

# Proposal of AT&T IOT Test Environment Battery Performance Test

MD8470A Signalling Tester

MX786000A Modular Automation Test Environment Platform (MATE™)

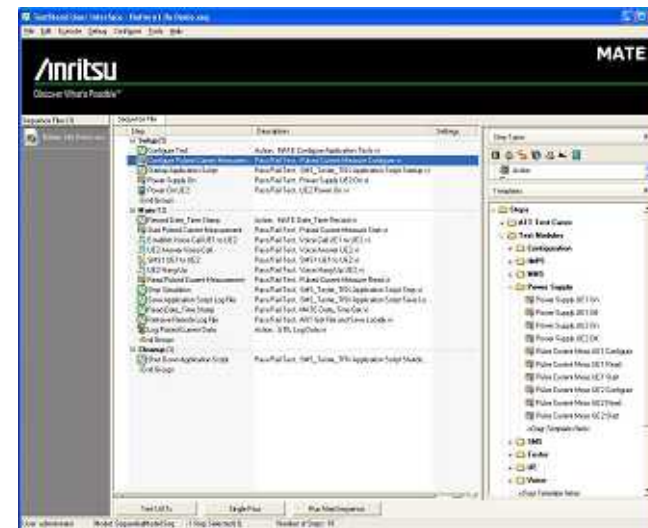
MX786000A-011 AT&T Battery Life Test Package

# Proposal of AT&T IOT Test Environment Battery Performance Test

MD8470A Signalling Tester

MX786000A: Modular Application Test Environment Platform (MATE™)

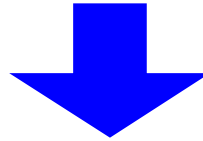
MX786000A-011: AT&T Battery Life Test Package



**Anritsu Corporation**  
**June 2009**  
**Ver 1.00**

# Market Background

- Standby and Talk time are currently the major measurement profiles for mobile phone battery performance test.
- However, mobile phones are evolving rapidly into increasingly sophisticated high-performance multifunctional devices incorporating features such as web browsing, video streaming and messaging.
- Mobile operators are also focusing a lot of attention on evaluation of battery current consumption as well as on determining the true battery capacity.

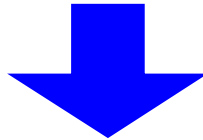


- Battery life measurement for “standby time” and “talk time” actually doesn’t meet the real life conditions.
- Battery performance needs to be expanded from Standby and Talk time testing to include real life conditions.



