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TITLE: Broadband Measurement in Egypt - Success Story & Challenges Ahead

Ministry of Communications and Information Technology
Information Center

International Telecommunication Union

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Broadband Measurement in Egypt
Success Story & Challenges Ahead

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25/11/2010

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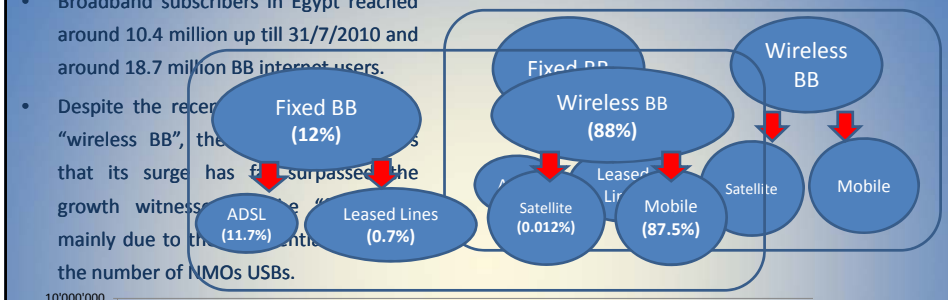
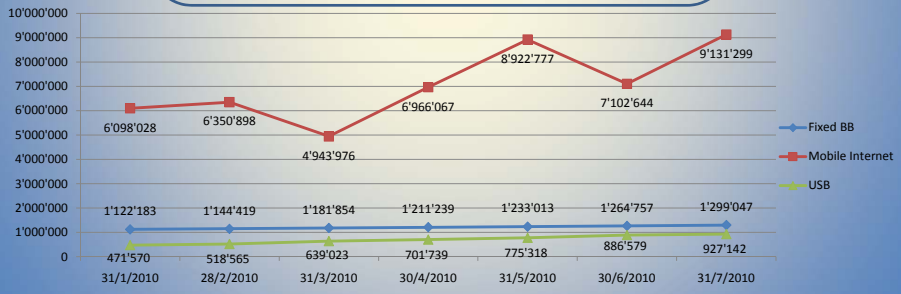
Introduction: Broadband Development through 2010

- Broadband subscribers in Egypt reached around 10.4 million up till 31/7/2010 and around 18.7 million BB internet users.
- Despite the recen… "wireless BB", the… that its surge has f… surpassed the growth witness… e "… mainly due to th… nth… the number of HMOs USBs.





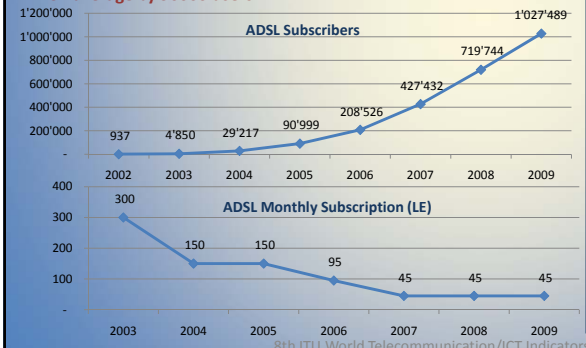
1. Broadband Measurement

1.1. Fixed Broadband Access Modes & Technologies

Internet Access Modes of Fixed BB	
DSL	• **ADSL:** Started to be available in 2002 & mostly used by HHs, provided at speeds up to 24M. • **SDSL:** Started to be available in 1995 & mostly used by businesses to establish their VPN , provided at speeds up to 2M.
FTTX (H (home), B (building), C (Curb))	• The deployment of fiber started a decade ago, but it is being concentrated in the core network for the purpose of transmission, now there is a trend to deploy fiber in the access network but still on a very small scale. • Until recently Telecom Egypt (TE) was the only operator licensed to deploy such infrastructure. In 2010, Telecom companies started to be licensed for fiber deployment within 2 closed compounds (until now only one company has been licensed). The choice of fiber deployment might be an hybrid choice of FTTX.
Fixed BB Technologies Deployment	
Broadband Power Line	In 2006 & 2007, the GoE tried to deploy such technology but it failed. It was intended to deliver internet services through electricity cables, but due to frequencies cross –interference, the experience failed.

