

# *Role of Regulatory Authorities in Promotion and adoption of Mobile standards in India*

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# *Web as a means for information*

- Web to its full potential as a forum for information, commerce, communication and collective understanding
- Web involves participation, opportunities to share knowledge.
- Need to be available on many kind of devices
- Need of developing common protocols that promote its evolution and ensure its interoperability.

# *Any device any language*

- Mobile phones, smart phones, personal digital assistants, interactive television systems, voice response systems, kiosks and even certain domestic appliances can all access the web
- Benefits of web to all people irrespective of device , application, culture, or **native language**
- In country like India, with its rich cultural and linguistic diversity, this becomes more crucial and poses high end research challenges.
- 95 % of population do not understand English. **Make the web available in all 22 Indian languages**

# Indian Languages

Language	Population (in million)
Hindi	499
Bengali	215
Punjabi	88
Tamil	77
Telugu	75
Marathi	71
Urdu	104
Guajarati	46
Malayalam	37
Kannada	44
Oria	32

# *Growth of mobile subscribers in India*

- **Around 800 million mobile phones in India**
- **Expected to be 1 Billion phones by 2014**
- **Broadband growth limited to 12 million**
- **Expected to be 160 million by 2014**
- **3G and Broadband wireless Access under launch**
- **Computing power in mobile with device API can integrate well with host devices**
- **Emergence of Mobile as a point of access offers opportunities for increasing the mobile Internet penetration for low PC and higher mobile phone penetrated Indian market**
- **Mobile presents a great opportunity for all to access web**

# Regulatory Issues addressed

## Regulatory Tool Box

USO

Comprehensive USO Policy in place

Interconnection

Issues have been addressed through various regulations and directives;  
One of the few countries to publish RIO  
A comprehensive IUC regime too is in place

Tariffs

Telecom Tariff Order & amendments;  
De-regulation of tariffs, starting with cellular tariffs  
Monitoring of tariffs for predation

Licensing

Based on TRAI recommendations, open competition has been introduced in all sectors including unified access.  
Internet Telephony introduced  
Recommendations for total unification with Govt.

