

Nokia Siemens Networks

Putting identity into context



Mastering the who, what, which, when, where, and how of modern telecommunication

An ever more complex cocktail of competitors is shaking up the telecommunications market, and the pressure is on to speed up the pace of innovation. Hardly a week passes without news of newcomers appearing on the scene, vying for the customers' eyes and ears. New ventures based on the premise of targeted personal advertising and focused on subscriber data – Joost, Facebook, Google, Blyk, and many more – are offering free IPTV, mobile telephony, messaging, and community services.

Retraining the focus from the product to the customer

A recent market survey commissioned by Apertio, now part of Nokia Siemens Networks, polled 70 operators around the globe. 59% stated mounting competition posed the greatest challenge. Telecommunications has become a hotly contested arena, making it tough for telcos to deliver on their corporate strategy. With this fiercely competitive market in mind, operators know they must redouble their focus on customers. Most have begun transforming their organizations from product-oriented to customer-focused businesses.

Tackling the organizational challenge is a step forward, but another great challenge looms. Operators must understand subscriber behavior to pinpoint opportunities, target and tailor services, and interact effectively with

consumers. To do this, they must first correctly identify each subscriber in a complex, converged, and open IP environment. Subscriber identity is a strategic asset. Operators who harness its power can facilitate and monetize a tripartite relationship with the subscriber and capitalize on the potential of a more innovative third-party ecosystem.

Subscriber centricity – an elusive objective?

But the goal of a subscriber-centric outlook is often elusive in an environment where networks lack a physical center. The traditional reference points – phone number, MAC/IP address, SIM, or username – are no longer sure-fire identifiers as operators converge their networks and move to all IP. Identity schizophrenia soon sets in where multiple devices, services, and network identifiers co-exist.

Back to the identity roots

As Apertio's market survey reveals, it takes more than merely bundling services to become a customer-focused converged operator. Respondents stated that managing identity, access, and authentication data in real-time is the most critical obstacle to providing seamless network access. So the ability to manage the subscriber's identities – which come and go with the ebb and flow of new services and subscriptions – is the bedrock of subscriber-centric business.

Identity – that is, the record of a subscriber's usage, activity, profiles, and policies – is now the network's logical center, and managing identities across all IP sessions is the ticket to converged service delivery. The ability to trace any alias back to the subscriber's root identity certainly benefits transparency. But more than that, it puts the operator in the driver's seat. By applying the appropriate policies and leveraging profile data to make it personal, the operator is in full control of the converged experience.

Orchestrating the IP experience with policy control

Identity is the key to unlocking successive network value – without it, sessions are limited to generic service control capabilities. Orchestration enables the operator to identify every session and correlate it with the given user, while taking personal preferences and rules into account.

An analogy best explains policy control: We may drive our cars down the highway, but rules and regulations tell us how fast we can go, what route our journeys will take, and where we must stop or proceed with caution. They even direct us to points of interest and the nearest pit stop. The ability to orchestrate sessions with a subscriber-centric outlook grants operators similar powers over what consumers do and where they go. And this authority extends to enhancing, constraining, and privileging every user experience.

Owning the customer experience

Session orchestration boils down to setting out business rules for groups or even individual subscribers. These business rules are delineated by personal policies enforcing subscriber entitlements in real-time, throughout the session from start to finish. Session policy management can be a powerful tool in a world of open Internet services where operators jostle to differentiate their offerings. In the hands of the savvy operator, this tool helps build the intelligent IP channel and retain ownership over the customer experience.

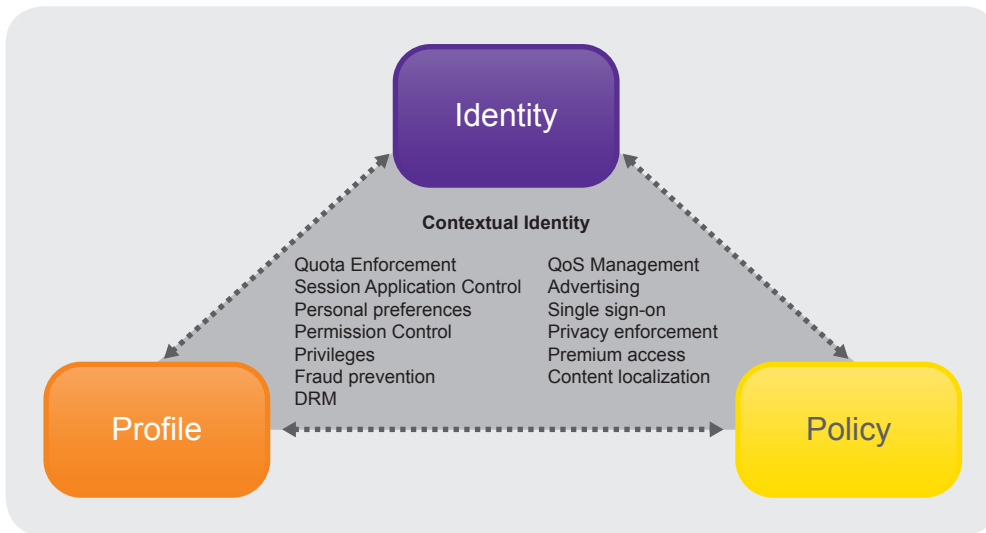


Figure 1: The contextual identity triangle

Getting personal with contextual identity

By bonding identity and policy, operators can exercise renewed control over the user experience. But unless this combination is paired with the subscriber's profile, it would appear to be a one-sided, authoritarian approach benefiting the operator more than the customer. So providers of converged services need to deliver an "adaptive" service experience – one that conforms not only to the device or network capabilities, but also to the needs of individual customers.

