

INDIA

Is government giving state-owned operators MTNL, BSNL an unfair head start?

TEMASEK

Singapore fund to make a new attempt on PCCW?

TRUE

Thai operator sees a future in dialup for students

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Reliance plans \$500m 3G tender, abandons CDMA for 3G?

India's largest CDMA operator Reliance Communications is reportedly planning to issue a tender worth US\$500 million for the supply of 3G infrastructure in anticipation of the government's upcoming 3G licence auction. According to a report in the Economic Times of India, a decision to issue the tender was made over the weekend in RCOM following the government's unveiling of its 3G licensing guidelines.

The government announced last Friday that it will auction 3G licences, which include spectrum in the 2.1 GHz band, in the coming months.

"The tender covers equipment supply and servicing for commissioning of the 3G network," an unnamed source told the paper. "The leading global vendors who are in preliminary talks with RCOM for the 3G deal include Huawei, Alcatel Lucent, Nokia Siemens Networks, ZTE and Ericsson." The tender document is expected to be sent to the vendors in the next three or four days. Despite RCOM's success with its CDMA offering, the new 3G infrastructure is expected to be rolled out over RCOM's GSM infrastructure. RCOM currently offers GSM services in eight circles but is rolling out a nationwide GSM network after it won the rights to offer pan-India GSM services in December.

The company has said it plans to spend some \$6 billion in rolling out its pan-India GSM network for its fiscal year ending March 2009. In January, it awarded a US\$600 million contract to Huawei to roll out a nationwide GSM network.

RCOM currently has 43 million CDMA subscribers and 8 million GSM subscribers.

DELHI GSM LAUNCH: At the same time, Reliance announced that it will expand its GSM service to the city of Delhi, which is the first circle beyond the operator's original eight circles. The operator said it is testing the network out with 1,000 employees and plans to launch commercial services when the trial run is completed.

Similarly, company sources told the Economic Times that the operator is readying commercial GSM launches across the country as soon as the network is ready.

CDMA FUTURE: The reports did not say what RCOM would do with its CDMA business. According to the government's 3G licensing structure, CDMA operators will be awarded separate spectrum for 3G services in the 450MHz, 800MHz and 1900MHz bands. However, there's no definition of what 3G CDMA services. India's CDMA networks already offer cdma2000 1x services. Under the government's criteria for 3G CDMA spectrum allocation, which stipulates that spectrum will be allocated to the operator with the most subscribers in any given circle, RCOM is almost assured 3G CDMA spectrum in all but two circles in the country. Tata Teleservices has more CDMA subscribers than RCOM in Delhi and Maharashtra.

... while India govt gives state operators 3G headstart

The India government will give its two state-owned operators, Mahanagar Telephone Nigam Ltd

(MTNL) and Bharat Sanchar Nigam Ltd (BSNL), a head start in the 3G market.

As part of its licensing structure for 3G, the Department of Telecommunications confirmed that it will reserved a block of 3G spectrum for the two operators, who are now assured the right to roll out services and hence can start planning and deployment. Under the plan, MTNL will get spectrum for Delhi and Mumbai while BSNL will get spectrum for the rest of the country. The operators are expected to be awarded the spectrum months in advance of the public 3G licence auction.

According to the India media reports, both MTNL and BSNL plan to roll out their network as soon as they receive their spectrum and launch commercial 3G services in as little as three to six months.

For their spectrum, MTNL and BSNL will have to pay the equivalent of the highest bid in their operating circles in the upcoming 3G licence auction, expected in the next three to four months.

Tony Chan

Singapore has a second go at PCCW?

Singapore investment firm Temasek Holdings has its eye on a 45% stake in PCCW's media and telecoms unit HKT Group Holdings, said The South China Morning Post. Temasek is said to be planning a partnership with South Korean private equity fund MBK Partners for the deal estimated to be worth as much as US\$2.5 billion.

Such a bid would be the second time around for Singapore. Singapore Telecommunications, in which Temasek holds 56% ownership, had bid for a controlling stake in what became HKT's parent PCCW in 2000, which caused alarm in Hong Kong and Beijing as concerns were raised by some Hong Kong legislators over foreign ownership. Richard Li Tzar-kai stepped in soon afterwards with a rival bid that won out.