# Market Background (Cont.)

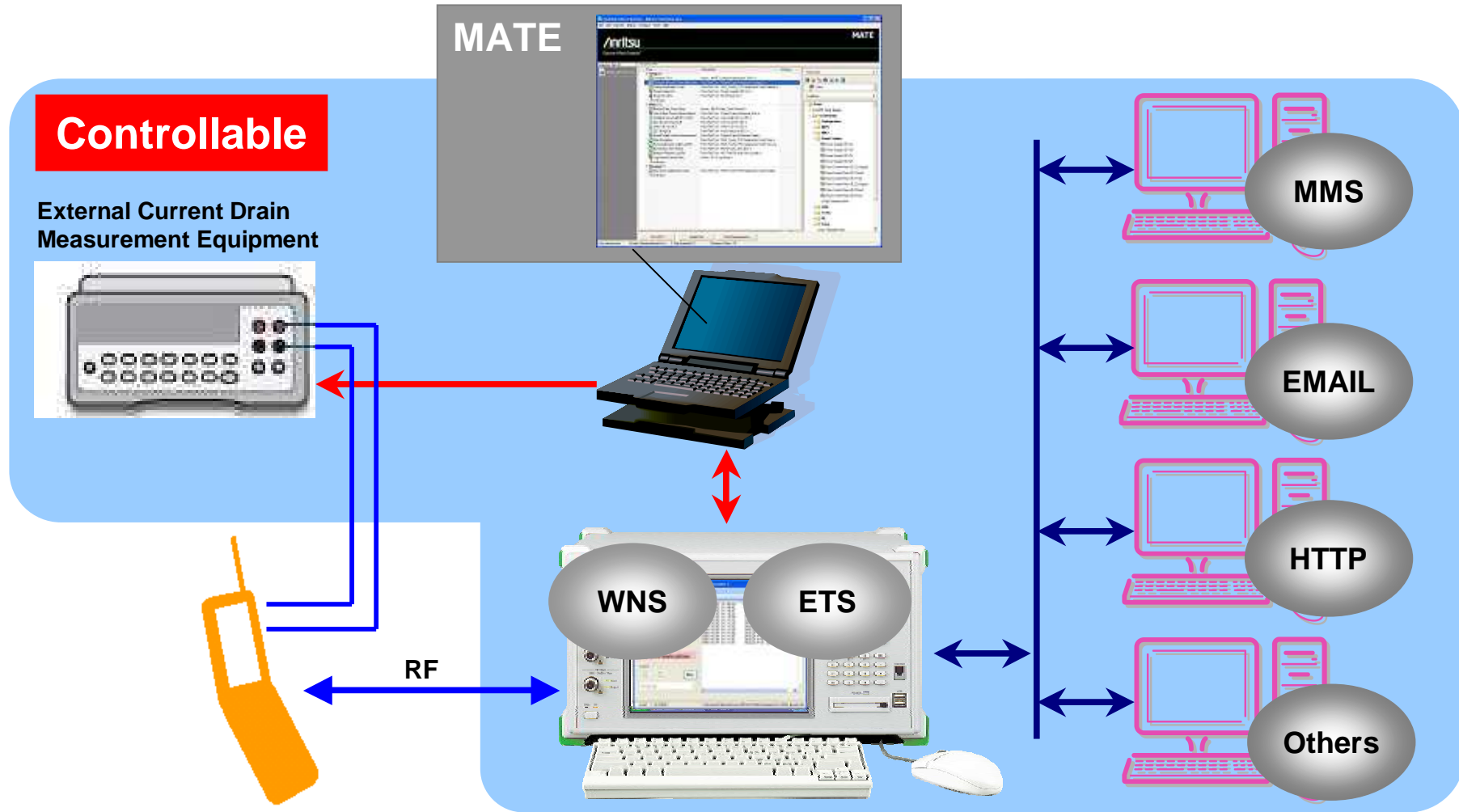
- Mobile operators are interested in testing the battery life of devices when used in real life conditions. Examples include;
  - Teenagers who send a lot of SMS messages a day
  - Multi-media savvy users who browse the internet, take pictures, and listen to music
  - Business users who receive pushed emails and send emails
  - Users that take pictures and send MMS messages



- Anritsu has developed the IOT tool named Modular Application Test Environment (MATE) and AT&T Battery Life Test Package in accordance with the requirement of AT&T for battery performance testing in “10776” AT&T acceptance criteria.
- It allows users to conduct some AT&T approved battery performance test cases and automate configuration and operation of this testing with the MD8470A, appropriate servers and external equipment.

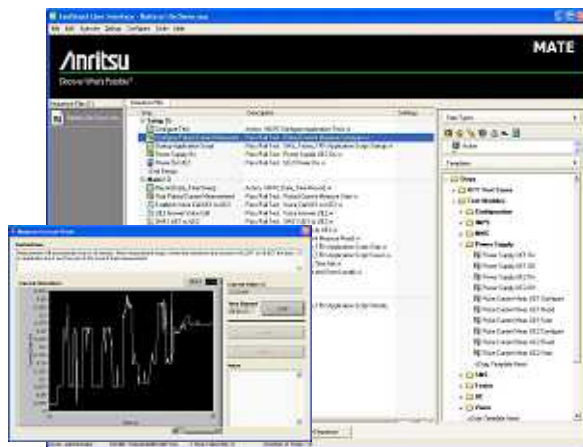
# What is MATE ?

- MATE runs GUI scripts that control MD8470A, servers, and other equipment automatically as required to perform test.

