

# Billing Subscribers In a Changing Market

To monetize new services, service providers need billing systems that think the same way they do.

By Masha Zager ■ *Broadband Communities*

**B**ehind every successful service provider is a great billing system. Responding to market changes with timely new offerings and then marketing these new offerings effectively requires a flexible, customizable billing system that lets service providers implement changes quickly and easily.

When Tullahoma Utilities Board (TUB), a municipal utility in Tennessee, added a telecommunications branch in 2007, a new billing system was a clear necessity. Dwight Miller, TUB's administrative manager, says that although the utility already had billing software for its electricity, water and wastewater services, billing for triple-play communications services over fiber was far more complex.

After reviewing a number of solutions, TUB chose WinCable from Great Lakes Data Systems (GLDS) for its features, flexibility, ability to integrate with other systems and, of course, price. GLDS began as a private cable operator in search of an affordable billing system, ended up developing its own billing system and eventually sold its cable operations to focus on the billing software. Today the company, headquartered in Carlsbad, Calif., serves more than 300 operators in 43 countries and has moved beyond the cable niche to fiber-to-the-home and other kinds of operators.

TUB put WinCable through its paces, Miller says. Because TUB outsources its telephone service to a third-party vendor, it has to integrate that vendor's usage data with its own video and Internet usage data to produce consolidated bills – something GLDS was able

to accommodate. GLDS also integrated WinCable with IPTV middleware from Minerva Networks and was able to easily produce all the receipts and reports that TUB needed.

Brian Langham, TUB's network operations supervisor, says GLDS's flow-through provisioning makes life easier for technicians. Setting up a subscription in WinCable automatically assigns services to customer devices –

time, manpower and resources," Langham says.

The one thing TUB hasn't consolidated into its FTTH billing is electricity charges, because most customers would find a combined electricity and telecom bill unpleasantly large. "We were afraid of sticker shock," Miller says. "Almost no one says they want a consolidated utilities bill. They don't even have the same due date."

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*Flow-through provisioning can automatically assign services to customer devices, saving time for installation technicians and ensuring that billing records reflect the services that customers actually receive.*

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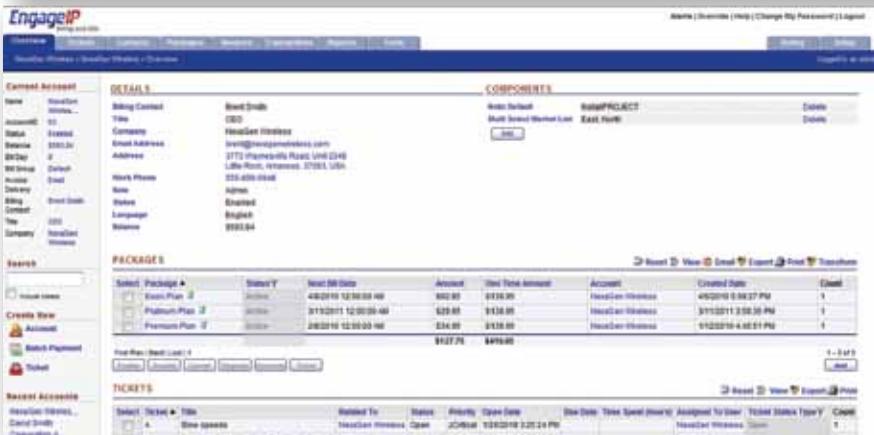
a telephone subscription configures a phone port and assigns a phone number, a video subscription assigns an IPTV package and enables specific channels and an Internet subscription assigns a data package with specific bandwidth.

Though technicians are still needed for in-depth diagnostics, adding and removing account features and even first-tier support can all be accomplished through WinCable. "It saves a lot of

Today TUB has about 2,600 FTTH customers and is adding more every month. Even though the company strives to maintain stable, long-term relationships with its customers – it doesn't offer promotional pricing and, in fact, almost never changes prices at all – Miller envisions adding new types of services somewhere down the line, possibly an over-the-top video (OTT) offering. He's sure WinCable will be able to

## About the Author

Masha Zager is the editor of *BROADBAND COMMUNITIES*. You can reach her at [masha@bbcmag.com](mailto:masha@bbcmag.com).



