

Is 3G Ready for Pakistan?

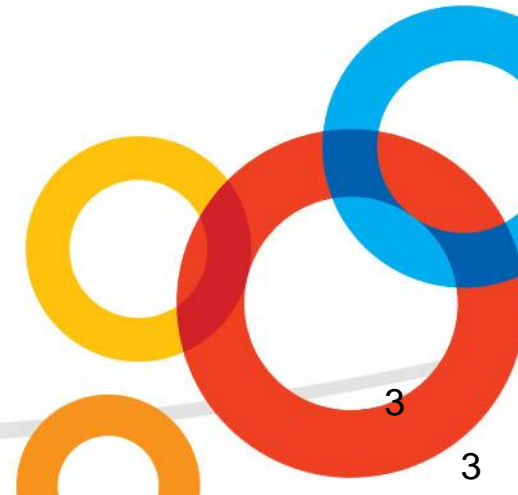
By

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Lets Address Both Questions

- Is Pakistan Ready for 3G?
- Is 3G Ready for Pakistan

Is Pakistan Ready for 3G?

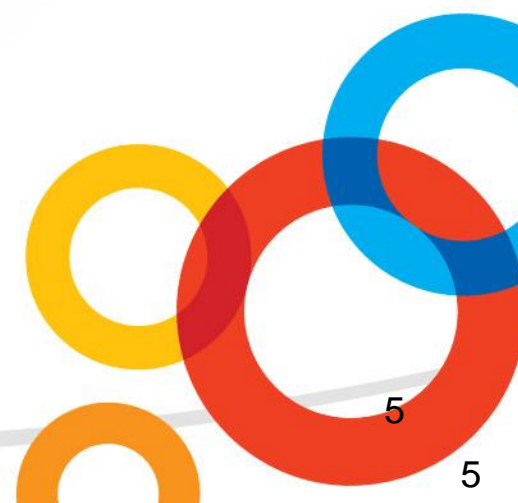


How Ready Could Pakistan be?

- Population: 160M
- Young people (15-24 yrs): 80M, 50%
- Matriculates: 27M, 17%
- Graduates: 7M, 4.4%
- Cellphone users: 89.5M
- GPRS Users: 5M (3%)
- PCs: 5M (3%); 80% used in Educational Institutes
- Internet Connections: 3.5 M (2.2%)
- Broadband users < 200K
(one of the lowest in the world, 143rd global ranking)

What is 3G?

- It is not about Technology, it is about services
- Key 3G Services
 - **Broadband**
 - **Multimedia**



What is **Broadband**?

- MoIT Broadband Policy 2004:
“Always On internet connection with a minimum download speed of 128 kbps connectivity”

Broadband Opportunity

- Noor ud Din Baqai, Ex Member Min of IT, “Pakistan would at best be targeting some thing like 2 to 2.5 million broadband customers by 2010”
- MoIT study; DSL can be provided to Max 500,000 users
- Requires
 - PC, only 5M mostly in educational institutes
 - Previous internet experience; only 3.5M
- Growth in Pakistan has been very slow
 - 2006: 45000
 - 2007: 65000
 - 2008: 130,000
 - Now: 180,000

Barriers to **Broadband**; MoIT Study

- User Terminal Price (Low PC penetration)
- Price; must be <Rs. 350 for mass adoption
- Availability; DSL, HFC, WiMax are not widely available
- Content; scarcity of local content and applications
- Knowledge (literacy), previous usage

Terminal Price

- PC prices have increased by 20% as the duty on PCs was increased to 16% last year
- PC/Server market growth rate is decreasing

3G as **Broadband**

- Addressable Market small
 - High End users
 - High literacy
- Barriers
 - PC + Phone
 - Internet knowledge a barrier
 - Package price
- Content
 - Lack of local content

3G as **Multimedia** Service

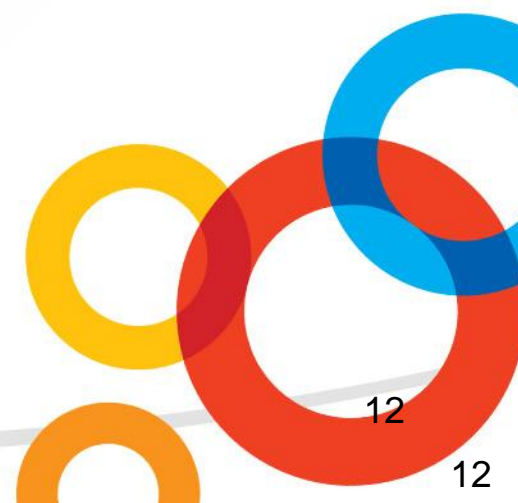
- Phone can be used as terminal device, PC not required
- Phone penetration; 56%
- No previous internet knowledge/experience required
- Literacy a non-issue provided content is interesting
- VAS have been very popular even in 2G

