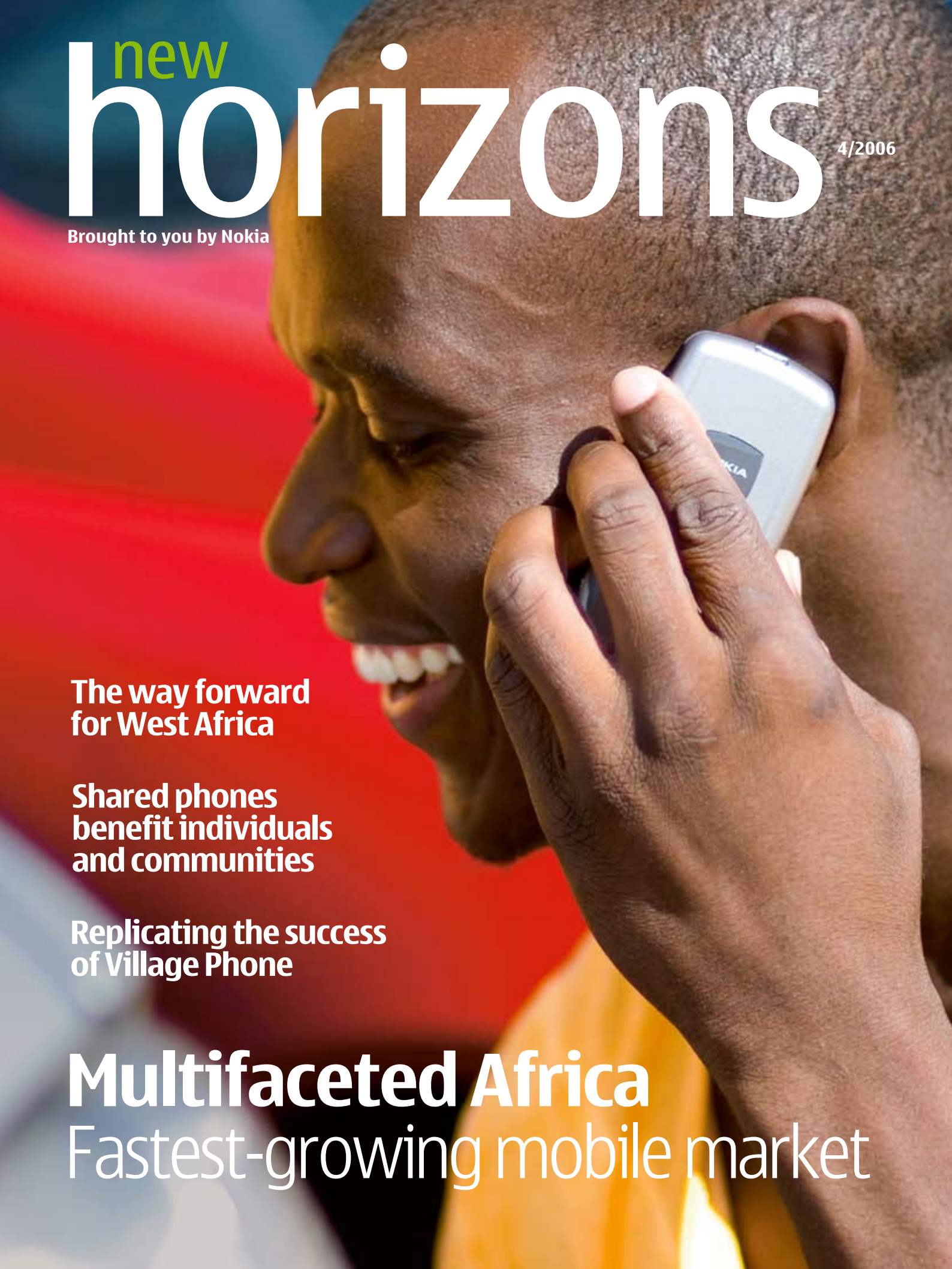




new horizons

4/2006

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**The way forward
for West Africa**

**Shared phones
benefit individuals
and communities**

**Replicating the success
of Village Phone**

Multifaceted Africa
Fastest-growing mobile market

Published quarterly

3 Expanding horizons

Mobile communications in action around the world

5 Regulator interview: DRC

We talk about affordability with Mr. Modeste Mutombo Kyamakosa, chairman of the Democratic Republic of the Congo's regulatory authority

6 Phone sharing: grassroots connections

Shared phones offer a way for those at the very base of the economic pyramid to gain the social and economic benefits of mobility

9 Embracing the advantages of mobility

In the Democratic Republic of the Congo, people's lives have been improved by access to mobile communications

10 African villages acquire mobility

The Village Phone project is enabling affordable, sustainable mobile communications in rural areas

12 Operator interviews: Rwanda and Uganda

In a double interview, CEOs Mr. Noel Meier of MTN Uganda and Mr. Per Eriksson of MTN Rwandacell discuss services and challenges in their markets

14 Unified policies advance development

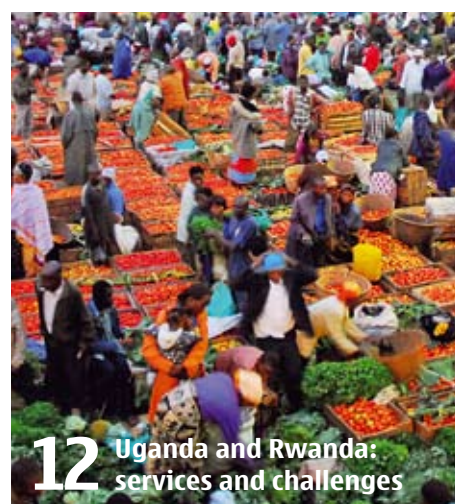
Cooperation will pave the way for continued strong growth of subscriber numbers in West Africa

