CHAPTER - II

TELEPHONE SERVICES IN INDIA HISTORY AND DEVELOPMENT OF MOBILE PHONE SERVICES
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PRE-HISTORY BIRTH TO BELL LAB’S 1924.

While puzzling over the mysteries of radio, many inventors worked concurrently on power generation, telegraphs, Lighting and later, telephone. The thorough understanding of electricity required to produce a reliable, practical radio system took a long time and happened in different phases.

In 1820 Danish physicist Christian discovered electromagnetism, the critical idea needed to develop electrical power and to communicate and, it fully understood and applied, promised a new area of communication. In 1821 Michael Faraday reversed Oersted’s experiment and in so doing discovered induction. This helped Faraday build the world’s first electric generator.

Faraday worked through different electrical problems in the next ten years. eventually publishing his results on induction in 1831. In 1830 the great American Scientist Professor Joseph Henry transmitted the first practical electrical signal; showing that electromagnetism could do more than just Create current or pick up heavy weights-it could communicate.
In a stunning demonstration in his ably academic classroom, Henry created the forerunner of the telegraph. While Henry did not pursue electrical signaling. He did help someone who did, and that man was Samuel Finely Breeze Morse. From the December 1963 American Heritage magazine, presented a sketch of Henry’s primitive telegraph. Dozen years before Morse, reveals the essential components; an electromagnet activated by a distal battery, and a pivoted iron bar that moves to ring bell”.

In 1837 Samuel Morse invented the first practical telegraph applied for its patent in 1838, and was finally graded it in 1848. Joseph Henry helped Morse build a telegraph relay or repeater that allowed long distance operation. The telegraph brought the closer and eventually the world.

INDUCTION AND THE RISKY OR LOOMIS

In 1865, a dentist Dr Mahlon Loomis of Virginia may have been the first person to communicate through wireless via the atmosphere. Between 1866 and 1873 he transmitted telegraphic messages at a distance of 18 miles between the tops of Coshocton. He even flew a metal framed kite on a metal wire, perhaps taking inspiration from Benjamin Franklin. He attached a telegraph key to the kite wire and sent signals from it. At another location a similar kite picked up these signals and noted them with a galvanometer.
1888 ON: RADIO DEVELOPMENT BEGINS IN EARNEST

In 1888 the German Heinrich Heriz conclusively proved Maxwell’s prediction electricity could travel in waves through the atmosphere. Unlike Hughes, the extensive and systematic experiments into radio waves that Hertz conducted were recognized and validated by inventors around the world. Jagadish Chandra Bose demonstrated in 1895 electromagnetic waves “by using them to ring a bell remotely and to explode some gunpowder.”

Ships were the first wireless mobile platforms. In 1901 Marconi placed a radio aboard a Thomycroft steam powered truck, thus producing the first land, based wireless mobile. Transmitting data, of course, and not voice. In December 24, 1906, Reginald fessenden accomplished the first radio band wave communication of human speech over a distance of 11 miles, from Brant Rock, Massachusetts to ships in the Atlantic Ocean. Radio was no longer limited to telegraph codes, no longer just a wireless telegraph, but a means of verbal communication. This was quite a milestone and many historians regard the radio era of the beginning of the voice transmitted age.

THE FIRST CAR-TELEPHONE

From g10 onwards, It appears that Lars Magnus Ericsson and his wife Hilda regularly worked the first car telephone. Yes, this was the man
who founded Ericsson in 1876. "In today’s terminology, the system was an early telepoint’ application; you could make telephone call’s from the car. Access was not by radio, of course instead there were two ling sticks, like dishing rods, handled by Hilda. she would hook them over a pair of telephone wires. Seeking a pair that were when they were found, Lars Magnus world crank the dynamo handle of the telephone, which produced a signal to an operator in the nearest exchange.

Thus we have the founder of Ericsson, bouncing along the back roads of sweeten, making calls along the way. Now telephone companies themselves had portable telephone. Before this, especially to test their lines, and armed forces would often lap into existing lines while divisions were on the move. Around the same time, the triode tube was developed allowing far greater signal strength to be developed both for whireline and wireless telephony. No longer passive like a crystal set, a triode was powered by an external source, which provided much better reception and volume.