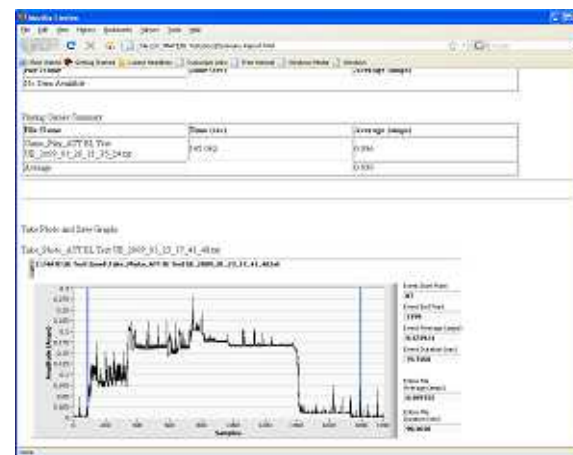


# About the AT&T Battery Life Test Package

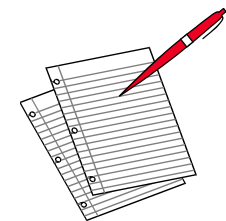
- The MX768000A-011 AT&T Battery Life Test Package was written to support the GSM and UMTS battery performance test cases defined by AT&T document “14680 Performance Requirements for GSM and UMTS Terminals v2.9” in 10776 v9.2 AT&T acceptance criteria.
- The Package contains:
  - ▶ Special AT&T Battery Life Test configuration module
  - ▶ General Battery Life Measure Current Drain module for running free current drain tests
  - ▶ Analysis module to compile data in specified results folder into final current drain HTML report
  - ▶ 19 test case modules for each AT&T Battery Life test case defined in 14680



MATE with AT&T Battery Life Test Package



HTML Summary Report



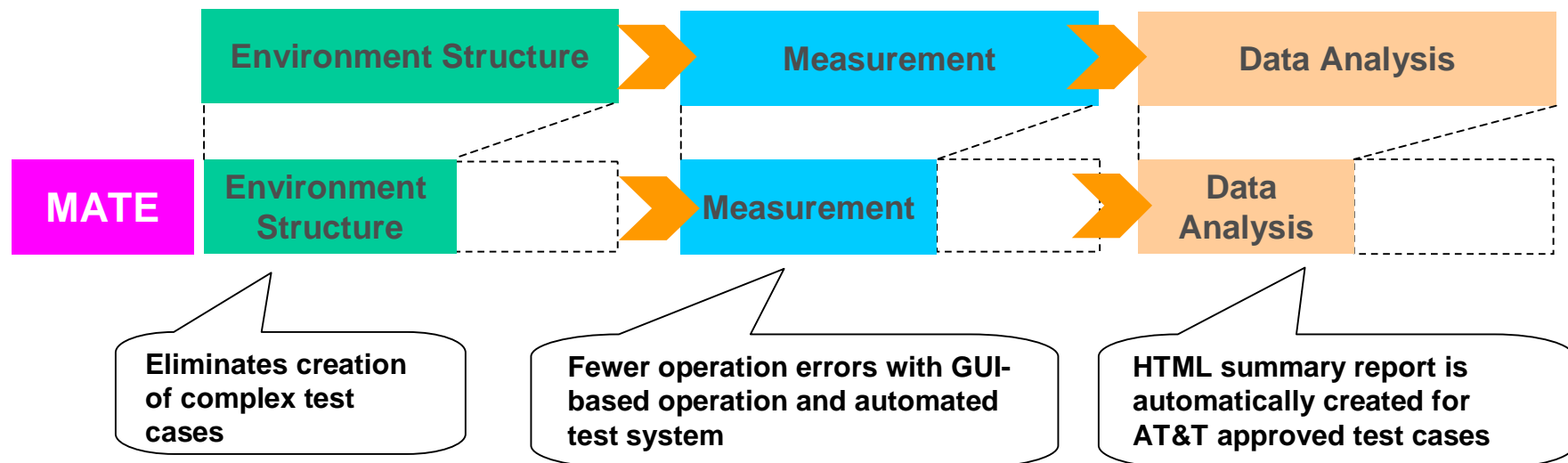
# About the AT&T Battery Life Test Package (Cont.)

