Telecom Market Highlights
Regulatory Perspectives

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Outline

- Convergence
- Re-Structuring Broadband
- Challenges of Restructuring Broadband
- WiMAX
- VOIP
- Market Overview
  - Fixed Lines
  - Mobile Lines
  - Internet
Convergence Roadmap

Convergence pillars:

Technical Side:
1. Digitalized Infrastructure
   - Broadband;
   - Wireless and mobile technologies;
   - High-speed backbone networks;
2. Digitalized Media Content
   - DRM
   - DAM

From the Regulatory Side:
1. Conducive Market Conditions (supply, demand, competition);
2. Technological Neutrality;
3. Intellectual Property Rights and GATS agreement

From the Business Side:
1. Encourage investment;
2. More service providers;
3. Diverse services; options;
4. Digital content creators
Impact of ‘Converged’ Telecom

- Gradual shift to VoIP and VOB (Voice over Broadband)
- CATV systems → offering video on demand, broadband access and voice telephony. CATV operators are now competing with telecom operators.
- Trend → offer triple play service bundles in inclusive packages
- Steady growth in 3G networks and wireless broadband services
- Threat on the industry

Impact of Convergence on Regulation

Implications:

- Rise in the number of wireless services → raises the need for spectrum management reform.
- Revisiting current licensing regimes & favors regimes that are technologically neutral.
- Broadening market definitions, with the possibility of replacing several narrowly defined markets by a single more broadly defined market.
Issues for Debate

- Regulatory and legislative issues:
  - The need to:
    - encourage investment
    - lower market entry barriers
  - Policy should:
    - ensure competitive markets
    - encourage the provision of better and cheaper services
    - be responsive to market changes; updated upon need
  - Avoid regulatory arbitrage and gamesmanship
  - Reducing the digital divide: Universal Service

Issues for Debate cont’d

- Is the trend of institutional convergence (the example of Ofcom) really the best way to address Convergence?

- Are current telecom or ICT regulators competent to regulate “content”?

- Can content regulation be avoided?

- What is the most effective role for national telecom regulators?
Re-Structuring Broadband

- Increasing broadband penetration
- Promoting ADSL higher speeds by getting their prices down (starting from USD 16 per month)
- Paving the road for eContent market by availing high speed connections
- Providing special services for buildings as an alternative to ADSL line sharing
- Considering WiMax technology as a possible solution to BWA in Egypt

Evolution of ADSL Subscribers
May04 – Oct06

Total number of subscribers 170,093
Challenges of Restructuring Broadband

- Impact on Free Internet market
- ADSL business model and pricing scheme
- ADSL line sharing and unlicensed service providers

WiMAX

Traditional Technologies can deliver

WiMAX Will Meet Emerging Customer Demand

- Fixed & Nomadic Data, Voice, Video
- Mobile, but Narrowband
- Broadband, but Fixed
Consultation Procedures

• First Phase – April 05
  ▪ Hearing Session

• Second Phase – within June
  ▪ Publishing a Consultation Paper (draft framework)

• Third Phase – within July
  ▪ Workshop discuss the Consultation Paper and feedback and adopt final framework

BWA Hearing Session

• Discussed different applications
  ▪ Nationwide Network
  ▪ Backhauling
  ▪ Last-Mile Access Network

• Scenarios for Regulatory Models
  ▪ Nationwide Service Provider
  ▪ Regional Service Provider
  ▪ Network Operator

• Licensing issues
  ▪ Concentrated on WiMax technology
Food for Thought

• It is expected that WiMAX becomes the dominant standard for Wireless LAN in the world market, at least, in fixed broadband networks

• Focus is too often on technologies:
  • Subscribers pay for services, not technologies
  • Technologies enable services, but should not be a burden on users
  • Broadband capabilities are important, but bandwidth is not the only meter to assess service.

VOIP: Introduction

• Transformation in Internet technologies
• Transition from circuit switched services to digital, Internet, packet-based networks and technologies — such as VOIP
• VOIP offers rich communications service at lower cost
• Uncharted legal, financial and technological challenges
• Ways to fit the new technology into existing regulatory frameworks.
VOIP Regulatory Framework

- How to Handle Security Issues in VOIP Networks
- How to measure factors that affect voice quality in VOIP Networks
- Interconnection Requirements for VOIP networks
- How may VOIP Service Providers provide emergency Services
- Contribution of VOIP in Universal Service
- Relationship Between VOIP and NGN
- Compatibility & Interoperability between VOIP Operators;
- Compatibility & Interoperability between VOIP Operators and PSTN Operators
- Numbering in Nomadic and non-Nomadic VOIP services

Market Overview
Fixed Line Market

- **Fixed Network**
  - Unbundling of the Local Loop
  - TE Licensing
- **Market Access permitted for**
  - Domestic payphones
  - Domestic value-added services allowed (e.g. PPCC)
- **Domestic Voice**
  - Eliminated the monopoly in fixed telephony
  - Resale of Telecom Egypt’s domestic service allowed
- **International Voice**
  - International gateway has been liberalized
  - Resale of Telecom Egypt’s international voice and data services has been allowed

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Fixed Line Market cont’d

- **Telecom Egypt has privatized 20% of its shares.**
- **Telecom Egypt may continue the privatization up to 49% of its shares in subsequent stages.**
- **All licensees must be companies registered in Egypt**
- **All companies must train local human resources**
Mobile Market

• Increase in mobile subscribers
• Usage of mobile phones surpassed the usage of fixed telephone lines
• Prices decrease gradually, especially with a third operator entering the market
• Services offered by both mobile operators are very similar to each other

3rd Mobile Network

• NTRA issued an RFP for 3rd mobile network in February 2006
• It will use both 2G & 3G technology
• 11 consortia from international companies in partnership with Egyptian companies applied
• NTRA formed a high-level committee to conduct the technical evaluation of bids
• Financial bidding process
• Consortium of Etisalat of Emirates, Egypt Post, and CIB won the bid with 16.7 billion Egyptian Pounds
Steady Increase in Fixed Lines & A Boom In Mobile Phone Users

Internet Market

- Enabling Internet access on all fixed phone lines without monthly fees
- Same cost as a local call since Jan 2002
- Provided by Telecom Egypt in conjunction with 210 Egyptian ISPs
- Beneficiaries: > 6 million users
- International Bandwidth: 8.3 Gbps
- Data Backbone Providers: 7
- Target within a year
  - Linking 1.7 million households to the Free Internet service
  - Getting 7 million users online while doubling the international capacity
Major Increase in the number of Internet Users

- 1999: 1
- 2000: 1
- 2001: 2
- 2002: 3
- 2003: 4
- 2004: 5
- 2005: 6
- 2006: 6

Broadband Initiative

- Launched May 2004 by H.E. President Hosni Mubarak during Telecom Africa
- Initial Target: 50,000 ADSL subscriber during first Year
- Later Phases to Include other Broadband Technologies
- 3-Year Initiative through Public-Private-Partnership
- First Objectives: Increase ADSL Penetration – Promote WiFi Hotspots
Evolution of International Capacity May04 – Apr06

THANK YOU