Contextual identity does this by combining the identity, policy, and profile to make session control relevant to the individual. Imagine the potential of comprehensive personal profiles with the account balance, subscriptions, privacy settings, presence, and location policies added to the mix. The operator could instantly grant privileges based on market segment, immediately shut down unauthorized sessions, or even afford access to premium off-net services based on the subscriber's pricing plan or current subscriptions. The customer, in turn, could buy time or bandwidth usage quotas and configure privacy settings to restrict advertising and calls. The possibilities for session control abound.

Tapping profile data to personalize the user experience

Policies paired with a full-fledged, unified view of all customer profile info are sure to yield the greatest benefit. Policies combined with incomplete profile data, landlocked within silo applications, limit the operator's ability to shape the user experience, and will only lead to frustration. The depth and breadth of profile data ultimately dictate the provider's ability to personalize the user experience.

The need for higher performance and greater flexibility

With broadband services becoming so very popular, data traffic is rising fast. It takes a new generation of products with information technology's openness and flexibility and telecommunication technology's carrier-grade performance and scalability to meet booming demand. What's more, the burden of network applications tasked to serve multiple network access technologies and a burgeoning customer base grows heavier by the day.

If all this was not enough, the shift from mass-market offerings to one-to-one communications enters the picture to complicate matters. The drive to market real-time personalized services to individual subscribers is pushing the performance barriers. Even given more powerful solutions, operators still need the flexibility to apply policies to groups, communities, and individuals. They need the means to adapt policies on the fly as consumers subscribe to new services with change in pricing or status that this entails. In a nutshell, operators need tools that empower them to create, provide, and retire their business logic without having to micromanage the business.

Monetizing the experience

In these times of accelerated change, operators are compelled to transform their business models. The unilateral relationship, where operators “owned” the customer, is no longer sustainable. The open, converged Internet environment is more akin to a civilization video game where a higher authority fosters a community but individuals are free to interact and transact within it. The object of such a game is to nurture a society that stands the test of time, and the only means of exerting authority is indirect, by carefully managing rules, resources, and services. This analogy fits the telecom market in that the emerging opportunity is a two-sided business model, where an operator’s revenue and business success hinges on the ability to facilitate and personalize third-party transactions.

Correlating permissions, privileges, preferences, and profiles

Identity figures prominently in this model. The operator who is able to consistently identify subscribers and correlate their personal permissions, privileges, preferences, and profiles is in a unique position to govern the user experience. While the broader ecosystem generates a wealth of opportunities for the consumer, contextual identity services enable the operator to enhance and secure the experience.

With the awareness that contextual identity is a real imperative comes the need for a systematic process of proven techniques to orchestrate the subscribers’ open Internet experience. Developers can look to other industries for inspiration. Financial and retail markets long ago identified valuable events that trigger a need for customer interaction. Likewise, much can be learned from e-commerce companies lacking a physical channel or relationship with customers. Online businesses have a finite window of opportunity to interact with potential customers who may be won over or lost in an instant.

Some of the real opportunities for generating revenue include: “legal age” and nationality authentication for gambling, adult content, purchases of alcohol, etc. Some Web 2.0 services incur a cost in the order of \$22 USD for each customer they recruit to ensure they are of legal age. Operators can provide anonymous customer profile information very competitively to 3rd parties looking for marketing insight or verification for government compliance requirements. Child locator, parental screening, personalized web home page, service blending with caller ID with IPTV, user account provisioning on demand, targeted advertisement enabler, and cooperative payment could all have real business potential.

The ultimate aim is to monetize the experience, maintaining customer ownership and brand mindshare, as consumers spread their wings and spend time off-net. The telco must prominently display its ability to deliver value, outshining all those competitors vying for the fickle customer’s attention. Then it can build a launch pad for an array of third-party transactions, and tap the vast potential of a much broader business ecosystem.

Mastering the identity challenge

The poll commissioned by Apertio asked operators what they believe to be the most relevant aspects of subscriber data intelligence. Most pointed to customer profiling, with identity management coming in as a strong second with a 64 percent rating¹. In a world where the boundaries between the Web and the network are blurring, identity management helps the operator establish a position as a trusted identity provider. Nokia Siemens Networks has the skill set and experience to help operators resolve identity issues and treat users to a truly converged experience.

¹ Source Apertio Loudhouse Research, Q3 '07

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