LTE Operator Strategies

Key Drivers, Deployment Strategies, CAPEX, OPEX, Price Plans, ARPU's and Service Revenues 2012 - 2016

March 2012
Overview:

Skyrocketing mobile broadband demand is driving an ever increasing number of commercial LTE network deployments. This surge has seen the number of LTE subscriptions already surpass 7 Million subscriptions worldwide, and over 300+ commercial LTE user device launches. As Mobile Network MNOs (MNOs) remain committed to deliver mobile broadband services over their LTE networks, a number of critical questions remain unanswered:

- How much revenue can an MNO generate with an LTE deployment?
- What is the typical ARPU for an LTE subscription worldwide or in particular regional market and how will it fluctuate in the next 5 years?
- What is the relative Total Cost of Ownership (TCO) of an LTE network in comparison to competing technologies such as HSPA+ and WiMAX?
- What is the market outlook for VoLTE (Voice over LTE) and wholesale LTE networks, and when would the first VoLTE deployments take place?
- How much CAPEX and OPEX would an MNO require to deploy an LTE network, and what strategies can be adopted to minimize both CAPEX and OPEX?

Covering over 325 global MNOs in 120 countries, this report answers the aforementioned questions by quantifying LTE service revenues, subscriptions, ARPUs, CAPEX and OPEX. In addition, the report reviews key trends in LTE deployment strategies such as VoLTE and SMS over LTE, the wholesale deployment model, Self-Organizing Networks (SONs) and the emergence of the data off-load (small cells, HetNets, Wi-Fi offload) equipment market.

The report further provides a global review of LTE price plans and key MNO strategies for LTE pricing and marketing. The report is supplement by an excel based interactive forecasting suite that can be used to forecast LTE service revenue, ARPUs, and subscriptions for particular regional markets, countries or MNOs from 2011 till 2016.

Report Benefits

- A Global review of LTE price plans and pricing and marketing strategies for MNOs worldwide
- LTE service revenues, ARPUs and subscriptions by region, country and operator for 2011, and forecasts till 2016
- LTE deployment strategies and key trends including VoLTE, Wholesale deployment model and FDD/TD-LTE integration
- CAPEX and OPEX requirements and strategies for LTE MNOs, including a review of CAPEX commitments by major MNOs worldwide
- Overview of the LTE market including key market drivers, commercial network deployments, subscriptions and device launches (as of March 2012) and frequency spectrum selection and fragmentation
Key Findings:

ARPUs and Operator Service Revenues

- Driven by early adoption among the enterprise users, LTE ARPUs will peak in 2012 reaching 88 USD per month, and drop down by a YoY decline of 16% over the next five years as the consumer market segment gains a higher market share.

- Having already surpassed 7 Million subscriptions, LTE subscriptions are set to grow at a CAGR of 150% over the next five year period.

- Growing at a CAGR of 80% global LTE service revenues will reach 291 Billion, representing a lucrative market for worldwide MNOs. LTE service revenues presently account for 15 Billion USD.

- While the Asia Pacific region will attain the highest number of subscriptions by 2016, the North America and Western Europe region will retain market leadership in terms of service revenues according for almost 60% of all LTE service revenues worldwide.

Deployment Strategies

- Mind Commerce estimates the first VoLTE deployments will take place in Q4'2012, with US and Korean MNOs the first to enter the market.

- While early market prospects in the US appear to be deteriorated, the wholesale LTE model will increasingly gain momentum over the next 5 years, and we expect to see the first commercial launch by UK Broadband in 1H 2012.

CAPEX and OPEX Strategies

- By 2016, the Total Cost of Ownership (TCO) for LTE will remain 44% lower than HSPA+ and 50% than WiMAX.

- If used to full potential, SON technology has the potential to reduce worldwide LTE deployment CAPEX $55 Billion, and $15 Billion in OPEX by 2016

Pricing Strategies

Most MNOs are adopting tiered based price plans based on volume and speed in order to maximize revenue while managing capacity. Unlimited plans may gain momentum as MNOs learn to divert revenues with OTT (Over-The-Top) players with technologies such as VoLTE, and as they attain cheaper network TCO by deploying small cells and WiFi offload equipment.
Target Audience:

- Mobile Network Operators (MNOs): Will make well-informed decisions about deployment strategies, CAPEX/OPEX reduction and price plans. Furthermore, “Greenfield” operators will understand how to capitalize on LTE technology by assessing the strategies of well established CSPs and MNOs.

