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expanding
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3/2007

Middle East market profile

The increasing role of e-governance

Nokia Siemens Networks Village Connection: New way for operators to reach rural areas

New benefits for consumers
Growing demand for data services

expanding horizons
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Published quarterly

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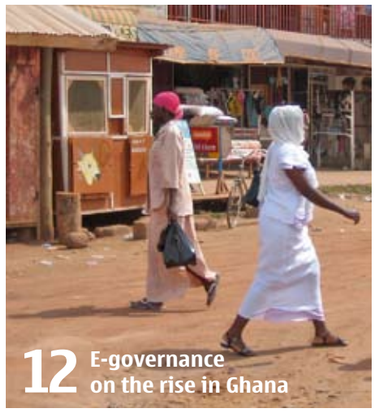

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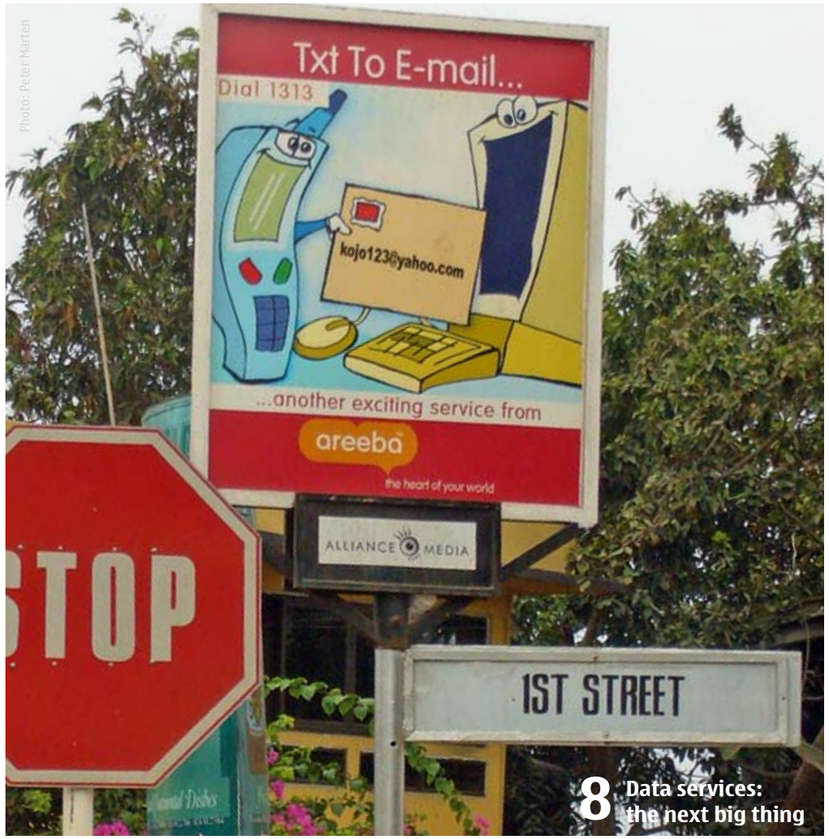

8 Data services: the next big thing

EDITORIAL

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DATA SERVICES are becoming associated with mobile communications just as closely as voice and text. As mobile subscriber numbers in new growth markets increase, consumer habits are also evolving and demand is growing for data services such as internet access. Data forms another aspect of mobile communications that will help produce socioeconomic benefits.

Mobile devices and networks offer technology that can meet the expanding need for data services conveniently and cost-efficiently. Our lead story describes how operators and regulators can increase mobile data services, for example by moving toward third-generation GSM technology.

This issue of *Expanding Horizons* also focuses on mobile communications in the Middle East with a market profile and interviews with top industry professionals. Elsewhere in the magazine, an African policy-maker tells us about the development of e-governance, in which governments utilize ICT to keep their citizens informed.

Another article depicts Nokia Siemens Networks Village Connection, in which a local entrepreneur runs a local network as a franchise business, bringing the benefits of mobility to more people while letting operators expand network footprints and subscriber bases with a relatively small investment.

Enjoy your reading experience!

Rauno Granath **Søren Petersen**

Expanding Horizons is published quarterly for operators, regulators and government policy-makers who are advancing mobile communications in new growth markets. Presenting best practices from around the world, the magazine shows how to create a favorable environment for market growth.

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Wind works: Mobile operator Orange UK has developed a wind-powered mobile phone charger in cooperation with the University of Texas. The miniature windmill weighs only 150 grams and represents a reliable off-grid energy source.

