

Personalized Policy & Charging Solution

Customers with an insatiable appetite for new services and devices are increasingly going with the best experience, regardless of the best network/performance/value. Telcordia helps communications service providers (CSPs) better monetize broadband networks by moving from merely selling “bytes” to instead selling services, which have a higher intrinsic value to customers. The Telcordia Personalized Policy & Charging solution achieves this by closely integrating charging and policy management, enabling CSPs to more easily offer services, packages, add-ons, and impulse buys.

With broadband network traffic exploding, the challenge for service providers is to maximize the monetization of that traffic. And these demands are only going to increase as the number of devices grows exponentially with machine-to-machine and consumer electronics also beginning to use data networks. According to Analysys Mason, “Wireless data traffic in developed countries will increase tenfold between 2008 and 2015, and sevenfold in emerging markets over the same period. Revenue per megabyte will continue to fall, driven down by increasing competition and flat rate pricing.” This, they continue, “is not a sustainable business model and CSPs acknowledge that they will need to...implement a smarter network.”

These dynamics, combined with consumer protection regulatory requirements, require service providers to deploy more sophisticated policy controls and devise new ways to package and market their broadband offering.

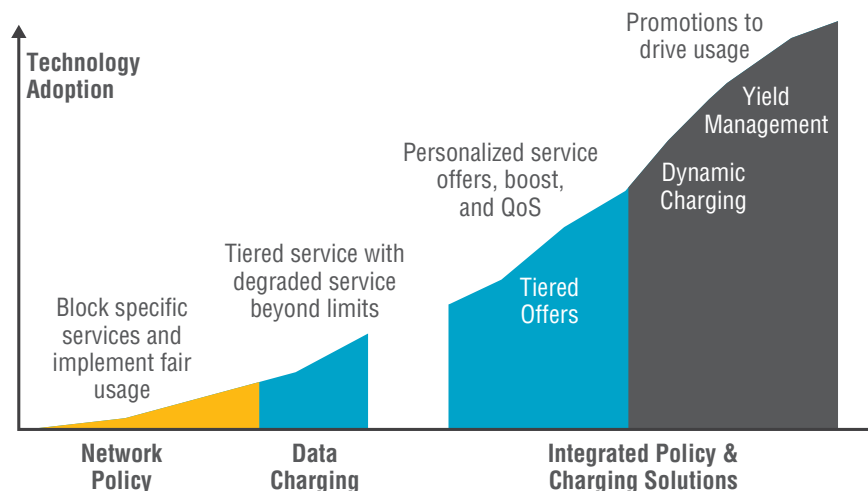
The combination of service-based policy management and real-time charging can help CSPs take full advantage of this broadband explosion, and not be relegated to pipe-provider status.

CONTROL AND DIFFERENTIATE YOUR BROADBAND

The Telcordia Personalized Policy & Charging solution enables service providers to introduce tiered plans and to package offers and promotions for data, content, and value-added services to drive increased revenue on the network. The Telcordia solution gives the operator the flexibility and control needed to create dynamic offerings for policy and charging to help differentiate their brand in the marketplace — and to continue doing so in an ongoing and rapid-fire way.

This real-time charging and policy management solution is applicable to the broadband usage of both postpaid and prepaid customers. Because in this environment, where user experience is so paramount, basic access fees, or even static tiered plans, are no longer sufficient.

Making the Leap with Integrated Policy and Charging



CREATE MORE REVENUE OPPORTUNITIES

The Telcordia Personalized Policy & Charging solution gives you more ways to monetize your broadband infrastructure. A simple example of a new service is the impact of network congestion on subscribers' quality of experience when using streaming video. With real-time policy and charging controls, the service provider can create a dynamic service "turbo boost" plan, which the user can add to their profile.

Alternatively, this "turbo boost" feature could be made available to the content partner, so that they could simply bundle it into the purchase of the video.

TRUST STANDARDS-BASED OCS AND PCRF INTEGRATION

Better monetizing your broadband network shouldn't mean sacrificing control or locking into a proprietary pathway. It starts with real-time controls for both charging and policy (the Online Charging System, or OCS; and the Policy and Charging Rules Function, or PCRF). Another key component is a real-time, in-memory, high-availability subscriber database (a Subscriber Profile Repository, or SPR).

Network integration between OCS/PCRF and network elements are defined by 3GPP standards. However, integration between OCS and PCRF systems are not clearly articulated by the standards, particularly for service/plan creation tasks — which are critical for broadband service innovation and rapid time to market. The Telcordia Personalized Policy & Charging solution integrates Telcordia® Broadband Charging and Telcordia® Bandwidth Manager, providing operators with the tools necessary to easily define and deploy new services in the network.