1.1.1. ADSL Growth in Egypt

- ADSL is the most widely used fixed BB internet access mode; ADSL subscribers in Egypt reached around 1 million subscribers in 2009 compared to only 937 subscribers in 2002 when this services first started in Egypt.
- The growth rate in ADSL subscribers between 2003 & 2004 by 502.41% is mainly due to the initiative undertaken by MCIT to reduce the price by half from 300 LE (52.51$) to 150 LE (24.24$).
- **A regression model conducted by MCIT found that ADSL prices affect significantly the number of ADSL subscribers; if the price decreases by EGP 10 (US$ 1.8), number of ADSL users will increase on average by 90000 users.**



The market of the ADSL in Egypt witnessed acquisitions by some NMOs buying ISPs during the last couple of years; as follows:

- During the second quarter of 2008, Vodafone Egypt completed its acquisition of ISP Raya Telecom.
- At the beginning of 2009, Etisalat Misr acquired 100% of Egynet and Nile On Line.
- Telecom Egypt (TE) the solely fixed operator in Egypt offers internet services to the largest number of subscribers after it completely acquired TE Data (100%) at the beginning of 2010.
- TE Data market share of the ADSL market reached 61% mid 2010.
- In July 2010, Mobinil acquired Link.net (100%) and the ISP part of Link Egypt.

1.2. Wireless Broadband

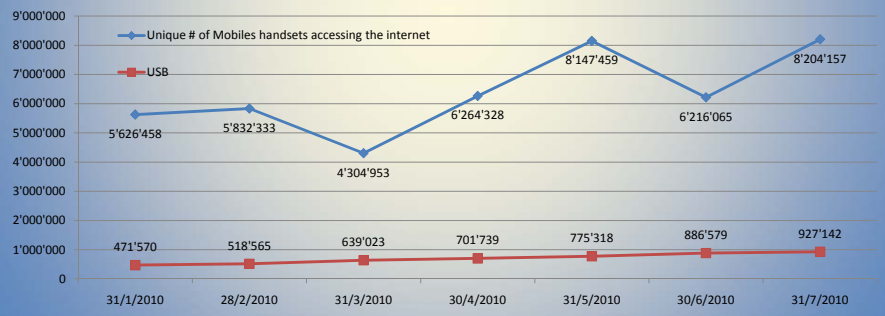
1.2.1. Satellite Broadband

Technology Deployed	Speed	Number of Users	Companies providing Satellite Services	
VSAT	≥ 256 Kbit/s	330 subscriptions (on average each sub. can be shared by 8 users)	• Alkan • MobiServe	•EgyptSat • African Waves
Inmarsat satellite system (BGAN services)	up to 432Kb/s	24 users	• Alkan • MobiServe	• VirgiTech
Thuraya satellite system	up to 256Kb/s	9 users	• Alkan	

- Customers of satellite services in Egypt are mainly petroleum companies and businessmen. These services are also used to connect local networks of airports and banks in Egypt.
- **The Deployment of Satellite BB in the Education System in Egypt:**
  One of the four company (Alkan) has a contract with the Ministry of Education for connecting 1300 schools remotely by the internet. This initiative has started from more than one year ago and it is mainly targeted at fostering "Distance Learning" in Egypt.
- Satellite BB services at speeds up to 256 Kbit/s are also provided on airplanes traveling through the Egyptian airspace. Until now four companies are licensed to provide telecommunications services on these airplanes.
- *Satellite Internet services are also provided via Inmarsat satellite system (fleet services) **at a speed less than 256Kb/s**. It provides internet services for ships in international voyage. The number of active equipments in 2009 reached around 51users.*

1.2.2. Mobile Broadband

- One of the main challenges of mobile broadband measurement in Egypt is that NMOs cannot differentiate between 2G & 3G speeds when counting internet access through the mobile handsets as in other countries like Denmark.
- At the end of July 2010 mobile internet subscribers reached around 9 Million; this represents the number of cumulative USBs and the "unique mobile numbers accessing the internet during the month".



2. Overcoming the Challenges of Measuring Mobile Internet Indicators in Egypt:

"Mobile Data Services Survey between Enhancement & Limitations"

2.1. Why Mobile Data Services Survey ?

- In an attempt to measure "Mobile Internet" indicators and due to the reluctance of some NMOs operating in Egypt to disseminate pertaining data items; MCIT in cooperation with Telecommunications Regulator "NTRA" conducted a survey in 2009 on "Mobile Data Services" (MDS).
- This survey comes in the framework of the initiative undertaken by the University of Southern California.
- Through this survey Egypt was able ***not only*** to avail MDS indicators but also to allow Egyptian MDS indicators comparability with other international experiences such as: ***Australia, Canada, China, Japan, Finland, Germany, Greece, Hong Kong, Hungary, Korea, New Zealand, Sri Lanka, Singapore, Taiwan, and the USA.***

