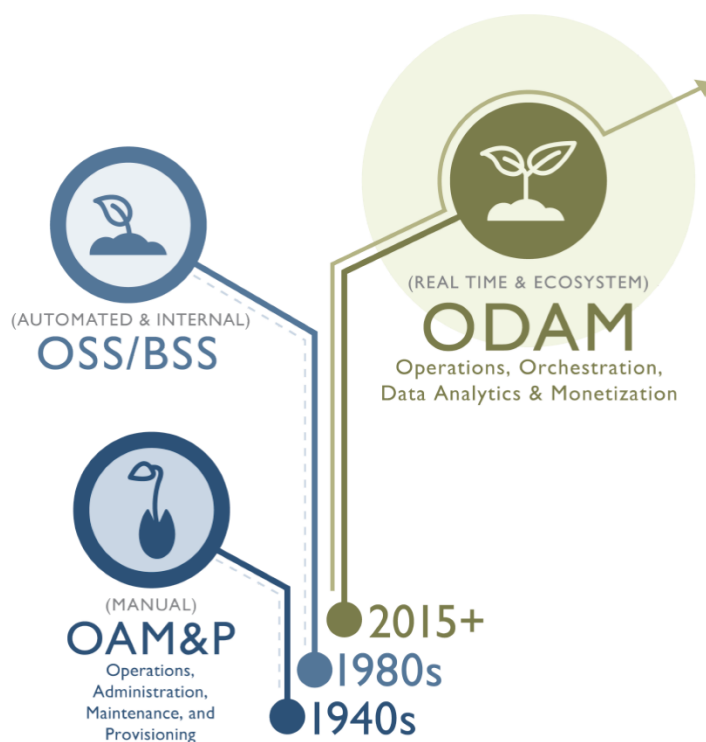


March 4, 2016

Innovation Enabled by Monetization

How “Getting Paid” Makes It All Possible

Stratecast Analysis by
Troy Morley



Stratecast Perspectives & Insight for
Executives (SPIE)

Volume 16, Number 8

Innovation Enabled by Monetization

How “Getting Paid” Makes It All Possible

Introduction¹

One dictionary definition of “monetize” is: *to utilize (something of value) as a source of profit*. Given the amount of time most people spend monetizing their time—i.e., working at a profession to earn money—one would guess that monetization is top-of-mind for most. However, examples abound of newly formed companies that put their primary emphasis on creating something new, perhaps an interesting piece of technology, and then focus on making money later. Many such startups have shorter lifespans than their founders envisioned.

The Stratecast Operations, Orchestration, Data Analytics & Monetization (ODAM)² practice focuses primarily on the communications industry, and, in particular, on the support systems that enable global communications service providers (CSPs) to provide products and services to consumers, to business and enterprise, and to government. The mature communications industry understands how to monetize its services; but still, a problem exists. For a number of years, the profit margins of CSPs have been squeezed as the costs of operations increased faster than the revenue generated. The reasons for this margin tightening are many and well known, including the continued exponential rise in data traffic and the associated costs to support that traffic. However, cost is not the focus of this report. This SPIE will focus on the revenue generation side of the margin equation. Generating revenue is of utmost importance to CSPs, and is a key focus of the support systems utilized by providers; ODA M is literally anchored by monetization.



One way CSPs can increase revenue is to simply raise the prices for services offered. In the competitive communications market, where multiple CSPs and over-the-top providers are competing for every customer, this avenue is not really an option. In fact, competitive pressures often work to push prices down, exacerbating the margin squeeze.

Therefore, finding new sources of revenue—offering new products and services, tapping into new markets, and expanding in existing markets—is the only viable alternative. Service providers, aided by their ODA M supplier partners, are doing just that. The monetization processes are essential in

¹ In preparing this report, Stratecast conducted interviews with:

- FTS – Moshe Peterfreund, Director of Marketing

Please note that the insights and opinions expressed in this assessment are those of Stratecast, and have been developed through the Stratecast research and analysis process. These expressed insights and opinions do not necessarily reflect the views of the company executives interviewed.

² As shown graphically on the cover of this report, Stratecast now uses the term ODA M to represent the evolution of operations support systems (OSS) and business support system (BSS), and the new areas in which business and operations management must now work together, including virtualized networks and telecom data analysis. In recent years, the lines between OSS and BSS have become less clear, with much overlap; and the roles in which OSS and BSS operate have expanded beyond traditional boundaries. Stratecast believes ODA M captures this new reality.

the pursuit of new revenue. This report will examine some of the monetization innovation that is enabling new revenue possibilities today.

