



The Mobile Internet continues its explosive growth with IP-enabled smartphones, netbooks, machine-to-machine embedded devices, and other mobile Internet devices gaining rapid acceptance.

With global mobile data traffic doubling annually and projected to reach 3.6 exabytes per month by 2014, according to the 2010 Cisco® Visual Networking Index, mobile operators face unprecedented challenges and opportunities.

The Cisco portfolio of solutions for the mobile Internet can enable operators to:

- Increase network intelligence and performance to handle rapid growth in mobile data traffic
- Reduce capital and operational expenses through deployment of more intelligent and efficient networks
- Build sustainable and profitable business models in existing and new markets
- Create and deliver differentiated and personalized services to delight and grow the subscriber base

Mobile Operators at an Inflection Point

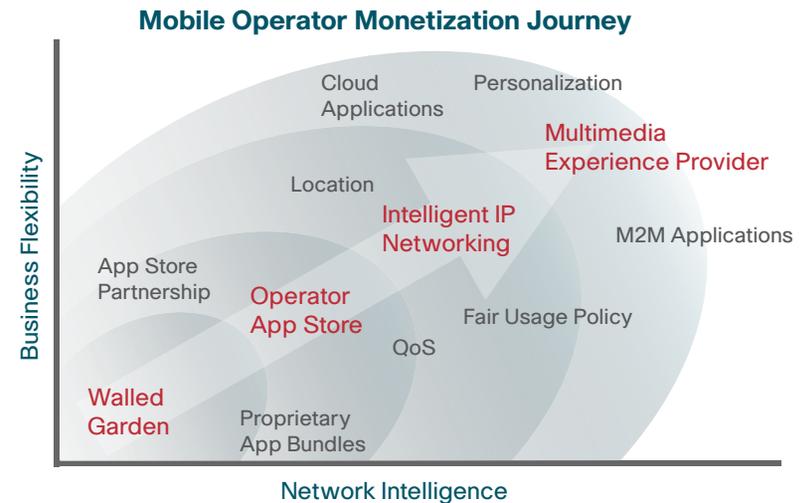
Mobile operators have accelerated broad customer adoption of mobile data services with the deployment of broadband technologies and implementation of flat-rate and tiered mobile data plans. In many cases, these plans have created the unintended consequence of revenueless traffic growth and services substitution, as users increasingly choose applications from the open application ecosystem.

These trends present significant challenges to operator business models. Operators are responding in many ways, including launching their own application stores, or enabling developers to access application programming interfaces (APIs) to network services such as billing and location.

Although these are initial steps, operators are looking to do more to reduce the danger of becoming “bit-pipe” suppliers to other providers that are monetizing applications and value-added services.

Monetization in the New Mobile Ecosystem

To increase sustainable revenue in the open application ecosystem of the mobile Internet, operators must deploy intelligent IP networking solutions that enable differentiated mobile broadband services and allow entry into promising new markets such as machine-to-machine, cloud services, and targeted advertising (Figure 1).



The foundations for new services revenue and higher customer satisfaction and retention include intelligent IP network solutions such as:

- **Policy management:** To enable users to personalize their consumption of services in real time and allow operators to more efficiently manage traffic
- **Services-aware charging:** To allow operators to flexibly bill subscribers using a variety of metrics, or to meter usage against fair-use-policies (FUP) quotas
- **Content filtering:** To provide protective services for minors or to preserve cultural norms
- **Quality of service (QoS):** To enhance the user experience for bandwidth-intensive applications such as video
- **Application detection and optimization:** To enable the network to appropriately manage diverse mobile applications and implement FUP
- **Stateful firewall:** To detect and prevent unsolicited network applications

These capabilities help operators optimize their networks and more accurately target and expand available markets. Intelligent IP networking also enables sustainable, mutually beneficial business partnerships with third-party application providers.

Cisco IP NGN Leadership for the Mobile Internet

Cisco offers one of the most comprehensive end-to-end solutions for third-generation (3G) and fourth-generation (4G) mobile networks. The Cisco IP Next-Generation (NGN) encompasses IP Radio Access Network (RAN) backhaul, packet core, service control, IP core, and data-center solutions—all optimized for the growing mobile multimedia market.

Key benefits include:

- Industry-leading, carrier-class performance
- Subscriber-, session-, and application-aware network intelligence for improved bandwidth management and new services revenue
- Evolved Packet Core (EPC) solutions with leadership technology, investment protection, and integration of services
- Carrier-grade IPv6 support for machine-to-machine devices, the “Internet of Things”

Cisco Full Lifecycle Services

Cisco’s experience, tools, and best practices help operators reduce the time to market and mitigate the risks in deploying IP RAN, mobile packet core, IP core, IPv6, Long Term Evolution (LTE) EPC, and more.

Why Cisco?

Cisco solutions, services, partnerships, and expertise help operators make the network and business transformations necessary to monetize the mobile Internet.

Figure 2 Intelligent—Services: Context Aware Services to Any Subscriber or Any Screen