- Mobile Network Infrastructure Vendors and Handset Manufacturer: Will assess particular issues faced by MNOs investing in LTE and align their product offerings accordingly.

- Application Developers: Will evaluate opportunities to invest in developing applications and services that run on LTE networks by understanding the market dynamics of LTE.

- Investors: Will better understand the LTE technology and its market potential, its value chain and potential. This report will help investors evaluate the investment prospects in the promising LTE ecosystem.

Companies in Report:

- 3 Australia
- Aero 2
- Aircel
- AIS
- Alestra
- Altech Stream Rwanda
- AM Wireless Uruguay
- America Movil Peru
- America Movil Puerto Rico
- AMX Argentina
- AMX Paraguay
- ANCEL
- Apple
- Aquafon
- Armentel
- AT&T Mobility Puerto Rico
- AT&T Mobility USA
- Augere
- AVEA
- Azercell
- Azerfon
- Babilon Mobile
- Bakcell
- Batelco Bahamas
- Batelco Bahrain
- Belcel
- Belgacom Mobile
- Bell Wireless Affiliates
- Bermuda Digital Communications
- Bharti
- Bharti Airtel Nigeria
- Bhutan Telecom
- Bité Latvia
- Bité Lithuania
- B-Mobile Brunei
- Bouygues Telecom
- British Telecom
- BSNL
- Cadcomms
- CamGSM
- Celcom Malaysia
- Cell C
- Cell One
- China Mobile
- China Telecom
- China Unicom
- Chunghwa Telecom
- Claro Brazil
- Claro Brazil
- Claro Chile
- Clearwire
- CMHK
- Cofetel
- Colombia Movil
- Comunicaciones Celulares Colombia
- Concel
- Corporacion Digital Venezuela
- Cosmo Bulgaria Mobile
- Cosmote
- Cosmote Romania
- CSL New World
- CTM
- CYTA
- Dhiraagu
- Dialog Axiata
- DiGi
- Digicel Jamaica
- Disk Network
- DNA Finland
- DSTCom
- DTAC
- eAccess
- Eagle Mobile
- ECMS
- Elisa Estonia
- Elisa Finland
- Emirates Integrated Telecommunications Company
- EMT Estonia
- EMTS
- enitel movil
- Entel PCS Telecomunicaciones
- E-Plus
- Ericsson
- Etihad Etisalat
- Etisalat Misr
- Etisalat Sri Lanka
- Etisalat UAE
- Everything Everywhere (Orange & T-Mobile JV)
- FarEasTone
- FCC
- Free Mobile
- Geocell
- Gibraltar Telecom
- Globacom Nigeria
- Globe Telecom
Companies in Report (cont):

