WHY PROTOCOL CONFORMANCE TESTING (PCT)?
Devices need approvals before gaining network access

**CONFORMANCE TESTING**
- Protocol Conformance
- RF/RRM Conformance

**REGULATORY COMPLIANCE TESTING**
- Safety
- Environmental Impacts
- Spectrum Use

**CARRIER ACCEPTANCE TESTING**
- 3G/LTE Data Performance
- Network Selection
- VoLTE
- Carrier Aggregation
- LTE Mobility
- Battery Use
- Circuit Switch Fallback
- eMBMS

Verification of Industry Requirements
Verification of Carrier Requirements

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THE DEVICE APPROVAL PROCESS

UE/Device Manufacturer

Complete R&D on new device

Test Equipment Manufacturers
eg. Anritsu

Approved Protocol Conformance Test Cases

Test House (Certification Group)

Certify Device is protocol conformant

Certification required as part of Carrier Acceptance

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THE TEST APPROVAL PROCESS

TEST SPECIFICATION STEPS

RAN 1,2/4, GERAN, CT
- Core Specification for Protocol

RAN 5
- Test Specification

MCC 160
- Abstract Test Suite (ATS)

TEST DELIVERY STEPS

Test Equipment Manufacturers
- eg. Anritsu

Test House (Validation Group)
- eg. CETECOM

Certification Body
- eg. GCF, PTCRB

Executable Test Suite (ETS)
- TTCN

Validation Report on submitted tests
- TTCN

Test Approval
- TTCN

Tests available for device certification

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CONFORMANCE TEST CASES

Technology Grouping
Tests grouped in Work Items (WI) as required by GCF Operators

Bands
Tests validated for Device Approval in GCF Operator bands

Test Cases
Same specifications used by GCF & PTCRB

Technology Grouping
Test grouped in Requests for Testing (RFT) as required by PTCRB Operators

Bands
Tests validated for Device Approval in PTCRB Operator bands
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Product Concept

- Simple configuration auto-measurement test system
- Support for customers requiring, RF/RRM only, PROTOCOL only or any combination in one platform

**ME7800L PRODUCT FEATURES**

- **Features**
  - Simple start up for LTE testing
  - Ideal for various department activities, “Development to Verification to GCF&PTCRB Certification”
  - Lower Cost per Test Case for GCF&PTCRB Certification Testing
  - Ideal for ‘IoT product GCF & PTCRB Certification’ and ‘GCF Platform’ Certification process
  - Available Spurious testing
  - High accuracy (Conform to the 3GPP Specification)
  - Upgradable to Full Conformance Test System

Test Platform: TP160

TP Validation Approvals started from Jan. 2017