2.2. Mobile Data Services Survey Methodology

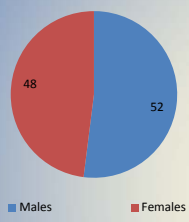
- The survey was conducted through telephone calls. The sample size accounted for 1000 subscribers in Greater Cairo and Alexandria; stratified according to operators' market shares, subscribing system (prepaid/postpaid) and gender.
- The survey tackled mainly 6 areas of "Mobile Data Services" as follows:
  - Mobile Data Service Users
  - Mobile Data Service Usage
  - Compatibility of Life Style
  - Location / Frequency of Usage
  - Customer Satisfaction
  - Mobile Phone Devices
- **In 2010, MCIT was able to enlarge the scope of the services accessed through the mobile as follows:**

Services included in 2009 Survey	Services included in 2010 Survey
Buying goods, tickets	Buying goods, tickets, making reservations
E-mail	E-mail
Online chatting	Sending and receiving SMS & MMS
Getting information and news	Getting information and news
Downloading games and ringtones	Downloading games and ringtones
	Chatting
	Listening to radio
	Paying bills
	Video calling
	Mobile TV

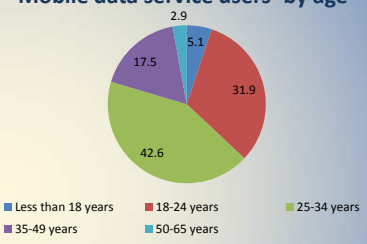
2.3. Extracted Mobile Data Services Indicators in 2010