Quick growth stats

Brazilian regulator Anatel plans to proceed with auctions for 3G licenses before the end of 2007. The Latin American GSM association 3G Americas predicts that 2008 will form a big year for 3G in the region, with growing user interest and operator expertise leading to added competitive offerings.
Source: Anatel and Business News Americas

In eastern Europe, high-speed download packet access (HSDPA), a 3G technology, is gaining popularity. Hungary's largest operator, T-Mobile, has expanded its HSDPA network to 14 additional cities for a total of 41, while Vodafone Romania has launched HSDPA in 23 cities.
Source: T-Mobile Hungary and Vodafone Romania

In a strategy to increase SMS traffic by more than 20 percent, Claro, the third-largest operator in Brazil, is cutting its SMS prices by 20 percent to 0.30 Brazilian reais (about 0.15 US dollars). The average price of an SMS in Brazil exceeds rates in other South American countries: in Peru an SMS costs about 0.08 US dollars, in Columbia 0.06 and in Argentina 0.05.
Source: Business News Americas, Claro and TMCnet

With the Village Phone Direct program and the online assistance center, organizations can set up programs to replicate Village Phone's success in countries like Uganda (above).

Village Phone Direct

Responding to popular demand, Grameen Foundation has set up the Village Phone Direct online assistance center, which helps microfinance institutions and other organizations develop Village Phone programs independently. Village Phone includes aspects of phone-sharing and entrepreneurship: a local individual, usually in a lower-income rural area, becomes a Village Phone operator with mobile communications equipment bought using a microfinance loan. Then the profitable small business benefits the community by encouraging communication and commerce.

Village Phone Direct builds on the success of the traditional Village Phone program pioneered in Bangladesh by Grameen Telecom and replicated in Rwanda and Uganda by Grameen Foundation. Village Phone Direct was developed by Grameen Foundation as a way for interested organizations to start the program without waiting for national programs to emerge. The website offers the *Village Phone Direct Manual*; a discussion forum for asking questions and sharing experiences; and hands-on guides to research, pilot and deployment phases.

More at: www.villagephonedirect.org

operator interview

Focus on your **strengths**

Orascom Telecom CEO Mr. Naguib Sawaris describes his company's future direction.

The amount of mobile subscribers in the Middle East and North Africa is growing at an amazing rate. What are your company's goals?
Orascom's target is 100 million subscriptions by 2009. These new subscribers will mainly come from our existing operations: mainly Pakistan, followed by Egypt, Bangladesh and Algeria.

How is your offering attracting lower-income customers?
Lower-income customers are an integral part of our growth. We have offered many propositions to help lower the entry barrier for those segments, including unlimited validity, bonus on incoming calls and low-end handsets. Of course, serving this market is a big challenge as this has to be coupled with tight control on the cost of serving those clients, in order to ensure that they are profitable to us.

Orascom has operations in large countries such as Algeria, Egypt and Pakistan – how would you compare growth in urban and rural areas?
This is highly country specific. For example, Egypt is predominantly urban, while in Pakistan 60 percent of the population is rural. This entails different roll-out strategies for the different countries. The cost of reaching rural areas is higher, considering network, distribution, customer care and so on. Therefore, where to go is a selective decision even within the rural areas. However, I would say that in a country like Pakistan rural areas are certainly a prime catalyst for future growth.

Which best practice would you like to share from the markets where Orascom is active?
Focus. Do not dilute your number one resource – managerial talent – by spreading it too thin. Concentrate on important markets and put your best people to creating real value. ■

In brief: Orascom

Orascom Telecom operates networks in Algeria, Egypt, Pakistan, Iraq, Bangladesh, Tunisia and Zimbabwe. It currently has a total of more than 56 million subscribers.

Photo: Jean-Marc Ferré/ITU

Mr. Sami Al-Basheer, director of the Telecommunication Development Bureau (BDT) of the International Telecommunication Union (ITU), discusses multistakeholder efforts to close the digital divide.

regulator interview

Bringing the benefits of ICT to all

What are your aims as BDT director?
My overall objective is to harness all energies at the global level to improve access to ICT everywhere, because ICT is not only a potentially powerful tool for economic development – it can also empower people.

My first priority is to develop opportunities for governments, regulators, the private sector and civil society to come together and agree on solutions for sustained ICT development. ITU already provides a forum where a constructive dialogue takes place between all players, but this needs to be stepped up. One example would be to leverage our existing annual meetings for regulators and create a forum where operators from different operating environments and business cultures can exchange views and experiences and identify regulatory incentives.

Another priority is to ensure that no new digital divides emerge. Developing countries have made huge strides in improving access to voice services, largely through mobile services. I believe this success story can be replicated in other areas. For example, with next-generation networks (NGN), operators can make better use of their resources by rolling out and operating a single network instead of several separate networks, and by being able to add capacity incrementally for a faster return on investment. As voice revenues and international accounting rate income decline, NGN could well be an answer for developing countries with little legacy network, to increase access and preempt the emergence of new gaps.

