



New Goals

In spite of an impressive performance and ambitious dreams to hop to higher technologies, Nepal has to first improve its mobile and broadband penetration

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The Nepalese telecom industry is going through a phase of transition, with telcos selling around 5,000 new phone lines every day throughout the country. Four telecom companies in Nepal issued a total of 1.82 mn telephone lines in the Nepali calendar from mid April 2008 to mid April 2009. This translates to a distribution of an average of 4,994 lines per day.

The impact of the global financial slowdown has not been seen in the telecom market in Nepal. The industry saw an increase in FDI in the last one year than before.

The financial year of Nepal starts from July 16. Considering the months starting from mid March to mid August, a steady growth of telecom services both in terms of subscriber base and in terms of geographic coverage can be observed. By mid April the tele-density was 20.83 where as this figure grew to 23.62 in August. The to-



tal number of voice telephony subscribers including fixed and mobile has increased from 5,676,554 to 6,498,272.

In the mobile segment, state-run Nepal Telecom again led the way with more than 3.17 mn GSM users, ahead of Spice Nepal's base of 1.87 mn, while CDMA (Sky Phone) services rendered Nepal Telecom a further 5,55,338 connections, and helped push cellular penetration to 20.35% by August 14.

According to the Nepal Telecommunication Authority, the data subscribers have risen from 1,48,833 to 5,41,327.

The geographic coverage has been expanded and the wireless data subscribers have dramatically increased. With a new interconnection regime becoming effective, the tariff of both NLD and ILD has reduced.

According to Nepal Telecom (NT) spokesperson, Surendra P Thike, the operator now boasts of about 66% of the market share and it is now working on to bring CDMA technology based on IP platform. At present the technical details are being worked out.

In a move, that will make calling up from the top of the most formidable mountain in the world a reality, NT is working on setting up a permanent cell-tower near Mount Everest.

Anoop Ranjan Bhattarai, chief of NT's satellite division said that the service provider will make use of a satellite antenna installed in Gorak Shep, located at an altitude of 5,160 meters. The cell-site will be able to handle about 3,000 phone calls simultaneously.

The NTA chairman Bhesh Raj Kanel feels maintaining a reasonable QoS particularly in the mobile service has been a challenge, and this has been compounded by the problem of load shedding. Alternative power backup mechanisms are being adopted by the operators and radio optimization is being regularly carried out. Addition of new micro BTSs are being done to improve coverage. The monitoring mechanism is being developed. But it seems that it will take a while to realize a stable good quality of service as expansion is going parallel with the optimization.

Nepal Telecommunications Authority (NTA), the telecom regulatory body, is outsourcing the job of con-



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UTL Nepal**

ducting surveys on quality of cell phone service provided by various telecom companies in Nepal.

Nepal's new Minister for Information and Communications, Shankar Pokharel stresses on the need for operators to improve quality of service. He says, "If they (operators) fail to come up with a solution, the government will have to resort to the option of bringing in another telecom company to enhance competition and give quality of service that people desire."

To provide high-quality converged billing and customer care services, the private operator Smart Telecom has chosen Redknee, a provider of business-critical software and solutions. Billy Liew, Redknee's VP APAC region calls this contract as another strategic customer win for the company.

Indian joint venture, United Telecom, remained plagued with labor problems for most part of the year gone by, is in the process of expanding of its network. Also UTL has announced free domestic roaming facility within its network. It recently introduced new slashed tariff to India at Rs 3 per minute. "We would like to leverage our existing new products by expanding our services across Nepal. In addition to this, we also intend to provide the EVDO services, which offers high-speed Internet to customers, shortly. We are making our sincere efforts, to cover-up the lost time and overcome all the man-made troubles. We have added new NGN switches first in Nepal for the benefit of the customers," says S Kannan, CEO, UTL Nepal.

SNPL plans to invest money in introducing new value added services like mobile banking and improving the service quality. It plans to add 1.2 mn more subscribers this year.

It has announced that it will invest \$120 mn in 2009 and \$130 mn in 2010, on boosting its network coverage. Some of the investment is to go on increasing back-up power supplies to cope with the unreliable national power grid. Rival operator, Nepal Telecom has also recently announced plans to boost its own back-up generators and switch to renewable power supplies where possible due to the same reliability issues.



Status of Voice Telephony Services: August 2009						
Services	Nepal Doorsanchar Company(NDCL)	United Telecom (UTL)	Spice Nepal (SNPL)	STM Telecom Sanchar (STM)	Others	Total
Fixed						8,12,615
Wireline (PSTN)	5,63,127	-	-	-	-	5,63,127
Wireless(WLL)	1,77,265	68,163	-	4,060	-	2,49,488
Mobile						5,597,880
GSM	3,169,376	-	1,873,166	-	-	5,042,542
CDMA(Sky Phone)	5,55,338	-	-	-	-	5,55,338
Others						87,777
Limited Mobility	-	85,577	-	-	-	85,577
GMPCS	-	-	-	-	1,517	1,517
WCDMA (3G)	683	-	-	-	-	683
Total	4,465,789	1,53,740	1,873,166	4,060	1,517	6,498,272

Source: Nepal Telecommunications Authority

Rivals on the Horizon

More than 80% of the population lives in rural and difficult geographic terrain, with no or limited access to telecommunications services. Thus, there is ample room for newer operators to pitch in for their share in the large telecom pie.

Nepal Satellite Telecom (NST), a new entrant is set to become the third GSM operator in the country. Ajeya Raj Sumargi, executive director at NST says, "The service provider will start its operation from the rural areas and will launch its GSM service within a year at Kathmandu. The company will offer services under the brand name Hello Nepal, and has announced that it will be investing \$25 mn for the expansion of its services in the first phase."

