

USING WI-FI AND NETWORK SIGNAL DATA TO DETERMINE INDOOR LOCATION

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ABSTRACT

Mobiles devices have become increasingly popular in recent years. Like many devices we own, it is often very easily to misplace them in the house. While many apps exist to help find these lost devices they rely on GPS technology to help pin point a location. In this paper we present a method of using of Wi-Fi and network signal data to locate a device indoors. The test results for our method show great accuracy in predicting which room a device is in and some success in pin pointing precisely where the device is in the room. We examine the shortcomings of our technique as well as the ways in which it can be improved. We also examine similar work done in this field and how future technologies such as Bluetooth beacons will make the problem of indoor localization much easier and much more accurate to solve in the future.

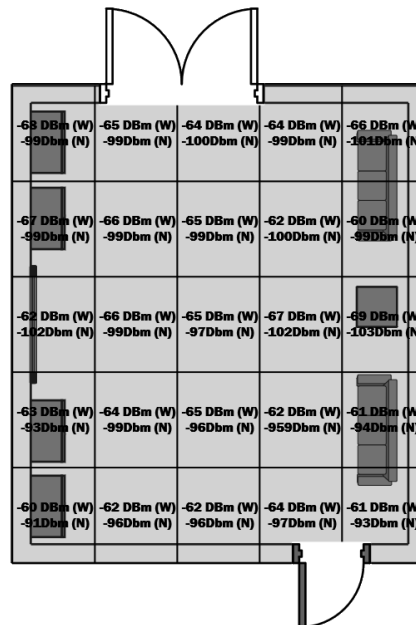


Figure 1. Distribution of Wi-Fi (W) & Network (N) signal strength in a typical living room.

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