

THE NEXT GENERATION

The rapidly expanding IPTV market in the Asia Pacific region is outgrowing the limitations of current generation middleware products. How can a service delivery platform approach to IPTV middleware help service providers maintain their competitive edge?





High-tech market research firm In-Stat reported that the Asia/Pacific region is leading the global revolution of IPTV in infrastructure deployments, applications development, and subscriber adoption. The region's broadband penetration and regulatory support help to foster the fastest-growing IPTV market in the world as is evidenced by the following data points: By 2011, the Asia/Pacific market is expected to reach 39 million IPTV subscribers with total IPTV revenue in the region reaching US\$8.1 billion by 2011.

In-Stat notes that providers will need to find a unique approach to packaging and bundling in order to attract customers and maintain a competitive edge. As a result, most IPTV service providers have strategically integrated services in their triple-play bundled offerings.

Deployments in this region are limited by the key element that enables service providers to launch new interactive services and enable full control of their subscribers' experiences: the current generation of middleware on the market. Middleware that is too prescriptive in terms of client technology results in a limited range of set-top boxes being supported (almost de facto vertical ecosystems per middleware provider) and non set-top box devices such as PCs, mobile phones or other mobile devices not being supported at all. Even if many of the devices are supported in a limited fashion, the current products are inflexible. Changing applications, adding new ones or integrating with an operator's existing core business functions can be a difficult and painful process. By their very nature, these proprietary solutions underutilize the vast array of application developers within a region. And, once these middleware solutions are in place, evolving an application suite is too cumbersome of a process.

Client devices for TV consumption are broadening beyond the limited range of set-top boxes typically supported for a service in a given geography. Alternative media viewing devices such as PCs, mobile phones, portable players and game consoles can and should also be supported within an IPTV network. The resulting requirement for IPTV middleware is rapid portability of the end user experience. This can only be achieved through a truly horizontal approach to client middleware. Less and less can operators afford to dictate the client middleware environment across the increasing spectrum of devices that

is emerging. Often, the service provider, and hence its middleware provider or system integration partner, will have to pragmatically accommodate client software architectures if they want to leverage these interesting and emerging client devices.

The TV service definition is not a static one and the advent of IPTV has only accelerated this evolution. IPTV in and by itself has innovated the TV service definition, yet still moderately so in actual deployments. A wealth of marketing opportunities for increasing the average revenue per subscriber (ARPU) depend on middleware to support new business models and the presentation of services over these new client devices.

CREATIVE MIDDLEWARE

Continued innovation demands a more open approach for the IPTV industry. A 'service delivery platform' (SDP) approach to addressing the headend side of the applications is emerging as the architecture of choice. An open SDP relying on a Service Oriented Architecture (SOA) provides a scaleable and solid base for an operator to both build new services and to leverage its existing service and OSS/BSS infrastructure. It can be tied into an IMS framework going forward and is network independent. The end result is a highly customisable SDP which is fully open to both global and local players for developing revenue-generating applications tuned to the differentiation requirements of service providers.

The SDP cannot be a monolithic solution where the server dictates the client architecture. The existing exclusive server/client middleware business models from one single vendor are no longer acceptable in the marketplace. Instead, the increasing importance of hybrid deployments such as cable and IPTV, satellite and IPTV, or terrestrial and IPTV inevitably have to include established client middleware solutions for broadcast like OpenTV.

Different runtime environments at the client side have their own life cycle and should not have a one-to-one relation with the service itself, rather with the devices for which they have been optimised. An open SDP simultaneously supports future evolutions and generations of browsers, as well as native managed code such as Java, MHP, C# and, in the near future, Flash. For future proofing services, operators should prefer to decouple these technology life cycles from the service definition itself. Using SDP allows both to evolve at their own pace.

Nagravision, a Kudelski Group company, is the world's leading independent supplier of open conditional access systems, DRM and integrated on-demand solutions for content providers and digital TV operators over broadcast, broadband and mobile platforms. Its technologies are currently being used by more than 120 leading pay-TV operators worldwide securing content delivered to over 71 million active smart cards and devices.

The company's conditional access solutions include features such as encryption, subscription services and PPV, and support on-demand services including subscription Video-on-Demand (VOD) and Movie-on-Demand, DVR, Push-VOD, season and team tickets, tiers pricing, targeted messages and conditional products. The solutions can also manage the security needs of interactive applications such as t-commerce, t-banking and t-voting. The conditional access solutions handle subscriber updates and new subscriber enrollment and manage all encryption modules. In addition to basic scenarios (clear encrypted streams, free controlled access), protected access

to particular products can be given for a limited period of time, a certain number of times or under certain conditions.

