

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®