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Battery Performance Test Solution for AT&T IOT

MX786000A MATE™ (Modular Application Test Environment)
MX786000A-011 AT&T Battery Life Test Package
for W-CDMA/HSDPA/HSUPA, GSM/GPRS/EGPRS

Introduction

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

In the USA, AT&T Wireless especially wants to evaluate battery current consumption for real life uses as acceptance criteria, such as:

- Teenagers sending a lot of SMS messages every day
- Multimedia-savvy users browsing the Internet, taking photos, and listening to music
- Business users receiving push emails and sending emails
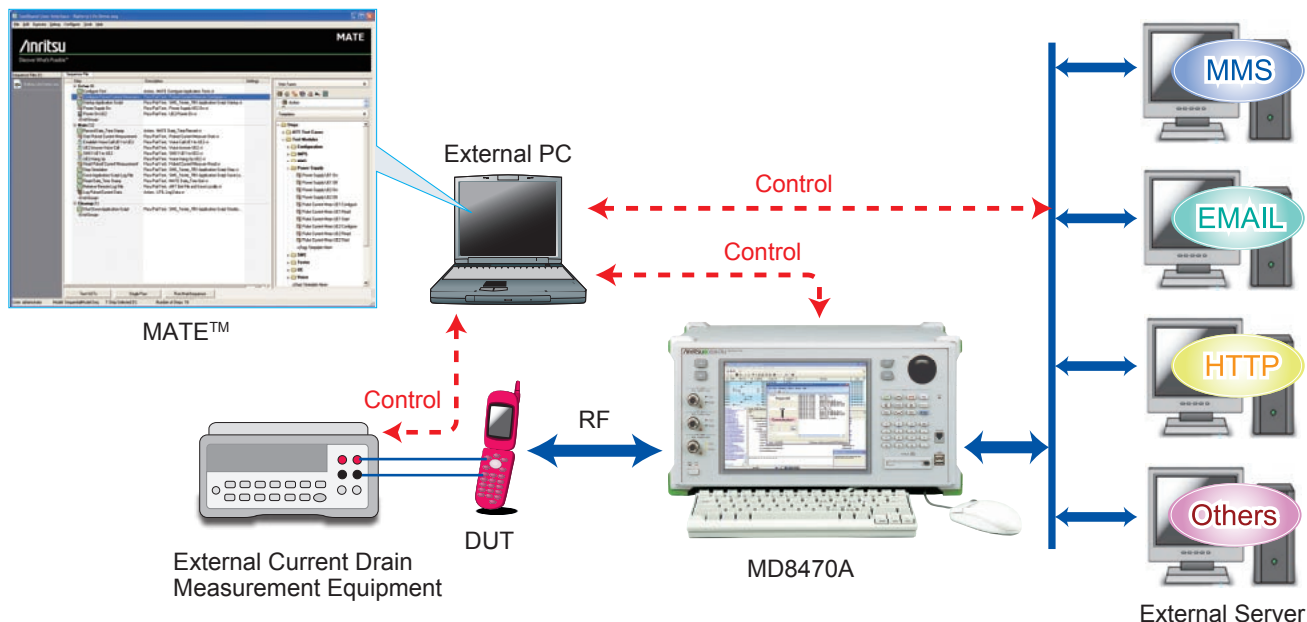- Users taking pictures and sending MMS messages

Anritsu has developed software tools called MATE (Modular Application Test Environment) and AT&T Battery Life Test Package for its MD8470A Signalling Tester to meet AT&T IOT acceptance criteria for testing battery performance.

MD8470A Signalling Tester

MX786000A   MATE™ Platform

The MX786000A MATE runs GUI scripts that automatically control the MD8470A, servers, and other equipment as necessary to run tests.

MX786000A-011   AT&T Battery Life Test Package

The MX786000A-011 AT&T Battery Life Test Package supports GSM and UMTS battery performance test cases defined by AT&T document "14680 Performance Requirements for GSM and UMTS Terminals v2.9" in the 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
- Test case module for each AT&T Battery Life test case defined in 14680

Test Case Module for AT&T Battery Performance Test

The MX786000A-011 AT&T Battery Life Test Package includes 19 Battery Performance test cases defined in 14680. This is powerful tool for performing certified AT&T Battery Life GSM and UMTS test cases. The AT&T 14680 Battery Performance test cases supported by MX786000A-011 are listed below.
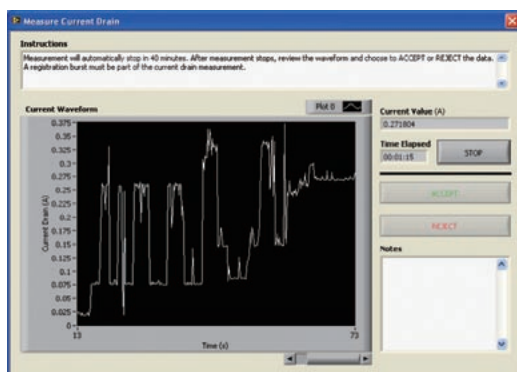
■ AT&T 14680 Battery Performance Test Cases Supported by MX786000A-011

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

∗: See AT&T document 14680_Performance_Requirements_for_GSM_and_UMTS_Terminals_v2_9 for details.
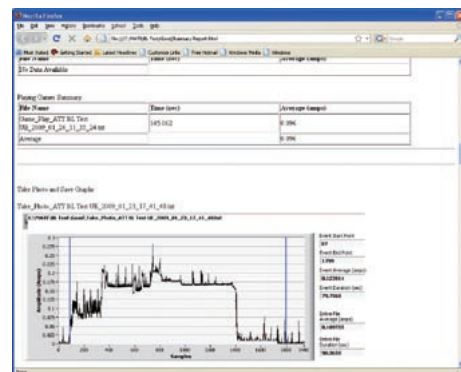
Current Drain Measurement Viewer

After current drain measurement starts, a special dialog is displayed in the MATE software window showing the current drain waveform as measurement progresses. For some tests, current drain measurement stops automatically after a set time period has elapsed.

Measure Current Drain Window

Battery Life Test Summary Report

The ATT BL Process Data Utility Module takes data files from the folder specified in the configuration as the location for good data and uses them to create a final battery life test report. Running this module causes MATE to write an HTML report plus several JPEG images of current drain measurement plots to the "good" directory.

AT&T Battery Life Test Summary Report

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

- Setup is simple because configurations for the MD8470A, external equipment, and server are set using a single MATE interface.
- An automated test environment for AT&T test case battery performance is configured easily for long-term measurement without operator error.
- This test package contains four unique user profile test cases (Teenager, Business, Multimedia, Normal User), allowing users to run battery performance tests simulating real life conditions.
- An HTML summary is created automatically without extra work.

MATE™

Ordering Information

Please specify the model/order number, name and quantity when ordering.
The names listed in the chart below are Order Names. The actual name of the item may differ from the Order Name.

Model/Order No.	Name	Description
MX786000A	Modular Application Test Environment (MATE)	MATE Platform
MX786000A-011	AT&T Battery Life Test Package	Battery life test modules for AT&T IOT
MX786000A-SS101	MATE Support Service (1 Year)	Support service for MATE Platform
MX786000A-SS111	AT&T Battery Life Test Package Support Service (1 Year)	Support service for AT&T Battery Life Test Package
Z1303A	MX786000A USB Key	USB License Key for MATE

∗: MD8470A requires MX847015A (ETS option) to use MATE with AT&T Battery Life Test Package.

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