



The Corporation for Education Network Initiatives in California • 16700 Valley View Ave. Ste 400 • La Mirada, CA 90638

To: U.S. UCAN Program Director

From: Jim Dolgonas

Subject: U.S. UCAN Pilot Affiliate Program Call for Participants

CENIC is committed to ensuring that community anchor tenants in California have equitable access to broadband and, therefore, has a strong interest in participating in the U.S. UCAN Affiliate Program, both for the benefit that such a program might bring to California anchor tenants and to share what we have learned in related efforts over the past two decades.

CENIC is a leader in connecting community anchor tenants in California. CENIC was among the first research and education networks to fully engage all of the state's educational segments, was a leader in the creation of the Internet2 Sponsored Education Group Participant Program (SEGP), was among the first five SEPGs, and has been an active participant in this program for over a decade. CENIC continues to partner with Community Anchor Institutions (CAIs) across the state on a variety of broadband initiatives, examples of which are below.

CENIC works intensively with various California entities to help define and provide support, guidance, direction, and access to advanced broadband services for Community Anchor Institutions (CAIs) and has done so since CENIC was created. Broadband initiatives, both those that directly connect CAIs to CENICs networks and those that connect CAIs to commercial networks have been high priorities of CENIC and remain so. Therefore, CENIC is pleased to respond to U.S. UCAN's affiliate pilot program call for participants.

CENIC envisions contributing to the development of the U.S. UCAN affiliate program by continuing its work connecting California CAIs. CENIC also is enthusiastic about the prospect of partnering with other U.S. UCAN affiliates to share best practices, innovative applications and services, and collaborate on such applications and services that are relevant and beneficial to CENIC's CAI participants.

Why are CENIC's mission and goals a good match to the planned activities of the U.S. UCAN affiliate program

CENIC has had a long history of engaging CAIs in broadband initiatives. Starting in 2002, CENIC lead a statewide initiative, leveraging an ecosystems approach involving communities, businesses, and anchor institutions in order to advance our educational goals, accelerate innovation, and sustain economic growth. This resulted in the launch CENIC's highly successful statewide "One Gigabit or Bust" initiative. See http://www.cenic.org/publications/archives/glossies/Gartner_Full.pdf

CENIC has a highly participatory governance structure that involves all California educational segments in its governance and these stakeholders help to shape current and future directions of CENICs network and services. Representatives from these institutions also donate expertise through their participation in various committees designed to ensure that CENIC is managed effectively and efficiently, and to support the continued evolution of the CENIC networks as technology advances.

CENIC is a partner with the Central Valley Independent Network (CVIN, LLC) on a BTOP award for planning, developing, and implementing a robust, comprehensive, and integrated fiber-optics middle-mile infrastructure to 18 counties in the Central Valley and Sierras. This new infrastructure will provide direct fiber connectivity to 64 anchor institutions as well as serve businesses and residences. Additionally, CENIC recently was awarded funding from the Public Utilities Commission to establish and work with two regional consortia to plan for two similar initiatives involving 14 counties in northern regions of California.



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The official memberships of the regional consortia currently working with CENIC are broader than the 8 U.S. UCAN CAI segments and thereby are uniquely positioned to plan and implement sustainable region-specific middle-mile infrastructures connected to CENIC's statewide backbone network. These consortia are composed of government entities (county, city/town, unincorporated districts, state and federal), Native-American communities, educational institutions, libraries, public safety entities, health delivery facilities, community and non-profit organizations, local businesses, telecommunications providers, electric utilities, and other organizations in each of the counties.

California organizations currently partnering with CENIC:

CENIC works with partners in state, county and local government, with commercial partners, and across all CAI sectors to extend broadband capacity and services. Some examples of current partners:

- *California Emerging Technology Fund:* partners with CENIC to help facilitate broadband access within un-served and underserved regions, communities, and segments California's citizenry.
- *California Public Utilities Commission:* partners with CENIC to leverage California Advanced Services Fund grants to expand access within un-served and underserved regions of California.
- *California State University Chico Center for Economic Development:* partners with CENIC to facilitate regional middle-mile and last-mile broadband infrastructure projects.
- *California Technology Agency:* partners with CENIC on exploring the use of fiber as part of the expansion of California's public safety advanced services network infrastructure.
- *California Telehealth Network:* partners with CENIC to extend the delivery of telehealth services into rural areas throughout California.
- *Northeastern California Connect Consortium:* CENIC partners with Northeastern California Connect Consortium to lead a seven county middle-mile/last-mile broadband infrastructure initiative, which includes representatives from all of the U.S. UCAN CAI segments within these counties.
- *Upstate California Connect Consortium:* – CENIC partners with the Upstate California Connect Consortium to lead a four county middle-mile/last-mile broadband infrastructure initiative, which includes representatives from all U.S. UCAN CAI segments within these counties.
- *Connected Capital Area Consortium:* CENIC partners with the Connected Capital Area Consortium to expand broadband access with the four county Capital area, which includes representatives from all U.S. UCAN CAI segments within these counties.
- *San Joaquin Valley Regional Broadband Consortium:* CENIC partners with the San Joaquin Valley Regional Broadband Consortium to expand broadband access within the eight San Joaquin Valley counties, which includes representatives from all U.S. UCAN CAI segments within these counties.
- *Redwood Coast Connect Consortium:* CENIC partners with the Redwood Coast Connect Consortium to expand broadband access within the four Redwood Coast counties, which includes working with representatives from all U.S. UCAN CAI segments within these counties.
- *Central Coast Broadband Consortium;* CENIC partners with the Central Coast Broadband Consortium to expand broadband access within the three Central Coast counties, which includes working with representatives from all U.S. UCAN CAI segments within these counties).