It has joint investments from Nepal, Pakistan, Bangladesh, and Cyprus. Nepal's Muktishree Telecom has 95% stake in the company, while Pakistan Mobile Communication and Bangladesh's Sewa Telecom enjoy 3% and 2% stake respectively.

Another player pulling up its socks to join the telecom race in the country is Smart Telecom. The operator will roll out both wireless and satellite services. To begin with VSAT services will be rolled out by October 2009, and the GSM services will be rolled out by the first quarter of 2010.

The telecom vendors finalized so far are Gilat for satellite hub equipment, and China DB Sat for satellite bandwidth, while the service provider will soon announce its GSM vendor.

Fall of ARPU

Because of competition, increasing subscriber base, reduced tariff and good validity period for the prepaid subscribers which dominate the overall mobile subscribers, the mobile ARPUs are declining at a slow rate.

Director NTA Ananda Raj Khanal says, "The VAS market is not booming in Nepal compared to India and other member states in the SAARC. Due to limited scope of this market, the VAS service providers are very few in numbers."

"So far the most popular VAS services are SMS, GPRS, and CRBT. Likewise there are web based SMS, downloading music, ring tones, etc. About 3-5% is projected as the contribution from VAS services," says Thike.

However, efforts are to expand the extent of mobile utility in the country. Like the other emerging countries, Nepal is waking up to a trend of mobile payments. Laxmi Bank, one of the leading commercial banks of the country, has launched m-payments in Nepal under the brand Mobile Money, which according to the bank, is a complete mobile banking service.



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Public Call Centers (PCO)	
Services	Subscribers
Rural PCO	1,886
Number of Unserved Village Development Committee (VDC) Telephone Service (Details in annex-1)	380
Number of Served Village Development Committee (VDC)	3,535

Source: Nepal Telecommunications Authority

VSAT Users: 118

Several mobile commerce companies are entering contracts with service providers to offer services.

3G Status

Even though Nepal Telecom was authorized to provide 3G service without additional spectrum fees for more than two years, the 3G network is confined to a very limited area in Kathmandu valley and the subscriber base has crossed just over 600.

Spice Nepal, another GSM operator in Nepal, has also been authorized to provide 3G service. It has not yet started the service. The two CDMA operators viz a viz Nepal Telecom and United Telecom are also set to start EVDO services. The key services that are being used in 3G platform are Internet, TV, and MMS.

Post 3G: 4G?

Two years down the line, 3G has not picked up any great pace in Nepal. "We are looking at the implementation of new technologies such as NGN, proliferation of rural wireless broadband such as WiMax. We believe that EVDO will prove to be a great success as a 3G technology," says Khanal. But the operators are thinking futur-

For a Better Tomorrow

- Adoption of the open licensing/unified licensing regime is believed to create a level playing field and certainty in the telecom market in Nepal. The existing voice operators are entitled to hold a unified license and provide all types of telecommunication services if the amendment is enacted
- Nepal is working on a complete liberalization of IP telephony including termination into or origination from PSTN/PLMN networks. It will help promote the Internet penetration in Nepal. It will also make ILD termination cheaper
- NTA has submitted its recommendation to the Radio Frequency Policy Determination Committee regarding the new spectrum pricing policy. The spectrum for WLL and cellular band of frequencies will be charged on the basis of absolute bandwidth, subscriber base, and/or revenue generated
- A group of experts is working on the national numbering plan and is expected to submit its report shortly. NTA will then review the recommendation of the report and take specific decisions

istic. Nepal Telecom is mulling over rolling out the 4G network, which provides a much faster, ubiquitous, and seamless access to Internet services.

A team is currently conducting a feasibility study on the possibility of launching this service in Nepal. Lok Raj Sharma, head of NT's IT department says that the company will get a comprehensive report within two months and decide on whether to float a public tender notice and invite interested parties to submit bid documents, or to roll out the next generation network by themselves.

The 4G wireless technology which provides peak Internet speed of 160 Mbps, was recently unveiled for the first time, in Sweden, by Ericsson and TeliaSonera.

Although TeliaSonera has an 80% stake in Spice Nepal (SNPL), Chandi Shrestha, director of SNPL, has cleared that the company does not have any plans of launching this service in Nepal now. "Our only focus at this moment is on expansion and increasing the country's tele-density, not on introducing new services," he says.

If NT succeeds in launching the next generation technology, the company is the first to introduce 4G services in South Asia. It will further strengthen its position as the frontrunner in introducing the latest wireless Internet technologies.

The telecommunications industry in Nepal is on an expansion spree, with two new operators coming in, the country is set to see huge investments on telecom infrastructure. Recently, ZTE inked a contract with Spice Nepal, to assist in constructing its GSM/UMTS network with its SDR solutions. Based on the contract terms, the Spice Nepal's GSM/UMTS network will cover six main zones of Nepal, with the phase I network deployment due to be completed by the end of October, 2009.

Broadcast and Broadband

NTA regulates only the Telecommunications sector in Nepal; the broadcasting sector is being regulated by the Ministry of Information and Communications, Government of Nepal. Recently, a committee is working on the feasibility of digital TV broadcasting in Nepal.

NTA is working on a comprehensive broadband policy in Nepal. The consultation process has already been completed. To promote broadband, particularly in rural areas, NTA has designed a project to connect all the district headquarters with the optical fiber. A specific Rural Wireless Broadband Access Project has already been approved to provide wireless broadband access in the designated thirty-eight districts of western Nepal. This project is being funded by the Asian Development Bank. Sporadic efforts are being made by all the operators including ISPs to bring broadband in the villages.