

The COMMONS Project: Cooperative Measurement and Modeling of Open Networked Systems

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On December 12-13, 2006, the Cooperative Association for Internet Data Analysis (CAIDA) held a North American strategy workshop to discuss and ultimately propose **a collaboration among researchers and networks to simultaneously solve three acute and growing problems facing the Internet: a self-reported financial crisis in the Internet infrastructure provider industry that poses a severe threat to broadband growth and American competitiveness; a data acquisition crisis which has deeply stunted the field of network science; and a critical dilemma within emerging community, municipal, regional, and state networks, who need (additional) broadband connectivity but face severely limited provider, service level, and usage options.** The Cooperative Measurement and Modeling of Open Networked Systems (COMMONS) initiative proposes to build and/or partner with national backbone providers to interconnect participating community, municipal, regional, and state networks to one another and to the global Internet. COMMONS peering is available to city, county, state, and federal government entities, academic institutions, community Internet initiatives (e.g., community wireless networks), and commercial entities based upon the following three conditions: (1) networks will make select operational data available to COMMONS researchers (under appropriate legal data sharing and privacy guards); (2) the attached networks must agree to develop and abide by COMMONS policies which will be based upon research results of empirical data analyses of network usage; and, (3) participating networks must abide by the Acceptable Use Policies set by the COMMONS Project Coordination Committee.

COMMONS brings together representatives from industry, community and municipal networks, regional and state networks, as well as Internet researchers, community organizers, and developers building next-generation data communications technologies. Workshop participants also included heads of research, infrastructure, media, and policy organizations, as well as telecommunications lawyers. The diversity of workshop participants helped ensure that all major project stakeholders were represented in the proceedings and provided invaluable insights into the potential pitfalls and opportunities the COMMONS Project faces in coming years. At a time when research on broadband service provision is desperately needed to help forge new national telecommunications policy and developing improvements in networking technologies, the COMMONS Project is an innovative platform that will provide vital research results for policy makers across the country and around the world. [Full Workshop Report: http://www.caida.org/workshops/commons/0612/final_report.xml]

COMMONS – Funding Requirements:

- \$35 million for first 5 years (start-up costs).

The COMMONS Project:

- Provides a platform for Internet researchers to study essential infrastructure.
- Creates a low-cost medium for networks to peer with each other.
- Offers connectivity to Internet infrastructure providers struggling to bring connectivity to rural America.
- Brings together federal funding agencies, industry, researchers, community organizers, network operators, fiber owners, municipalities, and policymakers.
- Facilitates innovative and empirically-based improvements to the Internet.
- Presents an unprecedented opportunity for establishing standards for scientific integrity for in-vivo Internet research using rigorous empirical data to validate theories, models and simulations.

Current COMMONS Partners: National Science Foundation, Cisco Systems, CAIDA, National Lambda Rail, University of California San Diego, KDHX, One Community, Kavli Institute for Theoretical Physics, the Ethos Group, Internet Exchange New Mexico, Samuelson Law, Technology & Public Policy Clinic UC Berkeley, New America Foundation, Indiana Farm Net, City of Geneva Illinois, NATOA, Telecommunity Resource Center and TISPA, Prometheus Radio, NextGenCommunications, First Mile US, Media Access Project, New York City Wireless, Cumberland Internet, Dandin Group, Ilse San Fil, Baller Herbst Law Firm, CTCnet Chicago, SoCalFreeNet, The CUWiN Foundation, Network for Good, SFLan, Bay Area Wireless Users Group and Bay Area Wireless Resource Network, Tribal Digital Village, Kane County Illinois, Grassroots.org, Free Press, FreeNetworks.org, and Seattle Wireless.