

Charge to the NetSE Council Working Committee on the Network Science and Engineering Research Agenda

This NetSE Council working committee is charged with the development and evolution of a compelling Network Science and Engineering (NetSE) Research Agenda.

With the ultimate goal of developing a comprehensive scientific understanding of the interconnected technical and social dimensions of complex digital communication networks, researchers with expertise in computing, engineering, and the social, behavioral and economic sciences are expected to come together in the development of this agenda. The NetSE Research Agenda will reveal the fascinating scientific landscape of network science and engineering, and will build support for increased and more effective investments in this multidisciplinary field.

The working committee is first charged with preparation of version 1.0 of the NetSE Research Agenda by August 31, 2008. The document should represent the most important multidisciplinary research opportunities in network science and engineering. The document should “tell a story” that convinces a wide variety of stakeholders – in academe, industry and government – of the imperative for further investment in this field. The document should be no more than 30 pages in length. In its development, the working committee should draw upon as full an inventory as possible of past agenda-setting activities in NetSE, and the document should reference the voluminous material generated by these earlier efforts. The working committee should design workshops, meetings, conference calls, and other events for the express purpose of helping the working committee’s designated writers get their job done well and fast.

There has already been a great deal of agenda-setting activity in NetSE, e.g., by Kearns and Forrest in an ISAT study; Feigenbaum, Mitzenmacher, and others in Theory of Networked Computation; Hendler and others in Web Science; Bajcsy, Berman, and others in CS-plus-Social Sciences; the NSF/OECD Social and Economic Factors Shaping the Future of the Internet Workshop; and documents created in the early design of the Global Environment for Network Innovations (e.g., the *GENI Research Plan* prepared by David Clark, et al., and the *Why We Dream of GENI* document prepared by Scott Shenker. The products of these earlier efforts, including the insights, talking points, and community formation as well as the tangible products such as draft reports and PowerPoint decks, should not be discarded! They should be incorporated as appropriate into the product of this next phase of agenda-setting. However, the working committee should not assume that all relevant people and communities have been heard from and should strive to get input from those who may not have had their research agenda ideas reflected in prior efforts.