EngageIP allows operators to easily build complex rating structures.

accommodate them as easily as it did the services that are already supported.

## THE NETFLIX CHALLENGE

TUB isn't the only service provider thinking about OTT. According to The Diffusion Group, a research firm, 106 million households worldwide used OTT services in 2010, and the number will grow to 250 million by 2016. For some providers, online video presents a bandwidth challenge, either today or in the future, when the content being viewed is more likely to be in high definition and 3-D.

Providers with robust fiber infrastructures can withstand the bandwidth challenge, but OTT still presents a revenue challenge. Revenues can't be collected directly from content providers, and subscriber revenues for premium services are increasingly endangered. (Out-and-out "cord cutting" seems to be limited or nonexistent at present, although that's also a future threat.)

There are a variety of approaches to dealing with the OTT threat, and they all require help from billing software vendors. Garrick Russell, president of GLDS, advocates the "If you can't beat 'em, join 'em" approach.

Russell notes, "Right now, our customers and their subscribers are jumping on board like crazy with IP-based delivery – bringing Netflix, Hulu and additional or alternative content to the TV set – rather than relying exclusively on cable. Instead of treating OTT as a threat, we encourage them to embrace it. ... You've got to capture the additional revenue or lose the customer to Netflix."

Operators find subscribers willing to choose their OTT offerings over (or in addition to) services such as Netflix as long as they can provide user-friendly interfaces and wide selections of video content.

GLDS recently implemented OTT billing for a cable operator that uses Clearleap's Stream On Demand, which enables delivery of IP video to connected set-top boxes, TVs and other devices. Generally, Clearleap provides media server boxes that carry a cable operator's branding, and the operator dedicates a cable channel to Stream On Demand. Eventually, the solution may be embedded into existing cable set-top boxes to provide a better integrated experience and to reduce living-room clutter.

Capturing over-the-top revenue isn't the only advantage of offering IP video; IP-based solutions are also much less expensive to implement than traditional VoD models. This makes them more attractive for smaller operators that can't afford the up-front infrastructure costs and ongoing maintenance of traditional VoD. Solutions such as Clearleap's are centrally hosted and can be delivered over existing, underutilized bandwidth. Most need between 1.5 Mbps and 2.5 Mbps to function well; operators who

can offer 10 Mbps pipes can reserve this bandwidth for video without impacting customers' other Internet experiences.

Yet another benefit is that branded OTT video offerings create customer "stickiness." Some operators require customers to extend their contracts an extra year or two when they sign up for OTT. Others simply count on the attractiveness of the offer to keep customers from defecting to competitors.

Russell compares today's IP-based video market with the early days of VoIP, saying, "Vonage came in with an offering and did quite well; then they opened up a cable operator branch so cable companies could brand their product and sell it to customers. Now everyone offers it. So cable operators have an opportunity to jump in there and grab [OTT video] or let it happen on the side."

Working with Clearleap, GLDS extended its billing system to allow real-time intelligent event authorization for over-the-top video. Russell hopes to add a self-service capability as well, which would allow customers to purchase their own media extender boxes, plug them in and register them to their cable accounts.

## USAGE-BASED BILLING

For LogiSense, an Ontario-based billing and OSS software provider, a better approach to the OTT challenge is usage-based billing. Flavio Gomes, LogiSense's founder and president, says that with usage-based billing, B/OSS software such as LogiSense's EngageIP can become a strategic marketing tool rather than simply an operational tool.

Gomes admits that operators have had difficulty communicating to customers the need to implement usage-based billing. Nevertheless, he says, many operators will need to use this approach to counter the impact of

*With usage-based billing, B/OSS software can become a strategic marketing tool rather than simply an operational tool.*

Web-based video. To avoid pushback from their customers, operators must devise billing structures that both appear reasonable and actually save money for moderate users.