Most people in Pakistan are experiencing internet through Mobile Phone
GPRS users already around 5M

Most Interesting Applications of Data in Use in Pakistan

- Music
- Games
- Sports
- Local/ international news
- Education
- Email
- Job/ careers

Source: NSN Survey



Multimedia Could be the Killer Application

- Success Factors:
 - Local Content
 - Creativity
 - Market Awareness
 - Education

Interesting Content will attract subscribers

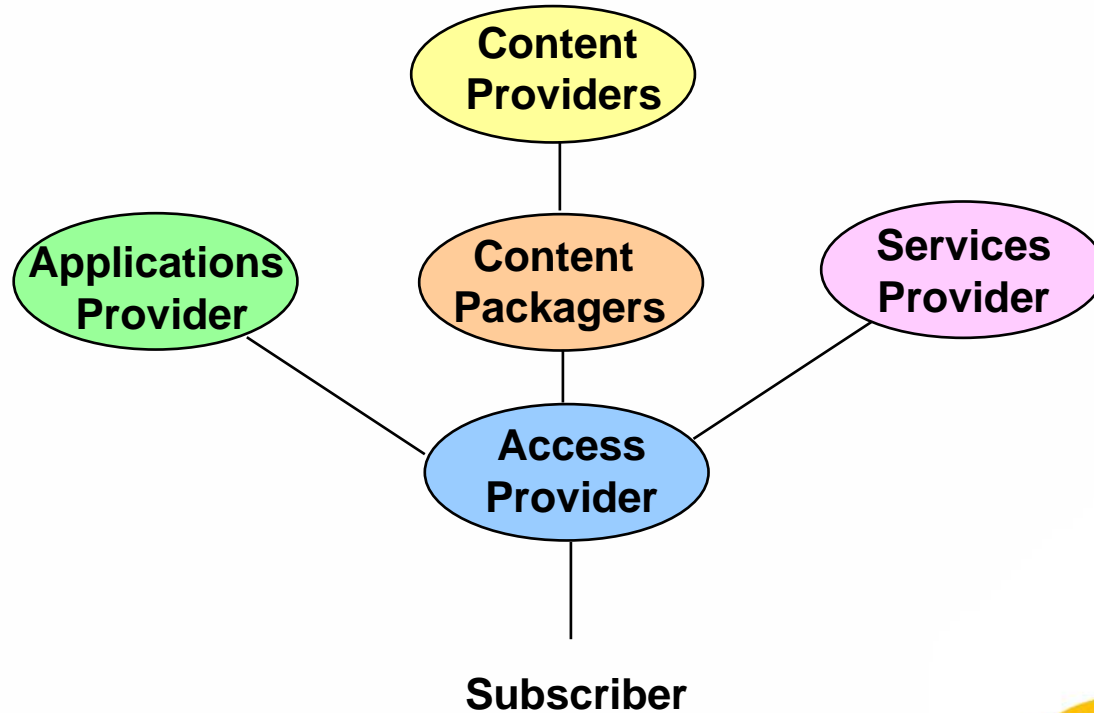
Other Readiness Factors

- Spectrum
 - 5 or 10 MHz is insufficient
 - Price can be very high
- Regulations
 - Broadband policy 2004 recommends “zero duty” on broadband related products. Will it be there?
 - Multimedia Content, VoIP etc?
- Investment
 - 3G Business case?
 - Operators still busy with 2G
 - CAPEX, OPEX is very high
 - Political/Business environment
- Ease of Deployment
 - NOCs
 - Wapda
 - Environment
 - Neighborhood Lack of Awareness
 - Sharing

WSIS Recommendation

- for Boosting Internet Penetration in Developing Countries
 - Leverage Broadband Wireless Technologies
 - Deploy High Speed Data on existing successful cellular networks
 - Countries should encourage 3G by eliminating license fees
 - Allow 3G on existing spectrum
 - Use USF to encourage 3G deployment
- Otherwise 2015 connectivity targets cannot be achieved

Are Local Operators Ready to Exploit the 3G Value Chain?



GPRS Service is not a good indicator
Cheap Broadband Data Model will be a disaster

Is 3G Ready for Pakistan?