Later with Armstrong’s regenerative circuit, tubes were developed could either transmit (or) receive signals and were stable and powerful enough to carry the human voice and sensitive enough to detach those signals in the radio spectrum.
HISTORY OF CELLULAR MOBILE TELEPHONY: 1982 TO 2001

1982 – The Beginning

During the early 1980s, the analog cellular telephone system experienced rapid growth in Europe, particularly, Scandinavia and the United Kingdom, but also in France and Germany. Each country developed its own systems which were incompatible with those of others, in equipment and operation. This was an undesirable situation because not only was the mobile equipment limited to operation within national boundaries, but also limited market for each type of equipment. This scenario in a unified Europe was undesirable and the subsequent savings could not be realized.

The Europeans realized this early on, and in 1982 the conference of European posts and telegraphs (CPT) formed a study group called the Group special mobile (GSM) to study and develop a pan-European public mobile system. The proposed system had to meet certain criteria which included:

1. Good subjective speech quality,
2. Low terminal and service cost,
3. Support for international roaming.
4. Ability to support handheld terminals,
5. Support for a range of new services and facilities.
6. Spectral efficiency, and
7. ISDN compatibility.
1987

In September 13 operators and administrators from 12 areas in the CEPT GSM Advisory group signed the GSM (Group Special mobile) move "Club" agreement, with a launch date of July 1991. The original French name Group speciality mobile was changed to Global system for mobile communication but the original GSM acronym remains, GSM specifications were drafted.

1989 to 1998

In 1989 GSM responsibility was transferred to the European Telecommunication standards institute (ETSI) phase 1 of the GSM specifications which was published in 1990. Commercial services started in mid 1991 and by them there were 36 GSM networks in 22 countries, with 25 additional countries like South Africa, Australia, and 1 middle and far East countries selecting GSM by the beginning of 1994, there were 1.3 million subscribers worldwide. The acronym GSM (aptly) stands for Global system for mobile telecommunications. The European Telecommunications Standards Institute (ETSI) defined GSM as internationally a digital cellular telephony standard GSM became an ETST technical committee.

1990

The DCS adaptation started in the year 1990. The validation system was implemented that the year. The first GSM world congress, was conducted in Rome with 150 participants, in the year.
1991

The first GSM specifications were demonstrated in the year. The DCS specifications were frozen. The GSM world Congress, Nice had participants in the year.

1992

The first January on 1992, GSM network operator was on Radiolinja an in Finland. The December 1992-B networks were on air in 7 are as the GSM world congress, Bertin hand 630 participants.

1995

The GSM move was formally registered as an Association registered in Switzerland – 150 member from 86 area covers. The GSM world congress, Madrid attracted 1400 participant in the year. In December 1995-on 117 networks were on air in 6G areas cover. The fax, Data and SMS roaming started in the year. The GSM phase Z standardization was completed, including adaptation for PCS 1900 (PCS). The Namiba went on line in the year. The Ericsson 337 won GSM phone of the year. The US FCC auctioned of pcs licenses.

1997

The Zimbabwe went live in the year in 21/2/97 GSM world congress was held squares. The Mozambique went live in the year. Indium birds were launched. Bosch launched the first dual band GSM go to 1900 phones in the year.
1999

The WAP trials held in France in Jan 1999. The February GSM conference held in Cannes. In 165m GSM 1800/1900 users world wide. The GPRS trials began in USA and Scandinavia. In May-cell Expo in Africa in the year. There were eight bidders for Third SA cell license. The GSM moue joined 3 GPP. The first GPRS networks went live in the year. The Blue tooth specification version 1.0 was released.

2000

In March GSM conference in Cannes in the year. By in 12/2000 there were 480 m GSM 1900 users world wide. The first GPRS networks were rolled out of the year. The mosey forum was launched. Met forum was launched in the year. The location inter operatibility form was launched. The first GPRS terminals were seen. The Nokia released smart messaging specification. The sickly specifications were released in the year.

2001

In February GSM conferences were held in cannes. By May 2001 there were 500 m GSM 900/1800/1900 users world wide. In the 16 billion SMS message were sent in April 2001, by April there were 500 million people are GSM users in the year.

BEFORE 1992

Telecom in India was a monopoly with fixed line services being provided by the Government through the department of telecommunications and the public operator Mahanagar telephone limited, which operated in the metropolitan cities of Delhi and Mumbai. The Government recognized the importance of telecommunications in attracting FDT and stimulating domestic investment and gave high priority to the development of telecommunication in the country. It was in this scenario that the private sector participation in telecom was invited to bridge the huge resource gap in the funds required by the government to achieve the revised telecom targets laid down by the Government in 1992 DoT invited technical bids for cellular mobile telephone service in Delhi, Mumbai, Calcutta & Madras.