What is your vision of how to bring broadband access and the internet to new growth markets?
Broadband and internet access have been successfully deployed in the developed world. But the story has often been somewhat different elsewhere. For example, Internet penetration in Africa stood at a mere 3.7 percent at the end of 2005.

All this could soon be changing with an ambitious plan to connect the developing world. Starting in Africa with the Connect Africa Summit later this year and then expanding to other regions, ITU will work with partners to accelerate the roll-out of ICT infrastructure and connectivity, including broadband, to improve access and, as a result, boost national development. Prior to the meeting, a gap analysis of where financial and operational efforts are needed will be carried out to mobilize all partners on the "missing links."

Summit participants will examine key success factors for ICT investment and development and identify areas for collaboration. These will include ways to expand broadband backbone infrastructure and access networks, enhance training to support growth in the ICT sector and the overall economy and broaden efforts to develop an enabling policy and regulatory environment for investment. Ways to stimulate the development of locally-relevant ICT content, applications and services will also be considered.

When emulated in all other regions, I am confident that this unprecedented massive investment and cooperative build-up effort will bring broadband and internet access to all the world's inhabitants. ■

In brief: ITU takes the initiative

"Partnerships with the private sector are giving rise to innovative new projects that can narrow the digital divide," says Sami Al-Basheer. "The challenge is to develop partnerships that benefit all parties and to focus on long-term benefits rather than short-term gains.

"In our Connect the World initiative, we are working with some 50 partners to bring ICT where it is needed, based on three building blocks: enabling environment (policy and regulatory frameworks that will allow for service provision); infrastructure and readiness (including raising ICT awareness and building capacity); and applications and services.

"Under an agreement with the GSM Association, low-cost solutions, as well as the innovative use of mobile technology and connectivity in the least developed and developing countries, will be developed. A second pole of attention is the development of innovative approaches for the use of universal service funds to expand access to ICT in rural and remote communities. A third area is to help enhance research and compile key industry performance indicators and benchmarks to improve decision-making. In keeping with the UN Millennium Development Goals, ITU's Connect the World initiative is one example of our efforts to actively forge partnerships to bridge the digital divide."

In the Middle East and Arab countries, liberalization and a gradual withdrawal of state involvement are paving the way for increased competition.

Liberalization supports Middle East **cellular growth**

The Arab market for cellular operations is in many ways in line with the global market," says Mr. Jawad Abbassi, general manager of the research and analysis company Arab Advisors Group. "Some seven years ago most Arab mobile markets were monopoly markets, with a few duopolies. Now all but one have some level of competition, ranging from two to five operators in each market, as with markets in the rest of the world. The predominance of prepaid as a method of subscription is another similarity."

The competitive model for regulatory frameworks is growing stronger throughout the region; even in troubled Iraq the market was served by as many as five operators in May 2007. Jordan had four, and so will Yemen and Saudi before the end of 2007. Algeria and Saudi Arabia, the top two countries in terms of cellular subscriptions, each had three operators serving its competitive market. The third-placed country, Egypt, introduced a third operator to break up its duopoly. Competitive operators in the more affluent countries in the region can achieve 50 percent profit margins – far higher than those achieved in western Europe, for instance.

Highs and lows

The high income of the oil-rich Persian Gulf states is reflected in their vigorous penetration rates and high-end preferences. The United Arab Emirates (UAE), for example, tops the penetration table compiled by Arab Advisors Group with a rate of 126 percent; the rest of the top five are Bahrain (112 percent), Qatar (110 percent), Saudi Arabia (82 percent) and Kuwait (79 percent). Conversely, the relative poverty of a North African state such as Sudan is apparent in its 11 percent penetration rate as well as its low ratio of cellular subscribers to its share of regional population.

The competitive model for regulatory frameworks is growing stronger throughout the Middle East

The Middle East market as a regional entity favors high-end devices such as handsets with the S60 software platform. As 3G gathers pace, so does the demand for services, applications and content. The more economically advanced countries, such as Saudi Arabia, display a fondness for cutting-edge devices similar to that of northern Europe.

In lower-income countries, says Abbassi, some prepaid subscribers may record as little as 25 minutes of calls per month. Lower income levels mean that many subscribers use their devices mainly for receiving calls or making calls of very limited duration, while the devices themselves are often secondhand or shared.

As far as expanding the lower-income market is concerned, the right combination is still evolving in the Middle East. The equation will include phones, networks, services and a supportive regulatory environment, essential to extending access to the benefits of mobility. The total cost of ownership to Arab and North African consumers has to be brought down, and more efficient, profitable and sustainable business models must be formed for operators and vendors aiming to expand their sales in the lower-income market.

