



EXPERT OPINION:

Drop the walled gardens without dropping your guard on cash



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While many medium and large operators have publicly committed to LTE (Long Term Evolution to 4G), the industry is still justifying its investment in 3G networks. Not because 3G network usage hasn't sky-rocketed over the last several years, but because revenues have not. When you look at the business case for LTE, there are two primary motives – drive more revenue and reduce costs. Real-time charging is crucial to both of these goals, making it a critical aspect of driving RoI from LTE investments.

Legacy architectures, poor performance and rising support costs are, however, preventing real-time charging from being the panacea that service providers (SPs) are looking for. For LTE to progress there needs to be a fundamental industry shift in how real-time charging systems are built and how SPs evaluate and leverage these applications in today's environment. To explain, let's first discuss why real-time charging is so critical to LTE.

LTE revenue depends on customer control

The proliferation of smartphones and 3G network cards have caused data usage to surge. However, unlimited usage pricing models have resulted in a 100% CAGR in usage but only a 4% growth in revenue. For LTE investments to proceed, these unlimited usage models cannot persist on a large scale. While there is a long-standing belief that SPs need to start charging on a usage basis, customers have demonstrated a resistance to usage-based pricing due to the lack of control and visibility into their current balances.

Without real-time charging, there is no visibility into how much a customer is spending on data services. Customers don't have a sense of how data usage is priced or how much bandwidth they are using to access various services. Additionally, the explosive growth of data services has left some operators days, even weeks, behind in processing usage.

This leaves customers unaware of their current balances and at high risk of 'bill shock'. The only way to migrate customers to

usage based plans is to give them the visibility and control that real-time charging enables. Real-time advice of charge, immediate balance updates and transactional enforcement of customer-defined spending limits will provide the success factors required for mass acceptance of usage-based tariff plans.

Real-time charging is also crucial to bringing down the walled garden. Both the iPhone and **NTT DoCoMo** have demonstrated that opening up your network to third parties is the secret to driving critical mass in applications and content revenues. But bringing down that wall opens up SPs to a form of leakage worse than revenue leakage... CASH leakage. Cash leakage can occur because SPs are on the hook to pay settlement charges to third parties even if they fail to collect the revenue from the customer. Real-time charging eliminates the risk of cash leakage and credit exposure, enabling SPs to leverage third party providers and deliver meaningful and sought after content and applications to their customers.

Cost reduction

Real-time charging also promises a single, convergent charging layer to process all online and offline usage. By decoupling service delivery from the network and leveraging standards such as Diameter*, SPs can move away from purpose-built charging and rating systems that only work for certain networks or services. Instead, they can direct chargeable event records to a single online charging application regardless of network or device.

Customers can have multiple balances that are

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debited and credited in real time, and move money between balances regardless of what services are being used, eliminating complex and expensive billing processes. SPs can then migrate off their legacy charging and billing applications, further streamlining their operational cost structure.

Additionally, growth in prepaid and developing regulation is forcing SPs to offer the same set of services and bundles to both prepaid and postpaid customers. Prepaid customers are becoming increasingly sophisticated and want access to all the 3G and LTE services and bundles, but complex real-time charging is required to achieve this. Currently, prepaid and postpaid charging mechanisms remain separate. Real-time charging enables SPs to finally implement a prepaid/postpaid charging layer, further reducing the costs associated with prepaid customers. Simplification of the infrastructure with all usage flowing through a single charging layer can and should drastically reduce SP costs – but with today’s real-time charging systems this is not actually the reality.

The success of real-time charging hinges on cost and predictability

If real-time charging is so critical to drive the revenue and cost reductions of LTE – what is holding SPs back? The answer is simple – COST and PREDICTABILITY.

In the past year, I’ve spoken with dozens of SPs about their real-time charging platforms, and found most of them unable to accurately calculate their current costs or predict future costs based on usage growth. This is due to the unpredictable performance and scalability of existing real-time systems. As loads increase, SPs don’t know how much additional hardware, software, power, data centre space and resources will be needed to support increases in 3G, and soon LTE, usage. In fact, if a new service takes off and usage spikes dramatically, operators are unsure if their real-time charging application will scale at all, or how much it will cost to scale. With existing systems, the resources required to support a new service can easily drive the Cost Per Transaction (CPT) up to, or even above, the value of the transaction itself.

To effectively roll out usage-based tariff plans

and leverage real-time charging across their service portfolio, SPs must have full predictability of their CPT, and that cost must represent a small fraction of the revenue of each usage event. This enables the SP to create a clear and compelling business case for LTE services, and understand the profitability of each service under various pricing strategies and adoption curves. Proliferating data services without this level of cost control equates to ‘rolling the dice’ with an SP’s profitability.

In addition to being predictable, the CPT also needs to be driven much lower. **Vodafone’s** CEO, Vittorio Colao recently talked about Vodafone becoming “an efficient kiosk for billions of one and two cent transactions per day”. Major media outlets have announced their intent to offer all their content online for “a penny an article”.

These business models can only be successful if charging is in real-time so customers have visibility and control over their spending. However, this trend toward high volume micro-transactions puts tremendous pressure on the cost to process each event. These services will only be profitable if the CPT is a small fraction of a cent.

Real-time charging is critical to the success of LTE. But to fully enable pricing models that are palatable to the customer and profitable to the SP, real-time charging systems must evolve rapidly:

- A quantum leap forward in performance and efficiency is required to drive down CPT and enable high margins even on micro-transactions.
- CPT must become fully predictable and consistent even when usage suddenly sky-rockets.
- Pricing flexibility, agility and reliability must remain intact. Gaining performance by trading off complex pricing models or carrier-grade durability is not a solution.

Real-time charging applications must become extremely efficient, provide predictable performance and scalability and deliver a measurable CPT that is a fraction of a cent per transaction. This will empower operators to leverage real-time charging to drive RoI from their LTE investments. **\$**

“With today’s real-time charging systems (cost reduction) is not actually the reality.”

VanillaPlus Jargon Buster

CAGR: Compound Annual Growth Rate

CPT: Cost Per Transaction

LTE: Long Term Evolution to 4G networks

RTC: Real-Time Charging

RoI: Return on Investment

* Diameter: A protocol delivering real-time charging and mediation for SMS, MMS, and always-on IP data sessions.