3G Success in the World

2007- 08

- Non-SMS Mobile Data Revenue grew 37.82% globally
- **Mobile broadband** growth driven by explosion of laptops with dongles
 - Data card and USB dongle growth rate: 62.9%
- Global **mobile broadband** subscriptions:
 - 3Q07: 78.4 million subs
 - 3Q08: 157.3 million subs
- DSL Penetration has dropped in Advanced HSDPA Markets

Lessons Learnt from Indonesia

- If the user base is not familiar with the internet, at first they will only use 3G for what they already know; **Multimedia**
- 60% of mobile web browsing traffic is to social networking sites

Source: NSN

Developed Markets Vs Pakistan

- Developed World
 - Broadband is a large Market segment
 - 3G is very suited for this
- Pakistan and Under-developed World
 - Multimedia is the larger segment
 - Is 3G ready for this?

What Barriers 3G Can Overcome in Pakistan?

- **User Terminal Price**
- **Subscription Price**
- **Content/Applications**
- **User Knowledge (literacy) Non Issue for Multimedia**

User Terminal Price

- 56% Cellphone Penetration is a big plus
- For mass market multimedia segment PC is not required

3G/WCDMA Phone Prices in Pakistan

- Cheapest: Rs 18,500
- Rs 18,500 to 23,000: 7 Models
- > Rs 30,000: 4 models
- Most Expensive: Rs 60,000

Source: MobileZone website

EDGE/GPRS Phone Prices

- EDGE; 18 models
 - Cheapest: Rs 5000
 - <10,000: 3
 - <20,000: 4
 - >20,000: 11
- GPRS; 22 Models
 - Cheapest: Rs 5000
 - <10,000: 5
 - <20,000: 4
 - >20,000: 13

Some GPRS Models are available between Rs. 1800-4500

Source: MobileZone website

Subscription Price

- Current GPRS Packages
 - About Rs 500/month with 1 Hr Daily use
- Similar subscription will work
 - Broadband with $>$ Rs 500 subscription has not been very successful

Content/Applications

- Interesting Multimedia
Content/Applications would be key to 3G success in Pakistan
- Lets look at various 3G service currently available

Japan; NTT DoCoMo

- i-mode Services
 - Email
 - Send/Rx Photos and Videos
 - News service
 - Customized Content
 - Music and Video Channel
 - Download Video/Multimedia Content
- Mobile Wallet
 - Credit card
 - Membership cards etc
 - Bill Payment
- Videophone & Video Conferencing
- Location Based Services

Broadband & Multimedia

UK; Vodafone

- Broadband
- Google Maps
- Mobile Banking
- Mobile Ebay
- MusicStation
- Video on Demand
- Location Based Services
- Email and Instant Messaging
- Social Networks
- Photo and Video Messaging
- Video Calling

US; Verizon Wireless

- Broadband
- Entertainment
 - Music
 - Videos
 - Games
 - Mobile TV
 - Sports
 - News
 - Travel and Weather
- Ringtones, Wallpapers
- Maps and Location Services
- Email and Instant Messaging
- Mobile Web Content

South Korea; SK Telecom

- Wireless Internet; Broadband
- Music
- Games
- Multimedia
- Entertainment
 - Video, News, sports, movies, music channels
- Location Based Services
- Digital Home Network
- M-Commerce
- Videophone
- M-RFID
- Satellite Digital Mobile Broadcast
- Email and Instant Messaging

Indonesia; Indosat

- i-TV
- i-Movie
- i-Music
- i-Games
- i-Lifestyle
- i-Business
- i-Infotainment
- i-Religion
- i-Sports

Mostly Multimedia

- Broadband
- Multimedia
 - Mobile TV
 - Mobile Programming
 - Video Mail
 - Videophone
 - Video Blogging
 - Video Sharing
 - Video on Demand

Nigeria; MTN

- Broadband Data
- Video Cam
- Video Calling

Cyprus; MTN

- Broadband
- Video Calling
- Video Clips
- Mobile TV

What Barriers 3G Can Overcome in Pakistan?

- **User Terminal Price**
- **Subscription Price**
- **Content/Applications**
 - **Can Local Operators Exploit the 3G Value Chain?**
- **User Knowledge (literacy) Non Issue for Multimedia**

China Mobile

- Largest Telecom Operator in World
- >450 Million subscribers
- >360,000 BTS sites
- 5th most powerful brand in the world
 - Worth \$42 Billion
- Nearly \$1Bn invested last year
- \$800 Million announced this year
- Fastest network rollout in industry
- **ZOnG** is the international brand of China Mobile