QoS

End User Quality of Service regulation,  
Publicly available customer survey

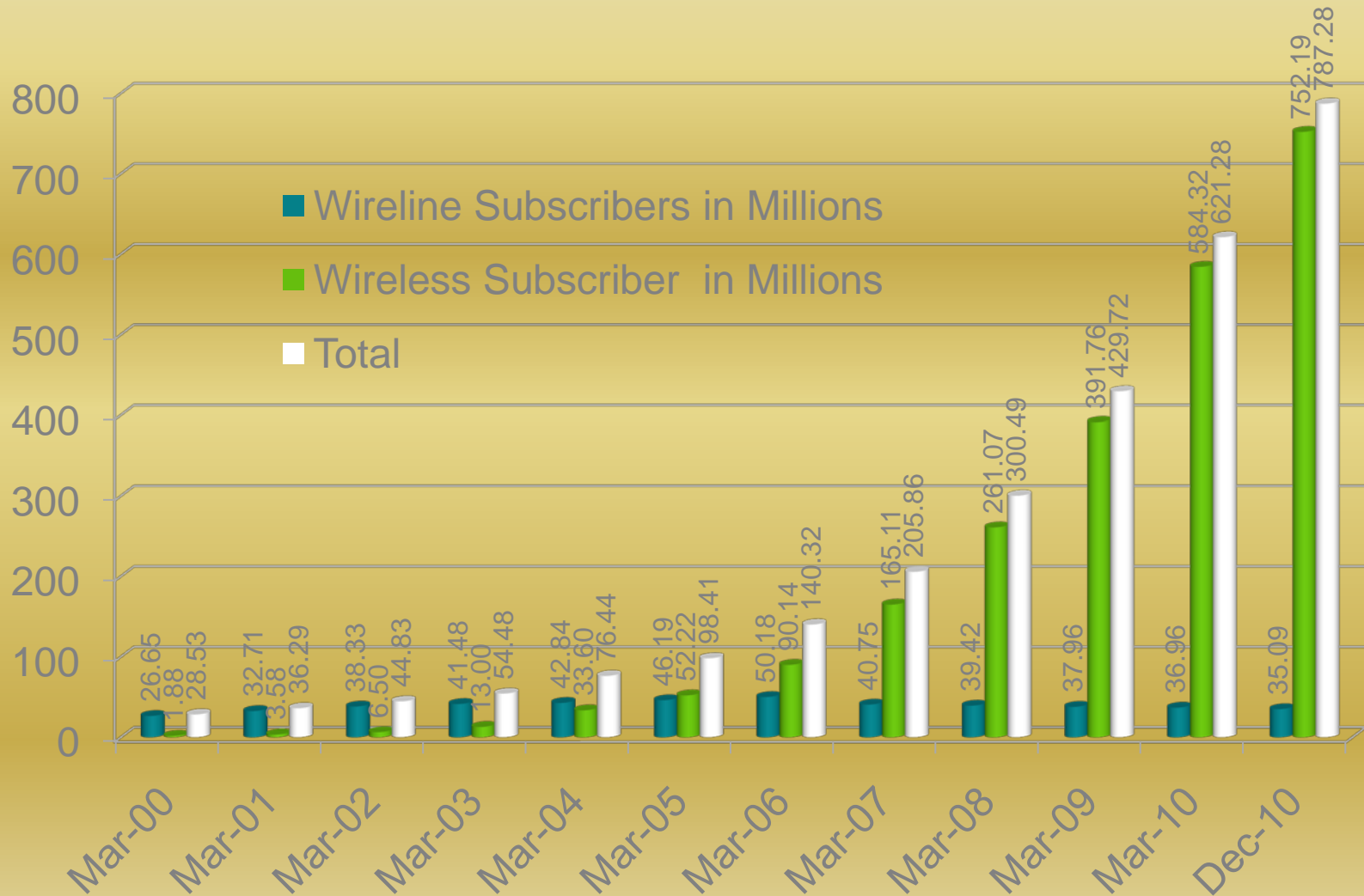
Competition

Accounting separation, RIO by service providers with Significant Market Power, Merger issues

