



ITU Regional Seminar for the Africa Region on
Conformance and Interoperability Testing Centres
Accra (Ghana), 4-6 July 2011

**Roadmap for the Planning and Rollout
of a Regional Conformance and Interoperability
Test Center**

Presented by:
Wayne Zeuch
ITU Consultant



1



Presentation Overview

- Discussion of a Roadmap
- Technology considerations
- Market needs and economics
- Facility requirements
- Management and operations requirements
- Developing a rollout plan
- Concluding comments



2



Discussion of a Roadmap

- Establishing a Regional Testing Center is a large undertaking, especially for the planning and start-up stages
- This is an attempt to provide high-level guidance in addressing the factors necessary to plan such a facility and its programs
- Therefore, a Roadmap is useful to point the way toward a successful rollout of a viable ITTC



Technology Considerations

- Except for financial considerations, the most important factor in planning a Regional Test Center are technology considerations
 - Technologies deployed in and planned for the Region
 - Broadband and mobility-related systems/services standards are generally high priorities
- Regional input is necessary to determine the potential scenarios to be tested among the broad scope of standards already in force

Technologies/Services	
• NGN Architecture and Services	• Multimedia, IPTV
• Fixed-Mobile Convergence	• ISDN
• Optical Networks	• QoS, QoE
• Broadband Cable	• Security





Developing a rollout plan

- Based on Region-specific input and market data regarding funding available, technologies deployed and planned, scope of the testing programs, a rollout plan can be developed
- The assumptions for testing programs will determine the ultimate facility (i.e., building, total floor space, lab space, office space, operations space)
- Assuming the total plan (including envisioned future expansion) cannot be funded immediately, the technology and test program priorities will drive the development of phases for the rollout plan



Developing a Rollout Plan - Phased Approach

- Technology choices determine testing scenarios and therefore affect test bed architectures and equipment requirements
- Phases should be determined on the basis of factors such as:
 - Technologies currently in use (market penetration, service maturity)
 - It is likely that legacy services in use will not require as much conformance and interoperability testing, unless there are issues with equipment quality and performance.
 - Type Approval testing may be required in these cases – requiring additional ITTC facilities.
 - New and planned technologies and services
 - Network interconnections for new systems





Developing a Rollout Plan

For Start-up

- Facility
 - Purchase or build facility (with considerations for future expansion)
 - Special construction for sensitive equipment (shielding from environmental factors (temperature, noise, vibration, etc)
 - Special construction for power requirements
- Lab certifications, equipment calibration
- Business operations unit
 - Reception
 - Financial operations and billing systems
 - Hiring of staff, experts
 - Training programs
 - Data base/Document filing system
 - Shipping and receiving



Developing a Rollout Plan

For Phase 1:

- Test labs for highest priority technologies and services
 - Model Network test bed
 - Media Gateway Controllers (MGC), Proxy Servers SIP (PS), IP Multimedia Subsystem (IMS), Media Gateways (GW), Signaling Gateways (SG), Transport Network Environment (TNE), Application Servers (AS), Media servers (MS), Messaging Servers (MeS), Management System (MS), Billing system (BS), NGN Access Devices (NGN-AD), Media Gateway for Legacy Terminal Equipment (GW-LTE)
- Type Approval Lab (Optional)
 - Calibration lab, Wireless test lab, Wireline test lab, EM Shielded room, Anechoic chamber, EMC test lab, SAR test systems, Environmental chamber, Open Area Test Site (OATS))
- Equipment calibration, inspection, maintenance (ongoing)

For Later Phases:

- Test labs to cover lower priority technologies and services





Concluding Remarks

- Developing plans and committing resources to establish an ITTC is a large undertaking, requiring analysis of Regional technology deployment and plans, market factors, funding levels, testing expertise, certification experience, and many other factors.
- Developing a roadmap for the eventual rollout of the ITTC provides a methodical means of considering the factors involved with such a project



Thank You!

Wayne Zeuch
ITU Consultant
WayneZeuch@aol.com