- MATE with AT&T Battery Life Test Package can support the following 19 battery performance test cases that was approved in AT&T 10776 v9.2 (Mar.2009).

14680 Test Number	System	Test Description
4.8.1	GSM	Circuit Switched Voice Talk-Time Battery Life
4.8.2		Circuit Switched Standby Battery Life
4.9.1	UMTS	Circuit Switched Voice Talk-Time Battery Life
4.9.2		Circuit Switched Standby Battery Life
4.9.3		Streaming Video Battery Life
4.9.5		Battery Life while playing music from MP3 file(s)
4.9.6		Circuit Switched Voice Talk-Time Battery Life with Bluetooth (BT) headset
4.9.7		Circuit Switched Voice standby-Time Battery Life with Bluetooth (BT) headset
4.9.8		Customer profile battery life task: Take picture from camera
4.9.9		Customer profile battery life task: View picture from camera
4.9.10		Customer profile battery life task: Take video from camera
4.9.11		Customer profile battery life task: View video from camera
4.9.12		Customer profile battery life task: Send SMS
4.9.13		Customer profile battery life task: Receive and read SMS
4.9.14		Customer profile battery life task: Send MMS
4.9.15		Customer profile battery life task: Receive and read MMS
4.9.16		Customer profile battery life task: Browse the web
4.9.17		Customer profile battery life task: Game play
4.9.18		Customer profile battery life task: Push eMail & push email keep alive event

# Merits of MATE with AT&T Battery Life Test Package

- Setup work is greatly simplified because configuration setting for MD8470A, external equipment and server can be set using a single MATE interface.
- Automated test environment for battery performance of AT&T test cases can be realized for long-term measurement without operator errors.
- This test package contains unique four type of user profile test cases which allow users to conduct battery performance testing of supposed real life conditions.
- HTML summary report is automatically created without any extra work.





# Ordering Information

- **MX786000A: Modular Automation Test Environment Platform (MATE™)**
- **MX786000A-SS101: MATE Platform Support Service (1 Year)**
- **MX786000A-011: AT&T Battery Life Test Package**
- **MX786000A-SS111: AT&T Battery Life Test Package Support Service (1 Year)**
- **Z1303A: MX786000A USB Key**
  
- **System Requirements**
  - **MD8470A with MX847015A ETS Option**
  - **GPIB Adapter (National Instruments)**
  - **Agilent 66311B Power Supply or Compatible**
  - **AT&T USB 881 Live Broadband Card (or equivalent)**
  - **Live AT&T SIM with data service enabled**
  - **Ethernet Cables**

## Anritsu Corporation

5-1-1 Onna, Atsugi-shi, Kanagawa, 243-8555 Japan  
Phone: +81-46-223-1111  
Fax: +81-46-296-1264

## • U.S.A.

### Anritsu Company

1155 East Collins Blvd., Suite 100, Richardson,  
TX 75081, U.S.A.  
Toll Free: 1-800-267-4878  
Phone: +1-972-644-1777  
Fax: +1-972-671-1877

## • Canada

### Anritsu Electronics Ltd.

700 Silver Seven Road, Suite 120, Kanata,  
Ontario K2V 1C3, Canada  
Phone: +1-613-591-2003  
Fax: +1-613-591-1006

## • Brazil

### Anritsu Eletrônica Ltda.

Praca Amadeu Amaral, 27 - 1 Andar  
01327-010-Paraiso-São Paulo-Brazil  
Phone: +55-11-3283-2511  
Fax: +55-11-3288-6940

## • Mexico

### Anritsu Company, S.A. de C.V.

Av. Ejército Nacional No. 579 Piso 9, Col. Granada  
11520 México, D.F., México  
Phone: +52-55-1101-2370  
Fax: +52-55-5254-3147

