

From Gatekeeper to Gold: Leveraging Policy 2.0

By Jesse Cryderman

Policy management is not immediately an attractive phrase, and certainly not a self-apparent creator of value. I'd imagine enrollment in a college class entitled "Policy 2.0" would trend a tad lower than "Sexuality in New Media." It's easy to see why.

The etymology of the word policy leads us to the Greek word polis, or city-state, from which words like politics and police also derive. Policing and politicizing conversation is not exactly desirable dinner table etiquette. However, in ancient Greek, polis described not just the buildings and space occupied by a city, but its citizenry and society as well.

What does this have to do with telecom?

In a sense, the definition of policy in telecommunications is trending away from "police," and more toward its original meaning. In the past, data monitoring was like policing—a reactive affair. Similarly, policy management solutions were reactive—they were on-off gatekeepers, punitive controllers, policeman with batons. More than simply outlining and enforcing a perimeter boundary, policy today reflects and affects the totality of a subscriber ecosystem.



Policy systems that were once viewed as merely a gatekeeper or tollbooth operator have evolved, and can be used to deploy new services, improve loyalty, and maximize network asset utilization. Additionally, policy control and analytics can be leveraged to create and extract value from many new service environments, including over-the-top (OTT), machine to machine (M2M), and the Cloud.

Policy 1.0

The first policy management solutions were based on the market and service dynamics of the past. Networks weren't very smart, or aware, and service offerings were relatively static. In the early days of subscriber service management, policy

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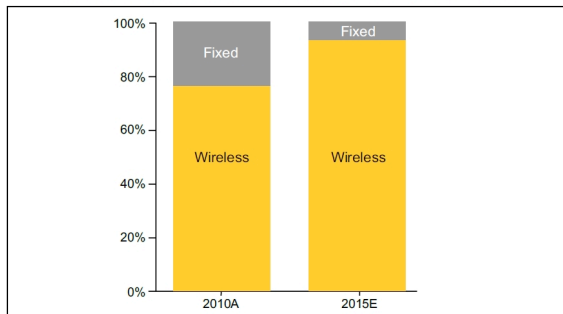
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management was primarily deployed to control broadband consumption by the cable industry. “Initially, policy was a defensive technology designed to enable bandwidth and usage caps and tiers,” explained Kishen Mangat, vice president, Solutions at BroadHop, Inc. “It focused primarily on managing network capacity and utilization. We refer to this era as Policy 1.0.”

In the past few years, however, wireless policy deployments have rapidly outpaced fixed-line deployments as operators scramble to maximize precious bandwidth through a variety of measures (traffic management, peak-period resource utilization, Wi-Fi offload, etc.), while rapidly rolling out new services to data hungry mobile customers. As you can see in Fig. 1 below, mobile policy deployments currently outnumber fixed-line policy deployments by a significant margin, a margin that is projected to widen.

Exhibit 1: Worldwide Policy Management Revenue Distribution: Fixed vs. Wireless Networks



Source: Infonetics Research, Policy Management: Biannual Market Share, Size and Forecasts, March 2011

Feeding the Need for Policy 2.0?

The market for communications services has undergone dramatic change in the past five years. Third-party content, applications, and over-the-top services (OTT) have accelerated the arrival of a new digital services economy wherein the concept of a “traditional” service is fading (as are attendant revenues). As a result, CSPs need smarter, more agile networks and communications IT (ComIT) architecture to keep pace with the demand for, and management of, new services. This fundamentally requires an evolved concept of policy.

Policy isn’t just a gatekeeper, but the “brains of the network,” says Joanne Steinberg, director of strategic marketing, Tekelec. And, a bigger brain means more agility, greater personalization, and faster time-to-market with new services.

Steinberg goes on to point out that mobile operators are most concerned with “how they can use their policy to add value to over the top applications. If

CSPs should be able to analyze the effects of new policies in real-time

I had to pick one theme, that would be it. Some numbers say over 50 percent of the mobile data revenues today are going to OTT providers.”

Kishen Mangat also pegged OTT as a top driver, and cited, “a convergence of factors” behind the dramatic rise in mobile policy over the past two years. “Smart phones and the corresponding explosive growth in data usage, disintermediation of telcos from their subscribers via OTT, and the need to more effectively monetize networks, provide value, and build stronger relationships with customers” is driving the Policy 2.0 boom, commented Mangat.

Policy 1.0 was simply not designed with this kind of flexibility in mind, as CSPs were more concerned with enforcing limits than rapidly rolling out, measuring, and evolving new data services, billing options, and loyalty plans. Now, however, rapid deployment of new services is seen as critical. Joanne Steinberg revealed that a top trend Tekelec has seen among their 55 customers is, “how they use policy to give them time-to-market advantages.”