15 Increasing potential with training

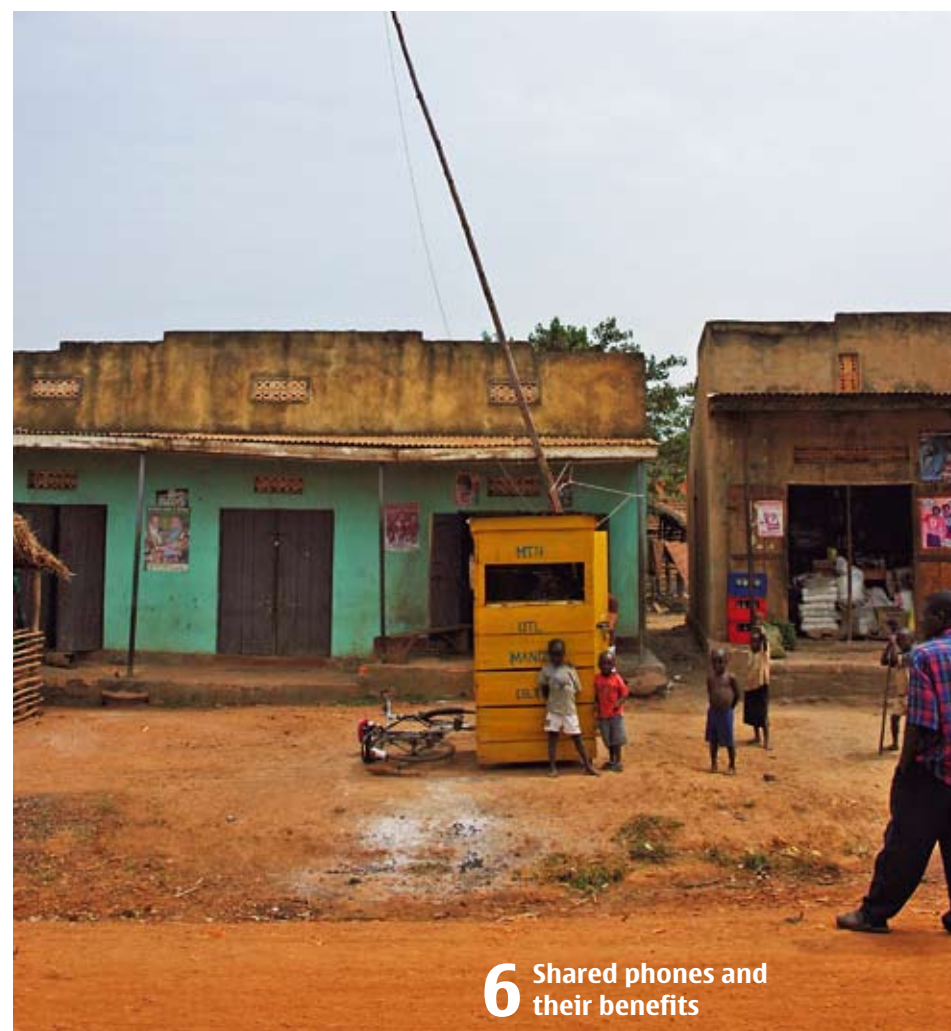
Operators who invest in employee training see improved skills and efficiency – and better profitability



10 Village Phone provides connectivity in rural Africa



12 Uganda and Rwanda: services and challenges



6 Shared phones and their benefits

Powering up

According to a 2005 UN report, 1.6 billion people live without electricity. For example, nearly 80 percent of sub-Saharan Africans have no electricity access. This poses challenges when trying to bring them the benefits of mobility. At the most basic level, the question is how to recharge their mobile phones.

In many rural locations, car batteries are the default power supply, and entrepreneurs use them to open phone recharging businesses. People may come from miles around to get their phones charged at one of these "charging stations." The car batteries, in turn, are taken even longer distances to be charged, to a location with a generator (often diesel) or mains power.

Solar power is viable in many places, but requires a somewhat larger initial investment. Ingenuity has also created a range of human-powered generators, from bicycle hookups to hand and foot-powered chargers. The latter includes everything from hand-cranked models to a variation that the user squeezes in one hand.



A phone charging business in Kampala, Uganda.

Leapfrog into the future

Mobile penetration in Africa does not yet match that of other continents, yet Africa is the fastest-growing region in the world for mobile phone users. Mobile penetration already far exceeds fixed-line in numerous areas of Africa. Mobile networks are in many ways easier to expand than fixed-line, which requires the expensive work of laying out thousands of kilometers of cable.

Predictions are already appearing that mobile devices will bring internet access to more Africans with a similar leapfrog over conventional computers, which only a tiny percentage of citizens there can afford. Operators in some African locations are rolling out 3G services and other solutions that will help them deliver more data flexibly and efficiently.

The BBC recently reported that 61 percent of its international WAP (wireless application protocol) users come from Nigeria and 19 percent from South Africa. WAP allows mobile phone users to access basic information through their handsets. Many people's first phone is a mobile instead of a fixed-line, and the coming years may show that many get their first look at the internet on a mobile device, too.