1994

In May 13, National telecom policy (NTP – 1994) was announced in the year.

1996

In May draft interconnect Agreement was released by DoT and discussions commenced with the cellular circle operators.

1999

In 1st May TRAI Telecommunication Tariff order [TTO] 1999 comes into effect. In May 2 DoT’s issues termination notices and
disconnects the interconnect facilities for Koshika Telecom and Aircel Digilini, who have not paid up their licenses fee outstanding. In May DoT allowed an – 8 month change of effective date for Srinivas cellcom for delays in SACFA clearances and FIFB approval for Tamil Nadu Telecom circle. In 28 May TRAI releases the Telecommunication Interconnection (Charges and Revenues sharing) Regulation 1999 (1 of 1999). The order is effective from May 1,1999.

In 31 May Do’T amends earlier order on SDCA and rules that PSTN to mobile calls in the adjacent SDCA will be equivalent to local calls if the POI [point of interconnect] is available in the adjacent SDCA

2000

TRAI issues consultation paper on accounting separation. In May 15, TRAI makes revised recommendations on the opening up of national long distance to private competition. As opposed to earlier recommendation of free competition, suggested that the number of players be restricted that the addition to the incumbents. Further, instead of a 5% revenue share percentage, recommends that the same be determined through a bidding process. Justice SC Seen was appointed as Chairman of the Telecom dispute settlement and Appellate Tribunal.

2001

I 8th may Do’T files affidavit with TDSAT in respect of the COAI petition on WLL (M) services by FSPS. Accepts Govt. IT Report on WLL (M) in full and states that this shall be implemented.

TRAI issues Telecommunication Traiff (Fourteenth Amendment order, 2004. (4 of 2001.). TTO 14 states WLL (M) operators can charge up
to Rs 10,000 as deposit for WLL (M) handset, which is refundable in full on cessation of service monthly rental for WLL (M) services – between Rs. 450 – 550 per month. In addition a maximum rental of Rs.80 per month can be charged for the hand set, if the WLL (M) operator provides the same. The lock call charges to be charged at Rs. 1.20 for a 3 minute call. There would be no free calls.

No alternative tariff packages allowed under these services. In the explanatory memorandum DoT the TTO, TRAI reiterated its earlier communication that the WLL system, which was a part of a PSTN, should not include a MSC as otherwise there would be no difference between a mobile and PSTM architecture of the WLL (m) service 23 May ?TRAI releases consultation paper No. 2001/1 on issues relating to the introduction of Calling Party Paya (CPP) for cellular mobile service.

2002

On 18 April, DoT issued notification for 8 spectrum usage charges for microwave access and Backbobe, COAI filed appeal in supreme court against TDSAT Judgement on WLL (m) on 1g April COAT submitted response to TRAI Reference Inter connect offer.

2003

BSNL announced new tariffs for its fixed services in the light of TRAI’S Telecom Tariff order (24th amendment) with seven alternate tariff packages. In all the alternate plans BSNL retains on 180 second pulse for fixed calls (as against 120 second pulse prescribed by TRAI) and uniformly reduced that pulse to go seconds for all fixed to WLL (m) calls and to 60 and 30 seconds for all fixed to cellular calls in metros circles respectively.
This means that a 3 minute local call will cost. Rs. 1.20 for fixed to fixed calls, Rs. 2.40 for fixed to WLL (m) calls, Rs. 3.60 for fixed to cellular in metros Rs. 7.20 for fixed to cellular in circlesless the new tariffs came to effect from May 1,2003 and all exiting customers will be automatically Migrated to the alternate plan tariff (and not the standard prescribed by TRAI).

Government appeased in supreme court against TDSAT order of April 8, 2003, which rejected the privilege plea of the Government relating to select documents to be disclosed by the Government for the proper adjudication of the dispute on WLL (m). In the matter of BSNL’s Appeal against clause 2.2 of the TRAI Tariff order (23rd Amendment), council of BSNL make commitment in TDSAT that the company will not indulge in cross subsidy. TRAI has now made it mandatory for all cellular operators to file their tariffs for the approval of TRAI at least 5 day’s before the introduction of these tariffs.

