

# Financial Security

## *What's a sign that a mobile operator is serious about ensuring profitability? It's doing content analysis.*

By M.J. Richter

***Many operators worldwide could see their profits completely evaporate sometime before mid-2015, if not sooner, according to a new Tellabs study based on independent analyst data. To avoid that fate, operators must create new revenue streams, which will require more than just selling bandwidth.***

“Mobile operators can spend themselves into a hole well before users run out of hunger for capacity,” said Rob Pullen, Tellabs president and CEO. “Our study shows that simply adding capacity or ‘dumb pipes’ is an unsustainable business.”

A smarter alternative is to add intelligence and analytics so that networks can gather information about their traffic and then act on what they find.

“The combination of analytics and intelligence produces insights that improve performance and generates new revenue streams,” Pullen said. “The result is a more profitable business, which is critical to operators’ survival.”

### **What's Inside Counts**

Mobile networks must be smart enough to optimize traffic flows and help operators reduce CapEx and OpEx. However, networks also need to be smart enough to support a new breed of services: ones so highly tailored to each user’s needs and wants that they can create new revenue opportunities.

The source of all this intelligence is “content awareness,” where a network device – such as the Tellabs SmartCore® 9100 Series – works with Tellabs® Insight Analytics<sup>SM</sup> Services to scrutinize Layers 4 through 7 of every packet, all in real time. The Tellabs SmartCore 9100 series can scale up to support millions of dynamically created service flows in a single system. Each flow includes full QoS classification and policing capabilities.

Tellabs Insight Analytics Services, meanwhile, proactively pulls intelligence from multiple vendors’ network elements and back-office systems. The combined solution includes



*As mobile data use skyrockets, particularly among younger demographics, operators need new options for monetizing that traffic. The Tellabs SmartCore® 9100 Series, combined with Tellabs® Insight Analytics<sup>SM</sup> Services, meets that need by providing powerful new tools for analyzing every packet and then applying policy decisions, all in real time.*

*For more insight into the end of profitability, check out the news release at: [www.tellabs.com/news/2011](http://www.tellabs.com/news/2011)*

experts who analyze that data to produce reports customized for different users within the operator's organization. For example, the marketing team might choose reports about the popularity of certain smartphone applications.

The combination of the Tellabs SmartCore 9100 series and Tellabs Insight Analytics Services gives operators a clear, actionable picture of user behavior and network resource usage, including:

- How network usage varies by time of day
- The most popular applications
- Which users consume the most bandwidth
- The most congested backhaul links.

The combined system extracts intelligence about that content, including the type of application used and, with the user's permission, who's using it. Unlike header-only processing, which looks just at IP and TCP header information, content awareness analyzes each packet's payload.

This information enables operators to define and implement policy-control rules, such as different QoS levels for different traffic types or customer groups. Content awareness also gives operators a powerful new tool for blocking DoS attacks, malware and other hacker traffic that waste bandwidth and degrade the user experience.

In fact, operators often initially deploy content awareness for security and to comply with law-enforcement requirements. But once that feature is installed, they're better equipped to monetize data traffic and remain profitable. In that sense, content awareness today is like E-911 Phase II a decade ago: Although U.S. mobile operators initially added GPS and other location functionality to meet FCC requirements, those deployments set the stage to offer a wide range of revenue-generating services. Current examples are turn-by-turn navigation, location-based advertising and mobile social networking apps.

### Beyond Bandwidth Caps

Armed with new, deep insights into their traffic, operators can optimize network performance and create policies that ensure the most fair and efficient use of network assets. They also can identify potential revenue opportunities, such as premium-service delivery of popular applications. One possibility: Users can pay extra for advertising-free streaming-video services.

This flexibility is key as operators wean users off of flat-rate, unlimited-use data plans. These plans no longer make financial sense due to the skyrocketing adoption of smartphones, tablets and other bandwidth-intensive devices. But tiered plans – often 200 Mbps or 2 Gbps per month – aren't a panacea.

One drawback is that many users inevitably will exceed their data-use limits, experience sticker shock when their bills arrive and possibly defect to another service provider. Another drawback is that operators are still serving as “dumb pipes” and thus are still headed for the end of profitability.



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— Rob Pullen, Tellabs president and CEO

### New Business Models

An intelligent network enables more effective alternatives in terms of revenue opportunities and market differentiation. These alternatives include the flexibility to quickly develop value-added services that capitalize on ever-changing market conditions.

For example, an operator could use content awareness as the foundation for a two-part pricing model that consists of 1) a set amount of data for a fixed monthly fee plus 2) custom, user-selected services at an incremental cost. Another example is a family plan that enables parents to monitor their children's phone traffic for inappropriate content, such as access to adult sites.

Content awareness also gives operators more flexibility to shift the cost of service to third parties. For example, an operator could partner with a streaming video provider to offset the cost of that bandwidth-intensive service. When users access that service, the content provider would pay a fee to help cover the delivery costs.

As a result, the operator doesn't have to limit or block user access to video services or charge customers extra for using them. That's a major plus in price-sensitive markets. In the process, this transaction-oriented, double-sided revenue model helps operators maintain and even increase profitability.

“Operators need critical intelligence to survive and prosper,” said Vikram Saksena, Tellabs executive vice president and chief technical officer. “That's why we've introduced a new smart mobile backhaul solution and an improved smart mobile packet core platform.” ■

**4G:** Fourth Generation  
**CapEx:** Capital Expenses  
**DoS:** Denial of Service  
**FCC:** Federal Communications Commission  
**GPS:** Global Positioning System

**IP:** Internet Protocol  
**OpEx:** Operating Expenses  
**QoS:** Quality of Service  
**TCP:** Transmission Control Protocol