TerraGrid
Taking you where GPS cannot

Abstract

TerraGrid is a 3D localization system that uses Ultra Wide Band (UWB) technology that gives centimeter (cm) level accuracy. TerraGrid is quite immune to noise, reflections and multipath effects that cause problems for localization systems based on technologies like WiFi, Bluetooth etc.

In the TerraGrid system, fixed nodes are placed at specific locations in a room. Moving nodes (possibly thousands) then determine their position with respect to the fixed nodes. A custom node placement algorithm lets us place the fixed nodes to ensure maximum coverage while ensuring there are almost no blind spots.
Our propreitary robust positioning algorithm let's us real calculate 3D position on the moving node itself. As the number of fixed nodes increase the accuracy of the positioning algorithm increases.

TerraGrid works indoors, outdoors or even in a basement. It can seamlessly transition with GPS if necessary. Applications range from retail/warehouse (Guide the buyer to the right aisle), to driverless cars parking in a basement, to indoor autonomous drone navigation, precision drone inspections among several others.

We have had very succesful tests indoors and in a basement so far. Initial videos may be seen here
https://www.youtube.com/watch?v=XpGVb3obheQ
https://www.youtube.com/watch?v=nZR0T0J45Gk

TerraGrid is a joint development by Quadrodynamics (Bulgaria) and Dynamic Software (India)