CONTRIBUTIONS OF THE CELLULAR PHONE INDUSTRY TO THE INDIAN ECONOMY

1. World Class Infrastructure

The Indian cellular industry has been instrumental in bringing to the Indian consumer, a world-class telecom infrastructure. The Indian cellular industry is the flag-bearer of the India & liberalisation process. The largest recipient of Foreign Direct investment (around Rs2200 Crores) A
responsible performing sector that has met all its obligations to the Government of India. The industry would have invested over Rs 24,000 crores to setup 6G Networks. To serve over one crore subscribers as on December 2002. They offer services in over 1575 cities & towns and cover over 14,000 villages.

2. **Reputed Indian Business Houses & International Telecom Majors**

   The privatization of India cellular brought into the arena some of the most repeated business houses of the country as also the biggest names in the international telecommunications Industry. These included; Reputed Indian business houses Birla, BPL, Excorts, Essar, Reliance. RPG, Tata and Thapar.


   International investor's AIG common wealth Development corporation [CDC], Emp, asian infrastructure fund and others.

3. **Increased Connectivity**

   There are presently 42 networks operating in the country covering over 1350 cities and towns and directly servicing over 6.7 million
subscribers nation-wide. Importantly, the connectivity benefits also extend to over 33.5 MN PSTN subscribers of BSNL & MTNL who can now reach the cellular subscribers any time and anywhere.

4. Employment Generation

As the 3rd and 4th cellular licenses would start their operations and with 77 networks (42 presently and 35 New networks) on air, the employment generated by the industry would be promising in addition to the direct employment generated by these networks.

There is also the multiplier effect of indirect employment generated down the supply chain comprising vendors, infrastructure suppliers, contractors, dealers, etc. IT is estimated that the total employment generated by the cellular industry would be in the tune of a few lakhs once the new networks are rolled in.

5. Increased FDI Flows

The telecom sector is the largest attractor of foreign Direct investment in the country. Accounting for almost a fifth of FDI approvals since 1991.

6. Heavy Investment In Infrastructure

The cellular industry is responsible for the single largest chunk of investment by any individual industry. The industry has already invested
over Rs. 20,000 crores and is expected to invest even more in the years to come.

7. **Revenue Generation for the Government of India.**

   The cumulative revenues that have flowed to the Government already about Rs. 10,000 crores form license fee and servicetax alone.

**THE NEW TELECOM POLICY – 1999 [NTP – 99]**

Given the central aim of NTP-99 to ensure rapid expansion of teledensity, given the unprecedented expansion on telecom services that competition has brought about given the steep reductions in tariffs that competition has ensured given the fact that advances in technologies erase distinctions imposed by earlier licensing systems, the fact that even more rapid advances in technologies are imminent, given the steep reduction in costs of providing telecom services, given the rapid convergence of tariffs for wireless services, given the fact that the provision of such services at the cheapest possible rates and by the most reliable mode is the sine qua non for India to consolidate its position as a leading hub of communications systems and information Technology.

   IT enabled services and of establishing itself as a leader in new disciplines such as bioinformatics and biotechnology. Given the recommendations of TRAI in this regard, Government, in the public interest in general and consumer interest in particular and for the proper
conduct of telegraphs and telecommunications services, has decided that
their share also be the following categories of license for
telecommunications service.

Unified license for Telecommunications services permitting licensee
to provide all telecommunication / Telegraph service covering various
degraphical areas using any technology. Licence for unified Access
[Basic and cellular] services permitting licensee to provide basic and / or
cellular services using any technology in a defined service area.

THE OBJECTIVES OF THE NTP 1999 AS UNDER

Access to telecommunications is of utmost importance for
achievement of the country's social and economic goals. Availability of
affordable, and effective communications for the citizens is at the core of
the vision and goal of the telecom policy. Strive to provide a balance
between the provision of universal service to all uncovered areas, including
the rural areas, and the provision of high level services capable of meeting
the needs of the country's economy. Encourage development of

Create a modern and efficient telecommunications infrastructure
taking into account the convergence of IT, media, telecom and consumer
electronics and thereby propel India into becoming an IT superpower

Convert PCOS, wherever justified, into public Teleinfo centres having
multimedia capability like ISDN services, remote database access, government and community information systems etc.,