Using LogiSense, Gomes says, operators can now build very complex rating structures “without heavy lifting.” This will enable them to fine-tune their billing policies and devise systems that both maintain their profits and are acceptable to subscribers. “We can’t predict exactly how they will do it or where the market is going,” Gomes says, “but now they have the tools and technology to make it efficient.”

He adds, “Our customers have been telling us that by having a very seamless, powerful, feature-rich rating and charging platform ... with personalized and granular control, they can develop sophisticated and easy-to-understand pricing and service plans and carve out additional revenue rather than be limited to generic tiered pricing models.”

MDU owners also can benefit from usage-based billing. Gomes says that whether MDUs manage their own broadband infrastructures or outsource them to service providers, and whether they provide services over cable, Wi-Fi or fiber, “central to their success is a B/OSS system that understands a shared broadband connection, manages it effectively, and is seamlessly connected to payment gateways or tied to management systems for collecting fees.” Just like cable and telephone companies, MDU owners are starting to meter bandwidth so a single heavy peer-to-peer downloader or video consumer doesn’t use up all the bandwidth allotted to the property.

Another frequent requirement for MDUs is burstable consumption – the ability for a subscriber to increase bandwidth at a moment’s notice, using a credit card. Gomes explains, “If you have friends coming over and there’s a video you want to see, you can activate additional services in real time for a limited period, based on time or bandwidth. We can even notify you that the time is up and give you a five-minute grace period to renew the connection.”

This feature is popular in the student-housing vertical and in hotels, which of-

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ten allow free access to a limited number of websites but require credit-card upgrades to exit the walled garden. More surprisingly, burstable consumption has also gained traction in senior housing. “We’re finding that more seniors are getting involved with broadband services,” Gomes says. “That’s an interesting development we didn’t expect – they’re becoming more net-aware and sophisticated.”

Because LogiSense has a flexible platform, the company can work collaboratively with its customers to develop individualized billing plans that meet their needs. Gomes says, “They know the customers better than we do, but we have a lot of exposure to a variety of different models, and we know which ones have been more successful. We can tell them how to get to where they want to go.”

## THE MULTISCREEN SOLUTION

Another way for providers to meet the OTT challenge is to repurpose their own pay-TV content as video on demand for PCs, smartphones and tablets – an approach often called TV Everywhere. Openet, an Irish company whose U.S. headquarters are in Reston, Va., has been a leader in developing billing and authorization solutions for TV Everywhere and helping operators measure audiences for specific content on specific devices.

Mike Manzo, chief marketing officer at Openet, points out that a major reason cable operators such as Cox are adding wireless phone service is to monetize their customers’ mobile video watching. Adding mobile services will eventually allow them to sell more content to more users, Manzo says.

Although multiscreen video solutions will produce incremental revenues, they pose great challenges for billing systems because they vastly increase the

complexity of authorization, billing and resource management rules.

Manzo asks, “When a consumer has multiple devices in the household – not just three televisions but also three PCs and an iPad – what happens when the system is overloaded? And what happens when the user takes the iPad to Starbucks?”

Because of device proliferation, operators are now grappling with the complexities of delivering content to individual users, Manzo says. They may want to advertise different products to different household members or implement different content controls for different users. Fraud issues arise as well – what is an operator to do if the same user ID appears on three devices at once?

Operators and even individual subscribers should be able to set up personalized rules (I don’t want my child to watch more than two hours of video per day, and at least one of those hours must be educational), and then operators must be able to charge their customers based on those rules. Of course, this extremely complex set of rules must be presented to subscribers in a simple and user-friendly manner.

The rules govern not only who is allowed to see what content but what network resources users may consume. Operators must allocate the resources that users need to get the results they expect. “The sad reality is that bandwidth is finite,” Manzo says. “The percentage of time that the network is congested will increase to as much as six to eight hours ... but only 15 percent of users are clogging it up at any one time. Instead of having a bad experience for everyone, let’s take the resources those 15 percent need and allocate it to them, then deliver email and Web surfing on a best-efforts basis.” ❖