Product Introduction

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
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.
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).

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

Environment Structure

Measurement

Data Analysis

MATE

Eliminates creation of complex test cases

Fewer operation errors with GUI-based operation and automated test system

HTML summary report is automatically created for AT&T approved test cases
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
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