

Call for Research Collaboration on Future Internet Architectures in Partnership with the US NSF FIND Program

Background

Much energy has recently crystallized within the international network research community for developing fresh perspectives on how to architect a single, coherent, global data network. The Internet's unquestionable success at embodying one such architecture has also led over the decades of its operation to unquestionable difficulties with regard to support for some types of functionality and sound operation.

As a reflection of this growing community interest, the U.S. National Science Foundation has announced a focus area for networking research called FIND, or Future Internet Design. The agenda of this focus area is to invite the research community to take a long-range perspective, and to consider what our global network of 10 or 15 years should be, and how to build a network that meets the future requirements. (For further information on the FIND program, see NSF solicitation 07-507¹.) The research funded by FIND aims to contribute to the emergence of one or more integrated visions of a future network.

A vital part of this effort concerns fostering collaboration and consensus-building among researchers working on future global network architecture. To this end, NSF has created a FIND Planning Committee, which is working with NSF to organize a series of meetings among FIND grant recipients structured around activities to identify and refine overarching concepts for a network of the future.

A broader community

NSF recognizes that its efforts at funding research to contribute to a future global network exists within a broader set of efforts with similar goals supported by other agencies, industry, and nations. Accordingly, NSF seeks researchers external to the FIND program itself—but who share a likeminded vision—to participate in the collaboration and consensus-building. NSF particularly welcomes international collaboration—any vision of a future global network will greatly benefit from global participation.

To this end, external researchers interested in such participation are invited to submit short white papers describing themselves and their work. Based on evaluation of these white papers, a select number of researchers will be invited to join the FIND meetings and other events, as overall meeting sizes and logistics permit.

Expectations and evaluation criteria

Since the efficacy of FIND meetings is in part a function of their size and coherence, the evaluation of the white papers will focus on certain criteria that are listed below, along with expectations regarding what external participation entails. Naturally, interested parties should take these considerations into account as they write their white papers, and include information in their papers sufficient to allow the FIND program to evaluate the aptness of their participation.

- In a few sentences, please describe your research and its intended impact. When possible, include as an attachment (or a URL) a longer description, which if you wish can be

¹ Available at http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf07507

something prepared for another purpose (e.g. your original funding proposal or a publication). It will help to limit the supporting material to 15 pages or fewer.

- Please summarize in the white paper the ways you see your research as being compatible with the objectives of FIND (the URL for the FIND solicitation is included above). Research that accords with the FIND program will generally be based on a long-term vision of future networking, rather than addressing specific near-term problems, and framed in terms of how it might contribute to an overall architecture for a future network.
- The FIND meetings have been organized for the benefit of researchers who have already been funded and are actively pursuing their research. Research described in white papers should already be funded. Please describe the means you have available to cover your FIND-related research: the source of funds, their duration, and (roughly) the supported level of effort. Unfortunately, NSF lacks additional funds to financially support your participation in the meetings, so you must be prepared to cover those costs as well. If you are planning to submit a FIND research proposal to the current NeTS solicitation, you should not submit a white paper here based on that research. Successful FIND grant recipients will automatically be invited to join the FIND community.
- As one of the goals of FIND is to develop an active community of researchers who over time work increasingly together towards coherent, overall architectural visions, we aim for external participants to likewise become significantly engaged. To this end, you should anticipate (and have resources for) participating in FIND project meetings in an active, sustained fashion.
- Your research must not be encumbered by intellectual property restrictions that prevent you from fully discussing your work and its results with the other participants.

Please try to limit your white paper to 2 pages. Your white paper (and the supporting research description) will be read by members of the research community, so do not submit anything that you would not reveal to your peers. (White papers are not viewed as formal submissions to NSF.)

Timing and submission

You may submit a white paper at any time during the FIND program. Before each scheduled FIND PI meeting, the papers on hand will be reviewed. Meetings are anticipated to occur approximately three times a year, in March, July/August and November. The next FIND meeting is scheduled for March 5/6, 2007, and priority in consideration for that meeting will be given to white papers that are received by Friday, January 19th, 2007.

Send your white paper to Darleen Fisher <dlfisher@nsf.gov> and Allison Mankin <amankin@nsf.gov> for coordination.

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