Regulations in the Era of Rapid Technological Changes

A presentation by N K Mangla
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1. About RCOM
2. Present Telecom Scenario
3. Need for Regulation
4. Technology- Regulation Link
5. Regulatory measures for adoption of new technologies
Reliance Communications

- Largest integrated communications company in the private sector in India
- Serving over 40 million individual and corporate customers on a global basis
- More than 6,000 Towns covered
- About 14000 BTSs
- Strategic presence in all high growth segments - wireless, global and broadband
- One of the largest Next Generation Networks in the world – and only one in India
- Service convergence of voice, data, internet and video
- Investment of USD 5 billion
- Market Cap of about USD 40.00 billion approx.

India’s fastest customer additions since launch
Only Operator to Dimension Network Ahead of Exponential Growth

<table>
<thead>
<tr>
<th>Coverage at a Glance</th>
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</thead>
<tbody>
<tr>
<td>% of Urban Population Covered</td>
<td>98.25%</td>
</tr>
<tr>
<td>% of Rural Population Covered</td>
<td>67.00%</td>
</tr>
<tr>
<td>% of National Highway Covered</td>
<td>95.00%</td>
</tr>
<tr>
<td>% of Railway Covered</td>
<td>93.19%</td>
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<tr>
<td>% of Total Population Covered</td>
<td>54.66%</td>
</tr>
<tr>
<td>Number of Towns Covered</td>
<td>6,000</td>
</tr>
<tr>
<td>Number of Villages Covered</td>
<td>500000</td>
</tr>
<tr>
<td>Customer Capacity</td>
<td>80 million</td>
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</table>

Highest Coverage of any Private Operator
Leading position across multiple segments

1. Largest in Enterprise data service - >50% market share
2. Largest carrier of Wireless data
3. Largest private Public Call Office (PCO) operator >50% Market share
4. Carrier of International Long Distance (ILD) voice – >40% market share
5. US-India retail voice carrier – 40% market share
6. Internet Data Center (IDC) services – 50% market share
7. Largest retailer of wireless handsets

...and of course leading wireless customer base in India
Current Telecom Scenario in India

- Current subscriber base – about 273 million as on December 30, 2007
  - Looks set to achieve the stated target of 500 million by 2010
- Gross revenues growth at CAGR of 21% since 2002
- Current Revenues stand at 20 billion USD.
- Accounts for 2% of GDP.
- 2.87 million broadband customers growing at the rate of 7% per month.
- The combined market cap of four largest players over 100 billion USD.

The regulator and the government policies have been proactive in achieving these milestones and providing the customers lowest tariff.

For Example; introduction of Caller party pays regime etc.
Why Regulate?

The regulation has to achieve the following objectives in general:

- Ensuring better quality of service - at par with international standards at affordable rates.
- To facilitate all those services & contents, to the Indian consumers, which are available worldwide.
- To facilitate the achievement of goals and policies of the Government for increasing the reach of telecom services far & wide and thus bridging the digital divide.
- Provide fair and transparent regulatory environment which promotes a level playing field and facilitate competition.
- Preparing for smooth transition to the latest technology and to the era of convergence.
Technology- Regulation –what is the link?

- Indian customers are entitled to have latest and world class service at affordable rates.

- These services are generally offshoots of emergent technologies meaning that Indian regulator has to keep constant watch on the technology evolving in the world and then adaptation in the country.

- Such adaptation is possible only by creating regulatory environment and awareness.

- While doing so, the regulator ensures:
  - level playing field between service providers by providing a fair and transparent policy environment which promotes a level playing field and facilitates fair competition
  - Protect consumer interests
  - smooth transition to an era of convergence of services and technologies
Initiatives taken by the Indian Regulator for new technology during the last two years:

- Infrastructure Sharing
- IN regulation
- Adaptation of CAS
- Digitalization of TV
- 3G & Broadband Wireless Access
- Efficient utilization of spectrum
- Mobile Number Portability
- Mobile TV / DTH/HITS & IPTV
- Technology neutrality – UASL > USL > NGN
Regulation- March with Technology

- Technology is marching ahead at a fast pace.

- Regulation is important for maintaining a consistency and continuity of investment climate resulting level playing field.

- Regulation is a continuous process and the Regulator has to keep a continuous watch on the technology, services, world trends and customer satisfaction and conveniences, meeting social objectives and at the same time addressing the interests of service providers and the government.

- Indian regulator has so far played a proactive role in most of the services/technologies, however some issues may remain unaddressed.

- Some of these issues which involve consumer interest are being discussed in the next slides.
Issues needing urgent attention of regulator

- Bridging the Digital Divide - The rural urban tele density gap widening

- Access to Emergency nos – Fire, Police, Ambulance

- Uniform code of conduct for passive infrastructure e.g. sharing of towers, eco-friendly generators & shelters etc.

- Convergence – Need to move towards converged networks permitting one type of service provider to provide similar service possible under separate licenses.

- Level playing field for all technologies- Delivery of TV channel possible through number of technologies- Cable, IPTV, DTH, HITS. Price Regulation available only for Cable and CAS. Other technology platforms have been excluded even though it is not conclusively proved other platforms are competitive.
Access to toll free nos – IN services still not available from all the phones
Roaming rates – need to bring down International roaming rates

- Exorbitantly high international roaming rates hurting Business & Consumers
- Indian mobile consumer pay 40-140 times higher call charges on international roaming as compared to domestic rates
- Indian customer pays 3-5 times higher charges in visited country

Domestic Call Rates (INR)

<table>
<thead>
<tr>
<th></th>
<th>India</th>
<th>UK</th>
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<tbody>
<tr>
<td></td>
<td>Incoming</td>
<td>Local Outgoing</td>
</tr>
<tr>
<td>Free</td>
<td>1</td>
<td></td>
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International Roaming Call rates (INR)

<table>
<thead>
<tr>
<th>Traveler from</th>
<th>Destination</th>
<th>India</th>
<th>Local Outgoing Call</th>
<th>International Outgoing Call</th>
<th>UK</th>
<th>Local Outgoing Call</th>
<th>International Outgoing Call</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Europe</td>
<td></td>
<td></td>
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<td>136</td>
<td></td>
<td>15</td>
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<tr>
<td></td>
<td>Italy</td>
<td>47</td>
<td>36</td>
<td>129</td>
<td></td>
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<tr>
<td></td>
<td>Germany</td>
<td>53</td>
<td>37</td>
<td>92</td>
<td></td>
<td>15</td>
<td>30</td>
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<tr>
<td></td>
<td>North America</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Canada</td>
<td>75</td>
<td>55</td>
<td>140</td>
<td></td>
<td>56</td>
<td>88</td>
</tr>
<tr>
<td></td>
<td>US</td>
<td>75</td>
<td>55</td>
<td>140</td>
<td></td>
<td>56</td>
<td>88</td>
</tr>
</tbody>
</table>

- Due to higher call charges penetration of International roaming is abysmally low at less than 1% of mobile users
- High rates generated arbitrage- Operators like Matrix and Falcon buy airtime from overseas network and offer to Indian customers.
Why International Roaming Rates higher for Indians?

- Operators determine roaming rates in respective countries on bilateral basis
- Coordinated international roaming price fixation by Indian operators
- 90% international roaming market with GSM operators
- No effort on part of operators to bring down prices though technology and efficiencies are improving
- European Union regulated international roaming rates in 2007, setting ceiling rates 60% lower than prevailing rates
- TRAI issued directive to use technology (CRBT) to inform caller that called party is on international roaming but international roaming prices are still higher.

When market fails, technology cannot substitute regulation
Thank you

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