Policy Analytics

Simply gathering and enforcing policy data isn’t enough. CSPs should be able to analyze the effects of new policies in real-time as well. In this way, they can measure the uptake of new services and correlate it with other system and subscriber data. An essential component of Policy 2.0, as Joanne Stienberg puts it, is, “functionality in the policy server that allows the carrier to analyze the effectiveness of a new policy.” This tool allows marketing and innovation teams to evolve their services in short order. Armed with this data, carriers can quickly launch new policies, measure the uptake, and see how subscriber behavior has changed.

Kishen Mangat identified the importance of integrating policy and big data solutions as well, but emphasized a platform approach. “Operators are looking for quick wins when it comes to out-of-the-box analytics capabilities,” he said. “Concurrently, data sources are being harmonized into larger scale ‘big data’ implementations. With a platform approach to policy management, both the vertical (pre-configured) and horizontal (data integration) approaches can be enabled to achieve short-, medium- and long-term analytics objectives.”

New Policy Management Use-Cases

With a dynamic, sophisticated rules engine and analytics capabilities, there are numerous innovative applications for Policy 2.0. Policy can be proactive, and leveraged as a tool for monetizing everything from OTT traffic to loyalty programs to app-based charging plans. Kishen Mangat noted that, "In the past two years, operators and vendors have become more innovative, introducing application and subscriber awareness to enable 'Policy 2.0' self-service, application and location aware use cases." In an Infonetics Whitepaper, analyst Shira Levine wrote of the, "growing interest in using policy to enable value-added capabilities such as advanced subscriber control or variable charging based on time of day or subscriber profile."

Innovative new use cases include:

- Day passes for trialing new services
- Dynamic shared data plans
- Advanced loyalty programs
- App-based charging plans (email or VoIP is zero-rated, for instance, while other services are tariffed on a real-time, scalable basis)
- Toll-free mobile data, subsidized by content providers, enterprise or advertising
- Cooperative agreements with OTT players for guaranteed quality-of-service (QoS)
- Advanced security policies based on user biometric data

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We've already seen a number of these cases come to life. Belgian operator Mobistar offers its subscribers zero-rated Facebook, Twitter and Netlog. AT&T's CEO has said publicly that toll-free data plans are coming to AT&T by the end of 2012. Comcast now offers Skype HD video conferencing. And most recently, Verizon transformed its subscription plans to toll-free calling and texting plus shared data.

Beyond traditional wireless models, these new use cases extend to two other burgeoning areas of growth: M2M and Cloud. CSPs can create and enforce policies in M2M that ensure data from smart meters is transmitted periodically and at off-peak times. Combine that with location-aware policies, and operators can add a level of security to their M2M devices with policy. Thieves in South Africa recently pilfered smart traffic lights for their SIM cards in order to make free calls; a location-based policy could detect the removal and movement of the SIM cards and immediately disable their use.

In the cloud, data backup from the multitude of devices using cloud services should occur when network strain is at its lowest. However, this requires a dynamic policy to match ever-changing traffic dynamics. Imagine all of the mobile devices on a network uploading exabytes of data to the Cloud

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during an evening World Cup match ... not so smart. Beyond this scenario, various device-, subscriber-, and service-aware policies can be built around Cloud services that best utilize and monetize network assets. The unique business ecosystem created by the Cloud also enables operators to expose and monetize Cloud-based policies to OTT partners (which are often Cloud based).

Even more interesting is the way MVNOs, MVNEs, and Cloud-based service providers are extracting value from policy at their unique intersection between operator and OTT provider. Kishen Mangat said, "These 'new' types of providers are finding success delivering applications and services to the subscriber with greater levels of personalization and context, leveraging enterprise API's that extend all the way into the operator network for real-time network, QoS, and charging control." Dynamic policy management capabilities will become increasingly important as services become more important and connectivity more ubiquitous.

The potential applications for Policy 2.0 are only limited by the scalability and sophistication of the platform and the imagination of the operator. Policy is no longer just a policeman, but a driver for new revenue in the transformed communication service market. As connectivity becomes ubiquitous, and services becoming network-agnostic, policy management has to be dynamic, real-time, and interface with a myriad of systems, from billing and provisioning to product catalog. These facts are only compounded by the growth cloud and M2M deployments. Leveraging policy management 2.0 is the only way for CSPs to compete and remain relevant in the new digital services economy.

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