GET THE MOST ROBUST, PROFITABLE ALTERNATIVE

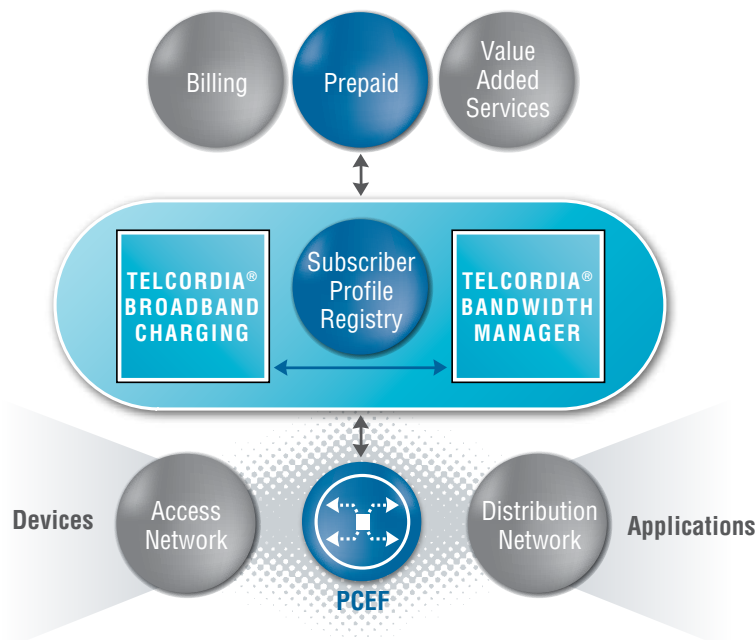
The Telcordia solution represents the latest innovation in the evolution of broadband policy and charging. A starting point that has already been deployed in many DSL and cable networks is a simple network management approach, which enforces "fair usage" or quotas, and blocks undesirable traffic. However, because it is not linked to charging, this approach prevents potentially your best customers from using services that they would be otherwise be willing to pay for.

A second approach introduced tiers. This allowed users to have a choice of plans, at different prices, and with different restrictions. Although it allowed for the monetization of some services, they quickly become commoditized, with limited profitability.

By integrating charging and policy, as the Telcordia solution does, it becomes possible for you to move beyond simple tiers to personalized offers, where users can dynamically add services to their plans based on their current desires. This dynamic offer management allows differentiation, up-sells, impulse buys, and other offers which can maximize the user's willingness to sample and buy, and can lead to much higher profits. This is what our Personalized Policy & Charging solution provides.

And with the addition of analysis tools and dynamic pricing, a complete yield management solution can be created.

Personalized Policy & Charging Architecture



What problems do you need to solve?

The Telcordia Personalized Policy & Charging solution was designed to give providers myriad ways to expand their broadband offering and improve customer experience. At the same time, the solution preserves your control and the neutrality of your network. Here are some examples of how you can use the solution to grow your broadband revenues:

SELLING UPGRADES

Offer a user an upgrade in the moment when they are trying to do something that benefits from the upgrade. For example, if a user wants to access an HD video, you can offer the user a permanent or temporary upgrade to their subscription, or transparently bundle the upgraded service in the content delivery (the user just pays for the content and the content server tells the network to provide the necessary bandwidth). Which type of offer you make depends on your market segmentation and the type of agreement you have with the content partner.

BILL SHOCK PREVENTION

Monitor spending in real time for data and other transactions and apply rules and thresholds defined by the CSP and the user. Actions can include notifications of usage and thresholds to the user or a third party, blocking transactions, and re-routing access to web pages.

OFF-PEAK PROMOTIONS

Offer special promotions for use during low usage times or in under-utilized cells. Service-based policy rules allow for promotions of services (for example, video streaming) at times and locations where there will be little effect on the network. This can both promote usage and also boost profitability, for both prepaid and postpaid users.

ADD-ONS AND IMPULSE BUYS

Create and offer additional features or services that the user can instantly add to their account (either permanently or for a limited period). An example could be access to a particular sporting event via a particular content partner for a fixed price, with the relevant data access not counting towards quota and with bandwidth provided as required. This can be offered via a link from an advertisement (on a web portal or in an SMS) or as part of the normal customer self-care, and can be promoted to all users, prepaid or postpaid.