Source: BBC and Mobile Africa

EDITORIAL



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SHARING PHONES forms one way for citizens at the base of the economic pyramid to gain the benefits of mobility. Phone sharing lowers the cash barrier – the money that must be paid upfront to get and stay connected. Our lead story separates shared mobile phones into four categories to help you understand the phenomenon, and describes how phone sharing is helping individuals, businesses and communities.

Another article in this issue takes a closer look at one kind of phone sharing, Village Phone in Africa. The project, which originally started in Bangladesh, has been replicated with great success in Rwanda and Uganda. Microfinance institutions provide loans to local citizens to set up Village Phone businesses that provide mobile communications services in their villages, which are located in largely rural, lower-income areas.

We also visit Rwanda and Uganda to interview tele-

communications operators about how they view the challenges and overall situations of their mobile communications markets. They talk about providing access to mobile communications for people who live in rural areas, and about surpassing license obligations.

The chairman of the regulatory authority of the Democratic Republic of the Congo (DRC) discusses the digital divide, and we also talk to local citizens in the DRC whose business and private lives have improved since they gained access to mobile communications.

Enjoy reading about these and other important topics in this issue of New Horizons!

Rauno Granath

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Søren Petersen

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New 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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Protecting consumers

The Pakistan Telecommunication Authority (PTA) has introduced a system that blocks stolen mobile phones. If a consumer's handset is taken, he or she can report the theft and the phone's international equipment identity number (IMEI), and the device will be blocked from the network.

The PTA is cooperating with operators, as well as federal and provincial police departments, and notes that the procedure for reporting a theft has deliberately been kept simple. An awareness campaign is educating consumers about the new system, which forms part of the PTA's efforts to assist the present telecommunications sector boom in every way possible.



A street scene in Pakistan.

Mobile phones increasing AIDS awareness

December 1 is World AIDS Day. The UN's Millenium Declaration calls for the spread of HIV/AIDS to be reversed by 2015, and the 2005 UNAIDS Report shows that this is more than possible if the political will exists. Nokia is a member of the Global Business Coalition on HIV/AIDS (GBC), which enhances and facilitates the use of companies' core competencies and products in the fight against the epidemic.

Four mobile phone games by ZMQ Software provide vital information about HIV/AIDS in a fun format and have received recognition from the GBC. The games, which have racked up millions of downloads, aim to counter the spread of HIV by building up consumers' knowledge and awareness of the sickness. Originally available only in India, they will be released this autumn in six African countries: Kenya, Malawi, Mozambique, Namibia, Tanzania and Uganda.

Source: National AIDS Trust, OneWorld South Asia and World AIDS Campaign

Quick growth stats

In the Americas, GSM now represents a majority of the mobile communications market. Its market share grew to 51 percent by mid-2006, an increase of 13 percentage points since the same time the previous year. In Latin America and the Caribbean, the GSM market share was 63 percent.

Source: 3G Americas

The global number of mobile phone subscribers surpassed the 2.5 billion mark in September, just one year after reaching two billion. The top ten countries (China, India, Russia, USA, Pakistan, Ukraine, Brazil, Indonesia, Nigeria and Bangladesh), nine of which are new growth markets, accounted for more than half of the 484 million new subscriptions since the previous September. China and India alone take credit for 25 percent of the total.

Source: Ovum

3G subscriptions will number 285 million by the end of 2006, forecasts ABI Research. Tanzania and Zimbabwe are among the most recent countries to announce that operators are planning to launch 3G services in the near future.

Source: ABI Research and Mobile Africa

African mobile subscriber numbers will climb by 80 million to reach 220 million by the end of 2007, predicts Informa Telecom and Media. By 2007, Nigeria's teledensity will be 20 percent, and the country will be home to 69 percent of the West African region's projected 48 million subscribers.

Source: ITWorld International



Mr. Modeste Mutombo Kyamakosa, chairman of the Autorité de Régulation de la Poste et des Télécommunications du Congo (ARPTC, Post and Telecommunications Regulation Authority of the Democratic Republic of the Congo) discusses the digital divide.

Initiating universal access

What is the role of mobile technology in reducing the digital divide in the Democratic Republic of the Congo (DRC)?

In the DRC, where there is a lack of fixed network, mobility is crucial. The current level of network deployment by mobile operators covers about 45 percent of the population. In rural and suburban environments, restrictions on energy exist, as well as on purchasing power for acquiring prepaid cards. Initiating universal access project is our next step.

How can regulators help bring affordable mobile communications to the end users?

Regulators can guarantee arbitration of disputes, intervene when operators have problems and manage the resources they need. Regulators create good operating conditions for active and potential operators. It is crucial to rule and list what is considered anti-competitive when it comes to roaming. If a cartel is formed between two operators in order to distort the market, then appropriate regulatory action must be taken.

How do you balance high license fees – necessary to fund government projects – and universal access targets that encourage affordable services?

Preferential fiscal terms should be allowed on imports and on some internal taxes so that costs stay affordable for customers.

What is the situation regarding roll-out schedules and service obligations for mobile operators?

In general, operators have applied for roll-out over the entire territory, and this is borne out in individual licenses. The regulator tracks their deployments, particularly those concerning territorial coverage obligations.

