962-A0-64 **Ralph L. Keeney*** (Keeneyr@aol.com), Center for Telecommunications Management, University of Southern California, 101 Lombard Street, Suite 704 W, San Francisco, CA 94111. *Building and using mathematical models to guide decision making.*

We make decisions to reach what we hope to achieve. To describe these hopes, we use our values expressed as objectives, goals, criteria, performance measures, and/or objective functions. Because of their critical role, it is useful to build mathematical models of these values to help guide us in making important decisions. In this presentation, I outline how to develop such models for specific decisions from basic principles. This includes how to identify values appropriate for a specific decision, how to organize them to facilitate thinking and analysis, and how to quantify values. I illustrate the use of value models in several projects concerning business strategy, life-threatening risks, storage of nuclear waste, and internet commerce. (Received July 17, 2000)