Meeting Application Demand Profitably with a Smart Network

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The Information Age has evolved from a Web 1.0 Read Only environment to a Web 2.0 Read/Write and share world. Networks have evolved from 2G to 2.5 G to 3G. The growth of broadband has helped to shift user focus from voice and personal communication to multi-media and content communication, and that's just the beginning for a smart network that makes application enablement a reality.

Historical Market Changes

With Web 1.0, we first got hooked on instant Web access and instant access to information via search engines and web browsers such as Netscape. Improved technologies led to better Web experiences thus propelling growth. With Web 2.0 enablement, Instant Messaging (IM) and Social Networking have led to wide-spread yet close-knit communities while viral spread of content and news happens at such a pace that people face 'information overload'. Consumers are now bringing their new tools to the office expecting them to work seamlessly as they do at home.

From an enterprise perspective, 2G & 3G technologies combined with innovative mobile devices such as smartphones and netbooks have enabled employees to shed traditional communication limits. Mobile e-mail access proved its value at the executive level, and around-the-clock access to corporate communication trickled down through the ranks as proof of productivity increases that demonstrated a strong ROI for the enterprise. Productivity applications began to grow, and business worker behavior began to change.

Enter the Apple iPhone, a true game changer that has helped make applications and content "king" while decreasing the perceived value of the network. This mobile device from a non-telecom player reached 1 million customers in the first year and created an easy entrée for third party application & content providers (ACPs) to quickly gain mass distribution of their applications.

The increase in data traffic has network providers racing to keep up with the demand for bandwidth — a continuous demand for bigger "pipes". The challenge is to do so at a profit and in a way that leverages the 'intelligence' of the network — a smart network. This race isn't just for more bandwidth or greater coverage — it's about creating sustainable business models that allow for the combination of high value network capabilities with the speed and innovation of the Web to provide consumers and enterprises a richer and more trusted Web experience — what Alcatel-Lucent calls application enablement.

Consumer Research

In the consumer market, a driving force behind much of the growth is youth and young adults. They are still asking "why", "what if" and "why not" questions. Alcatel-Lucent's Market Advantage research shows an overall interest in higher quality of service and centralization.

- Users believe the technology will make their lives better ("It helps me stay connected"; "I'm more efficient"; "Information is more accessible"; "It keeps me organized"; "It's entertainment").

- Users want to do more with TV, phone and PC ("Games running faster are more enjoyable"; "watch daily news & sports highlights").

- Storing and sharing information are more important (a media vault would add more flexibility to do what they do today).

- Mobile shopping provides value (users expect security issues to be addressed; they want personalized shopping notices; they want to select and track products to comparison shop; they want e-coupons/discounts real time).

Market trends align with research

A recent report on App Store's top grossing applications shows the top pick by consumers is a new social networking app, the second most popular is entertainment, third and fifth are mapping/GPS apps, and fourth is — yes — a shopping tool. (Fierce Mobile, 10/13)

At CTIA Spring 2009, three new apps stores were launched by major vendors. Six months later, a new app store now offers single stop shopping for most major mobile device operating systems, illustrating the need for centralization.

Google's Go Mobile Week also confirms Alcatel-Lucent's research findings. Feature updates include product search enhancements (shopping), news scanning, bar code scanning (shopping), search by voice, and search with location.

In the business market, enterprises have experienced shifts in communication needs. They have embraced anytime access to corporate e-mail and knowledge bases. They are pushing corporate applications into the hands of mobile workers for instant information access and superior customer service. They are exploring cloud computing and its potential benefits versus security and reliability risks.

Overall, market drivers for network providers include support of new consumer preferences (e.g., on-line chat for helpdesk support), and the need for direct interaction with customers (to maintain customer loyalty). Enterprises look for new marketing and sales opportunities to drive add-on sales, and must develop new or enhanced products to maintain market differentiation.

Demands on network providers

Simply put, end users want connectivity any time, any where. They want a high quality of service (QoS) for all the applications and content they access when they consume it (e.g., high bandwidth for video streaming and gaming). They want a network provider to provide a trusted web experience allowing them to access more applications and content when and where they want while having a trusted on-line shopping and banking experience without sacrificing control of their personal information. They want value for what they purchase.

Delivering on end user demands

Delivery on end user demands can be considered in two areas, the underlying network and the network provider's framework for capability exposure to application and content providers.

Regarding the underlying network, many wireline providers have converged their networks on to IP. Currently, many wireless providers are incorporating more IP technology at the edge of their network as well as in the network core. This IP convergence uses the latest broadband and optics to transport traffic reliably (QoS), at a lower cost (CAPEX, OPEX). Characteristics include high demand web capabilities, scalability for growth, dynamic bandwidth to meet changing needs cost effectively, resilience to ensure always on service to users, cost effectiveness with operational efficiency and innovations, multi-service to support different, but concurrent traffic, open and interoperable for rapid delivery of new services. The network is secure and private for all, and eco-sustainable to reduce the environmental footprint. As wireless networks move towards IP, there will be increased synergistic opportunities to converge wireless and wireline networks to one providing greater ubiquity of services across multiple screens/devices.

The second large area for meeting end user demands is new service creation and revenue growth by enabling applications and content on the network. Network providers can expose application programming interfaces (APIs) capabilities such as presence, location based services, identity management, messaging, billing, security, etc. These APIs are used by in-house developers, trusted partners, and third party application developers and content providers to rapidly innovate, offer personalized services and content, and generate new revenue.

Getting started

For most network providers, the path to delivering high value, personalized services to end users has already begun with alignment of their network with IP. While most initiatives were originally justified purely on cost savings, network providers are now actively looking to turn the IP network into a smart network which can be leveraged for revenue generation. This goal leads to a proactive plan to work profitably with a larger ecosystem of application and content providers to combine their innovative services with the trusted capabilities and speed of the network. Within this new environment, the network provider adds high value network capabilities and plays a larger and more relevant role in application and content delivery to their customers.

For more information, go to www.alcatel-lucent.com/application_enablement.

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