REGULATORY APPROACHES
Over the Top (OTT) Services

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Over The Top (OTT) Services

- OTT refers to services provided over the Internet rather than solely over the provider’s own managed network.
- The user’s ISP/telco is not involved in the supply of an OTT service

**Examples of OTT Services include:**

- Chat applications (WhatsApp, WeChat, Facebook Messenger);
- Streaming video services (Netflix, Amazon Prime, YouTube);
- Voice Calling and Video chatting services (e.g. Skype, Facetime)

- OTT players rely on IP based networks to reach customers, do not make any direct contribution towards the cost of providing it;
OTT Communications

- OTT Voice / Video
  - Shifting of voice to OTT VoIP
  - Multibillion Dollars Loss to Telco
  - Changes in Telco Tariff Plans
OTT Media

Spotify®

NETFLIX

YouTube™

sky GO

HbbTV

YUPPTV

ditto TV

wherever TV
OTT Media
Commerce

PayPal

eBay

amazon

Alibaba.com

daraz.pk

kaymu

HOME SHOPPING

TRADEKEY

Your Key To Global Trade
Telecommunications: a sector in the midst of transformation

- The telecommunications industry is transformed in past 10 years, rise of data- consumers, need more bandwidth for smart devices.
- Operators expanded service portfolios, overhauled price plans, catering growing demand,
- Rising capital expenditures underline ongoing imperatives to upgrade network capabilities.
- Many players are diversifying revenue streams, ensuring new services yield healthy margins.
- At the same time, over-the-top (OTT) players expanding offerings, disrupting different industry verticals in this process.
- All entities in the digital ecosystem seeking new points of differentiation to maximize their share of customer spending.
- While operators still enjoy a majority of ecosystem revenues, OTTs have grown share to 10% in the space of a few years, and competition in retail and distribution is becoming more intense.
The Challenges Faced by the Stakeholders in the Value Chain

- Enhancement of **Data Communication** to continue over the next decade with visible impact on Telecom Operators **challenged by new players - reshaped Eco-system.**
- The growing impact of OTT services on telco’s voice and messaging revenue, a **widely accepted phenomenon.** Re-thinking of business models to adapt to a **new paradigm.** Stay focused on core connectivity business? On providing digital services? On finding new revenue streams?... Will operators have resources to invest in all these segments?
- **Regulators** played an extremely **positive role** in the past decade making the development happen. They are questioned today about ensuring sustainability of the new ecosystem including affordable quality services to the maximum Populace. **Are Regulators prepared and ready?**
- **OTT Players** are taking full benefit of Telco Infrastructure and Investments for OTT Business. Will they accept to “Contribute” on balanced Value share and Cost/Revenues vs. Net Neutrality Assurance?
Customers are increasingly focused on data. Media and video were ~10% of traffic in 2010; now it’s ~50%.

The share of various partners in telecom value chain

- **Infrastructure and platform vendors**: 5%
- **Device vendors**: 20%
- **Operators**: 55%
- **OTT, content, advertising services**: 10%
- **Retail and distribution**: 10%

Voice usage has declined ... and mobile is now the leading computing platform

<table>
<thead>
<tr>
<th>Year</th>
<th>Desktop</th>
<th>Portable PCs</th>
<th>Tablets</th>
<th>Smartphones</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td></td>
<td></td>
<td>1,000</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td></td>
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Sources: Press, Canalsys, IDC, Gartner, EY analysis
The following points about OTT services, which have been put forward by the ITU (ICT Regulation Toolkit: Regulating ‘Over-the-Top’ services):

- Proliferation of content and applications services is to be welcomed (add utility for users).
- Change is inevitable. As network operators migrate to next generation networks, voice services will become software applications riding over the network. During this transition, policy-makers are finding different paths to balancing innovation, investment and competition.
- Regulators cannot hold back the tides of change to maintain the status quo.
- These changes are disruptive and inconvenient for those with a stake in existing arrangements, but the benefits of change outweigh the costs.
- Regulators generally support innovation. They prevent fixed and mobile operators from blocking or degrading competing services.
## Regulatory Imbalances

