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### **Engaging Public Audiences in Nanoscale Science and Engineering Nationwide**

LARRY BELL, Museum of Science

In 2005 the National Science Foundation threw out a challenge to the science museum community to engage public audiences nationwide in learning about nanoscale science, engineering, and technology, while raising the bar, extending the frontiers, and pushing the envelope, to achieve outcomes that otherwise would not be possible. The Museum of Science in Boston collaborated with the Exploratorium in San Francisco and the Science Museum of Minnesota in St. Paul to put together the team that won the largest NSF award ever made to a science museum by promising to get public engagement with nano happening in 100 places across the U.S. This was a particular challenge because research showed that neither science museums nor science research centers had the capacities, interest, or motivation to do so, feeling that their audiences had no strong interest in the topic. By 2016, however, the Nanoscale Informal Science Education Network (NISE Net) had over 600 active partner institutions, had engaged 30 million members of the public, and was reaching nearly 11 million each year. What were the keys to that success? The whole thing was an engineering problem—how to design a network and its way of working to maximize the likelihood that fiercely independent organizations not initially interested would find involvement beneficial; and how to design educational activities and resources so that public audiences would find nanoscale science, engineering, and technology interesting, relevant, and accessible. Tonights after-dinner presentation will focus on some of the tricks and lessons learned that made NISE Net successful both with professional and public audiences. They can be applied to other current research topics and other projects seeking to involve a wide range of organizations.