However, some analysts does not see this as an issue this time around. Nomura Securities telecommunications analyst Kelvin Ho said, "I don't see a big problem because we're not talking about a majority stake; it's 45% and if they are partnering up the effective interest of Temasek will be even smaller."

PCCW, who very much intends to keep the remaining 55% stake in HKT Group, said that the company expected to choose a shortlist of preferred bidders for the stake within a month and complete the sale by the end of the year.

PCCW had indicated that it wanted sole expressions of interest in the first round of the transaction last month, but it is widely expected that funds will form pairs or larger consortiums once notified by the company that they have made it on to the shortlist for the second round, said SCMP.

Furthermore, Macquarie, Providence Equity Partners and TPG, considered the favoured bidders, have been particularly sought out by other bidders such as Blackstone Group, Kohlberg Kravis Roberts and Apax Partners.

Reports had also revealed that PCCW plans to use part of the proceeds to pay off its debt.

Pamela Perez

True Corp revives dial-up biz

Thailand's True Internet is striving to breath life into the dying dial-up internet market as it seeks parallel growth with its broadband flagship business, said the Bangkok Post.

According to general manager Vasu Khunvasee, the company's campaign for secondary and university students to use more dial-up internet services will enlarge the overall internet subscription base.

The number of dial-up internet users in Thailand had been on a steady downward spiral as broadband became cheaper and more widely available, and now totalled about 800,000, down 20% from last year. Broadband users have surpassed one million, up 30% year-on-year, said Vasu.

With the promotion, the number of True narrowband customers is expected to reach 600,000 by the end of this year, from the present 560,000.

True now has 600,000 broadband subscribers, up from 500,000 last year and is expected to reach 750,000 by the end of this year out of an expected total 1.3 million users.

"Even though the narrowband user penetration will gradually decline, the market will still exist over the next several years," Vasu said. "It is unlikely that broadband will completely displace nar-

rowband in the marketplace.”

Vasu believes that despite speed disadvantages the older technology still has potential thanks to its inexpensive access costs and wide availability of telephone lines in households. He also said that given constraints on service areas and high access costs, the growth of broadband access network development was limited.

True Internet projects total revenue of US\$149 million this year, US\$6 million of which would come from narrowband services. The company earned US\$6.6 million from its dial-up business last year.

Pamela Perez

Qualcomm exec joins Motorola as handset head

Motorola has named former Qualcomm COO Sanjay Jha to head up its bleeding handset business in anticipation of a spinoff. He will also split duties with CEO Greg Brown as co-chief executive, enabling Brown to focus his energies on Motorola's other operations and creating an obvious pathway toward separation.

Jha spent 14 years at Qualcomm, most recently leading its CDMA technologies business and overseeing chip operations. He takes control of a foundering mobile phone unit that hasn't had a hit handset in since RAZR mania petered out three years ago and which faces considerable pressure on the international stage. Motorola narrowly clung to its third place in the global rankings last week after previously tumbling from the number two spot. But it surprised analysts by showing sequential growth for the first time in several quarters, shipping 28.1 million phones in the three months through June after reaching 27 million phones in the first quarter.

Brown said he was “confident Sanjay will continue the important progress we have made and strengthen our ability to deliver innovative products and experiences to market for the long-term future of this business.” Qualcomm CEO Paul Jacobs credited Jha with being ‘instrumental’ in growing the company into a top mobile chipset provider.

Patrick Neighly

LiMo on the ascent

LiMo and other Linux platforms will dominate the mobile Internet device market in the near term, according to ABI Research. The firm expects to see 50 million units shifted annually by 2013 thanks in part to the unique ability to support a single converged platform on multiple device types.

“Maemo is already in this space thanks to the patronage of Nokia. Moblin will benefit from tight integration with Atom and Intel’s drive, and LiMo is actively being positioned for this market. The flexibility, customization and very positive cost comparison to Windows Mobile looks set to ensure that Linux takes the leading role in this market,” predicted analyst Stuart Carlaw.

LiMo this week unveiled another seven handsets from Motorola, NEC and Panasonic - six of which are aimed at the Japanese market. The new models push to 21 the number of LiMo phones on the market, giving the LiMo Foundation a leg up against erstwhile rivals Android and Symbian. The alliance said another 11 members joined the foundation over the weekend, pushing its tally to 52 partners compared to 34 Android backers and 31 Symbian allies.

“LiMo was founded on the notion that fragmentation of the mobile industry among dozens of proprietary, closed operating systems was inhibiting innovation,” said foundation chair and NTT DoCoMo executive Kiyohito Nagata. “With such a variety of industry players cost-effectively adopting the LiMo Platform for non-differentiating handset middleware, more development resources are being devoted to enhancing the consumer experience. This new wave of LiMo handsets serves as proof.”

Patrick Neighly

Microsoft confirms 6 degrees of separation?

Microsoft has apparently confirmed the "six degrees of separation" theory. A study of the 30 billion conversations carried out on its Messenger IM client in June reveals any two users are an average of 6.6 contacts apart. The survey covered 180 million users around the world - with personally

identifying information stripped out - and shocked researchers by confirming an old wives' tale now best known for infinite Kevin Bacon jokes.

“What we’re seeing suggests there may be a social connectivity constant for humanity,” Microsoft researcher Eric Horvitz told the Washington Post. “People have had this suspicion that we are really close. But we are showing on a very large scale that this idea goes beyond folklore.”

Horvitz and peer Jure Leskovec examined the full Messenger database for June and attempted to determine the average number of hops required to connect 180 million random pairs of users. An estimated 78% were linked by seven degrees or less, while others required up to 29 middlemen.

LG NORTEL BUYS NOVERA

LG-Nortel has completed its \$16 million acquisition of Ethernet solutions developer Novera Optics. The cash deal potentially includes another \$10 million payout for achieving certain milestones over the next 18 months. The purchase gives the joint venture access to WDM-PON technology delivering broadband carrier Ethernet services from core networks to customer premises.

NSN INDOSAT WIN

Indonesian operator Indosat has tapped Nokia Siemens Networks to expand its wireless reach and begin the migration to an all-IP platform courtesy of a mobile softswitching platform. The vendor will also provide network design services and replace legacy equipment alongside new gear delivery. The upgrade enables Indosat to boost capacity as well as its operating footprint, including the ability to offer prioritized services for high value customers. Financial terms were not disclosed.

SRI LANKA PORN TAX?

Sri Lanka has told ISPs to block all pornographic Internet content and allow access only to those subscribers paying an additional fee for special access. The Telecommunications Regulatory Commission said the move came at the behest of President Mahinda Rajapaksa and was intended to protect children. Officials did not say whether the new access fee - which purchases a password providing unfettered Internet access - was destined for government coffers or a benefit for service providers.

MICROSOFT SIGNS FOR DEVICEATLAS

dotMobi announced that Microsoft’s MSN Mobile group will use dotMobi’s DeviceAtlas mobile device database to help develop and deliver mobile-aware content to its customers. DeviceAtlas is a superset of existing mobile device databases, containing attribute information for more than 5,500 devices around the world, including leading-edge mobile devices like the Apple iPhone, RIM Blackberry, Nintendo DS Lite and Amazon Kindle.

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How Intel measures its environmental performance

Measuring environmental impact of any company is a complex undertaking, more so when you happen to be the world's biggest semiconductor manufacturer. For Intel, the process not only includes a sum of carbon emissions of its operations, but quantifying that against production, employees and revenue is paramount for establishing a transparent view of its environment impact.

As part of its environmental reporting initiatives, the company has settled on an energy-per-unit-of-production as the primary performance metric. According to the company's 2007 environmental report, the company has reduced its energy use per chip produced by 17% from a 2002 baseline and is on target to meet a goal to reduce energy consumed per chip produced by an average of 4% per year from 2002 through 2010.

"This normalization concept of per chip, per manufactured unit, per revenue, per employee, is certainly something that's around for a while," Dave Stangis, Intel's director of corporate social responsibility told Green Telecom. "For Intel, we've been reporting our environmental performance since 1994, so we've been doing it for a long time. We have experimented with different kinds of normalization methods. We started out with normalizing on revenue, basically a trend line that tells energy, emissions, water, waste and so on, divided by revenue. But in the transparency space, in the reporting movement, there's a move towards a more tangible normalization standards. So we actually report on normalised per production chip, but we also report on all employees, employees by site, employees by region, in revenue, income."

According to Stangis, the information is available in a data sheet for the public and shareholders. "So if you were interested in energy use per country, you can dig through all of that based on that data. It is very transparent," he added.

Obviously, measuring impact must be paired with initiatives to reduce that impact. For Intel, this involves optimizing the design of its products, streamlining its manufacturing facilities, minimizing the impact of its products once they are on the market, implementing emission reduction initiatives and playing a leadership role in the industry.

"In terms of our core initiatives, we take a look at it in kind of a life cycle approach. So we look at the life of a chip from the time it is conceived. Our approach is to design for the environment, designing in more energy efficiency in terms of our process, so that we are comprehending it upfront in the design process, so that when it comes to market, it uses less energy, and offer that promise and performance to our customers," Stangis said.

"It goes beyond that. The biggest foreign issue is within our factories – they are very large and require a lot of energy and resources. Alone just on energy, we have a dedicated capital funding program just focused on energy conservation. For example, from 2001, we've spent about US\$20 million in energy conservation projects, which saved 500,000 kWh of energy. That's just in our own manufacturing facilities.

"When you looked outside the company, to when the chips are in the market place, there's been a big change in Intel's energy efficiency portfolio, technologies like dual core, which offers 40% reduction in energy consumption while doing 40% more work. The data, as of last May, that there were enough dual core processor out in the market place, that the work they did and the energy they saved, compared to previous generations, was equal to taking 2 million cars off the road. Now we are up to



taking 4 million cars off the road in terms of climate impact.”

Stangis added: “The fourth pillar for Intel is leadership, leadership out in the industry, among our peers, competitors. Here is where you find things like the Climate Savers Computing initiative that we launched last year, our focus on energy efficient design centres, our climate change policy worldwide.”

GREEN SUPPLYCHAIN: For the first time this year, Intel has implemented a green procurement initiative with predefined goals for its suppliers.

“What we have done this year for the first time, is to set up a criteria for all our suppliers that they will have the next three years to become incrementally more environmentally friendly,” Stangis said. “At the end of 2008, we expect the suppliers to have an environmental rating of excellent. At the end of 2009, we expect to them to have goals in terms of environmental performance. By 2010, we expect our suppliers to have published performance metrics on the environmental initiatives. We set out a roadmap for our suppliers to become more environmentally responsible.”

IBM to build US\$360m green flagship data centre

Big Blue, and now Big Green, IBM, has unveiled to build a US\$360 million data centre at its facility in Research Triangle Park in North Carolina. The company will renovate an existing building at the site to create “one of the most technologically advanced and energy efficient data centres in the world.”

“The new data center will be the first in the world to be built with IBM's New Enterprise Data Center design principles,” the company said. “Clients using this center will have unparalleled access to massive internet-scale computing capabilities, while gaining the cost and environmental protection advantages of IBM's industry-leading energy efficiency data center design.”

The new facility is the second green data centres announced by IBM. In June, the company announced that it opened its [then]“greenest” data centre, a 115,000 sq. ft facility, in Boulder, Colorado as part of a US\$350 million investment at that site.

The new site in North Carolina will feature many of the technologies from IBM's Project Green initiative. “What we are doing is aggregating technology from around the world to build the most advanced data centre, the most environmentally friendly data centre that has ever been,” said Bob Greenberg, IBM North Carolina senior state executive. “This data centre provides the technological leadership to be as green as you can possibly be. It becomes the showcase and its going to be right here in North Carolina.”

The new site will be designed according to IBM's modular data centre design, allowing the company to expand capacity as customers sign on to the site. IBM will also introduce its High Density Zone solution, which will support IBM's latest water-cooled equipment.

As part of the announcement, IBM has set a goal to reuse 95% of the original building's shell, recycling 90% of the materials from the original building and making sure that 20% of the newly purchased material is from recycled sources.

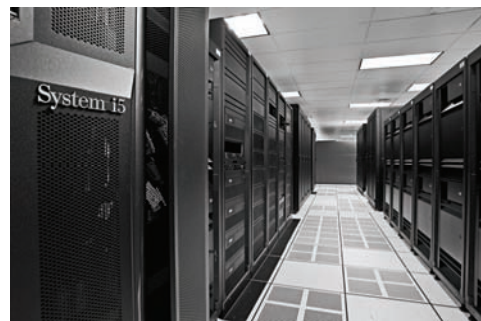
The new centre will also feature high density computing systems paired with virtualization technology, which when deployed together with the company's Cool Blue technologies and modular design, now offer clients up to three times more computing capacity per square foot than the average data centre, according to the company.

Other features include the ability to use free cooling during cooler months, a mechanical system design that is 50% more efficient than the industry average, and the use of alternative energy with a target to reduce up to 1 million pounds of emissions per year.

The new facility will also feature dual-site backup and recovery with the earlier Boulder site.

CLOUD COMPUTING: One of the key objectives of the new facility is the delivery of Cloud Computing capabilities to customers. The site will be part of a US\$400 million cloud computing initiative being rolled out in the US and Japan. The company announced that it is building a cloud computing centre in Tokyo, which will linked to the new North Carolina site, as well as a network of seven other IBM cloud centres around the world.

As reported in CommsDay earlier, HP, Intel and Yahoo have announced a cloud computing test bed linking six ‘centres of excellence’ at Singapore's IDA facilities, the University of Illinois at Urbana-Champaign, the Steinbuch Centre for Computing of the Karlsruhe Institute of Technology, HP Labs, Intel Research and Yahoo!.



NTT Com selects Juniper T1600s for scalability, energy efficiency

NTT Communications announced that it will deploy Juniper Networks' T1600 core routers over some 20% of its network to scale up capacity as well as reduce energy consumption. Key considerations for the selection included the non-disruptive upgrade path from the T640 to the multi-terabit capacity and energy efficiency advantages of the T1600

"To support rapid increase of Internet traffic and services, we upgraded our backbone network with T1600s to expand routing capacity, while also minimizing operational cost, space and power consumption," said Kempei Fukuda, director, global network department, NTT Com.

"With the T1600, we doubled the network capacity on the same footprint and, more importantly, reduced power consumption by more than 20 percent. The T1600 is an optimal solution for improving network performance, creating more value for our customers, as well as meeting our commitment to protect the environment."

According to Fukuda, approximately 20% of NTT Com's network will be run by T1600s by the end of this year. The new routers will be deployed on NTT Com's trans-Pacific segment between Japan and the US, where they will support a part of the operator's 185 Gbps of capacity, Fukuda added. According to Juniper, over 4,000 T-series systems have been shipped to more than 200 customers worldwide. The T1600 can deliver 1.6 Tbps of capacity with 40 percent less power consumption, compared to competitive platforms, the company added.

Green Telecom special report: Start up VNL introduces re-engineered, low power GSM system

VNL, a Swedish and India start-up headed by an ex-Ericsson executive, Anil Raj, claims to have re-engineered the GSM network architecture to support cheap and ultra low power base stations for extending coverage to rural areas.

The systems, called WorldGSM, is a result of four years of development and includes a solar powered solution for roof tops as well as a so-called, Cascading Star Architecture that extends network coverage from a Road Site along a bus topology to Rural Sites that in turn deploy a star topology to link up multiple Village Sites.

"VNL has re-engineered GSM technology to reduce its power requirement and make it suitable for a rural environment where electricity is scarce or unavailable," the company said. "The result is VNL's WorldGSM™ system, which includes base stations that only need between 50W and 120W of power to operate (compared to 3000 W for a typical GSM base station). A WorldGSM™ base station is entirely powered by solar energy with a 72 hour battery back-up in place (also charged by solar power)."

VNL is not alone in reducing the energy requirements of mobile base stations. All the major players today have announced efforts to reduce energy requirements for their base station products. While VNL says traditional GSM base stations require 3,000W to operate, both Nokia Siemens Networks and Ericsson have announced products and initiatives to reduce energy consumption of their base stations. For example, NSN's current generation of GSM base stations require 800W of power with the next generation of equipment targeted at 650W.

IMPRESSIVE POWER CLAIMS: According to VNL's product sheets, its portfolio of sites will require no more than 90W – similar to a light bulb – to operate with its Village Sites requiring only 50W of power.

One method the company used to reduce power consumption was to abandon traditional chipsets from telecoms vendors for low-powered chipsets from the consumer electronics and auto industries, reprogramming them with new software for its GSM solution.

At the same time, the sites are designed to operate without the need for shelter and air conditioning, further reducing power consumption. In addition, the system will work without mains power, generator or diesel fuel. Instead, it will be paired with solar panels, which because of the low power require-



ments, can be much smaller – between 2-8 square metres.

MICROTELECOM MODEL: In addition to energy efficiency, VNL says that its solutions are created according to a concept it calls “microtelecom,” which defines technology and a business model for low-income rural users. Microtelecom solutions are designed to be low cost, low power, easy to deploy and support business models that take into account local resources and limitations, the company said. As such, each VNL site costs as little as \$3,500, according to company officials. More importantly, the systems are very easy to deploy. For the example, the village site is designed “to be carted to site and assembled in hours by untrained local workers.”

The microtelecom concept also includes a business model that involves the outsourcing of rural network operations to local entrepreneurs. The model consists of mobile operators, banks and microfinance agencies, telecoms regulators. In the model, mobile operators manages the mobile network, including the network backbone, roaming, interconnect and billing services while the rural entrepreneur brings in the local knowledge of the area, the capability of service delivery and operations in the local area. The microfinance agencies provide loans for the entrepreneurs, and the regulator ensures an even playing field.

The solution targets emerging markets with large low-income, rural areas without network coverage such as India. The model leverages the low cost equipment to reduce investment risk while empowering local entrepreneurs to play a role in rolling out network coverage in their locations, similar to the successful Village Phone program by Bangladesh’s Grameenphone.

Like Grameenphone’s Village Phone program, microtelecom roll outs would qualify as for USO subsidies from governments, a VNL white paper suggests. VNL will also help its operator customers with their application for USO funds.

WHO IS VNL? VNL’s CEO is Anil Raj, who founded Hutchison India, now the country’s second largest operators after its acquisition by Vodafone. Prior to joining VNL, Raj was at Ericsson where he served in several senior positions, including president of Ericsson’s India operations, head of the company’s smartphone business. According to his bio, he also spearheaded and managed the Sony – Ericsson handset merger, serving as chief strategy officer at the company. He also served as chairman of the Symbian initiative.

Last but not least:

KT TO SET UP RENEWABLE ENERGY UNIT: Korea’s KT will include a renewable energy unit in its articles of association by the end of this year. The company reportedly reached an agreement at a meeting of its corporate social responsibility committee meeting in early July to set up a renewable energy unit and to expand its environmental management organization from the current status as a taskforce to a separate permanent organization standard next year, the Maeil Business Daily reported. The company also intends to introduce fuel cell technologies inside its Internet Data Centre.

AUSTRALIA’S PCI BUILDS NEW GREEN CALL CENTRE: Contact centre outsourcing specialist PCI is building a new unified communications contact centre facility in Melbourne using energy-efficient network solutions from Nortel and Platinum nPower channel partner Commander. The 6,000 square metre greenfield site will be fitted with an all-new, fully IP-enabled network supporting 715 active agents and up to 850 concurrent users that will enable the company the flexibility to manage its contact centre agents’ activities regardless of their physical location, allowing them to work from anywhere while retaining their same phone number, caller groups and access to network resources. “As with any large-scale technology rollout one of the biggest costs is the energy to power and cool the equipment,” says Phil Allan, CEO PCI. “Nortel demonstrated such a clear lead in this regard with its energy-frugal equipment that the savings in ongoing operation and lower TCO were reasons alone to choose its solution, not counting all the other benefits it offered.”