

Policy Measures for the Development of Telecom Sector in Lebanon

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Outline

- MOT's Current Priorities and Ongoing Infrastructure Projects
- Drivers Behind National and International Infrastructure Expansion and Upgrade
- Rights of Way Decree for Lebanon
- TRA Major Spectrum Objectives
- Further Policy Measures



To accommodate for technology advances and increased demand for new services, major investments are needed in fixed infrastructure (in national transmission and international capacity)



MoT current priorities are to invest in and expand the fixed infrastructure to address the need for bundled and innovative services as well as NGN services

- Existing infrastructure will remain among the public property of the Ministry of Telecommunications
- Invest heavily in the expansion and upgrade of existing national infrastructure
- Upgraded infrastructure will be made available for use by licensed service providers
- Promote service based competition among service providers
- Reduce the number of radio sites by implementing Site Sharing (Passive or Active)

TRA is currently coordinating efforts with MoT in relation to upgrading and expanding infrastructure in Lebanon, in order to address the needs of the Lebanese market

- Migrate from traditional fixed network to **Next Generation Network (NGN)** architecture and services
- Expand and modernize the national transmission network, laying down two fiber optic super-rings and 39 sub-rings (4000 km of fiber backbone)
- Connect 300 central offices (COs) nationwide via fiber optic networks
- 350 FTTH sites to connect mobile base stations, ISPs, DSPs, major universities, hospitals, public administrations and TV broadcast companies
- 1000 FTTC sites to provide VDSL connectivity
- Rollout 3G services (HSPA) by 1st quarter 2011 to provide Mobile Broadband speed up to 20 Mbps
- Participate in the high capacity submarine cable system (IMEWE) that will provide 120 Gbps of international capacity and the Kadmus marine cable that will provide 210 Gbps of international capacity for Lebanon in 2010-2011 time frame

Drivers behind national and international infrastructure expansion and upgrade

1 Significant increase in demand for higher broadband capacity especially in dense areas, economic zones, and new suburban compounds

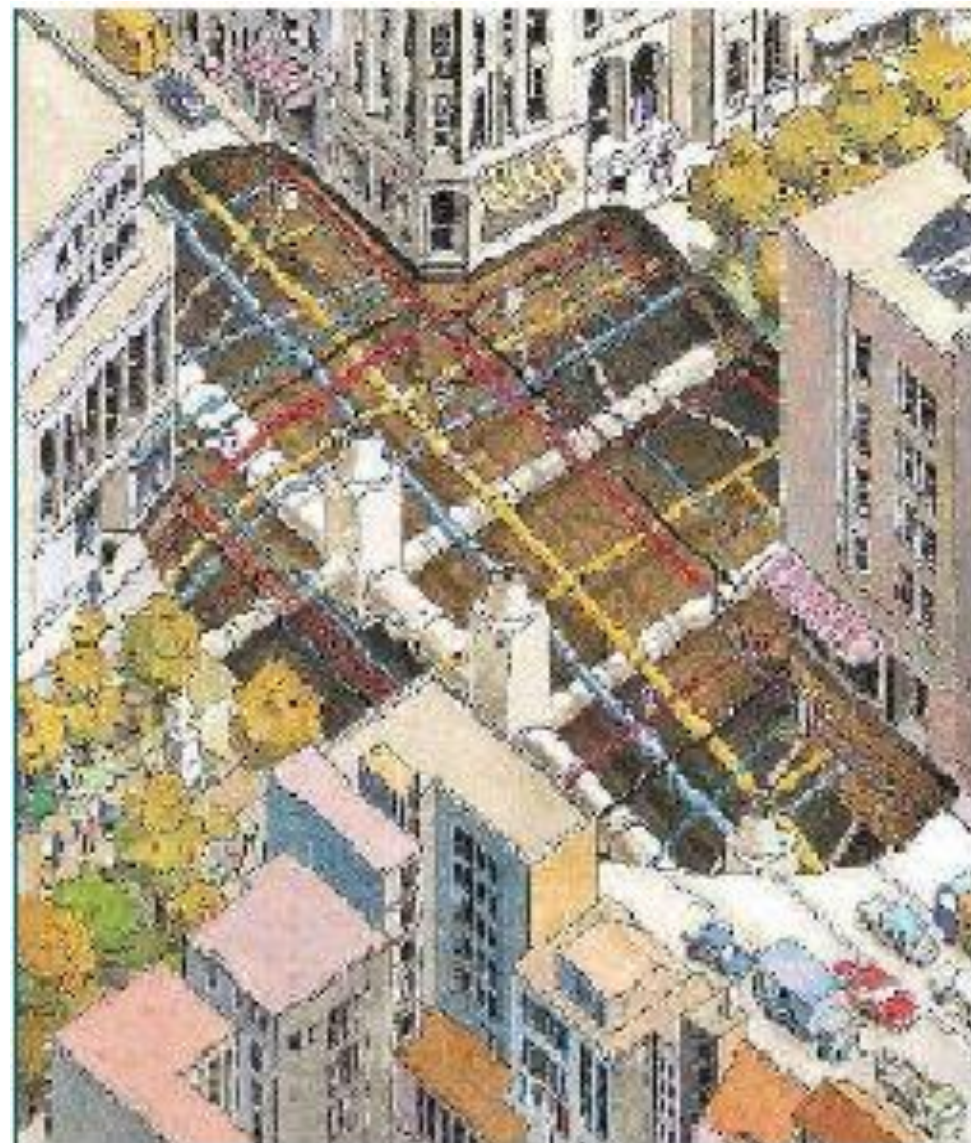
2 Bottlenecks in the *national* and *international* backbone capacity