With a sharp focus both on the revenue coming in the door, and on the costs of doing business, CSPs tend to move forward with caution. To a supplier of ODAM functionality, this means long sales cycles and considerable effort to close deals. This environment tends to favor larger suppliers: those with larger geographic reach and with more financial and personnel resources at their disposal. The old axiom “no one ever got fired for buying IBM” comes to mind.

However, smaller ODAM suppliers are still finding success. Stratecast recently identified over 100 active suppliers within the global CSP monetization market; roughly 80 of those suppliers could be classified as “smaller.” To stand out, these suppliers need to be even more innovative than their larger counterparts, to offer new ideas that catch the interest of their potential CSP customers. Many of these suppliers have also found a receptive audience for their monetization innovations in industries outside of the communications sector. This SPIE will conclude with a look at one of those monetization suppliers, FTS, and how it is innovating for both CSP customers, and for customers in other industries.

Utilizing Monetization Innovations to Enable New Service Offerings

Stratecast annually examines the global CSP billing market in detail, and looks at business drivers, market trends, and strategies that affect this market.³ (Figure 1, below, illustrates the primary functions that comprise CSP billing.⁴) One of the market trends was touched upon in the introduction of today’s SPIE: the revenue generated by CSPs around the world is not keeping pace with the cost of doing business. CSP margins are getting squeezed. In response, service providers and their monetization suppliers are utilizing innovative approaches to find new sources of revenue.

CSP billing, and monetization more generally, is the collection of money for a service offered. As a simple and understandable example, consider prepaid mobile voice. CSP billing processes account for every second of voice service usage, deducting from the customer’s prepaid balance. When the balance is depleted, the voice service is stopped until the user recharges the balance. Postpaid mobile voice is similar. While many customers have data plans that include unlimited voice, every second of usage is still accounted for. Monetization, at a high level, is simply the counting of something—e.g., seconds of voice, bytes of data, or number of text messages—and associating a charge with each of these items. Once charges are defined, they are either deducted from a prepaid balance, or are placed against a detailed call record for defining a postpaid invoice. For those postpaid customers with data plans that include unlimited voice (and often unlimited text messages), the calculated charges for mobile voice calls will be zero.

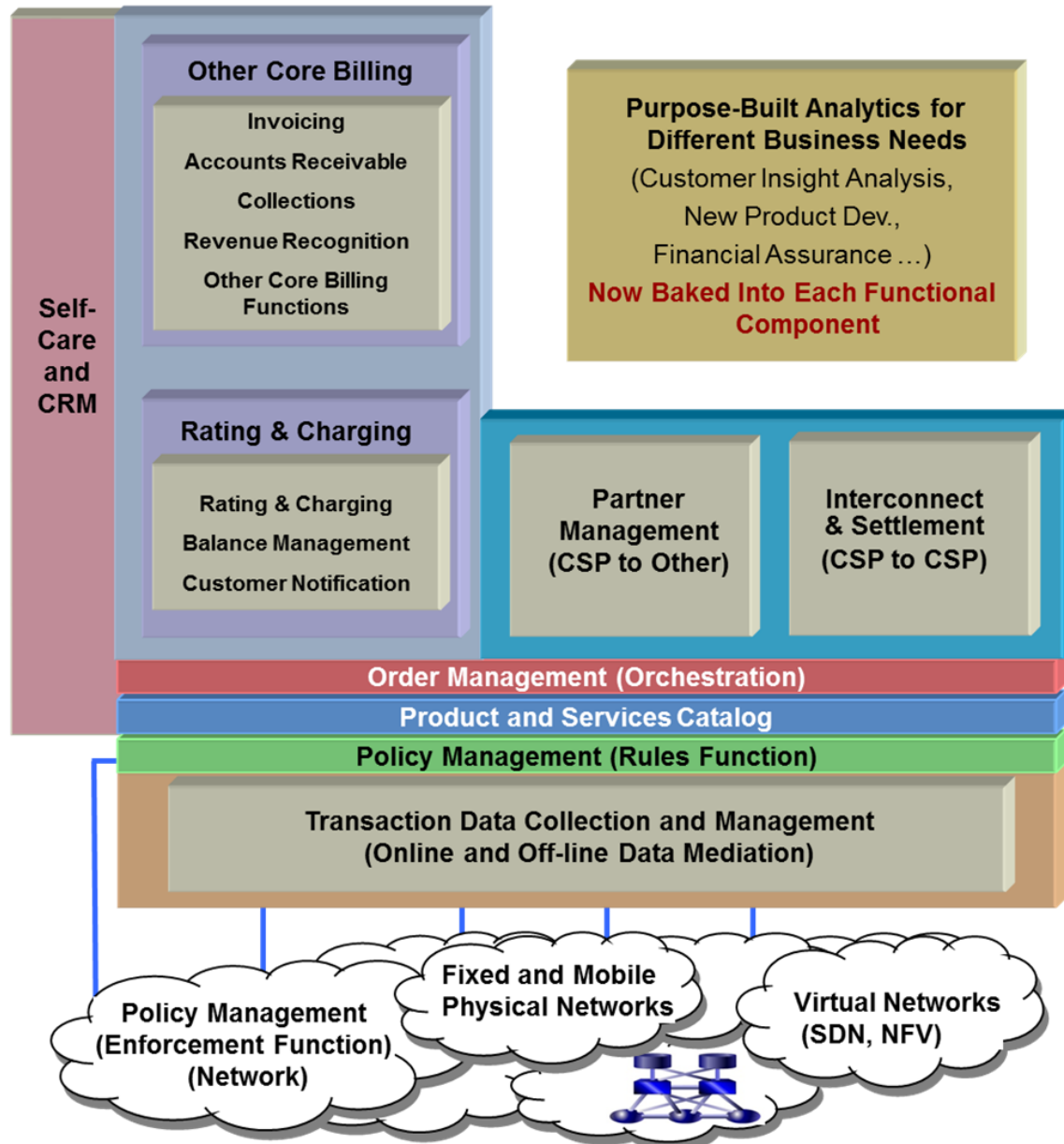
While monetizing service usage remains the primary function of the billing processes, innovation by CSPs and their monetization suppliers has expanded the domain of billing. Billing processes now *enable* new service offerings, as well as collect for their use. Many of these new offerings—new

