

A Wireless Communications Radio Frequency Scanner for Signal Measurement

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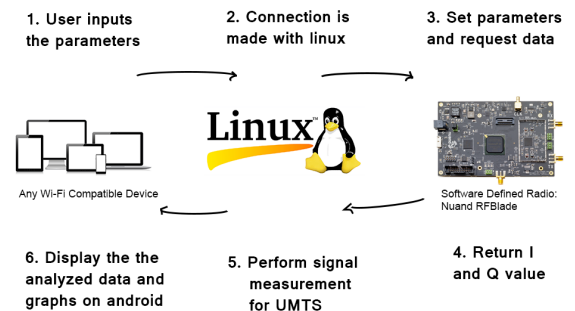
Introduction

- The Wireless Communications Scanner will be used in a mobile environment for measuring the RF performance of mobile telephone networks.
- This project is being sponsored by DasPoint Inc. which uses these scanners to optimize distributed antenna systems.
- Using BladeRF will allow the scanner to be less bulky and a lot more powerful in terms of speed and the types of analytics it can perform.

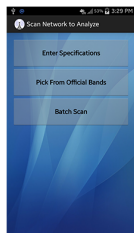
Old Scanners



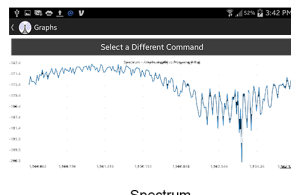
Schematic



Results



Home Screen



Spectrum



Statistics

Future Work

- Expand the product to work on other network protocols such as LTE, GSM, CDMA.
- Program the FPGA on the Nuand Blade RF to run the UMTS analysis code, thereby completely doing away with the Odroid.
- The power of BladeRF allows for many simultaneous processing, which can be useful in adding more functionality to the unit. This device can be the ultimate all in one RF machine.

Sponsor:
DasPoint, INC.

Georgia Tech School of Electrical and Computer Engineering

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