

## The Role of Mobile Sensor Networks in the Sensor Web

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Sensor webs have been shown to be a powerful tool for many in-situ Earth science applications ranging from earthquake forecasting to understanding climate change. The sensor web concept can capitalize on all scientific measurement opportunities – whether in-space, in-orbit, or in-situ. A key component in this broad sensor web concept is the inclusion of in-situ measurements as an enhancing component of the sensor web. These in-situ networks capitalize on their ability to deploy cheap nodes throughout a region of interest in order to gather information relevant for scientific analysis. Recently, there has been growing interest in mobile networks to deal with the limitations of static networks, including issues of network deployment, coverage, and fault tolerance. However, a number of issues still exist in deploying mobile sensor networks for Earth science applications, including the effectiveness of adapting to the environment and to changing science requirements, balancing power usage, and selecting between communication and control strategies. Dealing with these issues is fundamentally a difficult problem and yet enabling mobility for in-situ measurements provides a unique, dynamic characteristic that increases the capabilities of the sensor web to improve scientific knowledge.