

Measurements to Determine Potential Interference to GPS Receivers from Ultrawideband Transmission Systems

ABSTRACT

In response to the Federal Communications Commission (FCC) May 2000 Notice of Proposed Rulemaking concerning the use of ultrawideband (UWB) devices, measurements were conducted to determine interference potential to global positioning systems (GPS) from UWB devices. Measurements were conducted on four different GPS receivers by combining varying levels of different UWB signals with simulated GPS satellite signals and determining the effects on GPS receiver performance. A secondary objective was to identify metrics that are reflective of receiver performance for the intended application and to establish repeatable measurement methodologies. The results have provided the technical information needed by NTIA to develop policies for use of UWB by the Federal government and to work with the FCC to develop rules and regulations for UWB emissions.