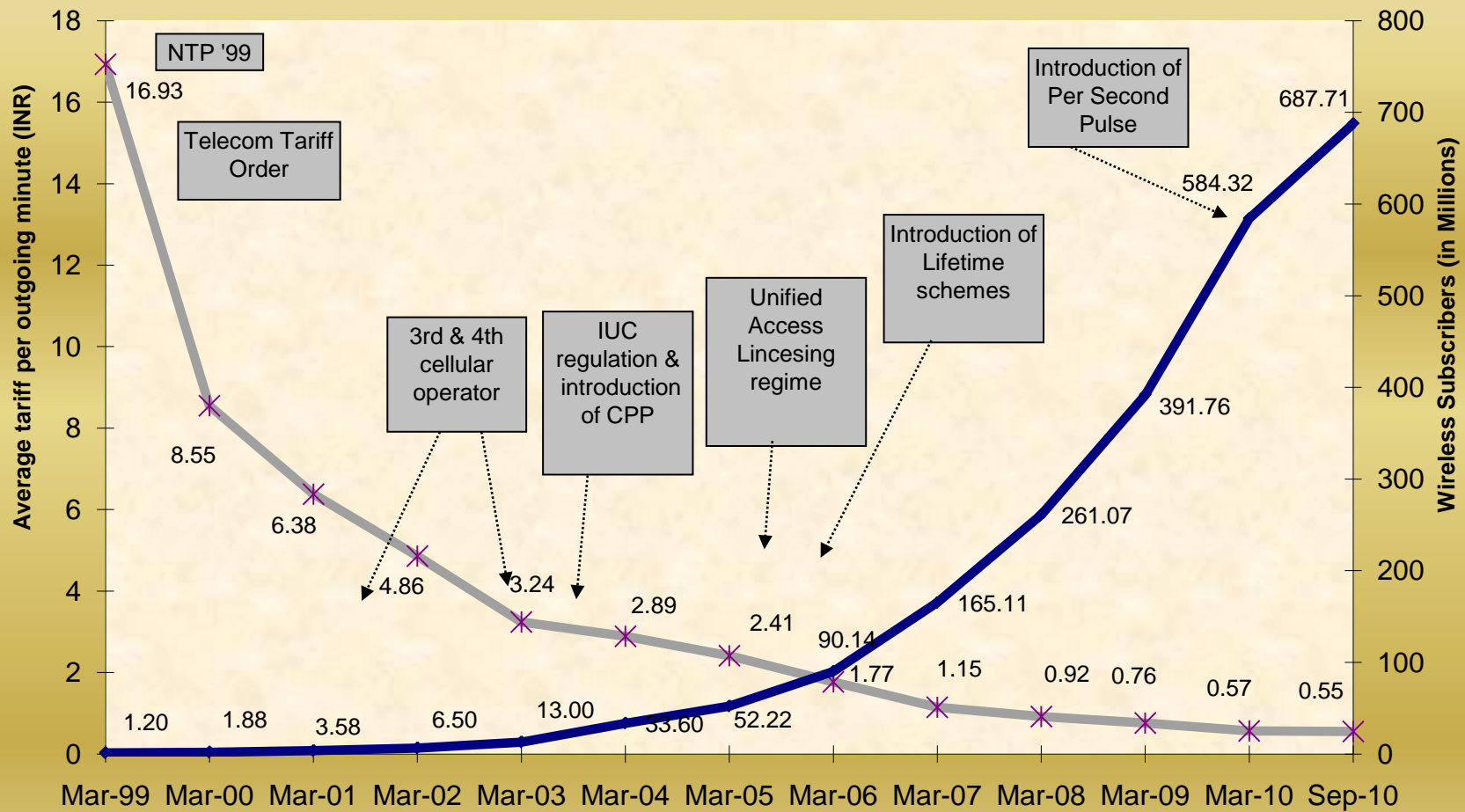
Broadband

National Broadband Plan issued in December 2010.

# Telephone Subscribers Growth



# Average Tariff and Wireless Subscribers



✕ Average tariff per outgoing minute (GSM Service)

■ Wireless Subscriber base (Millions)

# *Regulatory intervention for Indian language*

## **Support for Indian languages for SMS, Web**

Proprietary picture SMS based solutions

Require picture enabled handsets to display; message size is limited to 72X28 to 72X56 hence only few words can be sent

Different SMS encodings

Keypads with Indian languages available but everybody's keypad differs in number of characters on each key

Choice of characters placed on different keys

Position of characters on a specify key

Height and width of characters displayed on the keypad

# *The Role of TRAI*

## **Mission of TRAI**

The mission of **Telecom Regulatory Authority of India (TRAI)** is to ensure that the interests of consumers are protected and at the same time to nurture conditions for growth of telecommunications, broadcasting and cable services in a manner and at a pace which will enable India to play a leading role in the emerging global information society.

## **Web and internet connectivity & ICT facilities for all the people of India**

Requirement to make the internet available in all 22 Indian languages which are being understood by more than a billion people in the world. To improve the broadband penetration the availability of Indian language platform in the web is of paramount importance.

## **Web on mobile ( Availability of Indian language applications on mobile)**

TRAI will do the needful for promoting the use of Indian Languages for promoting the availability of web for all

# *Possibilities for Future*

- Making contents and websites available in all Indian languages and in all types of devices without involving any additional cost to consumer.
- This will definitely drive the Broadband growth.
- Let us begin today with collaboration and cooperation.



# Thank You