2.3.1. Mobile Data Service Users

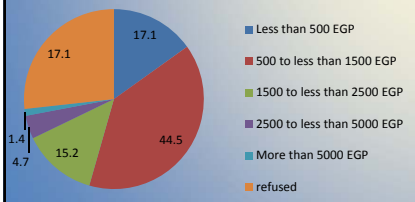
Mobile data service users- by gender



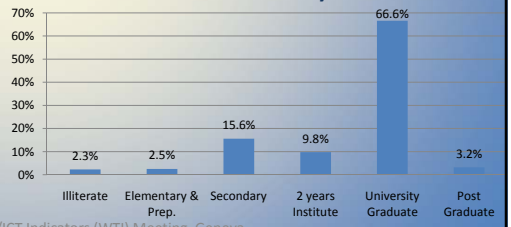
Mobile data service users- by age



Mobile data service users- by monthly expenditure

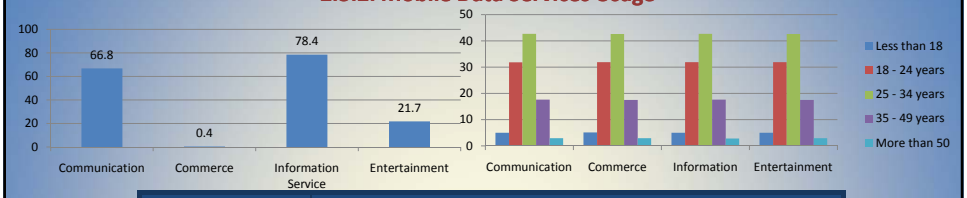


Mobile data service users- by education level

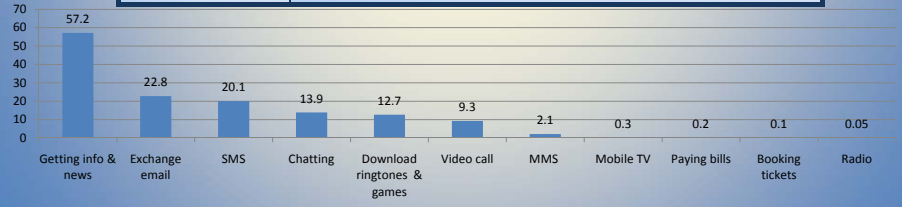


2.3. Extracted Mobile Data Services Indicators in 2010 (Cont'd)

2.3.2. Mobile Data Services Usage

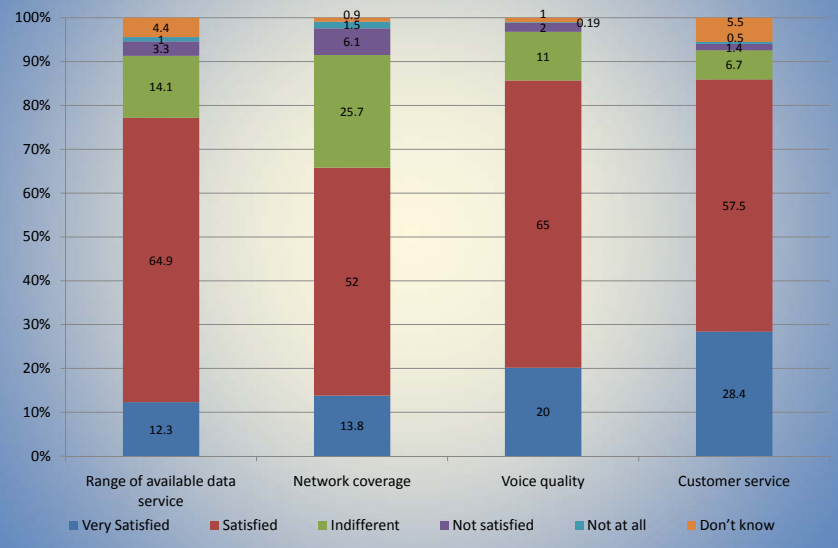


Category	Items
Commerce	Buying goods or tickets/ reservations / paying bills
Communication	e-mail/ texting / sending photos/ chatting / social networking
Information	News/ weather/ sports/ shopping info/ schedules /maps browsing
Entertainment	downloading games / graphics/ cartoons / music/ ringtones / video



2.3. Extracted Mobile Data Services Indicators in 2010 (Cont'd)

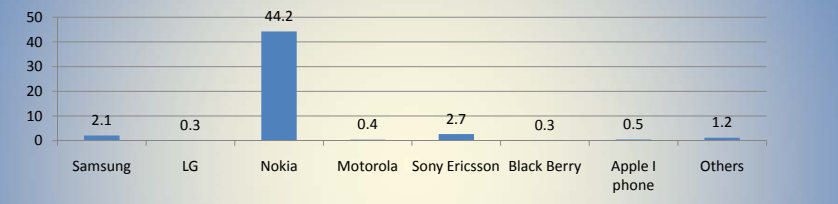
2.3.3.Customer Satisfaction



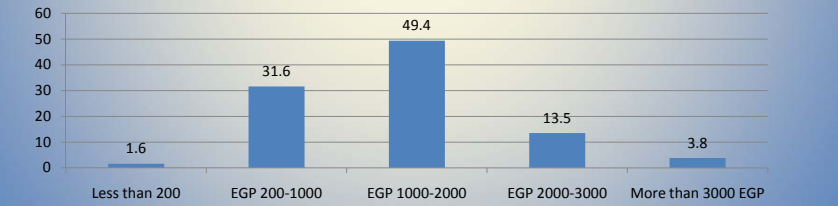
2.3. Extracted Mobile Data Services Indicators in 2010 (Cont'd)