- GrameenPhone
- GSM BiH
- GSM Kazakhstan
- H3G
- HI3G
- HI3G Denmark
- HiSilicon
- HTC
- Huawei
- Hutchison 3G Austria
- Hutchison 3G Ireland
- Hutchison 3G UK
- Hutchison Hong Kong
- ICE Costa Rica
- Iceland Telecom
- Idea Cellular
- Indigo-Somoncom
- Indosat
- Infotel Broadband
- Ipko Net
- Iusacell Celular
- Kar-Tel
- KDDI
- Kibris Telsim
- KKTCell
- KPN Group Belgium
- KPN Mobile
- KT Corp
- K-Telecom
- Kyivstar
- LG U+
- Lightsquared
- LMT
- Magticom
- Manx Telecom
- Maxis Communications
- MegaCom
- MegaFon
- Meteor Communications
- Metro PCS
- Mfone
- MobiFone
- Mobile TeleSystems
- Mobile TeleSystems Belarus
- MobileOne
- Mobility
- mobilkom Austria
- Mobilkom Czech Republic
- mobilkom Liechtenstein
- Mobilina Srpska
- MobiTel
- Mobistar
- Mobitel Georgia
- Mobitel Slovenia
- Mobitel Sri Lanka
- Moldcell
- Monaco Telecom
- Motorola
- Movil de Entel
- Movilnet
- MTN
- MTN Ghana
- MTN Nigeria
- MTNL
- MTS Mobility
- MTS-Ukraine
- MTS-Uzbekistan
- NBN Australia
- Ncell
- Nepal Telecom
- Net4Mobility
- Netcom
- Network Norway
- Nokia Siemens Networks
- Nova
- NTT DoCoMo
- Núcleo
- O2 (UK)
- O2 Germany
- O2 Ireland
- Ofcom
- Omantel
- Omnitel
- One
- Open Mobile
- Openwave Systems Limited
- Optus
- Orange (Poland)
- Orange Armenia
- Orange Austria
- Orange France
- Orange Jordan
- Orange Luxembourg
- Orange Moldova
- Orange Romania
- Orange Senegal
- Orange Slovak Republic
- Orange Spain
- Orange Switzerland
- Otecel
- Other
- P&T Luxembourg
- P4
- Pantech
- PCCW Mobile
- PMCL
- Polkomtel
- Public Mobile
- Q-TEL
- Radiomóvil Dipsa
- RCS&RDS
- RIM
- Rogers Wireless Communications
- Safaricom
- Safaricom
- Samsung
- SaskTel Mobility
- Saudi Telecom Company
- Sequan
- SFR
- Si.mobil
- SingTel Mobile
- SK Telecom
- Sky Mobile
- Smart Communications
- SmarTone-Vodafone
- SMTC Saudi Arabia
- Softbank Mobile
- Sonaecom Servicos Comunicacoes
- Sprint Nextel Puerto Rico
- Sprint Nextel USA
- STA
- Starcomms
- StarHub
- Sunrise
- Swisscom Mobile
- Tacom
- Taiwan Mobile Company
- Tango Luxembourg
- Tashi Infocomm
- Tata Teleservices
- TDC Mobil
- TelCell
- Tele2 Croatia
- Tele2 Estonia
- Tele2 Latvia
- Tele2 Lithuania
- Tele2 Nederland
- Tele2 Sweden
- Telecel Paraguay
Companies in Report (cont):

- Telecom Italia
- Telecom New Zealand
- Telecom Personal
- Telefonia Celular de Nicaragua
- Telefonica Móviles
- Teléfonica Móviles
- Teléfonica Móviles Argentina
- Teléfonica Móviles Chile
- Teléfonica Móviles Colombia
- Teléfonica Móviles del Uruguay
- Teléfonica Móviles Mexico
- Telefonica Moviles Venezuela
- Telefonica O2 Czech Republic
- Telefonica O2 Slovak Republic
- Telekom Baltija
- Telekom Srbija
- Telemar PCS (Oi)
- Telemar PCS (Oi)
- Telemar PCS (Oi)
- Telenet Tecteo Bidco
- Telenor Denmark
- Telenor Hungary
- Telenor Mobil
- Telenor Montenegro
- Telenor Pakistan
- Telenor Serbia
- Telenor Sweden
- Telia Denmark
- TeliaSonera Finland
- TeliaSonera Sweden
- Telkomsel
- Telstra
- Telus Mobility
- Tikona
- TIM Brasil
- TIM Brasil
- TIM Brasil
- TMN
- T-Mobile Austria
- T-Mobile Croatia
- T-Mobile Czech Republic
- T-Mobile Germany
- T-Mobile Hungary
- T-Mobile Macedonia
- T-Mobile Montenegro
- T-Mobile Netherlands
- T-Mobile Poland
- T-Mobile Slovak Republic
- T-Mobile USA
- TMP Uganda
- TT Mobile
- Tunisiana
- Turkcell
- Tus Mobil
- UCel
- UK Broadband
- UNE EPM Telecomunicaciones
- Unitel Uzbekistan
- Vala
- Velcom
- Verizon Wireless
- VIBO
- Vodaphone
- Vodafone Czech Republic
- Vodafone D2
- Vodafone Egypt
- Vodafone Espana
- Vodafone Essar
- Vodafone Greece
- Vodafone Hungary
- Vodafone Iceland
- Vodafone Ireland
- Vodafone Italia
- Vodafone Libertel
- Vodafone New Zealand
- Vodafone Portugal
- Vodafone Romania
- Vodafone Turkey
- Vodafone UK
- Wataniya Maldives
- Wind
- WIND Hellas
- Wind Mobile
- XL Axiata
- Yoigo
- Yota
- Zain Bahrain
- Zain Jordan
- Zain Kuwait
- Ziggo
- ZTE
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</tr>
</tbody>
</table>

| Signature | Date |

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**Online Ordering**

Customers can order online by visiting report webpage: