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Innovations to help you succeed

UPLOAD:
**Which
Country Has
the Fastest
Broadband?**

INSIDE

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Capacity**

**Tellabs
Partners with
Miracom
& STG**

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Carriers Stay
Relevant**

**Inside the
Tellabs®
SmartCore™
9100 Platform**

"We came up with
what we thought
would be the
ideal network."

Jesus Romero,
head of enterprise segments
for Globe Business



Telecom
ICON

Globe turns to Tellabs to
launch next-gen data services
throughout the Philippines

Empowering the mobile Internet

We're really excited by the rich conversations we have with our customers about the mobile Internet. We consistently hear from them that the mobile Internet is both their biggest challenge, and their biggest opportunity to grow the business. At Mobile World Congress and the international CTIA wireless show, we received feedback that smartphones and devices such as the iPad, combined with smart mobile networks, can completely change the mobility business. Mobile carriers have a major opportunity to evolve or even transform their business models as these new services emerge.

To gain insights into mobile users' needs, Tellabs commissioned Nielsen to gather opinions from 15,000 mobile users in 15 countries. On every continent, users are excited about the mobile Internet. About two out of three plan to use smart, personalized mobile Internet services within the next six months. In another piece of good news for customers, users hold mobile carriers in very high trust, second only to banks. Get an in-depth look at these global findings from Nielsen Research (see pages 14 and 15).



**"WE HAVE
INNOVATIVE
IDEAS ON HOW
TO LEVERAGE THE
MOBILE INTERNET
AND GROW
YOUR BUSINESS
BY ADDING
NETWORK
INTELLIGENCE."**

Roger J. Heinz
EVP-Global Sales and Services

At Tellabs, we have innovative ideas on how to leverage the mobile Internet and grow your business by adding network intelligence to deliver smart, personalized mobile Internet services and monetize the mobile Internet. We displayed examples of this at both Mobile World Congress and CTIA, and we're working hard with our customers to bring this technology to market.

Users expect a smart mobile Internet, and that requires smarter networks. With the Tellabs® SmartCore™ 9100 platform, a breakthrough mobile packet core product, we add intelligence to 3G and 4G networks to deliver smart, personalized mobile Internet services. Smart networks will be content-aware, context-aware and location-aware, which opens up new services and new revenue opportunities. With users' permission, mobile carriers will deliver highly personalized and innovative services (see pages 12 and 13).

A key way for Tellabs to extend our sales and support around the world is to work with experienced partners. At Tellabs' recent global partner conference, dozens of key partners representing over 70 countries learned about the latest Tellabs solutions and our new PartnerPlus Program. We help our partners with training, communication and other assistance designed to better support our customers.

We help our customers succeed by combining the strengths of Tellabs solutions with the capabilities of our local partners. For example, Miracom in Switzerland works with Tellabs in mobile backhaul networks. And in Central America, Tellabs and our partner STG are transforming optical networks in multiple countries (pages 6 and 7).

Customers such as Globe Telecom in the Philippines focus on business services. New business services such as VPLS and IP-VPNs, based on Tellabs® Business Solutions, have vaulted Globe Telecom to the number two position in its market. See how Tellabs helps Globe Telecom grow (see pages 8-10).

How can we help you succeed? Feel free to contact me at roger.heinz@tellabs.com.

Roger J. Heinz
EXECUTIVE VICE PRESIDENT-
GLOBAL SALES AND SERVICES

TELLABS

One Tellabs Center
1415 West Diehl Road
Naperville, IL 60563 USA
Phone: +1.630.798.8800
Fax: +1.630.798.2525
www.tellabs.com

PRESIDENT AND CEO
Robert W. Pullen

EDITORIAL MANAGERS
George Stenitzer
Ted Meister
inspire@tellabs.com

PUBLISHED BY
Connected Planet Custom Media
330 North Wabash Avenue
Suite 2300
Chicago, IL 60611
Phone: +1.312.595.1080
Fax: +1.312.595.0296
www.connectedplanetonline.com

EDITOR
Tim Kridel

EDITORIAL CONTRIBUTORS
Joan Engebretson, M.J. Richter,
and Sonny Waheed

ART DIRECTION
Cavedweller Studio

ACCOUNT MANAGER
Bethany Borger

REPRINTS
For reprints and e-prints, call
FosteReprints at +1.866.436.8366

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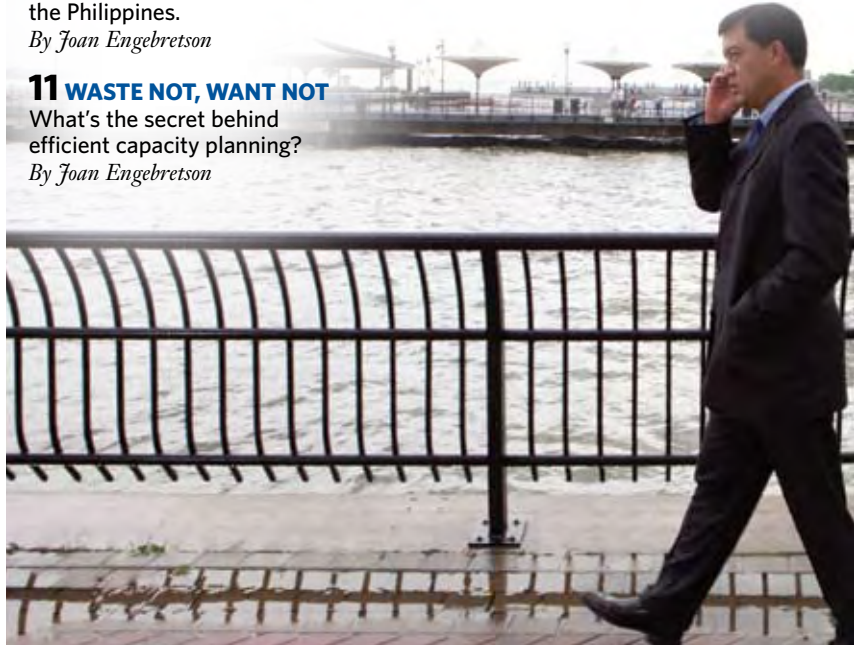
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**Innovative Viewpoints
That Help You Succeed**

www.tellabs.com/blog



Check out the Tellabs blog for timely information and education about industry topics, emerging services and end-user needs.

UPLOAD

CTIA
WIRELESS 2010
March 23-25, 2010
Las Vegas, USA

4G NETWORKS:
LTE AND WIMAX
April 15-16, 2010
Hong Kong, China

COMMSDAY
SUMMIT
April 20-21, 2010
Sydney, Australia

Japan Ranks No. 1 in Broadband Speed

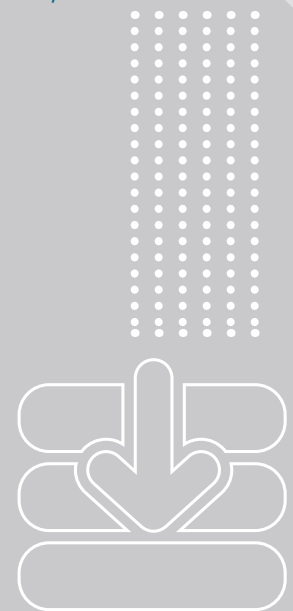
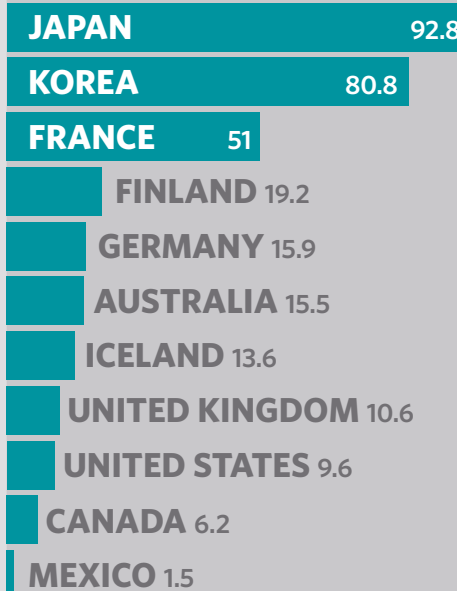
For more than a decade, Japan's leadership in deploying next-generation wired and wireless technologies has been world-renowned. Today, Japan can enjoy a new accolade: the world's fastest broadband services, according to the Organisation for Economic Co-operation and Development (OECD).

At 1 Gbps, Japan's top service is roughly nine times faster than what's available in Finland, the No. 2 country in the OECD rankings. Japan also had the highest average speed, which the OECD calculated based on the broadband services in each country.

The study also counted broadband subscriptions in the 30 OECD countries. That figure grew 10% between June 2008 and June 2009 to 217 million. In half of the OECD countries, at least 25% of inhabitants are broadband subscribers.

The full study is available at www.oecd.org/sti/ict/broadband.

AVERAGE ADVERTISED BROADBAND DOWNLOAD SPEED,
BY COUNTRY, MBIT/S, SEPTEMBER 2008



Source: OECD



FIBER CUTS TRIPLE-PLAY ENERGY CONSUMPTION BY 73%

Sometimes more is less. Take fiber: Although it supports exponentially more bandwidth than copper, it uses far less energy: up to 73% less for residential triple plays, according to a recent study by Etisalat, a service provider based in the United Arab Emirates.

Similarly, Tellabs found that optical line terminals can cut power usage by up to 80% in enterprises.

Etisalat's study compared homes that get voice, video and broadband over a single, fiber connection to those that get the same bundle over Etisalat's multiple legacy networks.

"In the past, cable TV, fixed-line telephony and fixed-line Internet each had its own infrastructure and power," the operator said. "Today, Etisalat's fiber-optic network provides all services across one platform, eliminating two complete national networks."

Fiber's range also saves money. With copper, Etisalat has a network node every 2.5 km, compared to every 12 km for fiber. That lower density translates into lower power, real estate and maintenance costs.

HAITI EARTHQUAKE SETS MOBILE DONATIONS RECORD

A 7.0 earthquake struck Haiti on January 12. By Feb. 1, mobile users worldwide had donated \$35 million by sending text messages to relief organizations and having the amount – typically \$5-\$10 – added to their monthly bill.

“This is the largest outpouring of charitable support by texting in history – by far,” said Verizon Wireless, whose customers alone donated more than \$1 million within the first 31 hours. “Wireless users have texted more dollar donations in two days than in all of 2009.”

Mobile donations typically take several weeks to get from the carrier to a charity. But the Mobile Giving Foundation worked with carriers to cut that schedule to days by advancing the money to relief agencies nearly immediately, before customers paid their bills.

A week after the earthquake, the Pew Research Center for the People & the Press surveyed Americans about how they were donating to the Haitian relief effort. Text messages were the third most common way, at 14 percent.

For a list of charities supporting Haiti, as well as other causes, that accept text donations, visit <http://mobilegiving.org>.



Mobile App Sales to Hit \$6.2 Billion in 2010

Worldwide smartphone sales have skyrocketed over the past two years, with fourth quarter 2009 sales 30% higher than Q4 2008, according to Strategy Analytics. That’s growing the addressable market for mobile applications.

This year, consumers will spend \$6.2 billion on mobile apps, according to Gartner, Inc. That’s impressive, especially considering that of the 4.5 billion apps they’ll download in 2010, 82% will be free.

The free-to-paid ratio won’t change much over the next few years. By 2013, mobile app downloads will top 21.6 billion, 87% of them free, but revenue will nearly double.

Free apps still can be money-makers, such as selling products or services that are ordered or delivered through the app. Other app providers make money by selling ads that appear between levels in a game, one of the most popular app categories. Ad-sponsored apps will generate almost 25% of app store revenue by 2013, Gartner predicts.

MOBILE APPLICATION STORES' NUMBER OF DOWNLOADS AND REVENUE, WORLDWIDE			
	2009	2010	2013
Downloads in Millions	2,516	4,507	21,646
Total Revenue in Millions of Dollars	4,237	6,770	29,479

Source: Gartner (December 2009)

Globe Telecom Gets MEF 9 Certification

“Carrier-class” is one of those adjectives so vague and overused that it’s almost meaningless – unless it’s verified by a third party, such as the Metro Ethernet Forum (MEF). In January 2010, Globe Telecom became the first Philippine operator to receive MEF 9 certification for its Ethernet services.

MEF 9 assesses Ethernet services based on criteria such as their ability to support defined levels of service quality. MEF 9 certification helps Globe target

enterprises, which often look for MEF compliance when comparing Ethernet services from different operators.

Based on the Tellabs® 8800 Multiservice Router (MSR) and the Tellabs® 6300 Managed Transport System platforms, Globe Carrier Ethernet services were launched in 2000. For an in-depth look at how Globe is expanding its Ethernet portfolio, see “An ICONic Network” on page 8 of this issue.

Think Globally, Act Locally

Tellabs' PartnerPlus program provides local expertise and support for operators worldwide.

BY JOAN ENGBRETSON

Network modernization is a worldwide phenomenon, with operators looking beyond their own borders for equipment solutions—albeit with a wary eye. These operators want assurance that the equipment will work as required, and that they will get the support they need in planning, deploying and maintaining that infrastructure.

To meet those needs, Tellabs works with local partners around the world. Based in the network operator's own region—often in the same country—these partners help Tellabs ensure that customers get the support they need in a timely and professional manner.

Tellabs has worked with some of its local partners for years. Recently, however, the company created the PartnerPlus Program with the goal of enhancing those relationships, helping establish new ones and ultimately enhance the customer's experience with the partner organizations.

“PartnerPlus aligns Tellabs resources and support to leverage the local partner's

strategic value to the partnership and to our network operator clients,” said Joe Shilgalis, vice president of channel partners for Tellabs.

SELECTIVE ADMISSION

Tellabs chooses partners selectively, looking for companies that have a strong understanding of telecom technology and strong relationships with local network operators.

“We look for a company that has a technical sales team and is willing to provide pre- and post-sale technical services,” Shilgalis said. “They also should have a portfolio of complementary services to help provide an end-to-end solution for the network operator. We don't flood a market with partners.”

Instead, Tellabs partners are treated as extensions of the company's sales and support team and are provided with a range of resources to help them in that role.

Two partners that recently worked with Tellabs to win and execute key projects are Switzerland-based Miracom and STG, which has offices in four Central American countries and engineers in a

fifth. Both companies illustrate how the PartnerPlus program works and what it can help partners achieve.

MIRACOM: “WE'RE FASTER” **mira**com

Founded in 1988, Miracom has a strong track record in managing infrastructure deployment projects on behalf of network operator clients.

“We have installed millions of dollars of equipment without a single delay that caused us to pay a penalty and without ever failing to meet a customer's specifications for capacity or functionality,” said Hans Peter Naegeli, CEO.

Miracom has handled multiple projects for one major European network operator, which recently enlisted Miracom's help with a deployment aimed at increasing the capacity of the transport network. That network, for the operator's wireless GSM service, had seen traffic boom as a result of customers' heavy use of hand-held devices.

One reason why that operator often uses Miracom for such projects, rather than handling it internally, is that “we're



Innovative
Technologies.
Innovative
Relationships.

faster,” Naegeli said. Miracom often advises the operator about new technology and is sometimes asked to recommend equipment for a particular project.

Miracom has worked with Tellabs on other deployments and recommended the Tellabs® 8600 Managed Edge System for the wireless transport network upgrade for a variety of technical and business reasons. One consideration was the product’s ability to support ATM, helping to preserve the operator’s investment in that technology.

Miracom also found Tellabs more flexible than other suppliers in meeting the operator’s business requirements. For example, Miracom and Tellabs were able to devise a pricing approach based on total cost of ownership in order to meet customers’ contractual needs.

Miracom and Tellabs also have established partner relationships with each other at various levels and functional areas of the two organizations.

“We have a handful of contacts at Tellabs who make our work possible,” Naegeli said.

CONSTANT COMMUNICATION

At least once every three years, all Miracom employees who work with Tellabs visit Tellabs’ facility in Finland, where the company’s regional support staff is based. Besides providing the opportunity for technical training, this approach also gives both companies’ employees valuable face time.

“They can exchange experiences and get updated on who is responsible for what on each side,” Naegeli said. “We want to make sure that people who troubleshoot know each other and one another’s level of education so that when they are troubleshooting, they can start with intelligent questions because they have an idea of what the other side is capable of.”

Miracom also has found value in the Web-based portal that Tellabs provides exclusively for partners. Miracom’s staff uses it to stay abreast of new product announcements, including competitive information.

“We like to see how Tellabs views the market situations and players,” Naegeli said. “It’s very important for us.”

This kind of information is helpful for generating additional business from customers such as the aforementioned European operator.

“We know from Tellabs what’s happening in other markets,” Naegeli said. “They help us recognize trends. We try to think of issues ahead of our customers so that by the time they start to think about a problem, we have a solution.”

STG: “CUSTOMERS ARE VERY CONFIDENT”



STG, founded in 1989, serves several regional network operators in Central America.

“They feel confident asking STG for support knowing that we are a strategic Tellabs partner and their experience will be similar,” said Jorge Escobedo, STG’s president. “We add the value of having local people. Competitors mostly have one regional office in Central America or perhaps Mexico or Colombia. Customers are very confident asking us about new projects because of the knowledge we have, not only on equipment, but on the customer’s network.”

TELLABS PARTNERS ARE EXTENSIONS OF THE COMPANY'S SALES AND SUPPORT TEAM.

STG first worked with Tellabs in 1994, and over the years the partnership has grown to where Tellabs now represents about 60% of STG’s business.

One of STG’s key customers is a regional operator that has acquired several other operators. STG and Tellabs began to work with the operator after the partners hosted a technical seminar about Tellabs products tailored for a company that the operator later acquired.

Recently, the operator sought STG’s advice when it was searching for a solution to transport all of its mobile traffic. STG suggested the carrier consider upgrading its existing network based on SDH to Tellabs’ ROADM technology.

“They needed to have a huge differentiator because they had competition and were the newcomers in the market,” said Juan David Alvarado, account manager for STG.

Decision-makers liked the fact that ROADM technology enables them to upgrade bandwidth between individual nodes on a ring. Network operators can accommodate growth only where needed, rather than having to upgrade an entire ring. The customer also was planning a video launch. Based on information from experts at Tellabs and the experiences of other Tellabs customers, STG recommended ROADM because it minimizes and often eliminates the need for regeneration to support video delivery.

This critical information prompted the operator to enlist STG’s and Tellabs’ help to construct two separate networks, including one spanning several countries.

Tellabs resources, including an online partner portal, were helpful during the deployment process and for ongoing support.

“We use the portal to get detailed technical and configuration information we need to support our customers,” said Santiago Munoz, product and commercial manager for STG. “The portal also has a subset of features the customers can use. We show them how to use it and they can get the information they need directly from the portal.”

Thanks to close coordination between the partners, the projects were completed on schedule and the networks are working well for the customer. The partners are working on other new opportunities with that customer and others, including a possible geographic expansion.

Miracom and STG are just two out of 70 partners that help support Tellabs’ global operations.

“Network operators are looking for the expertise that Tellabs has developed in serving their counterparts around the world,” Shilgalis said. “The PartnerPlus program provides an excellent platform for bringing that expertise to our customers using a trusted local partner as the conduit.” ■

ATM: Asynchronous Transfer Mode **GSM:** Global System for Mobile Communications **ROADM:** Reconfigurable Optical Add/Drop Multiplexer **SDH:** Synchronous Digital Hierarchy

An ICONic Network



THE PHILIPPINES' GLOBE TELECOM TURNS TO TELLABS TO ROLL OUT INNOVATIVE DATA SERVICES, INCLUDING VPLS AND IP-VPN.

By Joan Engebretson

Around the middle of this decade, Globe Business was one of several service providers offering corporate data services in competition with the incumbent carrier in the Philippines. Today Globe Business has made significant inroads in the corporate data market that helped maintain the strong foothold of its parent company, Globe Telecom, as the second best communications service provider in the Philippine market.

"We want to be known as the best provider in our chosen markets and the preferred business enabler in the country," said Jesus Romero, head of enterprise segments. Romero and his team are responsible for the 1,000 largest clients of Globe Telecom, including wholesale customers. His team is also responsible for product management of core data products. Romero attributes the company's strong gains in the corporate data market in large part to the advanced network infrastructure that the company initially deployed in 2006.

As a market challenger, it is critical for Globe Business to offer cutting-edge services that leapfrog the competition while maintaining a high service engagement to retain hard-won customers and seeking continuous network efficiencies to maintain a competitive cost structure. Although these might seem to be conflicting goals, Globe Business was able to achieve all of them by deploying an MPLS-enabled IP core network based on the Tellabs® 8800 Multiservice Router (MSR) Series.

THE BLUE SKY PROJECT

Globe's new network architecture was the result of an initiative originally known as "Blue Sky," which Globe Business undertook in the mid-2000s.

"As the term implies, Blue Sky is like a dream," Romero explained. "We came up with what we thought would be the ideal network."

At the time, Romero recalled, "we were in our second network incarnation. We started with a TDM network that had some Frame Relay capability. Then we went for

an ATM network that could do Frame Relay, DSLAM and MPLS."

The second-generation network, however, had scalability limitations, was difficult to deploy and could not easily support the wide range of services Globe Business wanted to offer.

"Blue Sky was a conscious decision to become a serious player in the data market, and there were several issues we had to address to leapfrog the competition," Romero said.

Those issues included making sure the network was ready for advanced services while supporting customers' legacy connectivity based on ATM, Frame Relay and E1 services.

"Our first goal was to address customer demand, both future and current," Romero said. "Normally those goals are mutually exclusive."

By taking a multiservice approach, however, the Globe Business planners believed they could address customers' current and future needs.

"We felt MPLS was something we could leverage to drive growth and leadership," Romero said.

Although the company already offered an MPLS service based on ATM, it did not scale well and was not differentiated from competitors' offerings. Globe Business also hoped to expand its growing base of enterprise customers by offering IP-VPN services and enhancing its Ethernet service portfolio.

"We couldn't sell Ethernet private lines forever," Romero said. "We wanted to make the core capable of transporting Ethernet traffic and supporting VPLS or VLAN service."

Globe Business' planners also wanted to provide as much flexibility as possible in supporting multiple service types over a single network.

"In our old network, we had to buy specific cards for specific services," Romero said. "When we moved a customer from leased line to Frame Relay service, we left one card idle."

Deploying the Tellabs 8800 MSR series enabled Globe Business to leverage its legacy ATM/Frame Relay revenue while offering new Ethernet and IP services on one platform. In addition, Globe Business leveraged the Tellabs 8800 MSR series' any-service-on-any-port flexibility to provision service at the

port level, thereby avoiding stranded, purpose-built modules.

Another important goal was to provide a higher level of service from provisioning to operations, maintenance and repair. To achieve that, Globe Business planners wanted flow-through provisioning, as well as end-to-end management, from one customer premises to the other.

End-to-end management also had the potential to help achieve the planning team's third key goal.

"We wanted to reduce the cost of serving the customer: both the CapEx cost per connected customer and the OpEx cost per live customer," Romero said.

The network that Romero and his team envisioned eventually became known as "ICON," which stands for "IP Converged Optical Network." As the planners defined that network, Romero said, they made a conscious decision not to look at any vendor brochures.

But when the time came to locate equipment for the network, planners were surprised to find one vendor whose solution fits: Tellabs.

Previously Tellabs had supplied Globe Business with about 30 units of the Tellabs® 6310 Edge Node, which supports Ethernet over SDH.

"At that time, they were looking for an SDH system that was hardened and tropicalized," said Dion Asencio, a Tellabs account representative who works closely with Globe.

Globe Business decision-makers were pleased with the performance of that

equipment and with the relationship the company had established with Tellabs. The ICON project expanded that relationship substantially.

400% MORE BANDWIDTH

Today the ICON network has 420 points of presence (POPs), covering an extensive area of the Philippines. That network includes nearly 30 Tellabs 8800 MSR series routers, and more than 500 Tellabs® 8100 Managed Access System nodes. In just three years, the number of circuits supported increased from 2,000 to 10,000 and bandwidth increased between 300% and 400%.

Yet Globe Business didn't need to add any additional operations personnel to support the vastly expanded network because it's managed end-to-end through a single integrated interface. That cut the cost per circuit by about 30%.

Part of this improvement is a result of faster provisioning, now that technicians no longer need to use multiple systems to set up a connection for a customer. The time to upgrade customers was reduced by 50%, Globe said.

"Now they not only see everything on one screen, but it is very well correlated," Romero said. "If there is a certain customer issue, you can easily determine if it is in the last mile or backbone. Our ability to manage a larger subscriber base with the same amount of people is a testament to the efficiencies we've managed to get."

Many problems that previously would have required a truck roll can now be

SDH network. The new IP/MPLS core runs directly over SDH.

The NMS also improved asset monitoring. It is now virtually impossible to lose track of customer modems, no matter how many times they are transferred from one customer to another, because the asset number is encoded in the NMS prior to activation.

The Tellabs 8800 MSR series solution also achieved the Globe Business planning team's goal of supporting any service on any port, which helped eliminate stranded resources, such as service-specific line cards that become idle when a customer changes services.

After taking all of these factors into consideration, Romero estimated that Globe Business reduced its total cost of ownership by 35%, a figure that includes both CapEx and OpEx. Based on those savings, he estimated that Globe Business was able to generate a return on its initial ICON investment in just 18 months.

That network also supports a range of advanced services. In 2007, for example, Globe Business was one of the first providers to offer VPLS, a carrier-class service that provides point-to-multipoint Ethernet connectivity, enabling customers to transparently extend their IT networks across a wide area. Two years after Globe Business deployed the service, some of its competitors still have not introduced VPLS.

Differentiated services with strong value to customers such as VPLS have helped Globe Business deliver strong growth in data services. Globe wireline data revenues increased 20% between year-end 2007 and year-end 2008. The first half of 2009 was even stronger, increasing 25% over the same period a year earlier.

"VPLS got us into a lot of customers who did not previously use our services," Romero said. "When you compare the performance of VPLS to traditional Layer 2 Ethernet services or switched VLANs, there is a world of difference."

The appeal of VPLS to customers, he said, is that it runs over MPLS, which customers like and are starting to embrace. And because VPLS is protocol-agnostic, he said customers have found that certain VoIP-based applications, such as those for call centers, work better than they would using alternative service offerings.

"AS THE TERM IMPLIES, BLUE SKY IS LIKE A DREAM. WE CAME UP WITH WHAT WE THOUGHT WOULD BE THE IDEAL NETWORK."

Jesus Romero, head of enterprise segments for Globe Business

diagnosed from the network management system. Globe estimates that truck rolls have been reduced 60% to 70%.

"Today, with a single view, we can pinpoint the problem within 30 minutes and can immediately deploy resources to fix the problem," said Peter Tan, head of the network operation division for Globe.

The new network is also easier to manage because it has only two layers, instead of three. The second-generation network had an IP core on top of an ATM core, which was overlaid onto an



Mandaluyong City, photo courtesy of P199/Creative Commons
Romero photo by Christopher Lane/Getty Images

“It gives customers confidence that we are innovative and cutting edge, especially considering that some of the large global carriers are just introducing the service now,” Romero said.

THE SATOP SOLUTION

After deploying the initial ICON network, Romero and his team realized that they could achieve further network efficiencies by moving TDM traffic onto the MPLS core, as well.

“Customers continue to buy leased lines,” Romero said.

Even if they are not using TDM end-to-end, customers continue to rely heavily on E1 circuits to provide local access into ATM, Frame Relay or Internet networks. As a result, he said, “we haven’t seen any slackening of that demand, and therefore it became imperative to support that demand in the most cost-efficient way.”

The solution, in 2008, was to deploy SAToP: a protocol that works over the MPLS network to enable the network to deliver T1 or E1 circuits over an Ethernet infrastructure. By using SAToP, supported by the Tellabs 8800 MSR series, Romero’s team determined that leased line services could be supported over the same core network as the more advanced data services.

By consolidating services onto a single backbone, Globe Business was able to enhance network efficiency, eliminate ATM switches and eliminate the need to use a separate management system for TDM traffic. There was another less obvious benefit, as well.

Now that leased line customers are connected to the same core infrastructure as MPLS customers, Romero said, Globe planners can easily migrate customers from legacy to next-generation services if and when they become ready. As a result, Globe Business becomes more entrenched with customers because competitor’s advanced services would require more deployment time and effort.

THE MSPP PLATFORM

VPLS, IP VPNs and SAToP are not the only enhancements that Globe Business has made to the ICON network. In 2008, the company began deploying a Tellabs multiservice provisioning platform, including the Tellabs® 6325 Edge Node and the Tellabs® 6345 Switch Node, with

the goal of enhancing the company’s SDH leased line and Ethernet service offerings. Ethernet offerings include VLAN, as well as VPLS services, which are delivered over SDH with MPLS capability.

“This allows more flexibility in terms of how the company can create circuits,” Asencio said. “The network is seamless end-to-end, from the low-speed to high-speed circuits, which minimizes the cost of delivering service in comparison with using multiple vendors.”

Today Globe Business has installed nearly 200 Tellabs 6325 Edge Nodes and six Tellabs 6345 Switch Nodes, with more being installed in the near future. SDH traffic runs on the Tellabs® 6300 Managed Transport System end-to-end, while Ethernet traffic feeds into the MPLS core. In either case, Globe Business has gained a more flexible system with improved management capability.

“As customers become more sophisticated, it isn’t enough to say we will deliver service within a specific amount of time,” Romero said. “They actually want end-to-end alarm management and applications to let them know if the network is up or down. As they move to high-speed services, they also want to be sure they can expand them dynamically.”

He cited the example of a customer that needed three or four times more bandwidth than it originally ordered. To make that upgrade with the Tellabs system, technicians change just a few interfaces rather than replacing the whole system.

Romero also likes the granularity of the Tellabs equipment. To support a customer connection, the company’s previous supplier required a minimum of 45 Mbps in the backbone. With the Tellabs equipment, the amount of bandwidth dedicated in the backbone more directly matches the bandwidth provided to the customer.

Tellabs also supports a wider range of customer interface speeds. “If you need 10 Mbps, I give you 10,” Romero said. “If you need 20, it’s exactly 20.”

That flexibility is particularly important with Ethernet, Romero said, because

when salespeople sell Ethernet, they are selling scalability.

MOVING FORWARD

In the future, Globe Business plans to expand the MPLS approach to include several other international POPs.

“We’re also pushing hard on Ethernet because that’s one area where we are the leader, and we want to widen that gap,” Romero said. For example, the company is looking at new technologies such as ROADM, which he believes could dramatically lower the cost per subscriber.

The company also is considering developing a wavelength-based private line service. “We have customers that are looking for facilities they can use to put up their own backbone,” Romero said.

One thing Romero does not expect to see is in what he considers one of Globe Business greatest differentiators: its technical expertise.

“We’ve always said equipment can be bought by anyone,” he said. “The difference is the people who make it work. We think we have a good mix of the right equipment and the right people that result in having one of the highest performing networks.” ■

Tellabs® 8840
Multiservice Router



ATM: Asynchronous Transfer Mode
CapEx: Capital Expenses **DSL:** Digital Subscriber Line Access Multiplexer **IP:** Internet Protocol **MPLS:** Multiprotocol Label Switching **OpEx:** Operating Expenses **POP:** Point of Presence **ROADM:** Reconfigurable Optical Add-Drop Multiplexer **SAToP:** Structure-Agnostic TDM over Packet **SDH:** Synchronous Digital Hierarchy **TDM:** Time Division Multiplexing **VLAN:** Virtual Local Area Network **VoIP:** Voice Over Internet Protocol **VPLS:** Virtual Private LAN Service **VPN:** Virtual Private Network

➔ Globe’s Carrier Ethernet services are the first in the Philippine market to achieve the Metro Ethernet Forum’s MEF 9 certification.

For more details, see page 5.

Waste Not, Want Not

The secret to efficient capacity planning is knowing where to look.

BY JOAN ENGBRETSON

How much is enough? For service providers, there is no easy answer when it comes to network capacity, partly because so many business functions or units are involved.

Each unit typically is highly specialized, has limited communication with other departments and makes decisions independently. All of that adds up to inefficiencies, which cost operators money. For example, the business unit responsible for facilities might add capacity to the mobile backhaul network, not realizing that the cell site infrastructure is incapable of using that much bandwidth.

Each new device or service introduced to the network is another wild card. Historical trends are helpful for forecasting capacity needs for established devices or mature services, but they often don't provide clues about demand driven by new services or devices.

To enable efficient planning, a comprehensive approach to capacity management pulls highly detailed traffic data from major network elements.

"More accurate planning information comes from looking across data pulled from multiple sources to see how a network element is being utilized, not just at a high level, but down to the label-switched path or circuit level," said Matt Hayes, senior product manager at Tellabs. "With these insights, planners can see under- and over-utilization and, where resources are not being utilized, they can turn those back to the network element manager to be provisioned in another way."

JUST-IN-TIME BANDWIDTH

This approach often enables network operators to add capacity without additional OpEx or CapEx.



"You won't have circuits continuing to be operational where they are of no benefit to the customer," Hayes said.

Operators traditionally take a "just-in-case" approach to capacity planning, provisioning more capacity than needed. But with comprehensive, detailed information about network utilization, Hayes said, operators instead can use a more cost-effective "just-in-time" approach.

"Being able to see where a facility will cross a certain threshold gives planners a better understanding of other intangibles, from adding heating and air conditioning and other environmental requirements to cell towers and cabling," Hayes said.

**OPERATORS
TRADITIONALLY
TAKE A "JUST-IN-
CASE" APPROACH TO
CAPACITY PLANNING,
PROVISIONING
MORE CAPACITY
THAN NEEDED.**

"The more information you have, the more you can spend just-in-time and yield the greatest benefit out of the network elements you have today."

When planners identify a need to add capacity, it should be easier to justify the expenditure when they can back their recommendation with comprehensive, detailed data from all critical network elements.

"They are armed with quantified proof of why they need to spend," Hayes said.

That data also can help in resolving conflicting capacity planning recommendations from different business units.

"Through a common report or set of reports, the groups responsible for different elements of the network can literally get on the same page with unique actionable information," Hayes said. "The planning involved and any subsequent build plans can be made with more informed insights into utilization and capacity."

BRING IN THE EXPERTS

Tellabs Global Services also can help operators sift through different priorities and ideas to focus on those that will have the greatest impact. Global Services personnel help operators obtain the comprehensive network utilization data necessary to enhance the capacity planning process and present that data in well-organized, easy-to-understand weekly and monthly reports.

Tellabs personnel have expert knowledge on how traffic flows through network elements and can advise clients on how to collect data for their particular situation.

One major North American wireless operator has seen the benefits of enlisting Tellabs Global Services. The operator gets weekly and monthly reports based on utilization data from cell sites, radio network controllers, media gateways and other nodes, along with expert consulting on how to interpret and apply the data. In addition to making the capacity planning process more efficient, the service also has enabled the operator to fine-tune its forecasts by tracking forecasts against actual network performance. ■

CapEx: Capital Expenses
OpEx: Operating Expenses

Five Steps to a Smart Mobile Internet

The Tellabs® SmartCore™ 9100 Platform gives operators new options for monetizing data services and slashing costs.

BY M.J. RICHTER

It takes a certain kind of intelligence to tailor the rapidly evolving mobile Internet to match individual user requirements, add network capacity when and where it's needed and, at the same time, control operators' costs and strengthen their margins. That intelligence is now available via the Tellabs® SmartCore™ 9100 mobile packet core platform.

"It is the only platform that is purpose-built for 4G, LTE and WiMAX networks while also supporting 3G infrastructure," said Rehan Jalil, senior vice president of Tellabs' newly formed IP and mobile Internet group. "When you combine it with the Tellabs IP mobile backhaul solution, based on the Tellabs® 8600 Managed Edge System, Tellabs® 8800 Multiservice Router Series, and the Tellabs® 8000 Intelligent Network Manager, you can give your individual users exactly what they want.

"In the process, you also can deliver new revenue-generating applications and reduce your CapEx and OpEx."

ONE BLADE, FIVE GOALS

A few years ago, when Jalil and his team looked out across the mobile Internet landscape, they saw a deluge of data traffic coming: Traffic threatened to overwhelm not only the wireless network itself, but also operators' voice-based business models.

"The mobile Internet's use of network resources keeps increasing, yet consumers prefer to pay a flat rate," Jalil said. "We concluded that this business model clearly needed innovation."

Jalil and his team set out to design an advanced packet core platform, with five goals:

- Deliver very high network capacity: 10-30 times more than existing platforms.
- Enable not just "big, dumb pipes," but a smart mobile Internet that lets operators migrate to a two-sided, transaction-oriented revenue model.
- Provide new ways for operators to monetize the content traversing their networks.
- Optimize the network for more efficient use of spectrum and backhaul networks, specifically by giving it the intelligence to determine which mobile applications get first dibs on those two precious resources.
- Provide built-in security, QoS and scalability.

Jalil and his Tellabs team built the Tellabs® SmartCore™ 9100 platform to achieve all those goals by using just a single blade in the chassis. That design provides enormous scalability by just adding cards to stay ahead of demand.



EIGHTFOLD CAPEX SAVINGS

A platform that's packed with such intelligence gives mobile operators the power to deliver what each customer wants and scale the network accordingly. Emphasizing that the Tellabs®

SmartCore™ 9100 platform is "a platform, not a product," Jalil said it does more than pave a cost-effective migration path for evolving 3G mobile networks to 4G, LTE and WiMAX.

Its multiple, built-in capabilities individually and collectively also help trim both CapEx and OpEx. For example, by capitalizing on the Tellabs® SmartCore™ 9100 platform's ability to manage traffic, inspect and analyze content, and encrypt and decrypt signals, the mobile operator doesn't have to purchase additional cards or hardware to deliver those functions.

The platform's control also helps to deliver a fourfold to eightfold CapEx advantage over competing products. With as many as 1 million mobile devices hanging onto a core packet platform, "you need a very scalable control plane," Jalil said. "That control plane is also built into the same cards."

WORK SMARTER, NOT HARDER

By simplifying and streamlining the mobile network, the Tellabs® SmartCore™ 9100 platform trims the operator's OpEx, too, but its ability to do so goes beyond reducing the number of required boxes and cards.

For example, by creating "the smart mobile Internet," the Tellabs® SmartCore™ 9100 platform gives operators the real-time intelligence necessary to use their limited resources – spectrum and backhaul capacity – more intelligently, dynamically and efficiently.

"Without this capability, mobile operators have to try to add more backhaul capacity or put in more base stations to re-use the spectrum, and both of those hit OpEx," Jalil said. "Instead, with the Tellabs® SmartCore™ 9100 platform, the network can use a limited number of resources more efficiently to provide a better mobile Internet experience for each customer."

INTELLIGENCE TO MONETIZE THE MOBILE INTERNET

The Tellabs® SmartCore™ 9100 platform also improves end-users' mobile Internet experience by providing comprehensive, real-time intelligence about each individual customer's needs, what content that customer is using and even where a given customer happens to be physically located. That content- and



SmartCore™ 9100 platform as a distributed gateway, enabling them to offload as much as 70% of Internet traffic at the network edge and thereby increase core network efficiency, improve user experiences and reduce CapEx by as much as 50%.

“Operators can still route through their existing 3G packet core the traditional traffic that is going to their internal servers,” Jalil said. “That enables them to use their internal servers more efficiently, apply the platform’s built-in intelligence to the offloaded traffic and leverage their

embedded 3G packet cores.

“The Tellabs® SmartCore™ 9100 platform can become the LTE packet core eventually, meaning the investment that operators make today will make them future-ready: They will solve today’s problems and also be ready for their LTE networks.”

Some analysts believe that Tellabs’ timing is right.

The Tellabs® SmartCore™ 9100 platform “has come out at the right time,” said Peter Jarich, service director with Current Analysis. “Tellabs got the market right, and they got the market demands right, in terms of throughput, in terms of sessions.

“They’ve also got what seems to be a smart strategy, which is start off by doing offload and then figure out how to leverage that box, how to transform it into a gateway. The challenge right now is to persuade mobile operators that the Tellabs® SmartCore™ 9100 platform lives up to its promise, and that’s why I think the strategy of pushing this to offload is a smart first step.” ■

3G: Third-Generation **4G:** Fourth-Generation **CapEx:** Capital Expenses **IP:** Internet Protocol **LTE:** Long-Term Evolution **OpEx:** Operating Expenses **QoS:** Quality of Service **WiMAX:** Worldwide Interoperability for Microwave Access

context-awareness delivers specific benefits that translate into huge advantages in the competitive market.

“First of all, it enables you to evolve your business model beyond the \$30 a month, all-you-can-eat kind of service,” Jalil said. “For example, a mobile user can access Amazon on the fly and download a book. For the operator, it

smart mobile Internet, they potentially could convert it to some real business, rather than just branding.”

By leveraging the Tellabs® SmartCore™ 9100 platform’s real-time intelligence about individual customers, mobile operators can differentiate themselves from their competitors by offering distinct services, such as more

THE TELLABS® SMARTCORE™ 9100 PLATFORM GIVES OPERATORS THE REAL-TIME INTELLIGENCE NECESSARY TO USE THEIR LIMITED RESOURCES — SPECTRUM AND BACKHAUL CAPACITY — MORE INTELLIGENTLY, DYNAMICALLY AND EFFICIENTLY.

turns out to be a double-sided revenue model, one that derives revenues from users’ flat-rate monthly fees and from content providers.”

The Tellabs® SmartCore™ 9100 platform’s delivery of real-time, customer-centric intelligence to the network also enables highly targeted mobile advertising, another revenue opportunity for operators and their business partners. Understanding the Internet preferences of a given user and the kind of content that user is trying to find enables advertisers to produce much more effective ads, Jalil said, “to the point that if a company does advertise something on the

granular parental controls and ultra-secure communications.

Another possible differentiator is the ability to support dynamic QoS applications, such as in a crisis scenario.

“An operator may be able to assure that mission-critical applications – emergency calls – can go through the network because the network understands that the content is actually a safety call, versus a best-effort browsing application,” Jalil said.

THE RIGHT SOLUTION FOR THE RIGHT TIME

Still another advantage stems from the fact that 3G operators can use the Tellabs®

From Dumb Pipes to Smart Networks

New research shows time is running out for mobile operators. Here's why – and what they need to do.

BY SONNY WAHEED

In a bid to overcome the commoditization of existing voice and data revenues, mobile carriers have spent heavily on network infrastructure to deliver a new world of applications and services to users. That investment is paying off, but at a steep price: Carriers are now running the risk of losing touch with their customers, falling out of the value chain and missing revenue opportunities.

New research from The Nielsen Group and commissioned by Tellabs shows that almost two-thirds (63%) of users want access to smart, personalized mobile applications and services (see Figure 1). New handsets, along with operator promises of better, faster networks, have set very high user expectations for the mobile Internet. Users have become accustomed to the functionality that the wired Internet offers, and they expect this to be easily and seamlessly replicated in the mobile world.

Services such as Google, applications such as Facebook and media providers such as CNN and the BBC have already gained a foothold in the mobile Internet world. The launches of Apple's iPhone, App Store and iPad, together with Google's Android phone, underscore this phenomenon. Users now expect mobile Internet services, applications and brands to deliver what they have grown to love in the fixed world.

Nielsen's research shows that users now more readily identify with these brands than with their mobile carriers for new mobile Internet services. Users say that in 11 out of 14 service areas (see Figure 2), companies other than mobile carriers would be more suitable providers of such services.

That means carriers' relevance to their users is under threat. As this relevance shrinks, carriers may lose touch with their users, hindering revenue opportunities. Carriers can't "sell" to a customer

base that doesn't recognize them as the most appropriate provider.

CLOSING WINDOW OF OPPORTUNITY

But there is good news for mobile carriers. The research also showed that users are turning to mobile carriers for mobile Internet services in the short term.

In addition, it also showed that trust in carriers is second only to trust in banks. Mobile carriers that act quickly have an opportunity to hold onto mobile Internet users by creating smart, personalized mobile Internet services.

The challenge now is for mobile carriers to make the most of today's positive position while there's still time. Current users exhibit good will towards carriers, and users have voiced their desire for new mobile applications and services: services that can deliver strong revenue streams to carriers that tap into them. But what should these applications and services be?

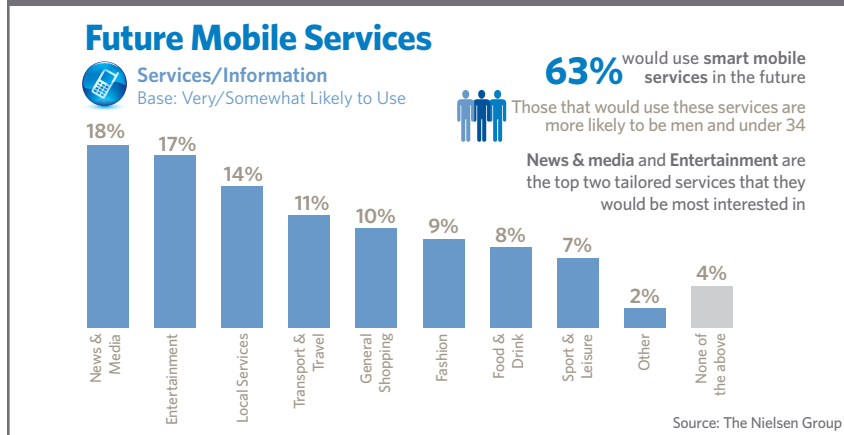
COUNTRIES RESEARCHED:

The research was conducted in 15 countries: Argentina, Australia, Brazil, China, France, Germany, India, Italy, Japan, Mexico, Russia, South Africa, Spain, UK, and USA. Just over 15,000 people were polled, approximately 1,000 in each country.

Figure 1

Thinking about future mobile services, how likely would you be to use smart mobile services? These type of services would be tailored to your personal preference (likes/dislikes) plus your location, time of day, and social setting, at any one time. An example of this would be receiving a text message about your favorite store having a sale when you are nearby.

Which of these tailored services and information would you be most interested in receiving?



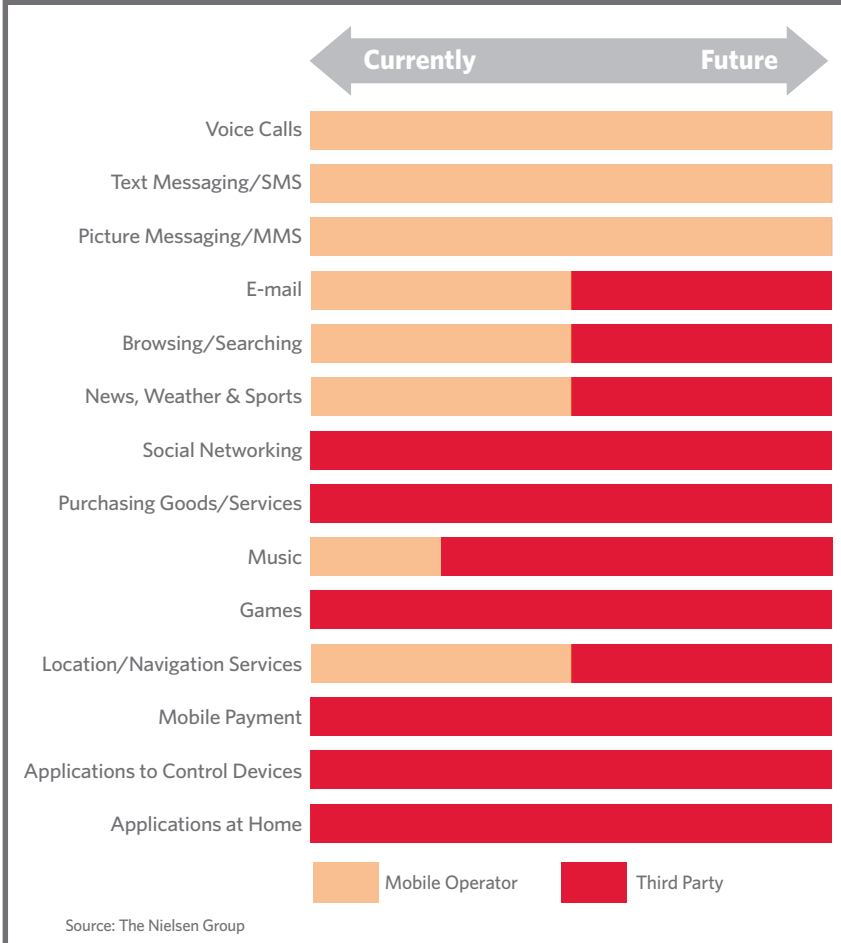
Users worldwide expect smart, personalized applications and services delivered through the mobile Internet. While today's typical Internet services are familiar to users, mobile carriers now have a unique opportunity to move the mobile Internet experience to the next level, trumping the fixed-line Internet.

Fixed-line Internet is exactly that: fixed. But mobile has one key advantage over the fixed-line world: users' location information. Mobile carriers also have the important assets of mobile networks and usage patterns.

The combination of all three elements represents a very powerful user proposition: New services can be tailored to their personal preferences, location, time of day and social setting, opening a world of location-, context- and user-aware personalized services.

Figure 2

Which type of company — a mobile operator or a third party — is the most appropriate provider of these services?



In short, carriers have the means to capitalize on the foothold that users recognize. Carriers can differentiate their service offerings by cleverly using the asset of “smart, personalized mobility.” (See Figure 3)

RISE OF THE SMART NETWORK

But there is one final piece of the puzzle needed to enable the delivery of smart, personalized mobile Internet services: smarter networks. Without them, carriers cannot harness the elements and functions of that distinguish the mobile Internet from fixed-line Internet.

Providing smart applications and services that are location- and context-aware, and delivered to users quickly, accurately and right the first time, will require a new type of network. These networks need built-in functionality to manage the increased volume and complexity of traffic that is generated and demanded by constantly connected users.

Tellabs is creating new, smart mobile networks that will deliver this vision. The acquisition of Silicon Valley start-up WiChorus in late 2009 gives Tellabs important mobile packet core and Internet offload capability. This technology, coupled with its mobile backhaul expertise, means Tellabs can now raise the IQ of mobile networks.

This decentralized intelligence extends across the network and all the way out to the edge. Because smart networks offload as much as 70% of Internet traffic before it reaches the core, it can save an operator as much as 50% in infrastructure CapEx. Most importantly, it also makes mobile networks content- and context-aware.

The result? Carriers can give users a more personalized mobile Internet experience. This gives carriers a valuable competitive edge over rivals and a way to continue to play a leading role in the mobile Internet and its value chain.

User trust, and a recognition that carriers have can deliver some of the smart mobile Internet services they crave, will not last forever. But carriers are already in pole position now to capitalize on new revenue streams by putting together usage patterns, location information, network infrastructure and the most important piece: smart networks. ■

Figure 3

Who do you think is the most appropriate/best placed to provide such services in the future?

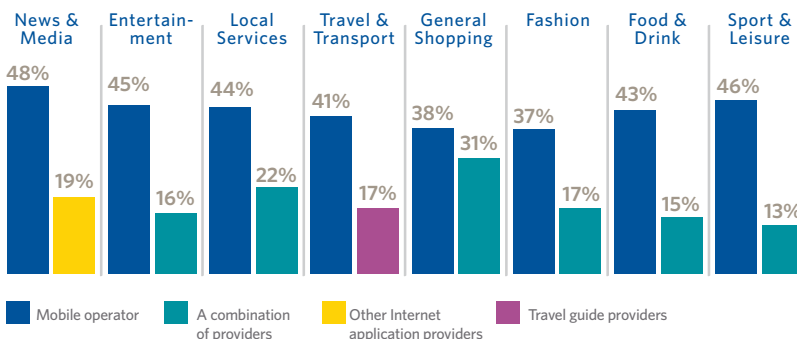
Future Mobile Services



Most Appropriate to Provide...

Base: Very/Somewhat Likely to Use

Although mobile operators are not seen as being the most appropriate for next-generation services, it's clear that for 'smart' services, consumers feel that operators at least have a role to play.



CapEx: Capital Expenses.

Act now to profit from the mobile Internet.

Make your network smart enough to meet capacity demands and monetize content.

This white paper will describe:

- Nielsen research findings on what consumers expect: smart, personalized mobile Internet services
- How to meet user expectations and monetize the mobile Internet
- How a smart 4G mobile packet core platform can make your mobile networks smarter, evolve your business model and deliver superior user experiences

Download Tellabs' free white paper,

- *Get Your Share of the Mobile Internet Pie:*
- *Capitalize on Growing Demand for Personalized Services, today at tellabs.com/4g.*