Transform in a time bound manner, the telecommunications sector to a greater competitive environment in both urban and rural areas providing equal opportunities and level playing field for all players. Strengthen research and development efforts in the country and provide an impetus to build world class manufacturing capabilities. Achieve efficiency and transparency in spectrum management. Project the defence and security interests of the country. Enable Indian Telecom companies to become truly global players. In line with the above objectives, the specific targets that the NTP 1999 seeks to achieve would be

Make available telephone on demand by the year 2002 and sustain it there after so as to achieve a teledensity of 7 by year 2005 and 15 by the year 2010. Encourage development of telecom in rural areas making it more affordable by suitable tariff structure and making rural communications mandatory for all fixed service providers.

Increase rural teledensity from the current level of 0.4 to 4 by the year 2010 and provide reliable transmission media in all rural areas. Achieve telecom coverage of all villages in the country and provide reliable media to all exchanges by the year 2002. Provide internet access to all district head quarters by the year 2000. Provide high speed data and
multimedia capability using technologies including ISDN to all towns with a population greater than block by the year 2002.

**NEW POLICY FRAMEWORK**

The new policy framework must focus on creating an environment, which enables continued attraction of investment in the sector and allows creation of communications infrastructure by leveraging on technological development. Towards this end, the new policy framework took at the telecom service sector as follows

**I ACCESS PROVIDERS**

1. **Cellular Mobile Service Providers**

   The cellular mobile service providers [cmsp] shall be permitted to provide mobile telephony services including permission to carry its own long distance traffic within their service area without seeking any additional license. Direct Interconnectivity between licensed [CMSP’s] and any other type of service provider [including another cmsp] in their area of operation including sharing of infrastructure with any other type of service provider shall be permitted. Interconnectivity between service providers in different service areas shall be reviewed in consultation with TRAI and the same was announced by August 15, 1999 as a part of the structure for opening up national long distance. The CMSP was allowed to directly inter connect with the VSNL after opening of national long distance from January 1
2000. The CMSP shall be free to provide, in its service area of operational all types of mobile service including voice and non-voice messages, data services and PCOS utilizing any type of network equipment including circuit and/or packet switches, that meet the relevant international Telecommunication union (ITU) / Telecommunication Engineering center (TEC) standards.

CMSP operators would be required to pay a one time entry fee. The basis for determining the entry fee and the basis for selection of additional operators would be recommended by the TRAI. Apart from the one time entry fee, CMSP operators would also be required to pay licence fee based on revenue share.

2. Fixed Service Providers

The fixed service providers (FSP) shall be freely permitted to establish last mile linkages to provide fixed services and carry long distance traffic within their service area without seeking an additional license. Direct interconnectivity between FSP’s and any other type of service provider [including another FSP] in their area of operation and sharing of infrastructure with any other type of service provider shall be permitted.

Interconnectivity between service providers in different service areas shall be reviewed in consultation with TRAI and the same would be announced by August 15, 1999 as a part of the structure for opening up of
national long distance. The FSP shall be allowed to directly interconnect with the VSNL after the opening up of national long distance from January 1, 2000.

The WLL frequency shall be awarded to the FSOPS requiring the same, based on the payment of an additional one time fee over and above the FSP entry fee. The basis for determining the entry fee and the basis for assigning WLL frequency shall be recommended by the TRAI. All FSP operators utilizing WLL shall pay a license fee in the form of a revenue share for spectrum utilization.

3. Cable Service Providers

Under the provisions of the Cable Regulation Act 1995, Cable Service Providers (CSP) shall continue to be freely permitted to provide “Last Mile” linkages and switched services within their service areas of operation and operate media services, which are essentially one-way, entertainment related services. Direct interconnectivity between CSPs and only other type of service provider in their area of operating and sharing of infrastructure with any other type of service provider shall be permitted.

II INTERNET TELEPHONY

Internet telephony shall not be permitted at this stage. However Government will continue to monitor the technological innovations and
their impact on national development and review this issue at an appropriate time.

The Radio Paging Service Providers (RPSP) shall be permitted to provide paging services within their service area of operation. Direct interconnectivity between licensed RPSPs and any other type of service provider in their area of operation including sharing of infrastructure shall be permitted. Interconnectivity between service providers in different service areas shall be reviewed in consultation with TRAI and the same would be announced by August 15, 1999 as a part of the structure for opening up of national long distance. Further, TRAI may also examine and recommend the revenue sharing arrangement between RPSP and other access providers, subject to technical feasibility.

