

## 1. Introduction

The Federal agencies of the Large Scale Networking Coordinating Group (LSN CG) held a March 12-14 **Workshop on New Visions for Large-Scale Networks: Research and Applications** to stimulate bold thinking and to explore new directions that could

the basis for presentations and panel discussions at the workshop. Most of these white papers are available on the Web at: <http://www.ngi-supernet.org/conferences.html>.

The workshop participants were asked to envision network technology possibilities that could revolutionize the way we live and work in the decades ahead, but that are beyond the scope of today's commercial, profit-driven R&D programs, and to identify network research needs to help realize those possibilities. Emphasis was placed on identifying exciting new areas of research that are radically forward-looking and that hold the potential to yield unexpected results. The workshop asked the participants to identify critical research barriers and the limitations of existing approaches. They were encouraged to bridge the gap between the broad-scale vision and the specific technologies, however difficult to achieve, needed to realize the vision.

### **1.3 Workshop Format**

The LSN workshop was held over a three-day period from March 12 to 14, 2001. On the first day, three panel sessions provided discussion of the white papers in the areas of:

- ◆ **Adaptive networking:** Network-aware distributed applications, proactive self-tuning systems for ubiquitous computing, and custom channel building for large-scale network systems
- ◆ **Infrastructureless networking:** Ad-hoc disposable networks; dynamically forming,