

## IEEE 802.21 MEDIA INDEPENDENT HANDOVER

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Title: **Multi-Radio Power Measurement**

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Abstract: This contribution describes the multi-radio power drain results.

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# Overview

- The main motivation of the MRPM is to reduce the power drain of the multi-mode terminals
- Most of the MRPM scenarios are based on the assumption that the WiFi interface is consuming more power than WiMAX or 3G
- To move forward the MRPM works, we should identify how much power is consumed in each technology and its power drain features
- This contribution describes the power drain results in real world environment.

- Oscilloscope
  - MSO6104A of Agilent
- Power Supply
  - GP-4303TP of Ez-digital : 5.2V
- Wireless Modems
  - HSDPA: IM-H100 of Sky corp.
  - WiFi: WUSB54GC of LINKSYS
- Access Point for WiFi
  - WAP54G of LINKSYS)
- Resister
  - 1 ohm, 1%

# Experiment (2)

- Data capture program
  - Program: IntuiLink Data Capture
  - It is possible 2M samples during 500s (about 8min)
    - In this experiment, 20k samples of data is captured during 500s
- Streaming Source
  - [http://www.tagstory.com/video/video\\_post.aspx?media\\_id=V000126232&feed=NV](http://www.tagstory.com/video/video_post.aspx?media_id=V000126232&feed=NV)

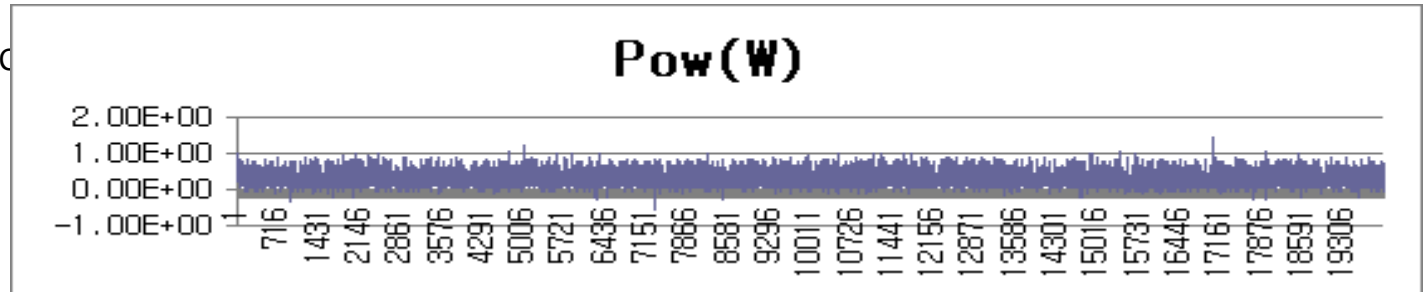


# HSDPA Power Consumption

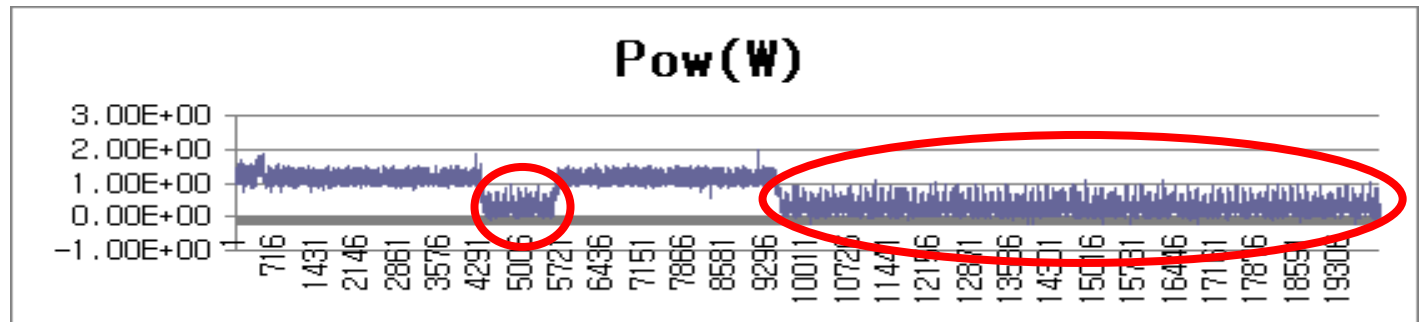
- State
  - NOCON: The connection with the BS is not made.
  - CON: The connection is established. However, no application service.
  - STR: On-going video streaming service

# HSDPA Power Consumption (2)

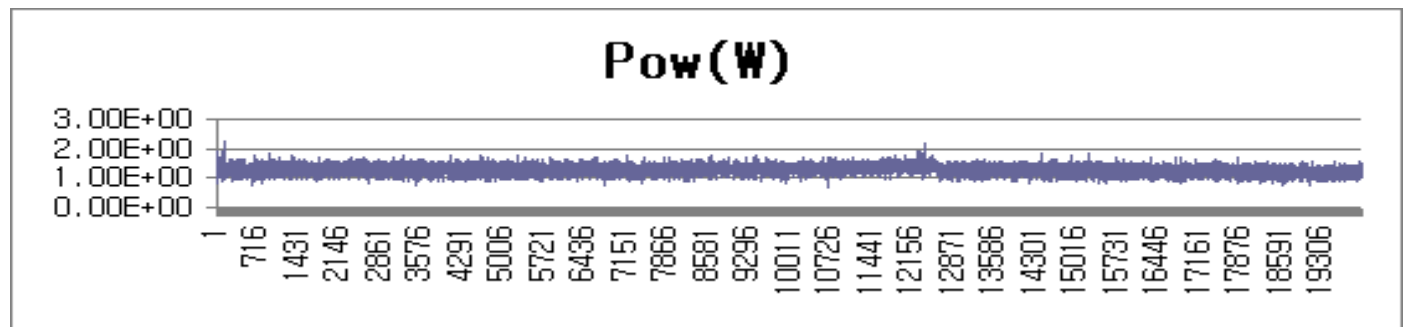
- NOCON



- CON



- STR





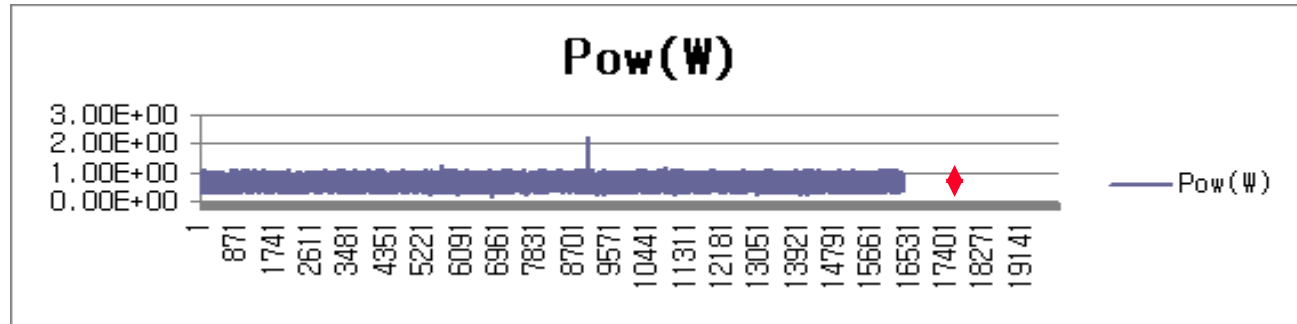
# WiFi Power Consumption

- State
  - PSM: Power save mode
  - CON: The association is made with AP. However, no application service.
  - STR: On-going video streaming service

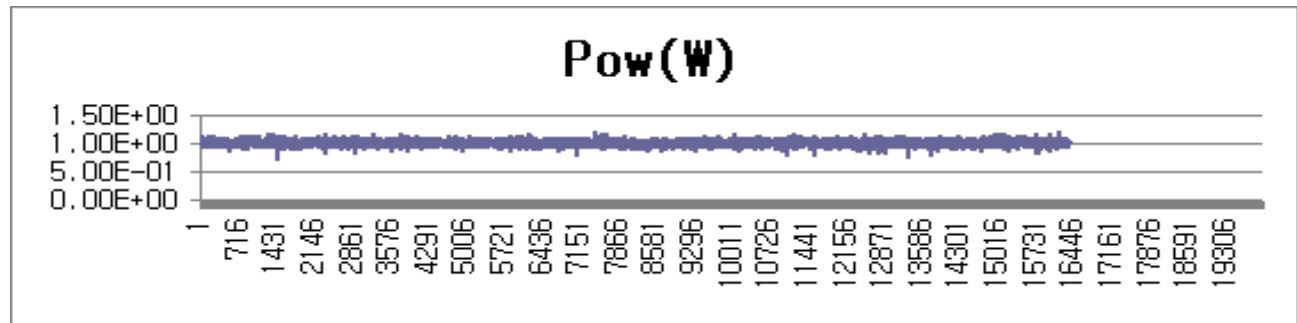


# WiFi Power Consumption (2)

- PSM



- CON



- STR

