

Motorola Reach

Efficient Wireless Solutions to Enable Profitable Emerging and Developed Market Growth



Motorola Reach

Efficient Wireless Solutions to Enable Profitable Emerging and Developed Market Growth



Are the challenges of developing a profitable wireless service in emerging markets fundamentally different from those in developed markets? And are the associated network solutions also fundamentally different?

Not in Motorola's experience. We believe well-designed economic solutions benefit service providers in all markets ...

A Global Grasp for Growth

Emerging markets are and will continue providing dramatic growth in global mobile subscriber numbers. In Pakistan alone, for example, between June 2004 and December 2005 the number of mobile users increased from 4 million to 18 million — a 450% increase. Demand is driven not only by consumers, but also by governments seeking economic expansion.

Growth of such magnitude means many service providers are facing the challenges of developing a profitable mobile service in emerging markets. Some believe that emerging markets are fundamentally different from developed markets — and therefore, the network solutions they require are also different.

Motorola believes otherwise. Our considerable experience in both emerging markets such as Africa, India and China and developed markets like Western Europe has shown us that the network requirements of service providers in emerging and mature regions are often very similar ... and that well designed economic solutions will benefit service providers in both types of markets.

The Common Factors

LOW COST VOICE SERVICES

Emerging market voice tariffs have traditionally been lower than developed markets, earning an average of only \$.07 revenue per minute (RPM) while

developed markets earn an average of \$.20 RPM. However, service providers in Western Europe, the USA and Japan are facing voice tariff erosion as mobile competition intensifies and mobile service providers target segments such as fixed line substitution. Emerging market service providers need economic networks to make their business case viable, while developed market service providers need their networks to be substantially more efficient to protect profit margins.

MIXED SERVICE PORTFOLIOS

Protecting overall profit margins with a combined service offering of voice and data services has proved an effective strategy for developed market service providers. However, a varied service portfolio can be an equally valid tactic in emerging markets.

Where there is no alternative source of internet connection such as DSL, demand for mobile data connections (even over GPRS) is strong in both urban and rural environments. The next billion mobile subscribers will not be satisfied with basic voice services. Both emerging and developed market service providers must be able to provision data services with very cost effective and scalable solutions.

CELLSITE POWER REQUIREMENTS

Many people would associate cellsites that require alternative power support as an emerging market issue. However it is a sizeable issue for developed markets, for example one of the leading UK mobile

Motorola Reach means maximum flexibility at lower cost and faster time to market

service providers has over 900 cellsites that are not on the main electricity grid supply. Nonetheless emerging markets do face additional issues of needing alternative power backup on cellsites due to the main grid supply being intermittent. Power for cellsites is a critical issue for all service providers both financially and logistically. Efficient Radio Access Network (RAN) and Core network products that have minimum power requirements and alternative power sources such as wind power are a valid requirement in all market types.

Motorola Reach

Motorola's Reach GSM Solution delivers:

- Low entry cost network solutions with scaleable voice coverage and capacity
- Data services that can be switched on and scaled upwards as needed
- Sustained low OpEx across the network, rather than escalating costs two to three years into service launch

The Motorola Reach solution includes :

Horizon II basestations in macro, mini and high power micro formats provide increased deployment flexibility. Motorola's GSM basestations address issues such as achieving a low cost-per-subscriber ratio, serving both dense and sparsely-populated areas, and maintaining consistent service quality. Reduced power and maintenance requirements are just two of the features that result in sustained low operational costs. In addition, all Horizon II basestations are data capable including support of EDGE.

Distributed IP based architecture for core with Motorola GSM SoftSwitch. The benefits of the IP switching platform includes small footprint and localized routing (i.e., reduced backhaul requirements) resulting in lower operating costs. IP based core solutions also enable service providers to plug and play with new data and voice service combinations like PoC and UMA and furnish a clear upgrade / inter-connection path to mobile broadband data capabilities like HSDPA.

Alternate power sources for off-grid cellsites.

Motorola is evaluating improved cell site power efficiency and renewable energy sources, in addition to solutions already available. The combination of solar and wind is very promising — in Motorola's UK trial site, battery backup was rarely required to power the site. An integrated design of renewable power could enable the system to charge reserve batteries while providing active power to drive the cellsite on a day-to-day basis, including air-conditioning.

Motorola is also driving the market for durable low cost handsets which do not require subsidy by the service provider to meet emerging market subscriber price points.

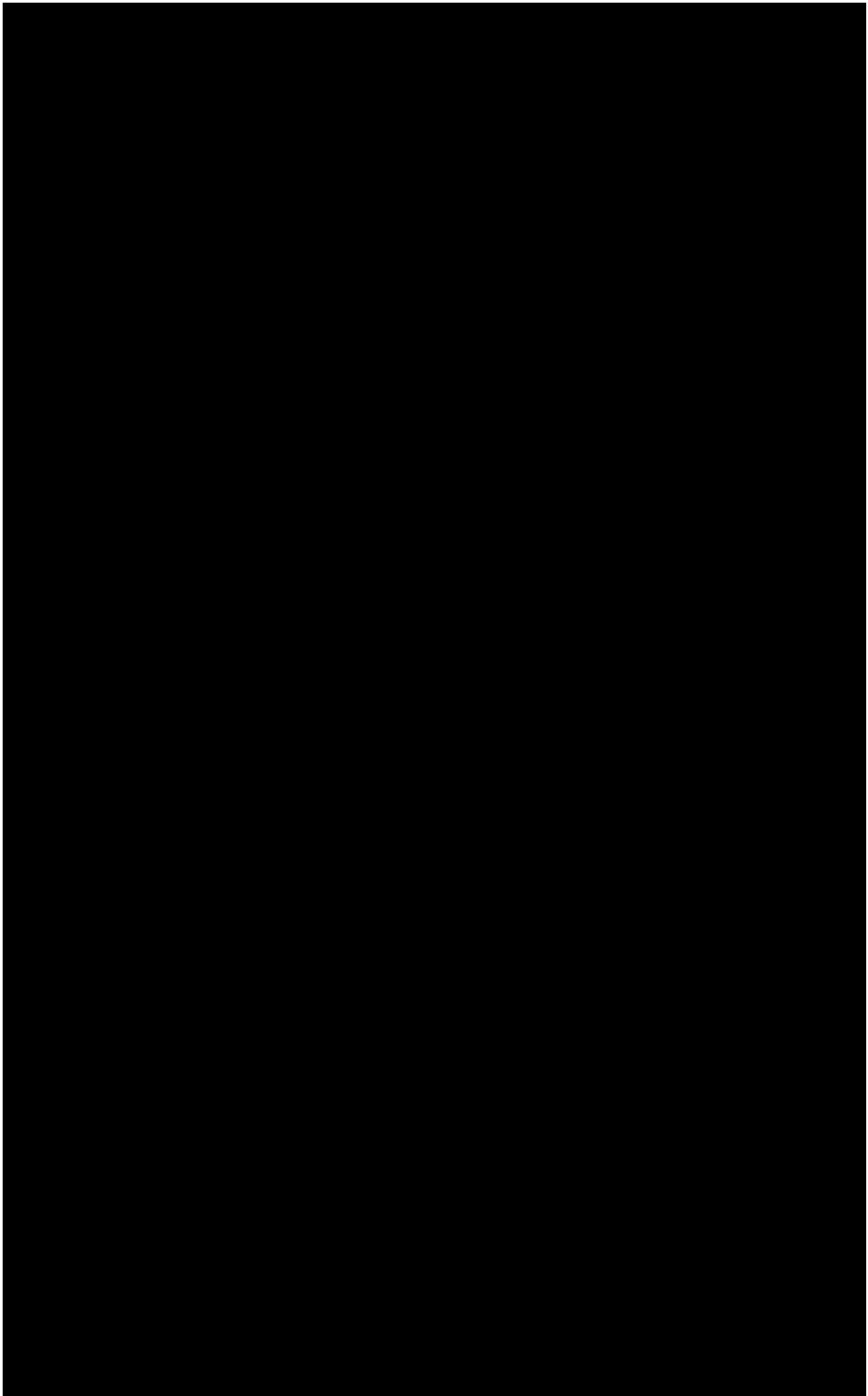
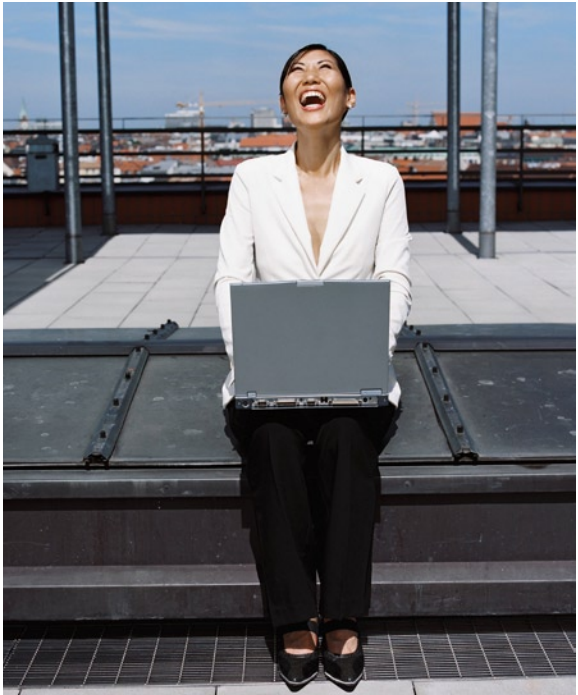
Motorola's ongoing agreement with the GSM Association to manufacture a range of robust sub-\$40 handsets that meet the specific needs of emerging markets, such as longer battery life. The designs are attractive and can be tailored to local tastes — offering a bundled football game in Africa and a cricket game in India, for example. Service providers can include further value added options to attract customers — a 'lantern' feature is proving popular in regions where electricity is scarce.

Network Services and deployment experience – Motorola offers considerable experience in network design, rollout and optimization across developed and emerging economies. Motorola considers the overall service performance – we have delivered leadership in multi-vendor optimization across RAN networks and also with data service optimization where we identified and resolved key network throughput issues delivering real E2E service improvements.

Extend Your Own Reach

Motorola's Reach GSM offering is attractive for service providers in both mature and emerging markets because it delivers maximum flexibility at lower cost. The ability to scale network capacity as voice call demand grows and to introduce and expand data services are also key elements of the Motorola Reach portfolio.





MOTOROLA

Motorola, Inc.

www.motorola.com/networkoperators

MOTOROLA and the Stylized M Logo are registered in the U.S. Patent and Trademark Office. All other product or service names are the property of their registered owners. © Motorola, Inc. 2006

0206networksgms