



The Mobile Wireless Data of Nepal Telecom



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The wireless internet technology is expected to leapfrog other data access technologies in terms of speed of deployment, cost of service and mobility. Specifically, NT is deploying a wireless internet network all over the country utilizing *cdma2000 1x PDSN* Technology, a leading wireless internet technology that offers a unique combination of high speed, mobility, wide area coverage and high base station capacity.

NT's vision is to unshackle the internet and to deliver the promise of wireless data communications. There is an increasing demand from users across the whole country that require high speed internet access from multiple locations which are dictated by their business and personal needs and not dictated by a fixed location. In doing so NT hopes to put Nepal in the map of Information Communication and Technology (ICT) as leaders of future technology.

The benefit from the *cdma* wireless internet services would accrue to all sectors of the economy through improved access to communication facilities as well as improved service quality. Rural focus and use of ICT in poverty alleviation program is considered as an important part of the overall ICT development in the country. It is believed that use of Internet and email will not only empower the rural population to enlarge their choices and opportunities, but also help in the overall information delivery, distant education and other administrative and business activities.

Cdma2000 1x PDSN Technology

PDSN (Packet Data Service Node) service provides high speed internet connection (up to 153.6 Kbits/sec and average of 38.4 Kbits/sec) to fixed and mobile users. However this rate is dynamic and can be variable depending on the traffic volume and signal strength. The

PDSN system is a complete end to end wireless internet protocol system incorporating the *cdma* technology, connecting end users and their devices to internet services with ubiquitous coverage; wherever and whenever the customer needs, at affordable prices.

From a technical perspective, the unique features of the *cdma2000 1x PDSN* technology include:

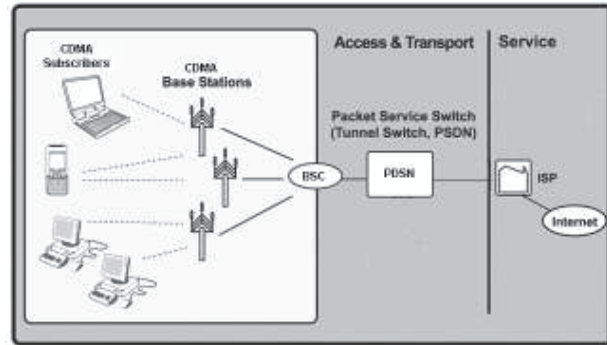
- **Data Rate:** Up to 153.6 Kbps data connectivity provides a fast internet experience even when on the move.
- **Access:** Wide area wireless access (presently covers 70 districts of a country) means that the service is available within a network wherever the user requires it.
- **Capacity:** Supports voice and data on the same 1.25MHz carrier, or radio frequency channel with multiple reuse of the same spectrum.
- **Ease of use:** Always on connectivity provides secure and immediate access to the internet.
- **Trouble-free:** The service is fully compatible with existing laptops and desktop computers- no upgrades or new computing devices required
- **Security:** Supports sophisticated encryption and authentication.
- **Affordable:** Just NRs. 200 to activate the internet service in any types of *cdma* phone services (C-Phone, Skyphone) and usage cost is NRs. 0.25 per 100 Kbytes of data transfer. This price is excluding TSC and VAT charges.
- **Portable:** This feature offers the ability to retain customer relationships even when they move locations.



Products and Services

There are two general product and service offerings:

- **Mobility Offering:** The “Mobility” product i.e. RUIIM or Sky phone/data provides users with internet services at the same price within a *cdma* network in a country.
- **Fixed Offering:** The “Fixed” product i.e. C-Phone provides users with internet services and can only be accessed from a fixed location although it still gives the freedom to move within a zone/anchal of a country.



Product Features

Feature	Mobile		Portable	Fixed
User Terminal	Cdma mobile phones	Cdma PC-card modem (PCMCIA)	Portable cdma modem with USB	Fixed wireless Phone (C-Phone)
Specification	Cdma 2000 1x, 800 MHz, RUIIM- mobile phone with data connectivity cable/Bluetooth Port	Cdma2000 1x, 800 MHz PCMCIA-II with RUIIM compatibility	Cdma2000 1x, 800 MHz USB modem with RUIIM compatibility	Fixed wireless phone with serial data cable subscribed by NT
Compatibility	Desktop and laptop (also MAC PC)	Only laptop with PCMCIA-II slot	Desktop and laptop with USB port	Desktop/laptop with serial port
Pricing	To activate internet is NRs 200 and usage charge is NRs 0.25 per 100 K bytes of data transfer	To activate internet is NRs 200 and usage charge is NRs 0.25 per 100 Kbytes of data transfer	To activate internet is NRs 200 and usage charge is NRs 0.25 per 100 Kbytes of data transfer	To activate internet is NRs 200 and usage charge is NRs 0.25 per 100 Kbytes of data transfer
Roaming Charge	Not for data	Not for data	Not for data	Not for data
Install	Install driver software for USB connectivity port in computer	Install driver software for PCMCIA connectivity port in computer	Install driver software for USB connectivity port in computer	Install Standard 33600 bps modem of windows OS in computer
Billing Mode	Prepaid	Prepaid	Prepaid	Postpaid and Prepaid
OS Mode	Windows 98, 2000, XP, Vista	Windows 98, 2000, XP, Vista	Windows 98, 2000, XP, Vista	Windows 98, 2000, XP, Vista
Appearance				

Speed to Market

The **One million** subscriber lines *cdma2000 1x* Project being implemented by Directorate of Wireless Telephone (DWT), Chhauni is underway at its final phase and after successful completion of the project, the **PDSN** data line capacity will be of **One lakh** which can be distributed all over the country. To cater the growing Bandwidth Demand of **PDSN** subscribers, NT’s Computer Department is already in a process to expand the Optical fiber connectivity network with Indian Telecom Service Providers like BSNL, Bharati AIRTEL.

Presently, **PDSN** service is being benefited by around 16,000 *cdma* subscribers which includes Government Bodies, Business Markets, Hospitals, Schools, NGO’s, INGO’s, Foreign Missions, Individuals etc.

NT represents an opportunity to bring wireless internet service to the masses and believe that **PDSN** service will act as a catalyst that will drive the ICT industry to new horizons and the Nepalese ICT industry will overcome its current limitation: the high cost of internet access in the limited areas where it is available and the complete lack of internet access for most of the population.