

## Radio Based Location Detection

**Authors :** M. Pallikonda Rajasekaran, J. Joshapath, Abhishek Prasad Shaw

**Abstract :** Various techniques has been employed to find location such as GPS, GLONASS, Galileo, and Beidou (compass). This paper currently deals with finding location using the existing FM signals that operates between 88-108 MHz. The location can be determined based on the received signal strength of nearby existing FM stations by mapping the signal strength values using trilateration concept. Thus providing security to users data and maintains eco-friendly environment at zero installation cost as this technology already existing FM stations operating in commercial FM band 88-108 MHZ. Along with the signal strength based trilateration it also finds azimuthal angle of the transmitter by employing directional antenna like Yagi-Uda antenna at the receiver side.

**Keywords :** location, existing FM signals, received signal strength, trilateration, security, eco-friendly, direction, privacy, zero installation cost

**Conference Title :** ICECE 2015 : International Conference on Electronics and Communication Engineering

**Conference Location :** Paris, France

**Conference Dates :** April 27-28, 2015