<table>
<thead>
<tr>
<th>Regulatory Obligations</th>
<th>Operators</th>
<th>OTT Players</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Licensing</strong></td>
<td>Must purchase license to operate</td>
<td>Often not subject to specific licensing</td>
</tr>
<tr>
<td><strong>Accessible Market</strong></td>
<td>Only serve customers within the regulated jurisdiction</td>
<td>Serve any user, any where</td>
</tr>
<tr>
<td><strong>Taxes</strong></td>
<td>Subject to local and national taxes</td>
<td>Locating operators in low cost locations and tax heavens</td>
</tr>
<tr>
<td><strong>QoS</strong></td>
<td>License includes requirements for SLA’s</td>
<td>No QoS guarantees</td>
</tr>
<tr>
<td><strong>Pricing Regulations</strong></td>
<td>Regulators’ approval is needed in advance</td>
<td>No need for authorization. Loose agreement subject to change at any time</td>
</tr>
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<tr>
<td><strong>Interconnection</strong></td>
<td>Required as part of regulatory regime</td>
<td>no interconnection requirements</td>
</tr>
<tr>
<td><strong>Net neutrality</strong></td>
<td>Best effort data transport without discrimination, independent of source or nature of data</td>
<td>No obligations</td>
</tr>
<tr>
<td><strong>Number portability</strong></td>
<td>Obligation to offer number portability between providers</td>
<td>OTT service independent from mobile number</td>
</tr>
<tr>
<td><strong>Infrastructure/Network</strong></td>
<td>Unbundling, open access to Infrastructure obligations,</td>
<td>Proprietary Infra with no obligations</td>
</tr>
<tr>
<td><strong>Privacy</strong></td>
<td>Strict data protection and privacy requirements by Law</td>
<td>Practiced on a limited and generally voluntary basis</td>
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</tbody>
</table>
Examples of National Regulation/Legislation

<table>
<thead>
<tr>
<th>Regulators</th>
<th>Regulator Initiatives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>European Union</strong></td>
<td>The European Union approved rules in April 2014 to ensure equal access of firms and individuals to online services and harmonize rules across national borders to create a unified European market. Individually certain countries like France and Spain have blocked OTT providers when offering voice services that connect to the PSTN.</td>
</tr>
<tr>
<td><strong>Netherland</strong></td>
<td>Included net neutrality principles into a law in 2011. Telecom operators are prevented from blocking or charging consumers over and above the regular data charges, for using VoIP based apps and other internet-based communication services.</td>
</tr>
<tr>
<td>Regulators</td>
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<tr>
<td><strong>South Korea</strong></td>
<td>The KCC announced “Net Neutrality (NN) and Internet Traffic management Guidelines” in 2011 (Transparency, No blocking; No unreasonable discrimination, Reasonable traffic management) It is legal for telecom operators to charge their customers extra fees to use VoIP apps or block their use entirely</td>
</tr>
<tr>
<td><strong>UK</strong></td>
<td>OFCOM permits experimentation with new business models that rely on certain forms of traffic management (the “best effort” Internet is then protected)</td>
</tr>
<tr>
<td><strong>Canada</strong></td>
<td>The CRTC has banned zero-rated mobile video streaming of carriers own services</td>
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# Examples of National Regulation/Legislation

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<td>USA</td>
<td>New FCC draft internet rules to ensure reasonable network management were released on March 12, 2015. This might take few years to be finalized</td>
</tr>
<tr>
<td>Chile</td>
<td>In July 2010, net neutrality principles have been introduced in the National Telecommunications Act. “zero-rating” was recently banned in May 2014</td>
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<tr>
<td>Singapore</td>
<td>Specific licenses for VoIP connecting to PSTN. Peer-to-peer not licensed, subject to competition law</td>
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<tr>
<td>KSA</td>
<td>OTT only allowed if they work with licensed telecoms companies. VoIP defined as a regulated activity</td>
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<tr>
<td>Egypt</td>
<td>Legislation expected soon (NTRA), but none at present. VoIP using mobile network is forbidden.</td>
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<tr>
<td>Kingdom of Bahrain</td>
<td>Voice services connected to PSTN only allowed for license holders. Foreign providers not actively marketing their services in the country will not be pursued</td>
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</table>
## OTT Business Model

