

# APPLICATION NOTE

MD8470A

Signalling Tester

Throughput Measurement

ANRITSU CORPORATION

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# MD8470A Signalling Tester Application Note

## - Throughput Measurement -



Throughput

Anritsu Corporation  
Measurement Business Center  
Wireless Measurement Division  
July 2005  
Version 1.0

Discover What's Possible™  
MD8470A-E-F-8

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# 1. Challenges of Measuring Throughput



In an online network, throughput changes dynamically for the following reasons, so it is difficult to measure throughput with high reproducibility:

## ■ Server Loads

Since servers on the network are performing a variety of processes, the time allocated to these processes is not always the same.

## ■ Number of Connected Users and Traffic Variations

In wireless packet transmissions, to make effective use of the network in response to traffic variations and increases/decreases in the number of connected users, the packet rate changes dynamically.

## ■ Changes in Route

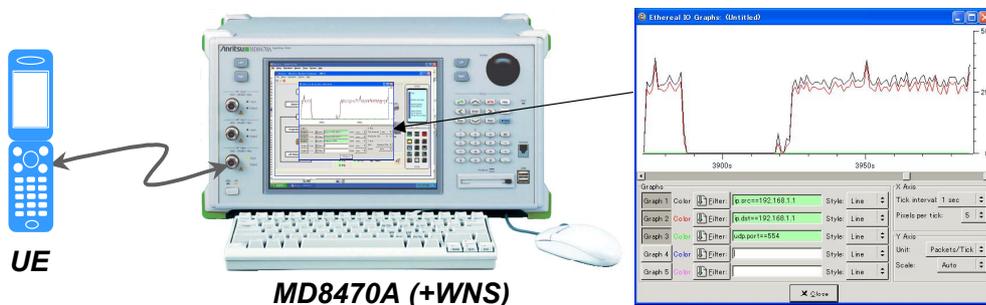
The route from the UE to the server and other UEs changes due to factors such as traffic loads.

The MD8470A offers a throughput measurement environment that is unaffected by these variables.

# 2. MD8470A Throughput Measurement



- ✓ Use WNS to connect the UE.
- ✓ From the Ethereal Statistics menu, display IO Graphs and make the Filter settings.
- ✓ Start capture with Ethereal and check Update list of packets in real time.
- ✓ Depending on the Filter setting, the up and down data throughput is displayed as a color-coded graph.



### 3. Advantages of Using MD8470A



- **Other PC or Equipment Not Required**

Throughput can be measured just by connecting the UE and MD8470A. The measurement target contents can be freely set.

- **No Dependence on Actual Network Conditions**

Since there is no connection to an online network, data can be retrieved with no impact from server load or the number of connected users. In addition, it is possible to test in areas where there are no W-CDMA or GSM services.

- **Able to retrieve and analyze wireless and browsing protocols**

The protocol logs captured during measurement can be analyzed to permit protocol tuning.



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