The problems encountered in ensuring the coverage are mainly due to logistics (lack of electricity, high costs for maintenance, surveillance and equipment transport), since the country covers a vast area. Operators prefer locations with easy access, to minimize costs so they can recover their investments and remain competitive.

If the major operators find it easier to pursue deployment, it is because they have the upper hand in profitable markets. Small operators, with a small share of the market in very profitable areas, find it hard to continue roll-out for fear of encountering more expenses than they might be able to recuperate.

What role do you see for other entities, such as governments, operators and equipment vendors, in introducing basic voice services to people with lower disposable incomes?

Synergy between all stakeholders is necessary in order to popularize basic telecommunications services. The government should put in place multisectoral projects for multiple uses of ICT (in education, health and agriculture, for example). It should create the proper conditions to attract investments; it must provide a global vision of where the country should be in terms of ICT development.

Operators must diversify services and develop competition, pushing each other towards innovation. They must also respect their obligations. The private sector should explore the investment opportunities offered by telecom sector development. Development organizations ought to put projects into place, mainly in rural and suburban environments. The regulator is the market arbitrator who ensures that each party operates within the norms and that everyone's interests are guaranteed, end users included. ■

In brief: DRC situation

The Democratic Republic of the Congo (DRC) is a vast country (2,345,409 square kilometers) with a very low population density (25 inhabitants per square kilometer). This means that the population is widely dispersed, creating a lack of communication between communities. "ICT cannot be ignored, and lack of access

to ICT is one of the poverty indicators," comments Modeste Mutombo Kyamakosa. "ICT needs to be developed in order to reduce poverty – this can be applied to sectors such as education, health, business and interpersonal relationships." Standard voice services can be expanded via mobile phone networks for an

ever-growing clientele. "The population is not well informed about the possibility of extending the standard services of voice telecommunications. People need to be educated to entice them toward the diversity of services; they also need to be made aware of the profits that can be gained."



Phone sharing creates grassroots connections

Shared mobile phones are helping expand the reach of mobile communications in new growth markets while benefiting individuals, communities and businesses.

Shared phones play a role in both rural and urban areas.

Photo: Gramscian Foundation



Sharing the Village Phone in a rural village.

Sending “currency” in the form of a prepaid scratch-off card number.

In order to reach the third billion mobile phone subscribers, affordability must be ensured for consumers near the base of the economic pyramid, those with a monthly income of 50 to 100 US dollars. In practice, this means bringing the total cost of ownership down below five US dollars a month, as well as lowering the cash barrier, which refers to the money that must be paid upfront to get and stay connected. For consumers with an even lower income, located at the very base of the pyramid, phone sharing represents one possible solution for overcoming the cash barrier.

Given the chance, most people would like to own a mobile phone. The benefits of personal communication are well documented and accepted. However, financial reasons can prevent the lowest-income consumers from becoming connected. Phone sharing can be defined as a way for consumers to gain the benefits of mobility without purchasing a personal phone or committing to a network service. Shared phones can significantly lower the cash barrier that forms the threshold between very-low-income citizens and the benefits of mobility.

Shared phones take various forms, from unofficial sharing between friends, roommates or family members to small

businesses that allow consumers to make calls or send SMS messages for a fee. Nokia categorizes different types of phone sharing according to the Nokia Phone Sharing Framework, a concept in which each shared phone is labeled either private or business, as well as either rural or urban. Examples of phone sharing can be conveniently placed within the resulting four-square matrix.

Family phones

“Private” refers to a personally owned phone – a family phone in an urban setting is one example. Urban dwellers typically share their own phones mainly with family members, if any-one. Because of where they live, city people anywhere in the world tend to consider loaning a phone to a stranger to be a situation that may encourage theft.

Statistically speaking, urbanites are also more likely than their rural counterparts to own their own phones, and therefore there is less need for phone sharing in urban areas.

Home phones

Shared private phones in a rural environment are designated as home phones in the Nokia Phone Sharing Framework. The difference between a family phone and a home phone becomes obvious when visiting rural areas in certain new growth markets where fixed-line coverage is not available. In this case, the shared mobile phone effectively acts as a home phone, as opposed to a personal one.

Rural villagers in Uganda, for example, may have a mobile phone or belong to a household or group that has one – a family, a circle of friends or another constellation such as people living in the same dormitory while they work in a mine or go to school. But family, neighbors and friends all feel free to use that phone. While city people tend to keep their phone numbers confidential, people in the countryside may provide the number of an acquaintance or a friend of a friend as their own contact number – sometimes without informing the person carrying the phone.

For someone new to this system, it can seem chaotic, but at a local level it works. Sharing phones forms another natural part of everyday life in places where traditions encourage people to trust each other and share resources to help each other in life. “Step messaging” is the term used to denote the process of calling somebody through the person who has the phone at the moment. The steps include the first call, the message delivered after that call (sometimes via a chain of people) and then another call when the desired person is actually present. This process fills important communications needs for information about health and other social matters.

Village phones

On the business side of the framework, rural areas may have microfinanced local businesses such as Village Phone kiosks. Turnover consists not only of calls and SMS messages, but also of sending and receiving money, which is accomplished through over-the-air balance transfers if the local operator

Sharing phones forms another natural part of everyday life in places where traditions encourage people to trust each other and share resources.

