

## Telcordia® Bandwidth Manager

Telcordia® Bandwidth Manager helps network operators better manage the exponentially increasing levels of data traffic on their mobile networks. This standards-compliant, network-equipment-agnostic Policy & Charging Rules Function (PCRF) will help increase market penetration, ease network congestion, maximize infrastructure investment, and provide the quality of experience your customers demand.

### 001

Increase your revenue through customizable data plans

### 002

Reduce your CAPEX per user and improve profitability

### 003

Manage your peak and off-peak network utilization

► In the mobile marketplace, the “land grab” for market share has been going on for years. In an effort to gain and retain more customers, service providers have offered increasingly expansive plans at ever more competitive rates, while at the same time building out infrastructure to accommodate the phenomenal growth rates and bandwidth needs. Early adopters of 3G and High Speed Packet Access (HSPA) networks report that data traffic can be as much as 94 percent of all traffic, while others have stated that although data traffic is 2.5 times greater in volume than voice, it is only generating 11 percent of the revenue. And based on the potential size of the mobile broadband market, this appears to be only the beginning.

But just as the wave of data growth is starting to gain serious strength, dark clouds are threatening to wash out the next big push in wireless telecom. Even as revenues are ramping up, the investment necessary to create a network capable of handling the data growth threatens the financial stability of the operators. What’s more, networks strained by the increased bandwidth requirements of the data volume are struggling to deliver the quality of experience for which customers are paying.

Operators are quickly finding that there often isn’t enough bandwidth to go around. During peak hours of the day, their network may be maxed out, while during off-peak hours, all of that costly infrastructure is being underutilized. Then there are the fair use issues of dealing with users who hog more than their share of bandwidth, to the detriment of everyone else.

### THE FIRST GENERATION OF BANDWIDTH MANAGEMENT

In an effort to ease the congestion, many providers have implemented plans with bandwidth caps, with some limited success. The problem is that these solutions tend to be network centric, rather than customer centric. Often, users get “bill shock” as they are charged after the fact for extra bandwidth usage, or find that their bandwidth slows to a trickle once they have reached their limit. By being based on monthly aggregate usage, these practices do nothing to encourage use at lightly loaded times, and provide little opportunity for the provider to earn additional revenues. At the same time, they can be frustrating to customers who never quite know where they stand.

### THERE IS A MORE POSITIVE WAY

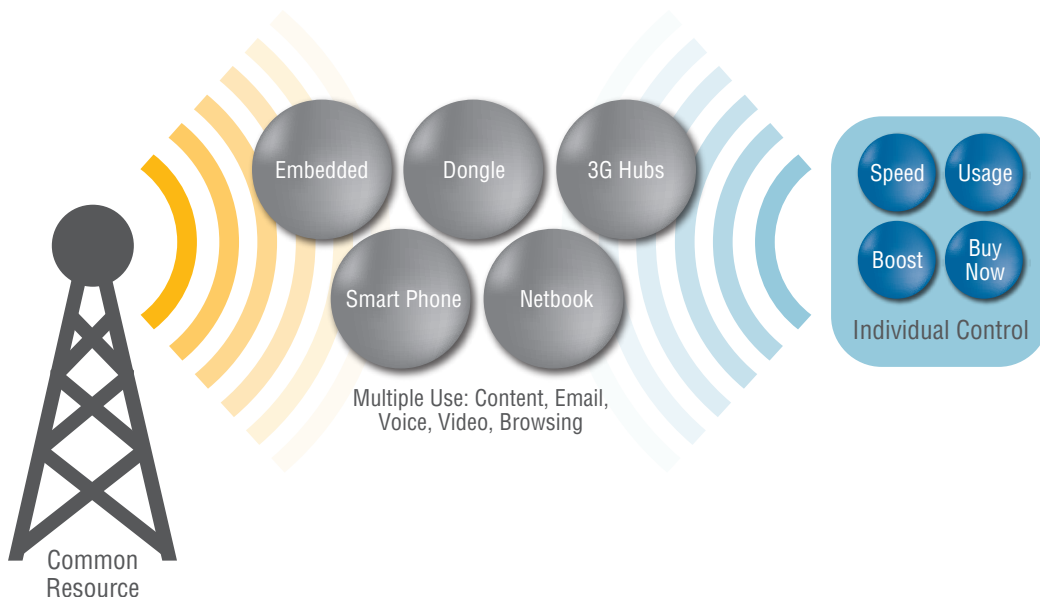
One of the most simple and compelling ways to overcome these challenges is by creating a dynamic, tiered pricing structure based on bandwidth speed — a solution that allows users to pay for just the speed they need or can afford, while allowing providers to better manage the peaks and valleys of their network volume. This is the kind of long-term solution made possible by Telcordia Bandwidth Manager.