³ See Stratecast report OSSCS 16-14, [Global CSP Billing 2015 Edition Part 6: Global Business Drivers, Market Trends, and New Solution Strategies](#), December 2015; specifically, the section titled “Business Drivers for Advanced Monetization Models.”

⁴ CSP Billing, as defined by Stratecast, includes the key business management functions of: billing mediation, rating & charging, other core billing, policy management, interconnect & settlement, and partner management. Analytics is now a key component of each of these functions.

sources of potential revenue for the CSPs—are brought about through the use of advanced rating & charging, policy management, and partner management functions.

Figure 1: CSP Billing – A Functional View



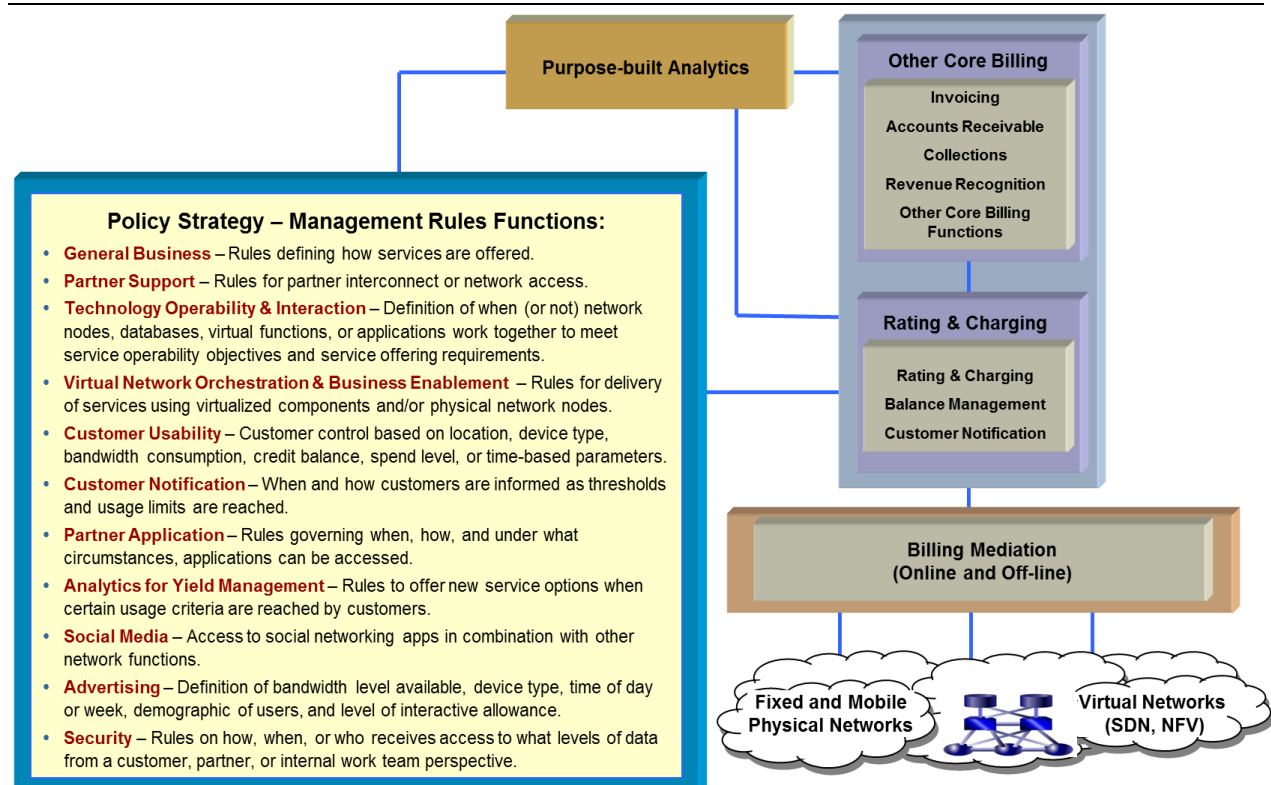
Source: Stratecast

Rating & charging has always been central to CSP billing. This function counts some measure of service usage and charges for it. Combined with policy and operating in real time, new customer service possibilities arise. Add in the contributions from partners, and the possibilities expand greatly.

Policy was originally implemented to control network traffic and to keep the networks operating efficiently; specifically, mobile networks. Today, however, policy has evolved to support a full range of CSP networks, and to enable new service offerings. For example, policy allows CSPs to offer quality of service (QoS) guarantees. This may be for ensuring that customers do not miss any of their favorite entertainment on mobile devices, or it may be something more critical. Imagine remote patient monitoring: where the life of a patient may depend on the guaranteed delivery of medical information with a minimal level of latency.

Policy enables CSPs to offer “personalized” service offerings and packages of service offerings.⁵ For example, T-Mobile’s Music Freedom plan⁶ focuses on subscribers who love music and want to listen to music on their device(s), but who do not want to worry about data limits. This plan is made possible by policy. Policy can define how and when to interact with the customer, including when to offer something new. Customers can even utilize policy to set up the controls they want. Policy can be used to enhance security, make advertising work more effectively, and more. Figure 2 examines some of the policy strategies in use today.⁷

Figure 2: Policy Strategies



Source: Stratecast

⁵ While most “personalized” plans and offers are still provided to large groups of subscribers, albeit a much smaller group than all of a CSP’s subscribers, policy can be used for unique offers, if the business case defines it.