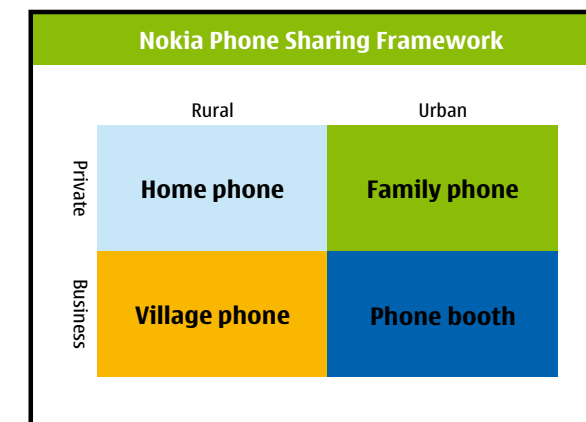
has a solution such as Nokia Connect eRefill, or alternatively by sending an SMS with the “currency” – the number from an operator’s prepaid scratch-off card. The businessperson on the receiving end takes the number and pays out cash.

Village Phone also serves as a rallying point for community spirit for the whole village, with everyone participating in raising the antenna pole, for example. Since so much communication happens at the Village Phone location, it can also become a village meeting point where people gather.

Young people, of course, make use of Village Phone kiosks to phone their girlfriends or boyfriends in nearby towns or play mobile games. Another social use in Africa for shared phones, whether private or business, is the popular radio call-in shows. People consider it worth the price of a call to get a message delivered to relatives and friends all at once, or simply to gain the entertainment value of hearing their names or their favorite songs on the radio.

Phone booths

In urban settings, shared mobile phones form the basis for business in the form of kiosks similar to those in rural areas. Although urban shared phone owners offer the same services and utilize the same advantages of mobility as their rural counterparts – including network coverage, competitive operator prices and easy handset portability – the situation is different.



The trust seen among rural people sharing phones is not equaled in the city. Customers never get to hold a mobile handset, since it is considered too valuable to risk a possible theft. Instead they talk through a phone receiver that is connected by a cord to mobile communications equipment inside the kiosk.

Ingenious solutions allow payphones to cover every niche of the city target market. Kiosks can be constructed to be very portable or even take the form of bicycles with phones mounted on them. Such phone booths can follow the urban flow of people wherever they need to make calls.

New possibilities

Being connected to the rest of the world via shared phones brings the social and economic benefits of mobility to remote rural areas, and the remoter the region, the bigger the difference it makes. While phone sharing carries a higher potential benefit in rural regions, it also has its place in urban areas. But what do shared phones mean to the different industry players, many of whom have cooperated in projects such as Village Phone?

Policy-makers express enthusiasm about shared phones because they can



These mobile phone booths in Kampala, the Ugandan capital, can go wherever the customers are.

see that mobile communications bring new possibilities to rural economies.

Operators, in turn, make more money from a shared phone than they would from one that is not shared. The average revenue gained from a Village Phone handset rises far above the normal average revenue per user (ARPU). Another bonus here is visibility for the operator's brand; someday more people in the village will be able to afford their

own phones, and they will likely choose the same operator.

Fertile ground

The factors that make a place fertile ground for shared phones include very low income levels and existing systems of trust and cooperation within the society, as well as the need and desire that people have to communicate with the rest of the world. In rural areas of Uganda and Indonesia, to name just two countries, deep social obligations exist about sharing within communities and among relatives. Shared phones play a larger role in rural areas than in cities, since people in urban environments are statistically more likely to get their own phones more quickly.

Shared phones represent grassroots connections to mobile communications and the benefits of mobility. Mr. Jan Chipchase, a Nokia principal researcher who has traveled throughout Asia and Africa on field research trips, believes that in the future shared phones will continue to play a part in development. "Phone sharing," he says, "exists and will always exist in some form in every market where there are people who cannot yet afford to buy and maintain their own personal mobile phone." ■

Innovations for shared phone users

One of the latest inventions in the shared phone domain is actually decades old. The old phone booths provided a shared terminal for the use of the community, and also complete control over costs for each call. Nokia Cost Control brings the same user experience to mobile phones. Instead of inserting coins, you use a simple command on the mobile to define the cost of the call before connecting the call.

Dialing 1234567#1*5, for example, connects the caller with number 1234567 for a duration equivalent of 1.5 monetary units. After the money runs out, the call is cut off. This greatly reduces the fear of overspending that is very prevalent in the lowest-income segment. Further, the caller can use the calling time they invested in to its full extent, compared to normal charging by the minute.

Shared phone businesses are easy to find in urban areas, but the big problem can be the lack of trust – the seller not trusting the caller to pay. On the other hand, the callers have doubts about the accuracy of the payments they are asked to make. Nokia Cost Control makes the process completely transparent so that correct costs can be charged based on correct tariffs, before the call.

Embracing the advantages of mobility

By adopting mobility in combination with liberalization, the Democratic Republic of the Congo has seen triple-digit growth in mobile communications. Lower-income citizens are some of the people whose lives have been made easier and more prosperous.

Addressing decades of non-investment in telecommunications that kept the nation at a fixed-line density of less than 1 percent, the Democratic Republic of the Congo (DRC) radically changed course by making strong moves toward liberalizing its mobile telecommunications market. In the year 2000, eight mobile operators had been licensed, providing a competitive environment that has since seen tariffs per minute fall from several US dollars to as low as 0.05 US dollars.

While mobile subscriber growth has been increasing by 40 percent annually, the total number of subscribers in the country has only recently passed the three million mark. Mobility is bringing a host of benefits to this nation of nearly 60 million, from invigorating businesses to offering a higher degree of personal safety.

