

## **UWB Antenna Surrogate Design**

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When designing a surrogate antenna system for physical testing, maintaining symmetry eventually present in a final design is important. Surrogate antenna systems are valuable when experiments with the real antenna system is not possible due to cost, design complexity, design maturity, non-disclosure concerns or other issues. Exigencies of a physical test may lead to surrogate design features that adversely affect results. Simulations capabilities and experience can aid in surrogate antenna system design yielding rapid prototyping while maintaining accurate symmetries with respect to final design guidelines. Several examples are discussed including discone (cylindrical) versus box discone (cylindrical/cartesian) antenna patterns, frequency characteristics and pulsed results.