Existing relationships with CAI sectors:

CENIC is active among all CAI sectors, with many being fully served today by the CENIC network and its services. Moreover, some CAI sectors (CENIC's Charter Members) are actively involved in CENIC governance and in shaping future network and services directions.

- *Public Safety:* CENIC is advising on a wireless broadband backhaul plan at State level with the California Technology Agency, and at the regional level with groups such as the BayWeb Consortium involving public safety agencies within the SF Bay Area; public safety agencies are



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included within all of the regional broadband consortia listed above and are thereby included in planning for connection to their respective regional middle-mile networks and to the CENIC backbone network.

- *Libraries:* County and City libraries are also included within all of the regional broadband consortia listed above and are thereby included in planning for connection to their respective regional middle-mile networks and to the CENIC backbone network. CENIC and the State Library and the 200 plus Major/County Libraries across the state are using the CVNGBIP as a start towards connecting all libraries.
- *K-12 School* – the K12 High Speed Network (K12HSN) entity which represents all 8,000+ public schools within California is a CENIC Charter Associate and these schools are connected to CENIC via their county offices.
- *Museums:* Museums and cultural organizations are included (where available) within the regional broadband consortia listed above.
- *Government:* County and local governments are included within all of the regional broadband consortia listed above and are thereby included in planning for connection to their respective regional middle-mile networks.
- *Health Services:* Major health delivery entities are included within all of the regional broadband consortia listed above.
- *Public Media and Performing Arts:* Local public media and performing arts representatives (where available) are included within the regional broadband consortia listed above.
- *Community Colleges:* The California Community Colleges Chancellor's Office representing all 115 public community colleges with California is a CENIC Charter Associate and all California Community Colleges are connected to CENIC
- *Universities:* the University of California Office of the President, the California State University Chancellor's Office, and all the major private universities are CENIC Charter Associates, and many other colleges and universities within California are CENIC Associates and all are, consequently, connected to CENIC.

Work plan for the pilot

CENIC has a long history of involving its stakeholders in leveraging their networking resources under the Corporation for Education Network Initiatives in California, in order to obtain cost-effective, high-bandwidth networking to support their missions.

CENIC designs, implements, and operates CalREN, the California Research and Education Network, a high-bandwidth, high-capacity Internet network specially designed to meet the unique requirements of these communities, and to which the vast majority of the state's K-20 educational institutions and other CAIs are connected.

CalREN consists of a CENIC-operated backbone to which schools and other institutions in all 58 of California's counties connect via leased circuits obtained from telecom carriers or fiber-optic cable. Working closely with CAIs and partnering with telecommunications providers has been a fundamental part of CENIC's strategy in the past and will continue to be in the future. Furthermore, recent initiatives have focused on community broadband initiatives, where the value to a community is multi-faceted and includes connections to CalREN, connections within communities to allow partnerships among diverse sectors, and connections within key CAI sectors. We believe that this community-based approach, where CENIC partners with diverse organizations, and organizations partner across sectors, is a critical, perhaps *the* critical, factor for success of broadband initiatives in California. Such an approach will continue to characterize our community broadband initiatives in the future and would form the basis for a workplan going forward. In addition:

- CENIC is willing to contribute to a repository of information on advanced applications, resources, funding models and processes benefitting California CAIs. In particular, as the Regional Network



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servicing the largest state with the largest number of CAIs, and the organization that has been very successful in connecting CAIs, long before the term “Community Anchor Institutions” existed, CENIC is in an ideal position to work hand-in-hand with U.S. UCAN in developing a scalable cost model. This model, ideally, would entice and encourage other RONS and developing networks to connect and serve unconnected CAIs in their states and regions.

- CENIC uses multi-county community-based consortia (as listed above) to identify eligible CAIs, assist them in eliminating the network as a barrier, driving advanced applications and to integrate them into a community-driven, participatory networking model.
- U.S. UCAN is expected to share best practices in the application of advanced R&E networking in community anchor settings, and to help map reported progress from California to the goals National Broadband Plan.
- CENIC anticipates interacting with U.S. UCAN within the broad context of two-way information sharing and is willing to serve on both national governance and advisory bodies.
- Metrics used to track CAI participation are or will be defined by the multi-county consortia listed above, and we would share insights gleaned through the U.S. UCAN program with these consortia, as extend what we learn in California to national CAI communities.

CENIC is ready and well-positioned to serve as the primary U.S. UCAN organization in California as a result of investing many years of building relationships with organizations and community anchor institutions at all levels and across all regions of the State, and because of the success of the community-based approach to broadband development that is at the heart of CENIC’s mission.