Life and livelihood

Mobile communications has become much more affordable in the DRC in the past three years. That, coupled with the ease of purchasing and transferring minutes to subscribers via SMS, has encouraged citizens of all income levels to use mobile devices in their personal lives as well as a tool of commerce.

For example, farmers are able to check prices for their commodities at nearby markets, avoiding unnecessary traveling and uncompetitive prices. By the same token, people can phone ahead before visiting relatives or friends to make sure they will be there - and in between visits, mobile phones help them keep in touch.

In Kinshasa, the nation's capital, a range of smaller merchants and business people now depend on their mobile phones for their livelihoods.

One example is Bim, a photographer: "I have clients who have receptions and celebrations. Now they call me on my mobile number. It has helped to increase my business volume and my income."

And there is Kato, a 35-year-old moneychanger in the heart of Kinshasa: "A client can call to tell me we need such and such amount of currency in US dollars or CFA francs, so we can put



that aside in advance. We don't have to waste time traveling anymore."

Other mobile-based commerce transactions are on the rise. According to a recent Washington Post article, some 25,000 people in the DRC have subscribed to Celpay, a company that offers internet-based banking via mobile phones. Payment for a wide range of goods and services is accepted using a mobile phone and an SMS verification process.

But the newfound benefits of mobility are not limited to commerce. Twenty-eight-year-old Blanchard, a mobile handset seller in Kinshasa, will always appreciate its use beyond keeping in touch with clients:

"One day I was at work when they called me to tell me my son was sick. I quickly went home to take him to the hospital. It saved my son's life." ■



The number of Village Phone businesses in Africa is steadily growing.



Richard Mwami, manager for MTN Village Phone in Uganda.

African villages acquire the benefits of mobility

The Village Phone project continues its success by helping spread affordable and sustainable mobile communications services throughout the largely rural, lower-income areas of Uganda and Rwanda.

Village Phone has been implemented on a co-operative basis by the Grameen Foundation, a global non-profit organization, and Nokia together with MTN Uganda and MTN Rwanda. The project, which originally began in Bangladesh by Grameen Telecom, has now been replicated in both African countries and uses microfinance as an innovative tool to create entrepreneurship. Another aim is to boost network connections in the areas where it is otherwise restrained by infrastructural limitations.

A microfinance loan of about 200 US dollars, repayable within approximately six months at a maximum interest rate

of 4 percent, allows individuals to set themselves up as Village Phone operators, providing mobile communications services to their communities. The initial loan covers equipment in the start-up package, including an affordable Nokia handset, an external antenna set, a battery charger, a SIM card, prepaid airtime and marketing materials.

Making a difference

"Effectively, the loan takes the form of phones and other equipment," says MTN Uganda Village Phone manager Richard Mwami. "That makes the business much more sustainable. We make it known that there are certain access points from which villagers can communicate. Pen-

etration is still just 6 percent, so a huge market remains. If you have the right product, microfinance is the most appropriate way to reach poor people.

"Village Phone has really given us the chance to have an impact on people's lives, especially those of women, who account for 60 percent of our Village Phone operators." These operators already total 5,300 in Uganda, and the number is growing every day.

Microfinance is also unique for this project because investing in a mobile phone and airtime yields returns to Village Phone operators immediately, Mwami explains, rather than in the period of months that other loans might take to show results. Village Phone also

Top: Village Phone sometimes exists in stores that also sell other goods.

Bottom right: A Village Phone operator outside her shop in Uganda.

Bottom left: A sign in front of a kiosk in rural Uganda advertises Village Phone services.

provides an innovative way of reaching governments' public access requirements in rural villages.

"Microfinance is an important tool to help the poorest of the poor lift themselves out of poverty," says Tim Wood of the Grameen Foundation's Technology Center. "Left behind by the traditional financial service industry, poor individuals in developing countries can use microfinance to access capital at reasonable rates. With these funds, they can build businesses that help provide for their entire families."

By nature, microfinance institutions are rooted in and have a complete understanding of their local communities. "These deep links into the community are essential for introducing new services," Wood explains, "and the potential contribution of microfinance institutions to new business initiatives targeting rural communities is often undervalued."

Microfinance helps the poorest of the poor lift themselves out of poverty.

Community benefits

In Rwanda, where Village Phone was launched in June 2006, the aim is to create over 3,000 new businesses throughout the country in three years in partnerships with three Rwandan microfinance institutions: Urwego, Vision Finance and CARE. The launch, held in the village of Gashora, attracted



more than 500 villagers as well as local, national and international guests to an enthusiastic festival including traditional dance and music - and actors demonstrating the versatility of the village phone.

The experience of the Ugandan Village Phone operators provides ample proof of how Village Phone is benefiting villagers in financial terms, and how these benefits permeate and multiply through the community.

Angilina Wandera in the village of Bumulimba has taken advantage of loans arranged through the FOCCAS microfinance organization, one of eight involved in the Village Phone initiative. She operates her Village Phone service from her dress-making shop and finds that each business complements the other, so that customers buying dresses also stop to make phone calls. The extra money she earns with her phone business means she can afford to pay school fees for eight of her 11 children. The result? A better-educated community, as well as a better-connected one.

Justine Zikusoka from Kigando now earns 65 percent more than when she took the first of five loans from the FINCA microfinance provider, selling more than 30 minutes of call time every day from her village shop. Like Wandera and many other Village Phone operators, Zikusoka has found it easier to fund school fees and feed her family as a result of her Village Phone success.

"With proceeds from the business, the Village Phone operator contributes to loan repayment and also purchases additional prepaid airtime cards," says Wood. "The microfinance institution earns money from the loan and also a percentage of the revenue from airtime sales. The mobile communications provider earns money through volume sales of airtime, and the telecoms operator earns additional income from previously inaccessible markets. The model works because it is designed so that all parties in the partnership win." ■

For more information about Village Phone: www.grameenfoundation.org/village_phone



Mr. Noel Meier, CEO of MTN Uganda: "In very rural areas, you empower people by providing access to telecommunications."



Mr. Per Eriksson, CEO of MTN Rwandacell: "We have an obligation to provide telecommunications in Rwanda beyond our license obligations."



In brief: MTN Uganda

"In 1998 the government of Uganda began liberalizing the telecommunications sector. At that time, penetration was a mere 0.23 percent," says Noel Meier. "I believe that MTN Uganda has been the catalyst in driving this teledensity from the low levels which existed then to the 8.5 percent it is today." He points out that Uganda is not the only country in Africa to benefit from the successful MTN recipe.

"Our customer base is approaching the 1.5 million mark, of which 99 percent is prepaid, and we currently enjoy a 65 percent market share. Strength and trust of the brand are essential ingredients and affordability is key. People in this market take into consideration factors such as billing increments, off-peak periods and cheaper, alternative forms of communications (SMS, SMS to email and email to SMS).

"However, an enormous challenge in Uganda is the frequent power outages. Options for new and alternative energy supplies are required, but need to be cost-effective."

Catalysts for rural coverage and customers

Operators in two African new growth markets talk about challenges and services.

What are the challenges related to lower income levels?

Per Eriksson: One has to understand that lower-income customers demand the same service quality as the high-income customers, so you cannot sacrifice service quality. That is why cost monitoring on all levels is a key to success.

Noel Meier: In the lower-income market, new services and products that are offered are often not used, as the economic capacity to adopt new services does not exist. The lower-income segment is characterized by a fixed budget available for telecoms.

What are the key elements in the low-cost strategy of your operations?

Eriksson: We are trying to use the capacity we have invested in at as close to 100 percent as possible. This means that Tel'imbere (the trade name for our public access in rural areas) does not require extra investments in the network – we are only using surplus capacity. Tight control of capital expenditures and operational expenditures is also very important.

Meier: Quality and affordability, with a major focus on curbing escalating costs. Obviously with that comes staff pro-

ductivity and having an effective dealer and distribution network – we have some 7,000 dealers and subdealers throughout the country making inroads into having an arm's-length distribution structure.

In brief: MTN Rwandacell

"Our customer base is just over 300,000," says Per Eriksson. "Prepaid customers make up 97 percent, though we provide post-paid, prepaid and public access services. We have around 4,000 public phones in operation. Our coverage corresponds to 80 to 85 percent of the population and 75 percent of the country.

"There is a strong focus in Rwanda on developing the country economically, centering on ICT. Being the largest telecommunications provider in the country, we have an important role to play in this development."

How important are new services in your entry segment?

Eriksson: For voice services, I think that new services are less important than cost of entry and usage to increasing our customer base. New services are more important for retaining our customers. WiMAX (world interoperability for microwave access) is a new technology for us, and since the demand for data services is increasing in Rwanda, this technology is important for penetrating the corporate market.

Meier: They are not critically important. Cost of entry, pricing, promotion and availability are the drivers of subscriber growth in this segment.

What role does your company play in activities designed to improve coverage?

Eriksson: The company has been in operation for eight years, but we are still improving coverage. Coverage has been the main way of growing the customer base, which is still very important to us today. In our opinion, we have an obligation to provide telecommunications in Rwanda beyond our license obligations. As the economy grows, the lower-income citizens in rural areas can see the need for telecoms and they can also afford the service. Village Phone is one project that provides affordable public access services in rural areas.

Meier: MTN continues to expand its coverage footprint. In addition, universal access tenders were awarded to MTN, and this has enabled us via subsidies to provide network coverage to areas previously deemed commercially unviable. In very rural areas, you empower people by providing access to telecommunications. Village Phone is ideal for providing such service.

The Village Phone project has been successful in the rural villages of Rwanda and Uganda. What have you learned from your experiences with Village Phone, and would you like to see the Village Phone project implemented in even more villages?

Eriksson: Over the next three years we will deploy 4,000 Village Phones in Rwanda. MTN Rwandacell has an important role to play in the Rwanda's development. The company is not just providing state-of-the-art telecommunications services in urban areas, but also helping create a base for rural areas to develop. The Village Phone project

As the economy grows, lower-income rural citizens see the need for telecoms and can also afford the service.

not only provides telecommunications services to rural areas, but also offers opportunities for local entrepreneurs to develop their skills, since the local service is provided by a local businessperson.

Meier: We have proved that there is a niche for the Village Phone product in rural areas and, as such, plan to roll out approximately 300 Village Phones per month. We currently have some 5,400 Village Phone installations country-wide and see the potential for more than 15,000. We believe that every parish in Uganda can accommodate at least five Village Phones – each parish has a population of at least 5,000. ■



West African market:
a street scene in Niamey,
capital of Niger.

Unified policies advance development

West Africa is predicted to overtake Southern Africa in mobile subscribers by 2008 if strong growth continues. Cooperation between the countries in the region forms a prerequisite for continued development.

Tremendous growth is predicted for West Africa, currently the third-largest region in Africa in terms of mobile subscriptions after North Africa and Southern Africa. West Africa had 32 million subscribers in December 2005 and is expected to reach 48 million by the end of 2006. It looks set to surpass Southern Africa by the end of 2008, when West Africa will be home to 29 percent of the continent's subscribers.

At an average of approximately 17 percent, mobile penetration in Africa is significantly lower than on any other continent, so opportunities clearly exist to gain new subscribers among the population of 900 million, especially among rural dwellers. With these opportunities come challenges for market stakeholders such as operators and regulators.

Tangible gains

Sustained growth represents immedi-

ate, tangible gains such as revenue growth for operators and direct and indirect employment opportunities. Governments should recognize mobile communications as a major driver of economic development in other sectors as well, including agriculture, mining and sales of other products. The mobile communications sector regularly commits 3 to 4 percent of its total revenues to marketing, making it the leading advertiser in the region.

Africa needs suitable universal service offering policies for rural areas, and taxation policies that make mobile handsets and services more affordable. The public and private sectors can share costs by forming partnerships. Unsuitable "cut-and-paste" policies from mature markets should be avoided, while spectrum pricing policies tailored to the African market are desirable. Strategies should focus on the needs of the people and recognize the globalizing impact of mobile devices.

Continuing sustainability

In the past decade, the number of GSM networks in the 15 member countries of the Economic Community of West African States (ECOWAS) has grown from five to 42. This very strong growth pattern has been primarily driven by pent-up demand, as well as the climate created by the governments and the speed of players in solving financing challenges.

If the mobile communications sector wishes to continue as a critical development driver in West Africa, it must keep certain things in mind. Poverty is a key issue, with more than 70 percent of the region's population earning less than one US dollar per day. This constrains not only the size of the addressable market as it currently defined, but also the sustainability of growth rates in the future.

Connectivity is key

Roaming policies present other challenges: lack of cooperation between operators in some regions, billing problems, lack of interoperability between systems and congestion and high prices in African gateways. It can currently cost more to call between two ECOWAS countries than to call Europe or USA. Cross-border and overall telecom connectivity represents the key to West African economic and social development and integration.

Competition between operators should be encouraged, and regulators can make the prospect of rural expansion a more attractive one to operators. Some analysts predict that Africa will produce the most innovative uses of mobile technology, simply because its citizens and countries cannot afford to do otherwise. ■

This is a condensed version of an article by Enyi Moses-Nwagwu that originally appeared in ITWorld International in June 2006.

Increasing potential with training

Operators who want to boost network performance, reduce operating costs and improve profitability need to invest in good training.

For operators today, building an effective service means not only offering top-notch technologies, but also having skilled people around who can make sure subscribers get the best possible user experience. Continuous local training is important in all markets, but it is particularly necessary in fast-growing markets and in those with great potential for growth.

One such market is Russia. When VimpelCom first launched its cellular network in June 1994, it had one switch and ten base stations. In April 2006, it was operating over 100 switches and about 20,000 base stations, serving more than 45 million subscribers. And that's just one example in a rapidly expanding market.

VimpelCom has benefited from training services for several years. It has utilized Nokia-run courses for local training in Russia, which has helped it reduce costs by sending fewer people to training events abroad. There are multiple courses and levels to choose from, so training can be matched to employee needs. Courses aim to lower operators' costs and improve their service offerings. For example, VimpelCom engineers have received network operations and maintenance training to allow them to improve their skills and achieve greater efficiency.

Making training more local

Ideally, a training center should be as local as possible. Apart from reducing

travel costs, local training also improves operator investments, because the local language can be used, and because the trainers better understand the local business situation.

Training centers contribute to the way operators optimize spending and focus on winning and retaining customers. In addition to acting as knowledge centers for customers, employees and partners, the training centers also accommodate systems and technology

nected with state-of-the-art technology.

Operators can manage and assess their training programs based on the program organizers' regular feedback, which provides an excellent measure of courses' effectiveness. Companies that have used training agree that good training helps network performance. And last but not least, well-trained personnel are also noticeably better motivated. ■



Skilled employees are just as vital as top technology to an operator's business.

testing, as well as collaboration on trials with local application providers.

Links with local talent

The training centers also facilitate links with local universities and other talent sources. The centers naturally keep up with the very newest technology, and by doing so they help introduce future technologies to new growth markets. As mobile technologies expand into new areas, they inspire and fuel an increase in local know-how and competence con-

Nokia Training Centers

- Americas: Brazil, Mexico and USA
- Asia: China, Thailand, India, Indonesia and Australia
- Europe: Finland, France, Germany, Italy, Russia and UK

Additional training facilities in:
Hong Kong, Hungary, Japan, Poland, Singapore and Taiwan

Inside this issue

New Horizons provides insights into Africa, the fastest-growing mobile communications market in the world. We examine the role of shared phones in lowering the threshold for benefiting from mobility. We also discuss rural connectivity and its challenges with experts in Uganda, Rwanda and the Democratic Republic of the Congo.

Take a look at how the future of West Africa is unfolding – it is set to overtake Southern Africa's subscriber numbers within a few years. Also, find out how operators can increase network performance and improve profitability by investing in employee training. All this and much more inside New Horizons magazine!

