# NETWORKWORLD

# UCLA, Cisco & more join forces to replace TCP/IP

## Named Data Networking Consortium makes its debut in LA

By Bob Brown | Follow

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Internet architecture

Big name academic and vendor organizations have unveiled a consortium this week that's pushing Named Data Networking (NDN), an emerging Internet architecture designed to better accommodate data and application access in an increasingly mobile world.

The Named Data Networking Consortium members, which include universities such as UCLA and China's Tsinghua University as well as vendors such as Cisco and VeriSign, are meeting this week at a two-day workshop at UCLA to discuss NDN's promise for scientific research. Big data, eHealth and climate research are among the application areas on the table.

The NDN effort has been backed in large part by the National Science Foundation, which has put more than $13.5 million into it since 2010. Since that time, participating organizations have somewhat quietly been working on new protocols and specifications, including a new packet format, that have been put through their paces in a testbed that spans from the United States to Asia. Their aim is to put forth an Internet architecture that's more secure, able to support more bandwidth and friendlier to app developers. Cryptographic authentication, flow balance and adaptive routing/forwarding are among the key underlying principles.

# `/net/named-data/consortium/`**`%FD%00`**\*

- First attempt at this idea and organization.
- Post-NFD launch effort to engage.

- So:
  - <u>Tell</u> us what you need.
  - <u>Help</u> us address limitations.
  - Be kind.

\* - This versioning convention not finalized,
let's have a conversation about what's next.

# High-level goal

- Grow and support a community that is collaborating on NDN research – including design, implementation, and evaluation;

- Provide a forum for dialogue and participation in the research and design of the core architecture, as well as the resources needed for engagement and dissemination.

# Initial Objectives & Benefits

- A clearly identifiable organization to **promote a vibrant open source ecosystem of research and experimentation around Named Data Networking** by
  - providing **developer support tools**,
  - organizing **community meetings**,
  - generating **outreach activities**,
  - hosting **working groups** for both industry verticals and cross-cutting activities,
  - as well as providing **general communication** and **legal support** not typically funded through sponsored research.

# Initial Objectives & Benefits

- An advocate for a transparent, consistent model to **preserve and promote the openness of the core NDN architecture**, in which participants agree voluntarily to license protocol and interoperability-related advances for use by the community with a degree of confidence that other participants will do the same;

# Initial Objectives & Benefits

- **Enhanced access to research results** at the NDN-NP ("Next Phase") academic institutions [and other members of the consortium and community] through meetings, workshops and other activities;

- **Evidence of the project's increasing maturity and research activity** for industry and government partners;

- An opportunity to provide academic partners with an **umbrella for coordination independent of individual sponsored research projects**.

# Non-Objectives

- There is no IPR component of the membership agreement. (So no patent pool, etc.)

- Not a standards body.

- Not a centralization of research funding for NDN.

- Not primarily internal.

# Structure

- The annual membership fee for for-profit corporations in FY2014 will be $25k (with voting rights).

- NDN "Next Phase" (NP) project academic participants will pay no fee.

- Other educational institutions and non-profit research organizations may join the consortium at no cost (without voting rights) or at $25k (with voting rights).

- Membership will be open to all organizations that are interested in NDN.

- Two (open) board meetings planned per year. How many community meetings and of what kind?

# Governance

- Activities of the NDN consortium will be steered by an Advisory Board of its members, which will set policy and elect officers to execute the consortium's activity.

- Board members include: the NDN-NP management team, one PI from each NDN-NP campus not represented on the management team, one voting representative (and one alternate) from each paying industrial or academic member.

- The board is expected to meet twice a year, in a forum open to all consortium participants and invited guests.

# Activities

- Much is t.b.d. in consultation with the members – we will start in earnest in late Fall.

- For FY2014, the NDN consortium funds will be managed by UCLA. **The consortium may in the future become an independent 501(c)(6) organization.**

- As funding allows, initial staffing for the consortium will include: A part-time or full-time program manager and member liaison; development support (which may include subcontracts to organizations such as the Linux Foundation); part-time administrative staff; retained services such as legal counsel and public relations.

# Discussion

**NDN Consortium: Quick Intro**

NDNComm 2014

September 5, 2014

named-data.net/consortium

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