PARENTAL/BUSINESS/HOUSEHOLDER CONTROLS

Allow parents, small businesses, or householders to manage use by family or employees. The account owner sets usage limits and can also set rules to control when the services may be used (for example, to prevent use during school hours). Changes are easily made (for example, to reward good behavior or encourage staff loyalty).

SERVICE TRIALS

Allow limited trials of services for very low cost, encouraging price-sensitive users to try new capabilities. The trial can combine spending or usage limits (giving both the CSP and user confidence that their costs are limited) as well as capacity-based controls (to limit usage). The user can also upgrade immediately to the full service any time they wish.

SERVICE-BASED TIERING AND FAIR USAGE

Create and offer tiers not just based on quotas or bandwidth, but on services. Include bundled access (with or without fair usage limits) to particular services or websites (e.g. popular social network sites) while disallowing or limiting access to others by site address, by protocol, or by using the powerful features of DPI systems. Allow users to upgrade at any time, either permanently or for a limited period, such as one hour, one day, etc.

MONETIZING “OVER-THE-TOP” DEVICES

Create a service that can be offered free-of-charge to attract users of particular devices like popular smartphones, tablets, or book readers that can be easily upgraded by the user to paid-for service. For example, offer SIM cards for a new tablet, with access to the CSP’s website and some free content — include an app for “one-touch” upgrade to enable email and web browsing and further upgrades to access video and other services. Prices can be set up to be any combination of single charges, recurring charges, and usage charges.



Features & Functions

CHARGING AND POLICY PLATFORM

- Pre-integrated charging and policy management, enabling rapid rollout of new offers
- OCS, PCRF, and SPR on a common platform
- Flexibility to enable CSPs to rapidly create new offers and change the business logic of existing offers to create the most compelling offers in the market
- Real-time (on-demand) provisioning and activation to enable immediate use of purchased offers
- Event Detail Record (EDR) created for every event that results in a policy change or charge
- No single point of failure in call processing
- Active-active, load-sharing architecture
- Geo-redundancy for disaster recovery

REAL-TIME CHARGING FEATURES

- Support for extensive revenue generating features such as tiered data plans to attract more subscribers and services on demand to increase the revenue from each subscriber
- Prepaid and postpaid charging for all network services (content, data, voice/video, messaging)
- Micropayments (pay ahead or pay behind)
- Voucher management solution
- Event and session-based charging
- Reservation-based or reservation-less
- Time, money, or per-unit charging

ADVANCED RATER

- Flexible rater rule editor for on-the-fly introduction of pricing packages and promotions
- Hybrid functional and table-driven rules
- Rules for rates, discounts, bonuses, revenue shares, and sponsorships
- Flexible product pricing catalog
- Friends & Family rates, location-sensitive rates, special day rates, etc.

REAL-TIME USAGE AND BALANCE MANAGEMENT

- Unrestricted balance buckets for credits
- Unrestricted usage buckets for history tracking
- Automatic bucket creation on first use
- Automated bucket deletion on expiry
- Individual and group balances

LOYALTY AND REWARDS PROGRAM MANAGEMENT

- Flexible rules for reward qualification plans
- Flexible rules for reward redemption plans
- Notifications on reward qualification

SUBSCRIPTION MANAGEMENT

- Management of multiple daily, weekly, and monthly subscriptions
- Rules-driven periodic charging per subscription

DATA PLANS

- Flexible offer structures for data plans and subscriptions based on time, volume, and speed
- Limiting an offer to a specific website, group of websites, APN, or application
- Defining the duration of an offer in hours, days, or months
- Plans offered on a subscription basis or a one-time basis
- Policy creation and configuration application that provides easy to use yet highly flexible interface to create, customize, and provision the service plans, subscriptions, and policies for each service plan
- Better utilization of the network, which can reduce the CAPEX per subscriber
- Better management of Quality of Service (QoS) for the subscriber, which can reduce churn

PRE-INTEGRATION AND INTERFACES

- Open, multivendor solution model for complete convergence
- Centralized policy and charging for different networks allowing service differentiation between the networks
- Gx and Gy interfaces to the Policy and Charging Execution Function (PCEF)
- Rx interface for application requests for QoS
- S9 interface for visited and home PCRF functions
- Web services SOAP interface for third parties to request subscriber plan changes
- HTTP/SMS/email interfaces to support customer notifications
- HTTP for configuration user interface (UI) access
- Gxx interface to a Bearer Binding and Event Reporting Function (BBERF)
- Sp/Ud web services (SOAP) interface for notifications of subscriber record changes
- Pre-standard Sy interface to indicate when various thresholds have been crossed



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