However, even as the high-income markets approach maturity, high entry barriers remain a challenge to growth in the region. The tendency to view it as a single entity with shared characteristics, rather than a region with great diversity, is another. Industry players coming from outside the region must stay aware of its cultural background and the need to acknowledge that models that have worked in other new growth markets may not always apply in the Middle East.

The Middle East represents a diverse region with a varied set of challenges for mobile industry players.

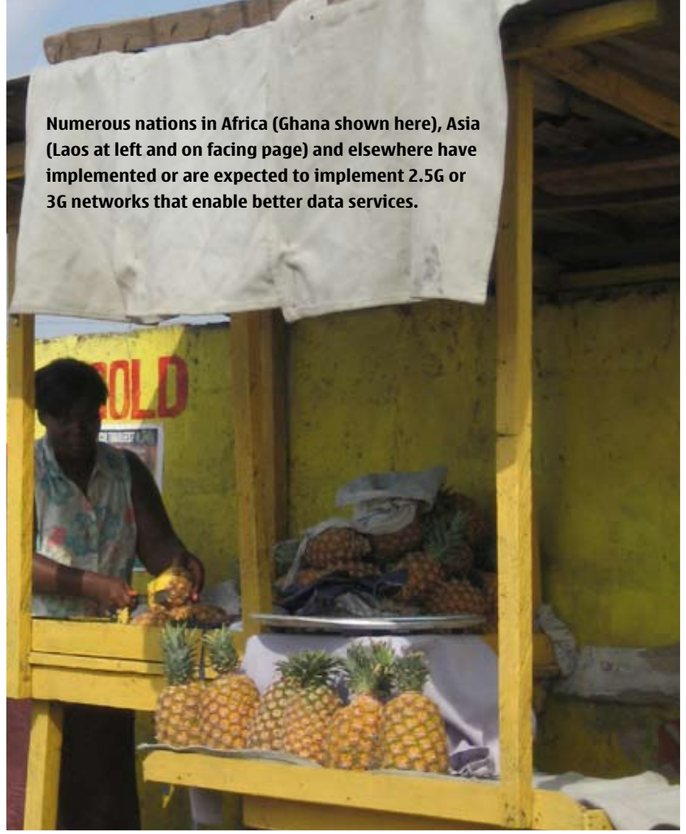
Photo: Michael Haefner/iStockphoto

Improved approach

Just the same, in more developed markets such as Saudi Arabia, Oman and Qatar, the mobile market is taking ever-larger slices of the total telecom cake, eating away at the market for fixed-line telephony. The region has seen the successful launch of 3G services, notably in Bahrain, Saudi Arabia, UAE and Egypt, with others set to follow suit, while broadband services are also spreading at a rate comparable to that in other economically developed regions. According to Mr. Morten Kvammen, an industry analyst with Delta Capital, the telecommunications and broadband internet sectors are expected to generate 70 billion US dollars in annual revenue by 2015 in the Middle East and North Africa region, increasing from the current rate of about 50 billion US dollars.

While much of the growth will be nurtured by investments in more mature country markets, the region will benefit from an improved trans-regional regulatory approach. This is the conclusion of another recent analysis by global strategy and technology consulting firm Booz Allen Hamilton, which asserts that "effective regulation encourages growth and investment in the telecom sector, promotes technological and service innovation and is correlated with lower prices and greater consumer choice, leading to greater service penetration." ■

Photo: Pasi Kemmo

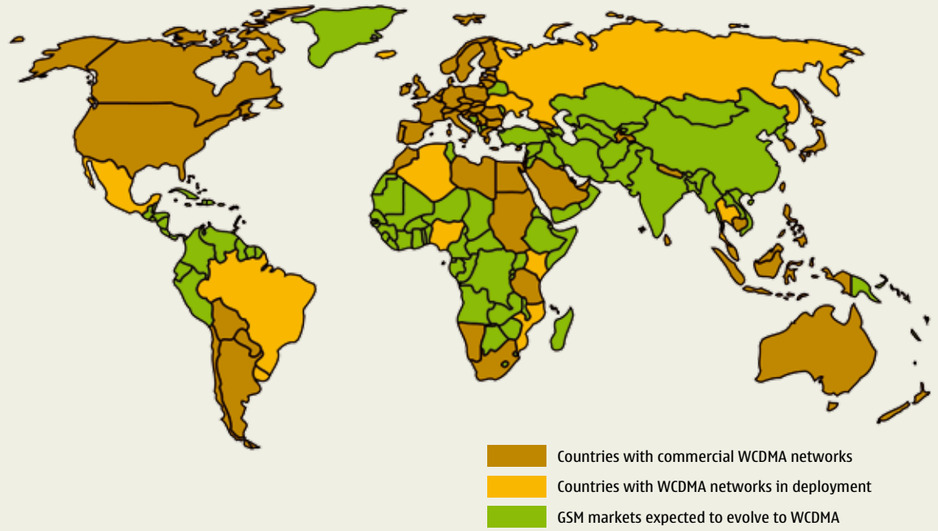


Numerous nations in Africa (Ghana shown here), Asia (Laos at left and on facing page) and elsewhere have implemented or are expected to implement 2.5G or 3G networks that enable better data services.

Demand for data services is increasing in new growth markets, where mobile subscriber numbers are expanding rapidly. Mobile devices and networks form a natural, convenient choice for filling this need.

The next big benefit of mobile communications

An example of 3G progress: 163 commercial WCDMA networks in 73 countries



Source: Global Mobile Suppliers Association, May 2007

The socioeconomic benefits of mobile communications in new growth markets are well documented. As mobile phones and voice and SMS services have become more affordable and accessible, they have helped more people gain employment, business opportunities, information and better contact with family and friends. Rural areas are effectively brought closer to the rest of the world, increasing the options of their citizens.

The time is approaching, in rural regions as well as elsewhere in new growth markets, when mobile communications will mean not just voice and text, but also data services. As consumer habits evolve, demand grows for data services such as internet access. Technology is also evolving, providing an increasing number of solutions that can make mobile data feasible, affordable and even easy. One thing is clear regardless of the solution adopted: as with voice, mobile is the way to go for data.

While the need for data services is almost universal, the specific use cases may vary significantly according to the user group and especially its income level. Lower-income subscribers are interested in basic internet browsing and email for a range of practical considerations, in contrast to more affluent users, usually urban dwellers, who consume more entertainment and multimedia services. Time will show exactly which innovative uses of data capabilities become successful, but mobile telephony will certainly be involved. →

Mobile telephony is certain to be involved as data services develop

Photo: Pasi Kemmo

Cost-efficient upgrades

In order to make mobile data a reality, several different technological paths can be taken. The GSM standard accounts for nearly 90 percent of mobile networks worldwide. In addition to yielding economies of scale, this strength can be utilized as a base for providing data services with third-generation (3G) technology. 3G includes several technologies that can form cost-efficient upgrades to second-generation (2G) GSM networks. Wideband code division multiple access (WCDMA) is one of the most widely used 3G technologies, while high-speed packet access (HSPA) occupies the next step up from WCDMA.

But 3G is not necessarily the first step to affordable data services. Other relevant GSM technologies are general packet radio service (GPRS) and enhanced data rates for global evolution (EDGE), often called 2.5G. Worldwide interoperability for microwave access (WiMAX), another option suitable for high-speed data services, is not originally part of GSM but can be introduced on top of a GSM network with the right solution.

Optimal balance

Selecting the most appropriate solution is a matter of finding the optimal balance between performance and cost for a particular environment and use case. One size does not fit all. The more intense the data traffic, the more cost-effective it is to have a technology that supports a broader band. Total cost of ownership (TCO) forms a significant consideration, of course – for the consumer and the operator alike. Since GSM supports 2.5G and 3G without necessitating new networks, operators can upgrade cost-efficiently and continue to benefit from their original investment in the network. This can be reflected in their customers' TCO, which includes the service cost and taxes as well as the cost of the mobile device.

The vast majority of mobile networks worldwide are GSM, which provides the base for 2.5G and 3G data services.

For operators considering when to upgrade, for example from EDGE to WCDMA, the main issue is when one will form a more convincing business case than the other. Less than two years ago, most operators in Africa were still skeptical about Africa's readiness for 3G, and only South Africa and Mauritius had functioning WCDMA networks. As of May 2007, nine African countries had commercial WCDMA networks and several more were in the process of deploying them. Elsewhere, markets as large as Russia and Brazil are also deploying WCDMA.

The power to encourage

What can regulators do to encourage the great potential offered by affordable data?

The regulatory environment has the power to encourage or discourage the adoption of 3G solutions. For instance, it would not make any sense to repeat previous, suboptimal experiences of huge 3G license fees. Licensing policies can also be arranged so that existing network structure can be reused without building new networks from scratch. Policies must be technology-neutral to avoid giving a certain technology an unfair advantage.

If fees are kept to a minimum, then it will be easier for society and the economy to start reaping the benefits of the new services. Otherwise the possibility exists that 3G will function only as a luxury service or remain unimplemented, since the threshold for operators to invest in it would seem so high. Regulation can also help foster opportunities for high-speed data services by allowing sharing of networks, especially in rural areas, where the cost of coverage matters even more than usual. ■

Dual markets on a common platform

Operators can in many cases optimize usage of their networks by evaluating their market segmentation and employing a dual market strategy. Using a common platform that allows interoperability between 2G and 3G, they can offer premium services to those who can pay, while providing more basic, affordable services to lower-income consumers.

GPRS, EDGE, WCDMA and HSPA each represent a step change increase in data speeds at only an incremental cost to operators, since they build on existing networks. 3G still carries connotations of high-end users, but WCDMA is well placed to benefit the lower-spending consumer segment as well, as it is more efficient than 2G for carrying heavy traffic. WCDMA can also provide wireless broadband, filling the gap created by the lack of fixed-line connections in many locations.

An innovative new solution called Nokia Siemens Networks Village Connection offers affordable connectivity for rural villagers and a profitable business case for operators and local entrepreneurs.

Affordable communication for rural villages

Operators and other mobile communications industry players realize that rural areas in new growth markets contain extensive potential for increasing subscriber numbers and bringing the socio-economic benefits of mobility to more people. How can the industry tap that potential?

Rural regions are home to nearly three billion citizens, characteristically living on an irregular income of less than three US dollars per day. The UN estimates that 70 percent of Africans and 60 percent of Asians live in villages. Under these circumstances, operators find that a traditional GSM network may be too costly for covering large, low-density areas. Maintenance, subscriber management and sporadic power supplies bring additional challenges.

Capturing the potential

The Nokia Siemens Networks Village Connection solution helps harness the great potential of rural markets while providing operators with a profitable business case and encouraging entrepreneurship at a local level. The innovative GSM-based system, which becomes economically self-sustaining after start-up, helps operators establish franchises run by local entrepreneurs in individual villages.

Recognizing that site costs, operation and maintenance can represent 80 percent of total network operating expenditure in new growth markets, Nokia Siemens Networks developed Village Connection. It represents efficiency in operating expenditure (OPEX) as well as capital expenditure (CAPEX). The solution has already achieved impressive results in pilot implementations in India, and will be commercially available in 2008.

Each village typically hosts one GSM access point including a GSM transmitter, an antenna, a PC and software, all that is needed to set up a local village level communications network. A local entrepreneur runs the local network as a franchise and performs subscriber management such as billing and customer support. Several power supply options are available to address the challenge of power availability in remote rural areas. In this way OPEX usually paid by the operator is spread out and covered by local franchises.

Win-win for all

Communications traffic within the village is handled by the local network. The solution naturally supports full connectivity to anywhere in the world as the local network is linked to the operator's main GSM system. In addition to voice and SMS, the versatile IP links also pave the way for cost-effective internet services.

Everyone stands to gain from Nokia Siemens Networks Village Connection. Operators profitably capture rural market potential, achieving an expanded network footprint and a larger subscriber base in the process. Local entrepreneurs have the opportunity to become business owners while contributing to their village communities.

Perhaps most significantly, customers in remote villages in new growth markets experience affordable access to improved economic efficiency and well-being and the other proven socio-economic benefits of being connected to the rest of the world by mobile communications. ■

A Village Connection access point with (left) PC, GSM transmitter and (right, on roof) antenna offers opportunities for local entrepreneurs.

Ghana moves toward e-governance

Mr. Benjamin Aggrey Ntim, Ghana's deputy minister of communications, talks about the development of e-governance in his country.

What e-governance services does the Ghanaian government offer its citizens?
Ghana has started the e-Ghana project, which aims to help the government to communicate efficiently with its citizens in order to generate growth and employment by leveraging ICT and public-private partnerships in the economy. One of its aims is to establish a technology incubator to encourage young people to create local ICT businesses. ICT is already enabling Ghanaian Customs to work better and more efficiently. For instance, the Ghana Community Network Services (GCNet) supplies duty rates and other information to export and import companies that trade with Ghana. A single network encompassing all the Ghanaian government ministries is currently being created.

How are e-governance services provided in the rural areas?
The government plans to provide access to rural areas beyond the national capital, Accra. The rural population includes about 55 percent of Ghanaian citizens. A national fiber backbone, already under construction, will enable internet access in the country. This facility, in turn, would provide the mechanism for rural communities to access government and other information online.

In the meantime 72 Community Information Centers (CICs) have been built in rural areas. These represent the first phase of a planned project to construct such centers in each of the 230 parliamentary constituencies in the country. These centers are expected to provide ICT services to rural communities and are also being encouraged to be self-sustainable – they can be outsourced to private enterprises or private persons to be run as businesses. In these centers, ICT skill training is provided to citizens. Presently, it is students who often patronize the centers, but the clientele also includes other citizens.

Would mobile communications be an effective way to provide e-governance services to the citizens?
Mobile communications would offer a good option for providing e-governance and internet services in rural areas, for example using general packet radio service (GPRS). Tests of worldwide interoperability for microwave access (WiMAX) are being carried out in Accra.

What kind of content would be important to provide for citizens?
Content needs for services are sometimes different for rural and urban citizens. For rural regions, content should emphasize agriculture, healthcare and meteorology. Young people also want music and entertainment. Voice is most important, and then come additional services to enrich users' lives. Urban areas show more demand for entertainment, music, information, local and international news and reports about football and other sports. The convergence of digital broadcasting and data will enable even more citizens to be reached.

How do you see the role of public and private sectors working together on e-governance services?
In Ghana, strong private sector involvement is happening already, for example with GCNet. The entire public payroll system is a collaboration between government and private enterprise. Our plan is to involve the private sector to an even greater degree in creating more businesses in Ghana and forming incubators to develop local ICT companies. The ICT technology park that is to be constructed in the Tema free zone this year is another example of public-private partnership initiative.

How important is it to cooperate and share e-governance experiences, among African countries and globally?
Some sharing and cooperation is already happening in Africa, both bilaterally and regionally. The construction of a common fiber backbone forms one example, as it will connect neighboring countries.

However, the challenge at the moment is to build up the national e-governance systems, to allow regional and global sharing of e-government systems to be better and fruitfully pursued. ■

In brief: Ghanaian mobile sector

"Mobile communications technology has affected the way we do business in Ghana, and has also impacted on the creation of new businesses," says Benjamin Aggrey Ntim. "The Ghanaian mobile communications sector has seen phenomenal growth since the telecommunications operator field was first liberalized in 1996. By the end of the year 2006, there were over 5.2 million mobile subscribers in Ghana – representing a combined teledensity figure of about 25 percent of the population – whereas in 2001 there were only 460,000 subscribers, including both mobile and fixed-line. The most important factors for this growth are telecom sector liberalization, good regulatory framework and competition."

In Africa, improving communication between governments and citizens goes hand in hand with technological development.

Governing in a digitized world

By definition, e-governance refers to a government's use of ICT to more effectively and directly communicate with citizens. While obtaining records and information from the government has often required a lengthy and inconvenient process, the diffusion of technology now allows resources such as social service information, voting information and birth and death records to be made available electronically.

More than just an inevitable product of an increasingly digitized world, e-governance has the potential to deepen understanding between citizens and their leadership. At its best, ICT can increase transparency in government decision-making; eliminate bureaucracy and administrative steps; reduce the costs of getting information to the public; and encourage grassroots involvement. In other words, widely and easily available information can enhance good governance and democracy.

In many African countries, e-governance projects are intersecting with quickly growing ICT usage. The number of mobile subscribers in sub-Saharan Africa has, since 1998, increased from less than two million to more than 100 million. The World Bank predicts that this number will reach 350 million in 2011. According to Internet World Stats, Africa's number of internet users has grown to more than 33 million individuals. This is only 3 percent of the world's internet users, but represents an increase of more than 600 percent from 2000.

This expansion of technology use has been further linked to economic growth: As the number of internet and mobile users grows, so does the GDP, proclaims the Commonwealth Telecommunication Organization (CTO). A similar correlation has been demonstrated between ICT access and effective governance.

Various initiatives are fostering and monitoring the expansion of e-governance projects in Africa. The scope of the discussion is wide and the potential significant, but although the internet provides the most extensive access to a government's resources, its coverage is still limited in many African countries. Mobile communications can play an important role in Africa in providing internet access and enabling governments to deliver e-governance services, even to rural areas. ■

New networks in new growth markets

Whatever their income and wherever they live, people have a need to communicate.

New growth markets will form the engine of communications growth for years to come. How is this reflected in the goals of one of the industry's largest players?

Mr. Simon Beresford-Wylie, CEO of Nokia Siemens Networks, believes that new growth markets represent a significant opportunity for the company. "The vast majority of growth, as much as 90 percent, will come from new growth markets and more than half of that from India and China alone," he says. He provides an idea of just how many new users there will be: "We expect that five billion people, or fully 70 percent of the world's population, will be connected by 2015. And many – billions in fact – will be connected by broadband. Broadband will be everywhere. To put this into perspective, of the 2.6 billion people who were 'connected' at the end of last year, only 400 million had a broadband connection."

Seen in this light, new growth markets represent huge business opportunities for the communications industry players – as well as an opportunity to make a real difference in peoples' lives. Nokia Siemens Networks, formed earlier this year by the merger of the networks business units of Nokia and Siemens, can provide solutions that will significantly increase its customers' profitability while helping bring the advantages of communications to greater numbers of people in new growth markets.

Global pool of ideas

Affordability is essential when trying to reach the unconnected, since individuals in rural villages can only spend as little as three US dollars per month on communications. Operators expect solutions that help them reach that segment – and a partner with both local presence and global scale who understands the local market situation while drawing on a global pool of experts, ideas and innovations.

Nokia Siemens Networks is among the top 40 R&D companies of the world. When combined with Nokia, the companies are among the top ten R&D investors of the world, and the clear number one in the communications industry. In addition to having this global R&D strength, Nokia Siemens Networks is also committed to be where the growth is in terms of having local R&D, local customer teams, and local operator services in place across the new growth markets.

Nokia Siemens Networks has operations in 150 countries. By combining resources with Nokia, it gains tremendous knowledge about the people who use mobile communications products, which in turn helps it produce innovative and affordable voice and data connectivity.

Creating and enabling innovation

New growth markets are experiencing technological, social and economic changes that mean operators must investigate new ways of doing business. Lower personal income levels and large populations in rural areas require new business models and an end-to-end approach to connectivity. People have a need to communicate, and communication services contribute to business and personal well-being. Exciting applications are also emerging in healthcare, education and business.

The internet will be the predominant platform to connect the five billion people and their various devices to each other. In new growth markets, mobile and wireless broadband will play a crucial role in broadband coverage. Openness enabled by the internet and fast connections brought about by broadband will boost the adoption of healthcare and education services. "What connectivity will bring to people is truly inspiring – our vision really is about a fully connected world," said Beresford-Wylie.

Research shows that it is vital to continue reducing the total cost of ownership for rural users. In addition to continuous innovation in technology, products, and solutions, operators may also need to rethink their business model approach in some rural markets. For example, a franchising model such as Nokia Siemens Networks' Village Connection lets a local village entrepreneur handle most village-level activities for the operator, benefiting both the village and the operator.

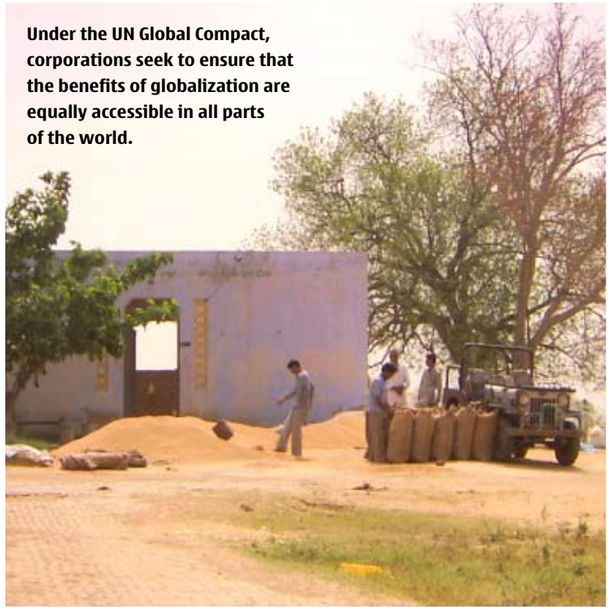
Worldwide accessibility

Nokia Siemens Networks maintains a dialogue with regulators and policy-makers about the importance of communications. "Good cooperation between all parties involved is required in order to provide affordable communication services and connect five billion people by 2015," says Beresford-Wylie.

The company also understands that it has responsibilities not only to its shareholders and customers, but all stakeholders, including employees, business partners and the environment. "We support the UN Global Compact, the world's largest voluntary corporate responsibility initiative," says Beresford-Wylie. "This reflects our belief that the advantages of globalization should be equally accessible in all parts of the world."

"What connectivity will bring to people is truly inspiring."

The essence of Nokia Siemens Networks is the desire to enable communications in communities across the world. "We are committed to living up to the responsibilities of a global company in all the communities where we live and operate," says Beresford-Wylie. "We are motivated by a strong desire to bring the huge benefits of communications to those who remain unconnected. With the right collaborative sprit, we can connect the world!" ■



Under the UN Global Compact, corporations seek to ensure that the benefits of globalization are equally accessible in all parts of the world.

Inside this issue

Mobile subscriber numbers in new growth markets are fast increasing, and with them the amount of users interested in data services. Convenience and cost-efficiency mean that mobile communications is set to become the vehicle for affordable data services, in addition to voice and text services. We look at the possibilities and ramifications in this issue's lead story.

We also see how e-governance is catching on in Africa, and how the Nokia Siemens Networks Village Connection solution offers a way to expand mobile communications to more rural villages while benefiting operators, local entrepreneurs and citizens alike. All this and many other useful, informative articles inside *Expanding Horizons* magazine!

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