III PUBLIC MOBILE RADIO TRUNKING SERVICE PROVIDERS:- (PMRTSP)

PMRTSP shall be permitted to provide mobile area of operation. Direct interconnectivity between licensed PMRTPs and any other type of service provider in their area of operation shall be permitted after examining the legal implications in view of the CMSP licenses.

The PMRTSP shall be granted separate license, on a non-exclusive basis, for each service area of operation. Licenses would be awarded for an initial period of twenty years and will be extended by additional periods of
ten year as thereafter for this purposes, the service areas would be
categorized as per the existing structure. The PMRTSP shall be eligible to
obtain licenses for any number of service areas.

IV NATIONAL LONG DISTANCE OPERATOR

National long distance service beyond service area to the private
operators will be opened for competition with effect from January 1, 2000.
To promote setting up long distance bandwidth capacity in the country,
provide a choice to consumers and promote competition, all NLDOS
should be able to access subscribers.

Resale would be permitted for domestic telephony, announcement
for the modalities thereof to be announced along with the opening up of
national long distance by August 15, 1999. Resale on international long
distance will not be permitted till the year 2004.

V INTERNATIONAL LONG DISTANCE SERVICES

The subject of opening up of international telephony service to
competition will be reviewed by the year 2004.

VI OTHER SERVICE PROVIDERS

For applications like tele-banking, tele-medicine, tele-education,
tele-trading, etc., commerce, other services providers will be allowed to
operate by using infrastructure provided by various access providers, no
license fee will be charged but registration for specific services being
offered will be required. These service providers will not infringe on the jurisdiction of other access providers and they will not provide switched telephony.

VII GLOBAL MOBILE PERSONAL COMMUNICATION SERVICES

The Government has opened up the GMPCS market in India and has issued a provision license. The terms of the final license would need to be finalized in consultation with TRAI by June 30, 1999. All the calls originating or terminating India shall pass through VSNL gateways or in case of bypass. It should be possible to monitor these calls in the India gateways. VSNL is also to be compensated in case gateway is bypassed.

The GMPCS operator shall be free to provide voice and non-voice messages, data service and information services utilizing any type of network equipment, including circuit and/or packet switches that meet the relevant International Telecommunication Union (ITU)/Telecommunication Engineering Centre (TEC) standards.

VIII SATCOM POLICY

The Satcom Policy shall provide for users to avail of transponder capacity from both domestic\ foreign satellites. However, the same has to be in consultation with the Department of space.
Under the existing ISP Policy, international long distance communication for data has been opened up. The gateways for this purpose shall be allowed to use SATCOM. It has also been decided that frequency band shall be allowed to be used for communication purpose.

i) VSAT Service Providers

The VSAT service providers shall be granted separate license, on a non-exclusive basis for an initial period of twenty years and will be extended by additional periods of ten year thereafter interconnectivity between service providers in different service areas shall be reviewed in consultation with TRAI and the same would be announced as a part of the structure for opening up national long distance by August 15, 1999.

It is proposed that the appropriate level of entry fee and percentage of revenue share arrangement would be recommended by TRAI in a time-bound manner, keeping in view the objectives of the new telecom.

IX ELECTRONIC COMMERCE

On line electronic commerce will be encouraged so that information can be passed seamlessly. The requirement to develop adequate bandwidth of the order of 10 Gb on national routes and even terabits on certain congested important national routes will be immediately addressed to so that growth of IT as well as electronic commerce will not be hampered.
X RESOLUTION OF PROBLEMS OF EXISTING OPERATORS

The new policy framework which seeks to significantly redefine the competitive nature of industry, would be applicable to new licensees. There are, however, multiple licenses that have been issued by the Government for cellular mobile phone service, basis services, radio paging services, intention to satisfactorily resolve the problems being faced by existing operating operators in a manner which consistent with their contractual obligations and is legally tenable.

CELLULAR MOBILE SERVICE PROVIDERS

Denominations and validity

Replacement of SIM

Carry over of balance any grace period

Facility to know rupee balance

Cost of the card/Recharge coupon

Airtime/ call charges

Procedure to connect

Procedure for accessing customer care center

Availability of toll free-numbers

Supplement/value added services