Don.Welch@merit.edu  
Merit Network, Inc.  
1000 Oakbrook Drive, Suite 200  
Ann Arbor, Michigan 48104-6794