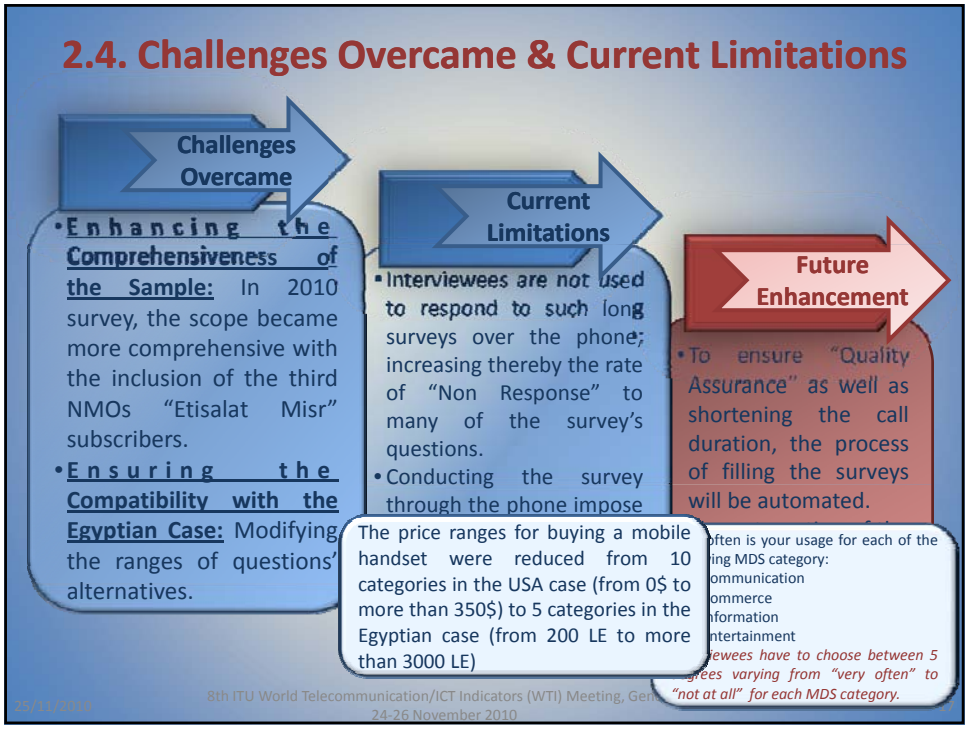
2.3.4. Mobile Phone

The brand of the mobile phone currently used



Willingness to pay for a new mobile phone




2.4. Challenges Overcame & Current Limitations
Challenges Overcame
•Enhancing the Comprehensiveness of the Sample: In 2010 survey, the scope became more comprehensive with the inclusion of the third NMOs "Etisalat Misr" subscribers.
•Ensuring the Compatibility with the Egyptian Case: Modifying the ranges of questions' alternatives.
Current Limitations
• Interviewees are not used to respond to such long surveys over the phone; increasing thereby the rate of "Non Response" to many of the survey's questions.
• Conducting the survey through the phone impose
The price ranges for buying a mobile handset were reduced from 10 categories in the USA case (from 0$ to more than 350$) to 5 categories in the Egyptian case (from 200 LE to more than 3000 LE)
Future Enhancement
• To ensure "Quality Assurance" as well as shortening the call duration, the process of filling the surveys will be automated.
often is your usage for each of the
ing MDS category:
ommunication
ommerce
nformation
ntertainment
ewees have to choose between 5
grees varying from "very often" to
"not at all" for each MDS category.
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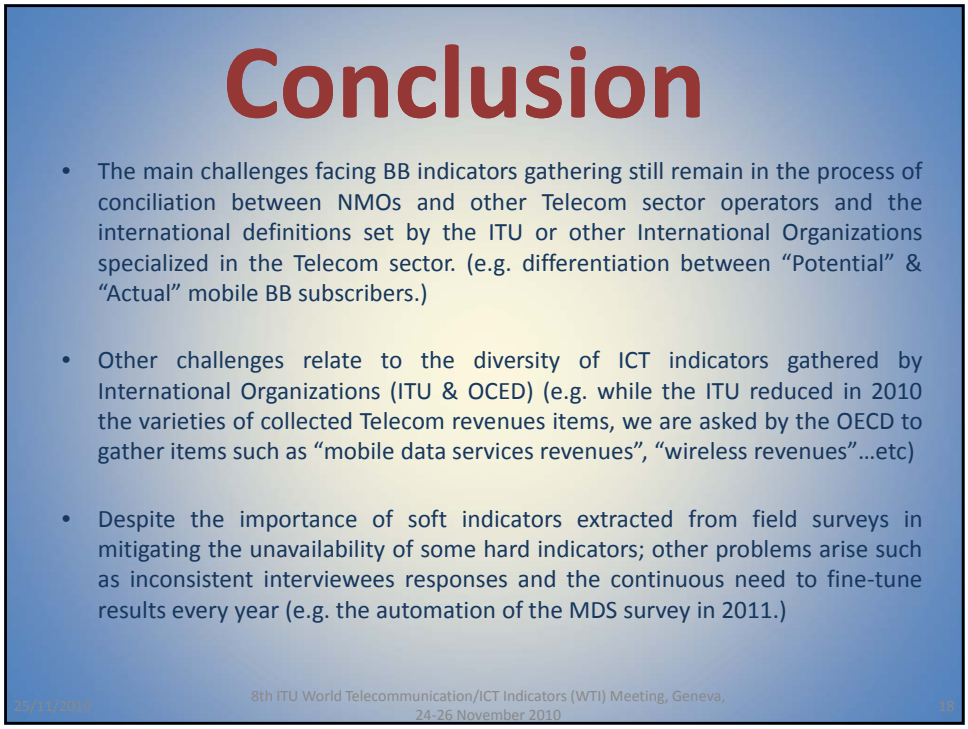
Conclusion
• The main challenges facing BB indicators gathering still remain in the process of conciliation between NMOs and other Telecom sector operators and the international definitions set by the ITU or other International Organizations specialized in the Telecom sector. (e.g. differentiation between "Potential" & "Actual" mobile BB subscribers.)
• Other challenges relate to the diversity of ICT indicators gathered by International Organizations (ITU & OCED) (e.g. while the ITU reduced in 2010 the varieties of collected Telecom revenues items, we are asked by the OECD to gather items such as "mobile data services revenues", "wireless revenues"…etc)
• Despite the importance of soft indicators extracted from field surveys in mitigating the unavailability of some hard indicators; other problems arise such as inconsistent interviewees responses and the continuous need to fine-tune results every year (e.g. the automation of the MDS survey in 2011.)
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Thank You
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