<table>
<thead>
<tr>
<th>Advertising</th>
<th>Services funded by display of advertisements or collection of user data for advertisers.</th>
<th>Google, Facebook, WeChat, Line, Viber, Angry Bird, Candy Crush, Pinger, Spiderman etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-app purchases / content</td>
<td>Purchase of extra features or stickers etc.</td>
<td>Kakao, Line, WeChat, 8 ball mini pool, bad land, device 6 etc.</td>
</tr>
<tr>
<td>Software Licensing</td>
<td>Services are bundled with hardware as white label services</td>
<td>Skype, Minecraft, Heads Up, Dropbox etc.</td>
</tr>
<tr>
<td>Subscription</td>
<td>Charges for basic service or additional features</td>
<td>Skype, Viber, Whatsapp, Pay TV services, Lumosity etc.</td>
</tr>
<tr>
<td>Unit Pricing</td>
<td>Revenues from off-net calls and SMS</td>
<td>Skype, Viber, etc.</td>
</tr>
</tbody>
</table>
Policy Challenges

• Facilitate the availability, accessibility and affordability of ICT services
• Consumer protection
• Embrace market developments and digital opportunities
• Create a competitive and enabling policy environment
• Promote investment and innovation
• Policy need balance innovation, investment and competition
• Consider the benefits of change vs. costs
Policy and Regulatory Issues on OTT

**Consumer aspects:**
- Protection of rights;
- Internet should be free and open;
- Data protection and privacy

**Competition aspects:**
- Promote service-based competition (greater consumer choice);
- Better pricing of services
- To regulate or not to regulate ECS providers? Regulation of services and/or content and not entities?
- Two licenses: ECNS (regulated) and ECS (not regulated),
- Implication for vertically integrated players?
- *What is the real issue? Stimulate innovation or stifle it?*
<table>
<thead>
<tr>
<th></th>
<th>Regulatory Challenges</th>
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<tbody>
<tr>
<td>1</td>
<td>Licensing</td>
</tr>
<tr>
<td>2</td>
<td>Frequency Spectrum</td>
</tr>
<tr>
<td>3</td>
<td>Interconnection</td>
</tr>
<tr>
<td>4</td>
<td>Infrastructure Obligations</td>
</tr>
<tr>
<td>5</td>
<td>Quality of Service</td>
</tr>
<tr>
<td>6</td>
<td>Emergency Services</td>
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<tr>
<td>7</td>
<td>Regulatory Levies</td>
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<tr>
<td>8</td>
<td>Universal Service Obligations</td>
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<tr>
<td>9</td>
<td>Bank Guarantees</td>
</tr>
<tr>
<td>10</td>
<td>Scope of Services</td>
</tr>
</tbody>
</table>
Consumer Security

- Loss of Privacy
- Data Security
- Social Engineering
- Data Portability
- Loss of Control on Data
- Lacking isolation of data on Cloud Networks
- Deletion of Data
National Security

- Lack of visibility into Internet traffic
- Increasing amount of data and diversity
- Threat to Critical Infrastructure
- Encryption of Data
- Non-registration of OTT Players locally
- Insensitivity to religious and cultural values
- Public reaction on traffic monitoring
Impact on Economy

- Competition with Global Markets
- Low fixed cost and cost of entry
- Increase in Trade
- Tax Evasion
- Universal Service Obligation Funds
- Internet / Online Advertising – above USD 130 Billion
Conclusions

- OTT services are growing exponentially
- Risks of disclosure of personal data, loss of control on data and data security are increasing for consumers and governments
- Change in telcos tariffs - flat tariff to fair data usage tariff
- Network management by telcos to sustain their revenues
- Net neutrality turning out to be an important regulatory issue
- Policy to support investments in networks
- Law enforcement for OTT Services
Recommendations

- Create regulatory framework supporting telcos and innovation of OTT players
- Costing of transport and access networks to decide about regulatory intervention
- Policy on net neutrality
- Policy to support investments in networks
- Enact laws for consumer privacy, data protection and electronic transactions
Thanks