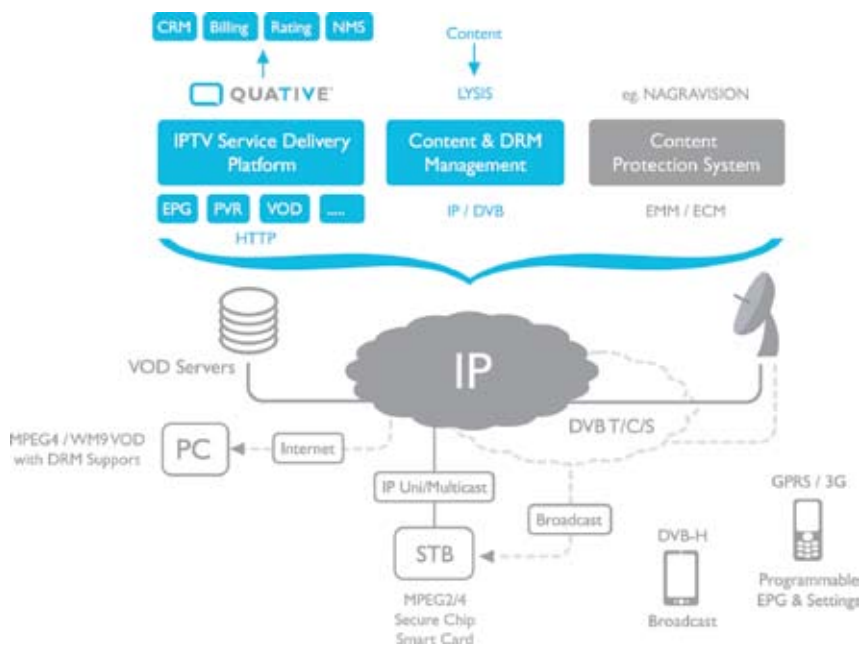
Quative Limited is a wholly owned subsidiary of the Kudelski Group. Quative provides a next-generation award winning service delivery platform, SDP2.0, in combination with a comprehensive content management system (CMS) from Nagravision/Lysis and acts as a specialised end-to-end IPTV solution integrator for service providers. Quative is focusing on telecom and internet service providers launching new IPTV services or migrating to next-generation IPTV solutions. It also offers a solution for cable and satellite/terrestrial pay TV providers deploying IPTV to seamlessly enrich the existing broadcast services.

Quative SDP2.0 powers the delivery of applications to set-top boxes including PVRs as well as PCs. Operators using the next generation platform can decouple the complexity of traditional broadband and IPTV solutions which typically have an exclusive relationship between client and server side solutions. SDP2.0 can deliver and manage its own reference applications, which are highly customisable, or applications from third

parties. Quative SDP2.0 forms a server side middleware solution for IPTV which is integrated with client middleware from OpenTV as well as other solutions offered in the market and available on a variety of IPTV set-top boxes. SDP2.0 also comes with a default reference application suite supporting OpenTV Core2 and OpenTV HTML.

Quative SDP2.0 comes pre-integrated with Nagravision Lysis content and DRM management and Nagravision content protection systems. The platform supports the industry's leading video server and encoding systems. The solution suite enables operators to provide a flexible, expandable set of distinctive features while securing a stable, reliable platform with a short time to market.

The Kudelski Group is a world leader in digital security. Its technologies are used in a wide range of applications requiring access control and rights management, whether for securing transfer of information (digital television, broadband Internet, video-on-demand, interactive applications) or to control and manage access of people or vehicles to sites and events. The Kudelski Group is headquartered in Cheseaux-sur-Lausanne, Switzerland.



Operational improvements of an SDP include supporting a 'wholesale-capable' platform that allows both wholesale operators to sell a white-branded service to other service providers and regional operators to join forces leveraging economies of scale through a common

backend. This requirement is fulfilled in an application hosting model supporting a notion of 'multiple virtual operators.'

An SDP allows for content management systems to be incorporated from the start of service deployment. While typically only introduced when

library manageability has already become an issue, much higher service consistency can be achieved by introducing this as part of the service definition process.

THE SOLUTION

The next generation of IPTV middleware is available today and provides a key element in IPTV end-to-end solutions. The award winning Quative SDP2.0 enhances a service provider's ability to launch new interactive services and enables full control of the subscriber experience. Device-independent and utterly lightweight APIs cater to a variety of client run-time environments like browsers, Java and Flash. This approach has already paid off in the straightforward integration of a rapidly growing list of market leaders in client middleware and TV browsers.

Supported by a number of leading set-top box vendors, Quative SDP2.0 comes pre-integrated with Nagravision Lysis content and NagraIP content protection systems. The result is a comprehensive solution suite enabling operators to provide a flexible, expandable set of distinctive features while securing a stable, reliable platform with a short time to market. ■ www.nagra.com