⁶ The plan allows unlimited music streaming, from a select list of music streaming services. All the data used while streaming this music does not count against the user’s data limit.

⁷ See Stratecast report OSSCS 16-09, [Global CSP Billing 2015 Edition Part 4: Policy Management, Market Forecast, and Market Share Analysis](#), September 2015; specifically, the section titled “Policy Enabled: A Simple Phrase with Far-Reaching Benefits.”

Partnerships are now essential to a CSP's growth strategy. Gone are the days when network operators attempted to keep everything in house. Today, most global CSPs have an expanding list of partnerships. To monetize (and enable) those partnerships, the CSP billing segment of partner management becomes essential.

Partner management involves supplier agreements: the business terms and technical interoperability details that define the conditions pertaining to content or services delivered via the CSP network. Partner management also includes a financial settlement function: the details of who gets paid, how payments are defined, and how often they are made.

The types of partnerships are literally limitless, providing great potential for new CSP revenue streams. Most of the original partnerships revolved around digital content, and many still do. Returning to the policy example of T-Mobile's Music Freedom plan, each of the streaming music providers are partners. Each of these partners benefit from an expanded user base; which, in turn, can benefit their bottom line. One music provider stands out with this example. A premium membership to Rhapsody (which eliminates advertising for subscribers, as well as providing other benefits) is included with certain levels of T-Mobile's data plans. One can assume a stronger financial relationship between T-Mobile and Rhapsody, versus the other music streaming partners. This is also implied by branding; T-Mobile, the "un-carrier" offers Rhapsody's "unRadio" service.

Partnerships are not limited to content or to a business-to-business-to-consumer (B2B2C) model. Some CSPs offer tangible goods—for instance, device accessories, movie tickets, and food—in addition to digital services. Some partnerships involve multiple layers of partners. Imagine a live sporting event offered to subscribers of a CSP via their mobile devices. A scenario like this may involve the particular league or association offering the event; perhaps even the teams involved; as well as advertisers, content distributors, or even other "partners." Each partner receives a cut of the generated revenue. Some partnerships do not involve the consumer market; the end customer is a business or enterprise in a B2B business model.

Monetization and New or Expanding Markets

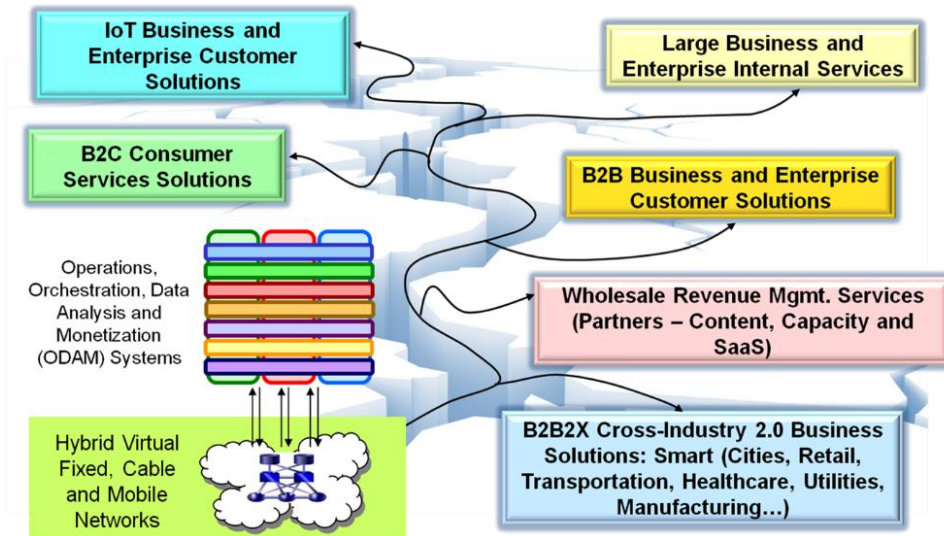
One way to solve the margin squeeze now experienced by CSPs globally is to offer something new. Innovation in the monetization processes, primarily surrounding the billing segments of rating & charging, policy, and partner management, was discussed above—primarily in the context of the consumer market (B2C) and with partnerships in the consumer market (B2B2C). However, as Figure 3, below, indicates, Stratecast's research into the global end-to-end billing market has uncovered at least six areas in which the monetization functions are used by CSPs to support customers of complex services involving network- and partner-supplied components. In the context of this report, each of these areas is a market that CSPs may choose to pursue to increase revenue, and each is enabled by innovations within ODAM—in particular, with the monetization processes.

The previous discussion has revolved around two of the markets shown in Figure 3: B2C Consumer Services Solutions and Wholesale Revenue Management Services. While an in-depth analysis of the remaining four areas is beyond the scope of this report,⁸ each of these markets represent potential

⁸ For details about these six business domains, see Stratecast report OSSCS 16-14, [Global CSP Billing 2015 Edition Part 6: Global Business Drivers, Market Trends, and New Solution Strategies](#), December 2015; specifically, the section titled "Business Management is No Longer One Size Fits All."

revenue growth areas for CSPs that choose to pursue them, as well as ways CSPs can differentiate themselves from their competition.

Figure 3: The Consumer Market is only Part of the Story



Source: Stratecast

The Flipside: ODAM Suppliers Explore New Markets

While most of the discussion so far has centered on a CSP's need to find new sources of revenue, there is another side to the story. Suppliers of ODAM systems to the communications industry are like businesses in any industry; revenue growth is generally identified within every business plan. In the past, OSS and BSS often were very specific to the communications industry, and had little direct applicability outside of that industry. The CSP market was the only market.

Times have changed. Evolution of the CSP monetization systems has moved from specific to general. Whereas a billing system in the past may have been designed to support a single service, on a particular network, via a particular payment method, the inefficiency of this approach became apparent as new services and new networks came online. Convergent billing systems—supporting multiple services on multiple networks, utilizing any payment method—have become the norm. Flexibility, ease of configurability, and the ability to launch new offers, services, and plans quickly became the next differentiators for CSP billing systems.

Today, CSP monetization systems are more powerful than ever; and the journey to get to this point has made these systems attractive to other industries. This attractiveness has opened new markets to monetization suppliers that previously addressed only CSP market requirements. The first industry to benefit shared many similarities with the communications market—the utilities market. However, recent examples from a variety of suppliers show more diversity: financial services, transportation, and shipping, to name just a few.

Innovation Enabled by Monetization; Real-World Examples

Founded in 1997, FTS has a long history of involvement with monetization for the communications industry.⁹ More recently, the company has found success in solving problems in other industries as well. The company reports more than 60 implementations worldwide of its solutions—a strong indication that it has caught the notice of many CSPs, as well as some outside of the communications sector.

FTS offers a full range of CSP billing functionality.¹⁰ The company's product suite revolves around real-time rating & charging, policy management, and partner management. FTS first caught the attention of Stratecast because it was discussing policy and partner management before most of the other monetization suppliers began voicing their solution capabilities.

The foundation of FTS' monetization solutions is the company's real-time rating & charging engine—the Leap Business Control & Charging Function (BCCF). The product enables CSPs to handle all aspects of event processing, from defining the business logic, through importing events and formatting, to charging and executing business rules. As FTS shared with Stratecast, with Leap BCCF, new services are deployed on the fly, and strategic business rules are formulated easily, ensuring real-time responses to both service and customer-related events. In the CSP world, events typically relate to voice or data services, but Leap generalizes the concept to allow an event to be anything that can be counted.

Leap Billing and Leap Policy Control, both built upon Leap BCCF, are the underlying products that define the modular solutions that FTS offers its customers. Combined, these products support all segments of CSP billing, and are now supporting other industries as well.

Leap Billing supports multiple lines of business, including wireless, wireline, cable, broadband Internet, mobile virtual network operators and enablers (MVNO/MVNE), content providers, machine-to-machine (M2M), and the Internet of Things (IoT). The product addresses any type of service, delivered over any network, and any customer or service event. This generalization also allows Leap Billing to support other industries. Modular partner management capabilities enable partnerships and revenue sharing.

Leap Policy Control provides standards-compliant policy to the mix. With Leap BCCF providing the charging and the policy rules engine components, Leap Policy Control supports a wide range of policy use cases; and more can be added with configurable business rules.

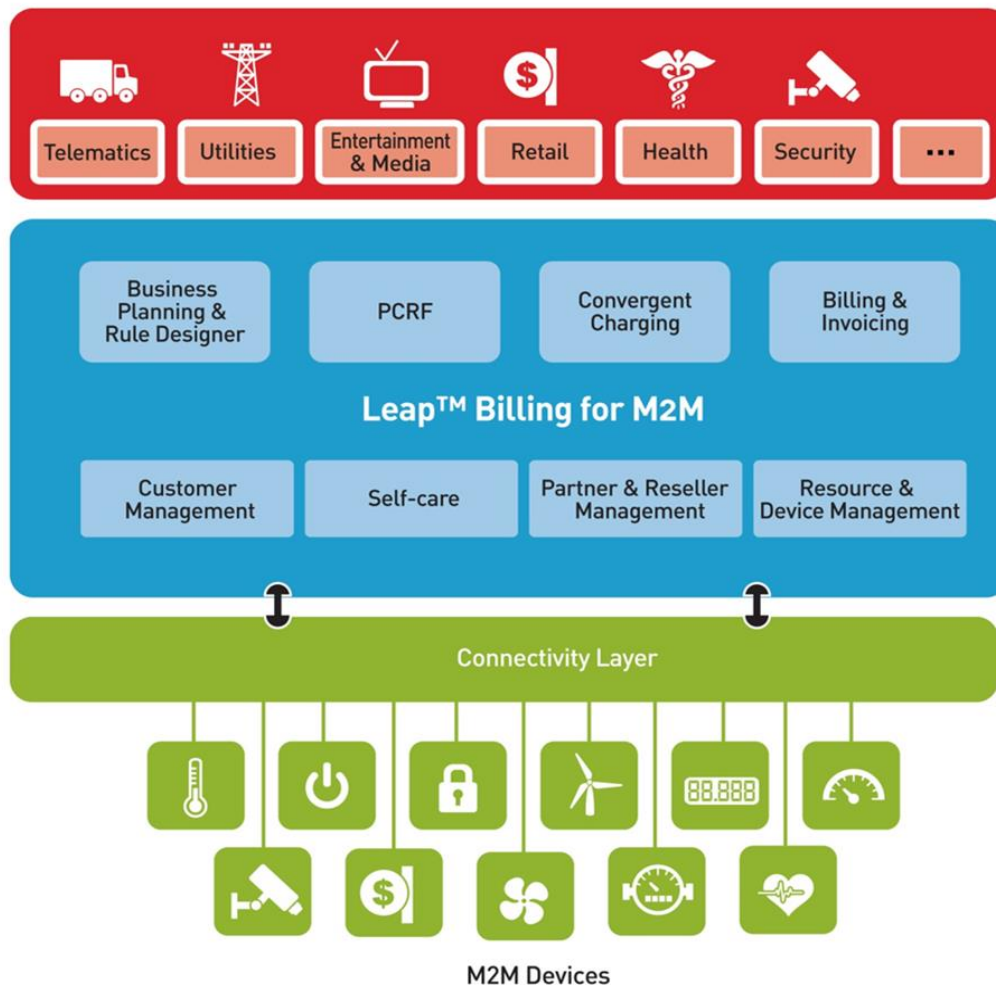
An example of FTS and its solutions in action involves a provider of on-demand content services. The solution delivered to this service provider demonstrates how the concepts developed for CSP billing apply outside of the communications industry. The content provider needed to deliver video-on-demand services via a set-top box in hotel rooms. The twist was to have the ordering, payments, billing, and self-care functions addressed via a smartphone app. Payments could be via credit card or through direct carrier billing with the purchaser's CSP. In addition, revenue needed to be shared between the content provider, the distributors of the set-top boxes, the hotel, and potentially other

⁹ In October 2014, FTS was acquired by the Magic Software Group. Magic is a public company (NASDAQ: MGIC), based in Israel, that has operated for more than 30 years, and now has a presence in approximately 50 countries. Magic solutions cover a wide variety of industries. Prior to the acquisition, FTS was a private, independent software supplier, headquartered in Herzliya, Israel. FTS now operates as a Magic Software Group company.

¹⁰ This includes functionality in all six segments that make up CSP billing; namely, billing mediation, rating & charging, other core billing, policy management, interconnect & settlement, and partner management.

partners. FTS utilized its Leap Billing for M2M solution, shown in Figure 4, as the solution to this problem.

Figure 4: FTS' Leap Billing for M2M



Source: FTS

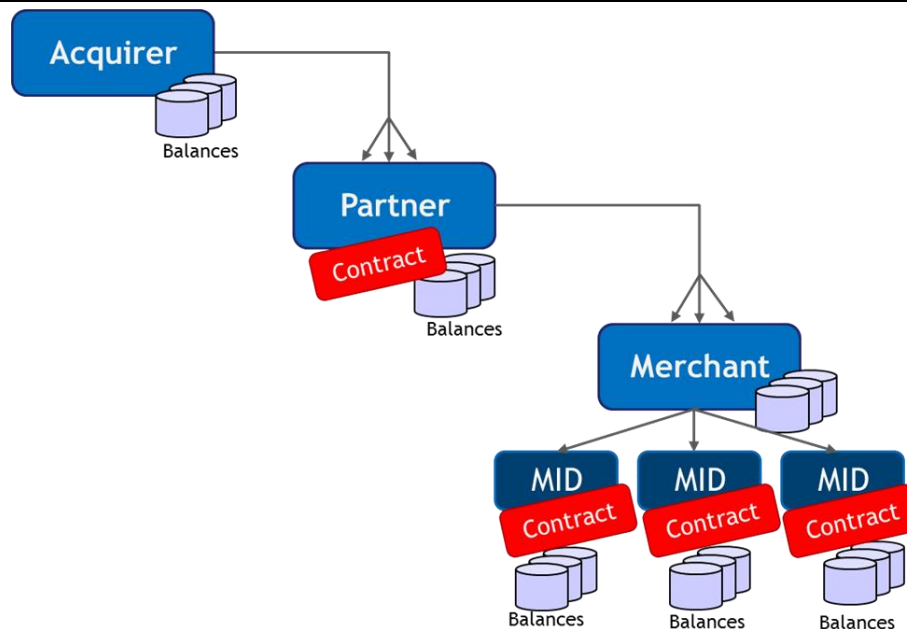
The M2M communication in this example is between the set-top box and the smartphone. Leap Billing provides the ordering, charging, billing, payments, customer management, self-care, and revenue sharing management between partners. The solution integrates with a smart phone app, as well as with the content provider's network management and provisioning systems, and with payment gateways. FTS reports that this content provider is now able to quickly roll out new services, new bundles, and new promotions. The partner management capabilities of Leap allow swift creation of new contracts with partners, or changes to existing contracts.

Another example involves electric car charging stations. In this case, electric car owners utilize a smartphone app to reserve time at these stations, and can either prepay or get billed for their usage after the fact, in a postpaid manner. The provider of these services selected FTS and Leap Billing to provide charging, billing, customer management, and revenue sharing functionality.

Leap Billing provides real-time, transaction-based billing, either prepaid or postpaid. Each of the charging stations has its own pricing scheme, and may involve any number of shareholders who participate in the revenue sharing process. Pricing may be based on time or volume (in this case amperage of electricity consumed). Other factors in the price include maximum parking times, penalties for exceeding that time, maximum or minimum amperage allowed, or a minimum level of revenue required.