## • U.K.

### Anritsu EMEA Ltd.

200 Capability Green, Luton, Bedfordshire, LU1 3LU, U.K.  
Phone: +44-1582-433200  
Fax: +44-1582-731303

## • France

### Anritsu S.A.

16/18 avenue du Québec-SILIC 720  
91961 COURTABOEUF CEDEX, France  
Phone: +33-1-60-92-15-50  
Fax: +33-1-64-46-10-65

## • Germany

### Anritsu GmbH

Nemetschek Haus, Konrad-Zuse-Platz 1  
81829 München, Germany  
Phone: +49-89-442308-0  
Fax: +49-89-442308-55

## • Italy

### Anritsu S.p.A.

Via Elio Vittorini 129, 00144 Roma, Italy  
Phone: +39-6-509-9711  
Fax: +39-6-502-2425

## • Sweden

### Anritsu AB

Borgafjordsgatan 13, 164 40 KISTA, Sweden  
Phone: +46-8-534-707-00  
Fax: +46-8-534-707-30

## • Finland

### Anritsu AB

Teknobulevardi 3-5, FI-01530 VANTAA, Finland  
Phone: +358-20-741-8100  
Fax: +358-20-741-8111

## • Denmark

### Anritsu A/S

Kirkebjerg Allé 90, DK-2605 Brøndby, Denmark  
Phone: +45-72112200  
Fax: +45-72112210

## • Spain

### Anritsu EMEA Ltd.

#### Oficina de Representación en España

Edificio Veganova  
Avda de la Vega, n° 1 (edf 8, pl 1, of 8)  
28108 ALCOBENDAS - Madrid, Spain  
Phone: +34-914905761  
Fax: +34-914905762

## • Russia

### Anritsu EMEA Ltd.

#### Representation Office in Russia

Tverskaya str. 16/2, bld. 1, 7th floor.  
Russia, 125009, Moscow  
Phone: +7-495-363-1694  
Fax: +7-495-935-8962

## • United Arab Emirates

### Anritsu EMEA Ltd.

#### Dubai Liaison Office

P O Box 500413 - Dubai Internet City  
Al Thuraya Building, Tower 1, Suit 701, 7th Floor  
Dubai, United Arab Emirates  
Phone: +971-4-3670352  
Fax: +971-4-3688460

## • Singapore

### Anritsu Pte. Ltd.

60 Alexandra Terrace, #02-08, The Comtech (Lobby A)  
Singapore 118502  
Phone: +65-6282-2400  
Fax: +65-6282-2533

## • India

### Anritsu Pte. Ltd.

#### India Branch Office

3rd Floor, Shri Lakshminarayan Niwas, #2726, 80 ft Road,  
HAL 3rd Stage, Bangalore - 560 075, India  
Phone: +91-80-4058-1300  
Fax: +91-80-4058-1301

## • P.R. China (Hong Kong)

### Anritsu Company Ltd.

Units 4 & 5, 28th Floor, Greenfield Tower, Concordia Plaza,  
No. 1 Science Museum Road, Tsim Sha Tsui East,  
Kowloon, Hong Kong  
Phone: +852-2301-4980  
Fax: +852-2301-3545

## • P.R. China (Beijing)

### Anritsu Company Ltd.

#### Beijing Representative Office

Room 2008, Beijing Fortune Building,  
No. 5, Dong-San-Huan Bei Road,  
Chao-Yang District, Beijing 100004, P.R. China  
Phone: +86-10-6590-9230  
Fax: +86-10-6590-9235

## • Korea

### Anritsu Corporation, Ltd.

8F Hyunju Building, 832-41, Yeoksam Dong,  
Kangnam-ku, Seoul, 135-080, Korea  
Phone: +82-2-553-6603  
Fax: +82-2-553-6604

## • Australia

### Anritsu Pty. Ltd.

Unit 21/270 Ferntree Gully Road, Notting Hill,  
Victoria 3168, Australia  
Phone: +61-3-9558-8177  
Fax: +61-3-9558-8255

## • Taiwan

### Anritsu Company Inc.

7F, No. 316, Sec. 1, Neihu Rd., Taipei 114, Taiwan  
Phone: +886-2-8751-1816  
Fax: +886-2-8751-1817

Please Contact: