

The art of smart:

how to build an experience-based pricing solution

“An architecture for successful experience-based pricing should allow actions to be taken instantaneously and intelligently”

Successfully implementing experience-based pricing can require **major transformation** of an operator’s OSS/BSS architecture – and the crucial element is **intelligence**.

In our series so far, we have examined how operators have generally considered pricing as off-limits as part of a strategy for profitable monetization, given the potential risk of entering into damaging price wars. In particular, we have looked at how a concept we call experience-based pricing (EBP) can potentially be a powerful strategic instrument for capturing value in the Networked Society [1].

EBP is about breaking down a consumer’s communications experience into individual chargeable components that can be packaged and priced according to the consumer’s required experience based on context. The second article in the series discussed how this might work in practice, and the potentially strong position operators hold, given their ability to control the consumer experience from the core network to policy and charging-based packaging, billing and payments, and consumer interaction [2].

This third and final article explores what is required to implement EBP in terms of operations support systems/business support systems (OSS/BSS).

DELIVERING A VALUED CONSUMER EXPERIENCE

Some operators continue to see their value only in terms of the quality and performance of their networks. In reality, however, consumers increas-

ingly take even the best connectivity for granted, and see apps, over-the-top (OTT) services, and the features and functionality of various devices as the most valued and important part of their experience. For operators to monetize profitably the exponential increase in traffic flowing over their networks, they must look beyond connectivity and learn how to charge consumers for services according to context. Few operators have taken advantage of context as a charging strategy. A notable exception is where operators have deployed dynamic charging according to network capacity in order to optimize network utilization successfully.

EBP is about addressing the needs of individual consumer micro-segments with innovative package and pricing structures, and using context to set the optimum price for the experience sought by the consumer in a dynamic way. This approach dominates the video gaming industry. Game pricing has evolved from charging a flat purchase price for each game (based on its quality, complexity and graphic sophistication), to contextual pricing within the game after a relatively low initial purchase price. Once players are involved in the gaming experience, they are offered better functions, weapons and defenses that can be purchased for additional payments, and even resold to other players at market prices. The value of each





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upgrade component is based on the experience and the player’s subjective value of that particular feature in the context of the game: will it at this moment help a player win, get a tactical or strategic advantage, or improve game play? This leads to numerous new opportunities for incremental revenues and profits inside an established gaming service.

Employing EBP means considering contextual pricing as a separate function of the overall formula for profitable monetization. This can potentially have a significant impact on profitability and, moreover, on the ability to meet consumers’ experience expectations consistently.

OSS/BSS: THE ENABLER OF EBP

Implementing an EBP-centric strategy will require a new mindset – one that recognizes price as a strategic differentiator. It may also require a major transformation of OSS/BSS architectures. Specifically, the strategy will require an IT environment that is fully integrated end-to-end, starting at the core network and including the service control, charging and billing, product orchestration and consumer interaction layers. This will enable the operator to control the entire consumer experience seamlessly. Crucially, the environment should also include analytical capabilities that provide real-time insights about the consumer profile, usage patterns and experience.

Many operators have already invested in BSS solutions that provide a strong basis for EBP. However, an architecture for successful EBP is not just about having all the right pieces. The key is to link them in a way that allows actions to be taken instantaneously and intelligently in the context of the current consumer experience with complete automation. A human studying analytics output and then inaugurating an offer or service days or weeks later defeats the contextual purpose of EBP.

For example, an analysis of current traffic conditions has to come back and effect a real-time price and policy offer for EBP to work. It is not realistic to perform dynamic pricing by traffic level conditions in a manual fashion.

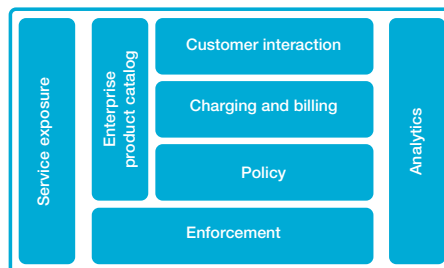


Figure 1: Basic BSS architecture.

Consider Figure 1, which depicts a basic architecture for enabling EBP, assuming real-time capabilities in all elements. The main source for information leading to an immediate EBP offer will by definition be the analytics engine, which receives all contextual data related to specific consumers. The analytical findings may point to an offer for an individual consumer, but generally speaking, analytics today are not built to take automated action on that information or to communicate offers directly with the consumer involved.

THE MISSING ELEMENT

To realistically enable EBP, the architecture needs to address a key missing element: *intelligence* that can act across layers to make pricing fully interactive with the current consumer experience. Analytics, for example, must be able to make changes to prices through dynamic rules, and just as importantly, to know when to convey the change to the consumer. Pricing changes driven

from analytics must also be able to inform charging and billing, policy and the enterprise product catalog in an intelligent way. This end-to-end linkage of all systems involved provides the necessary ability to deliver contextual pricing through a fundamentally new form of collaboration.

This dynamic real-time rules engine in an EBP architecture moves information back and forth between the other elements, drives pricing and pushes offers to the consumer through real-time interactions. It contains dynamic pricing information that consumers can use to get current prices based on their context or location, as well as to find out which contexts would yield more advantageous prices – much like Uber has transformed the taxi services business.

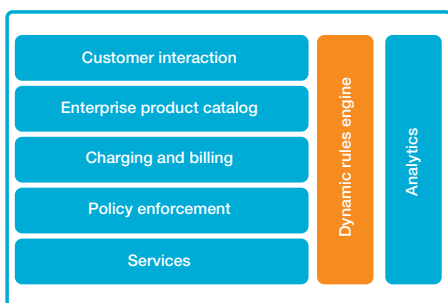


Figure 2: EBP architecture.

This intelligence, shown as a dynamic rules engine in Figure 2, must effectively address the communication of EBP pricing both directly to the consumer and with an operator's customer relationship management systems. This ensures accurate consumer knowledge and visibility of their existing subscriptions, as well as any related dynamic services pricing offers. Much like a gamer seeing in-game offers, consumers could then receive offers and recommendations to improve their experience in the context of their current location and activity in a way that they can be easily consumed. This kind of consumer intimacy and ease of use, based on relevant real-time information, along with the feeling of control and value for money, is key to the success of an EBP architecture and strategy.

The dynamic rules engine that acts in real-time across the OSS/BSS space is the primary missing enabler in an EBP-centric architecture. However, it is important to realize that other OSS/BSS elements and behaviors are equally vital, and to recognize the functionality and capabilities these elements need to play their role effectively in collaboration with a dynamic rules engine. The following section examines the attributes that other BSS elements must support to achieve an effective EBP-centric architecture.

REAL-TIME CHARGING, BILLING AND POLICY

At the heart of an EBP-centric architecture lies

real-time convergent charging, billing and policy enabled by real-time analytics. This provides the baseline flexibility to package and charge for both data volume and speed, and potentially to support bundling of other services. This baseline package, in itself, is not demanding in terms of its charging and billing requirements. EBP is all about charging for additional value components beyond basic connectivity for those consumers who want a different experience – and this is where the sophistication begins.

Consider a consumer who purchases an HD movie package, but realizes that his baseline data package does not provide sufficient speed to support it with the required experience. In such cases, data speed add-ons are classically available to purchase at a pre-established price that reflects an attractive discount. However, if a consumer impulsively purchases an add-on “in the moment” to watch a movie, the price could instead be set according to the availability of network capacity at that time.

Alternatively, the consumer may only be offered speed boost options when the real-time customer experience assurance detects buffering, which triggers the real-time notification engine to offer an add-on to improve the experience.

Fulfilling these options would require a real-time charging and policy system that can intelligently price and dynamically charge according to available network and real-time consumer experience service-level insights from an external system.

A strong focus on experience-differentiated packages will also require an integrated charging and policy control environment, which in turn is integrated with the policy enforcement layer (Policy and Charging Rules Function) to deliver differentiated data experiences appropriate to any consumed offers. This integration must support the ability for new offers to be dynamically defined and orchestrated across the charging, billing and policy domain as a single logical system to provide the expected consumer experience.

REAL-TIME ANALYTICS

Flexible service packaging, control and pricing are vital, but a key pillar of EBP is the ability to understand the experience the consumer desires or requires. At a service delivery level, this requires correlating the quality of service (QoS) as *perceived by the consumer* with the type of service or content being delivered. For example, when the QoS drops below a certain level, this could trigger the offer of real-time speed boosts to the consumer. At a marketing campaign level, real-time analytics can enable an operator to determine the kind of experience consumers have had, and to create and target retention offers or proactive consumer actions accordingly.

The analytics engine also needs to be integrated with the charging and policy control environment

“A transformed OSS/BSS environment includes real-time everything”

to trigger real-time notifications or service delivery actions in an intelligent manner. In practice, this means the ability to enrich usage records, in real time, with experience analytics insights and to communicate action-worthy events.

PRODUCT MANAGEMENT AND ORCHESTRATION

As illustrated, an EBP-centric strategy will, by definition, require complex product and service families with multiple options and add-ons. For many conventional service creation environments, this would mean extensive process duplication, potentially with configuration of the same service derivative across multiple charging, billing and policy systems. For this reason, operators need a fully integrated environment that uses an enterprise product catalog. This will provide a single point of configuration for all products and services, and a common view of the end-to-end product life cycles. The result is that operators will be able to work faster and more dynamically in response to the constantly changing experience needs being created by an ever-growing digital service provider ecosystem.

CAPTURING THE VALUE OF THE NETWORKED SOCIETY

Consumers no longer just consume connectivity, but a wide range of digital services provided by a growing ecosystem. The commodity in which providers trade is more than connectivity, and the value and assets they provide reach

far beyond the network.

Strategies such as EBP can enable operators to capture the value of the wider experience from consumers as well as from third-party collaborators. The operator's ability to package, price, charge and bill, and to support OTT services bundled with their own offerings, makes them an attractive distribution channel and can help establish them within the new digital value chain.

To capture the value of the Networked Society, the operator needs a new mindset and a transformed OSS/BSS environment. The latter includes real-time everything – from the dynamic rules engine to charging and analytics to the central product catalog with granularly defined service components – coupled with intelligent automation that precludes the need for time-consuming human-based processes. Consumer interaction through self-care portals must be used as impactful channels for EBP offers and pricing information to create an attractive and consumable experience.

Operators need to invest in and think about IT as a genuine business enabler that supports and drives real transformation, innovation and new business models. IT-based approaches such as EBP can go a long way in helping to create a better future for consumers, operators and their entire digital ecosystems. ●

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► REFERENCES

[1] Chris Yeadon & Linda Austin, "Operators – you should be making more money," *Ericsson Business Review*, Issue 4, 2014, available at: <http://www.ericsson.com/res/thecompany/docs/publications/business-review/2014/ebr-operators-should-making-more-money.pdf>

[2] Chris Yeadon & Linda Austin, "Experience matters: what operators should really be selling," *Ericsson Business Review*, Issue 2, 2015, available at: <http://www.ericsson.com/res/thecompany/docs/publications/business-review/2015/eb-issue2-2015-experienced-based-pricing.pdf>