The final example deals with financial services, in particular the payment processing needs of digital acquirers. This term is likely unfamiliar. Most readers understand that when they pay with a credit or debit card, the merchant they are paying incurs a fee, a percentage of the amount charged, to accept this charge. In the simplest case, this fee goes to the bank or financial institution that converts this charge into revenue for the merchant. The term for this bank or financial institution is the “merchant acquirer” or just acquirer. In the case of online merchants, it turns out to be considerably more complicated with potentially multiple layers of partnerships, each with their own unique contracts and business rules; and merchants, each, in turn, with their own contracts and business rules. All in all, this represents a very complex value chain, as shown in Figure 5.

Figure 5: A Digital Merchant Acquirer Example



Source: FTS

A merchant acquirer—a bank or a financial institution focused on online payments—deployed the FTS Smart Payment Enabling solution to deal with this complexity. (The Smart Payment Enabling solution has Leap Billing at its core.) The solution delivers fully automated and independently managed revenue sharing and settlement procedures for all layers in the value chain. The Smart Payment Enabling solution supports individual contracts with partners and merchants, each containing personalized business logic. The solution enables rapid, digital on-boarding of new merchants and partners, along with tailored commissioning models for each case. The solution supports an unlimited number of revenue sharing levels.

Stratecast The Last Word

“Getting paid” is important to CSPs; and monetizing service usage remains the primary function of the billing processes. However, what Stratecast believes is more interesting are the new possibilities CSPs now find before them, all enabled by innovations within ODAM systems, and specifically by innovations within monetization systems.

Monetization systems are allowing CSPs to roll out a continually expanding set of new service offerings to their existing customers, and to expand into new markets; both paths should help CSPs with their margins issues.

The suppliers of monetization solutions are also realizing benefits. Not only do they have a receptive audience in the communications industry; these suppliers are finding that the innovations built for CSPs have applicability in many other industries.

FTS, with a long history of supplying CSP billing systems, provides an excellent example of this trend. The adaptability and flexibility the company built into its monetization solutions to support CSPs has opened the door to new markets. FTS now supports the monetization needs of on-demand content providers, electric car charging station providers, and financial service providers, among others.

Innovation has a tendency to spur additional innovation. Stratecast believes that monetization systems will continue to evolve, and continue to provide interesting new possibilities, both for the communications industry, and increasingly for industries related to and outside of communications. Innovations enabled by monetization, from suppliers such as FTS, will continue to prove that “getting paid” makes it all possible.

Troy M Morley

Operations, Orchestration, Data Analytics & Monetization (ODAM) Strategy Analyst

Stratecast | Frost & Sullivan

tmorley@stratecast.com

About ODAM

The processes and tools that communications service providers (CSPs) have utilized to run their businesses have changed over time. More than a half-century ago, CSP network and business management processes were manual (OAM&P). As CSPs evolved over the years, so did the operations support systems (OSS) and business support systems (BSS) that address CSP business and network management needs. In recent years, the lines between OSS and BSS have become less clear, with much overlap. In addition, the roles in which OSS and BSS operate have expanded beyond traditional boundaries. As such, Stratecast now uses the term Operations, Orchestration, Data Analytics & Monetization (ODAM) to encompass both the traditional OSS and BSS functions and the new areas in which business and operations management must now work together, including virtualized networks and telecom data analysis.

About Stratecast

Stratecast collaborates with our clients to reach smart business decisions in the rapidly evolving and hyper-competitive Information and Communications Technology markets. Leveraging a mix of action-oriented subscription research and customized consulting engagements, Stratecast delivers knowledge and perspective that is only attainable through years of real-world experience in an industry where customers are collaborators; today's partners are tomorrow's competitors; and agility and innovation are essential elements for success. Contact your Stratecast Account Executive to engage our experience to assist you in attaining your growth objectives.

About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, works in collaboration with clients to leverage visionary innovation that addresses the global challenges and related growth opportunities that will make or break today's market participants. For more than 50 years, we have been developing growth strategies for the Global 1000, emerging businesses, the public sector and the investment community. Is your organization prepared for the next profound wave of industry convergence, disruptive technologies, increasing competitive intensity, Mega Trends, breakthrough best practices, changing customer dynamics and emerging economies? For more information about Frost & Sullivan's Growth Partnership Services, visit <http://www.frost.com>.

CONTACT US

For more information, visit www.stratecast.com, dial 877-463-7678, or email inquiries@stratecast.com.