

## Snow Crashing the Diamond Age: Mobile Devices meet Sensor Networks

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Personal mobile computing devices share many of the same properties of nodes in a sensor network. They are both sensor-rich, power-limited, and wirelessly connected. Indeed, a number of researchers have described sensor networks composed of collections of mobile devices. Sensor networks may be naïvely characterized as instrumentation of a fixed space or structure. Mobile devices are appliances in the service of an individual. Imagining the potential of these technologies in combination is a matter of proposing applications.

However, combined applications must abide by the tight energy and bandwidth constraints imposed on sensor networks. A conventional mobile device risks becoming the bull in a china shop if it requires service from surrounding sensor networks. This talk examines both the potential and limitations of combined applications.

Turner Whitted joined Microsoft Research as a senior researcher in 1997. He manages MSR's Hardware Devices and Graphics groups. He was an adjunct professor of computer science at the University of North Carolina at Chapel Hill from 1983 until 2001 as well as a cofounder and director of Numerical Design Limited. Prior to that he was a member of the technical staff in Bell Labs' computer systems research laboratory where he introduced the use of recursive ray tracing to implement global illumination. He earned BSE and MS degrees from Duke University and a Ph.D. from North Carolina State University, all in Electrical Engineering. In the past he has served as an Associate Editor-in-Chief of IEEE Computer Graphics and Applications, and was papers chair for SIGGRAPH 97. He is an ACM Fellow and member of the National Academy of Engineering.