3 New infrastructure is required to meet demand for Broadband services

4 Predominance of copper access in the last mile

5 Upgrade of wireless backhaul to accommodate higher bandwidth required for 3G services

- **Scope:** All existing infrastructure owned by the RoL (Telecom – Fixed & Mobile, Electricity, water, Sewers, Roads, Highways, etc).
- **Purpose:** Pursuant to Telecom law 431, and in order to speed up the rollout of broadband networks, TRA drafted the RoW decree and issued it for public consultation .
- **The RoW decree** mainly sets the condition of use of the public property, clear procedures for such use, basis for allocation of charges and dispute resolution.



- 1** Repackage and redistribute prime broadband wireless access spectrum to promote competition, more spectrally efficient technologies and new service offering
- 2** Develop the regulatory framework for the broadcasting services (DTT, Cable TV, MVDS networks)
- 3** Ensure the timely introduction of Digital Terrestrial TV (GE06 Agreement) before 2015 and to free-up the digital dividend spectrum to reallocate it for Mobile Services
- 4** Issue FM master Frequency Plan inline with ITU regulations to resolve interference and improve FM transmission
- 5** Address illegal transmission and resolve interference issues and implement Enforcement Regulation
- 6** Ensure network openness with fair market competition and consumer protection through new regulations that address Converging Environment and QOS standards

TRA will continue its coordination and cooperation with the Ministry of Telecommunications to adopt policy measures aiming at increasing demand and affordability of telecommunications services



- 1 Since its establishment, the TRA has been working extensively on setting a **regulatory framework** that would ensure the success of telecommunications liberalization and development
- 2 Ensuring **Rights of Way and access to the ducts** will incentivize new entrants by reducing significantly the sunk costs and eliminate needless duplication of infrastructure
- 3 A **structurally separated entity** is needed to manage the infrastructure so as to ensure transparency and treat both incumbents and other service providers on equitable basis
- 4 Work with MoT to address **open access** to upgraded infrastructure and capacities (allow service providers to build their own last mile sites) and arrive at the definition of new **reference offers** that spell out terms and conditions in a clear and transparent manner
- 5 Service providers should have **access licenses** at the level of fixed, wireless and mobile. This will lead to access-level competition and will therefore push prices down and incentivize providers to offer better quality of service
- 6 Involving the Lebanese **private sector** as a full partner is a key for setting the environment for the sector's development
- 7 Stimulate technological innovation and competitiveness by supporting the introduction of more **spectrally efficient technologies** and ensuring that adequate spectrum is available for new operators and services



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Thank you

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