Bandwidth Manager is a standards-compliant PCRF that gives service providers the ability to address bandwidth issues in a transparent, customer-centric way, through tiered rates, bundles, packages, and other dynamic pricing offerings. It integrates with your preferred network equipment and enforces the policy rules that you define, allowing you to

### THE TELCORDIA SERVICE DELIVERY SUITE

- The Telcordia Service Delivery Suite provides a set of service creation, charging, and policy control solutions that allow you to create, test, deploy, and monetize advanced services for fixed, mobile, and converged networks. Built upon our service delivery platform, the suite gives you a faster, more cost-effective concept-to-cash cycle, so you can deliver the experience that differentiates your offering and create new revenue streams.

### Common Resource, Multiple Uses, Individual Control



set up data plans to control the usage of data services, bandwidth and Quality of Service (QoS) for these services, and the charging for each of these services, based on the user's subscription profile. These data plans can offer dynamic changes based on the time of day and day of week, volume thresholds, application detection (such as peer-to-peer), historical usage, network capacity and demand, and other factors.

### THE PROMISE OF TIERED BANDWIDTH PLANS

With Bandwidth Manager, you can set up pricing plans that address head-on the key issues surrounding the booming growth of data volume on mobile networks. These plans allow you to charge customers for a guaranteed data rate, rather than just a volume limit. During low-volume times of the day, everyone enjoys the maximum speed, but when bandwidth becomes constricted, premium plans take precedence over lower-cost plans. It's simple, fair, and best of all, your users can understand it.

When compared with the drawbacks of unlimited plans or capped data plans, a tiered pricing plan based on access speed offers several striking benefits:

- With real-time dynamic functionality, you can offer plans that increase or decrease access speeds during different times of the day, mitigating both the peaks and the valleys of network utilization — customers can pay for premium speed during premium times, or reap savings by opting for lower performance during peaks.
- By offering multiple plans, including compelling entry-level pricing options, you can increase the number of users on data plans.
- By increasing the number of users across the bandwidth continuum, you can reduce your CAPEX per user.
- With customers paying for different rates of access, you can accurately plan for and provide a consistent quality of experience.
- With multiple pricing options, you can get creative with your plan offerings and promotions to customers, and you can more easily test and implement new plans, bundles, and packages.
- With real-time visibility into their own usage, customers will no longer be in the dark about their status, and how it might affect their bill.
- By creating packages that bundle appropriate QoS with purchased content, services, or hardware, you can enter new markets and receive revenues from new partners.

Of course, providers whose customers are used to all-you-can-eat plans might be reticent to attempt to put any usage boundaries in place. They are rightfully concerned about how users will react. On the other hand, these are the same users who are beginning to experience service degradation, and who can be offered an improved quality of experience.

- **AT A GLANCE**
- Telcordia Bandwidth Manager helps you turn the challenge of mobile data volume growth into an opportunity by:
- Giving customers differentiated data plan options and more consistent quality of experience
- Better utilizing your network during off-peak hours, and maintaining quality during peaks
- Helping to increase the number of data subscribers, while reducing CAPEX per user
- Providing better reliability, flexibility, and room for growth.



For business users with mission-critical data sharing needs, knowing they can pay for a guaranteed level of bandwidth to get above the fray is a compelling benefit. When business travelers need to download a vital contract document to a handheld, they don't want to have to compete with the student who is just surfing for the latest YouTube video.

### **MORE FLEXIBLE, MORE RELIABLE**

Based on open standards and an industry-leading track record in service delivery, real-time policy, and real-time charging, Telcordia Bandwidth Manager gives you the control, the flexibility, and the dependability your growing network and customer base require.

**Standards Compliance** – It is independent of network equipment, making it more cost effective to deploy and upgrade, and allowing it to run across multiple networks simultaneously, both wireless and fixed.

**Integration** – It integrates with real-time charging and prepaid systems, providing a common management structure and fast, seamless access to subscriber information.

**Extendable** – It is based on an industry-standard blade architecture, making it easy to add more capacity to keep up with subscriber growth.

**Reliability** – It resides on the trusted Telcordia® Converged Application Server, with more than 170 installations, supporting over 150 million users and a proven record of over 99.999% availability.

### **SOLVE THE BANDWIDTH ISSUE BEFORE IT BECOMES A CRISIS**

Mobile broadband is the biggest driver for mobile in all markets, and customers are moving to data plans in droves. When they upgrade, what will they find? A network that delivers as promised, or a network that fails to provide the bandwidth a customer needs, just when they need it most?

In telecom, game-changing waves only come around so often. This time, there is a huge opportunity for providers who can deliver on quality of experience. Those who can't are staring at a crisis of churn. Telcordia Bandwidth Manager gives you an opportunity to proactively get a handle on data growth, with plans and management that will help keep your network running smoothly, keep your infrastructure investments at reasonable levels, and not only appeal to your customer base, but to potential customers who might be ready to make a switch.

### **GET IT RIGHT**

With the expertise to solve the world's most complex communications challenges, Telcordia is known for helping its customers get it right so they can reap the greatest business benefits. Our Service Delivery Suite is part of our broad offering of products and services designed to help you operate more efficiently, drive revenues, and deploy innovative new services.



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