



### **Third World countries are transforming into real mobile computers with appropriate software.**

Surrounded by a dozen women in sari, in the dark, Meena, aged 30, pianote tirelessly on his Nokia 6600. Not for phone calls, but to update the accounts of a small group of micro credit, as developing countries in many millions. Employed by a local NGO, the woman originally from Tamil Nadu, in southern India, is responsible for managing the accounts of about twenty groups of investors (the amounts of contributions, loans, reimbursements, and so on. ). A tedious work that she was doing until recently on notebooks. Today, she no longer uses a mobile, which sends data to a server via SMS. "It's easy," she says. With a little practice, even a illiterate could use them.

The cell phone would be the tool of the future for economic development campaigns in the South? Or, in the words of India, the vector which gommer the "digital divide" between towns and villages? The answer is far from being settled, but a growing number of researchers believe that the mobile could actually be more effective than the computer to connect the most remote areas to the outside world. "The portables today are as powerful as the PC of the year 2000, and much cheaper," said Keshav Srinivasan, a professor at the University of Waterloo, Canada.

In India, where two-thirds of the population still live in rural areas, operators sell more than six million new subscribers per month. The country has just crossed the 200 million subscribers, and the goal now is to reach 500 million by 2010. A growth that will inevitably rural areas, the focus soon operators. However, because of the ease of use of its multimedia functions, "the mobile is a seamless interface for these regions," says the computer Tapan Parikh, from the University of Washington, USA. It is compact and requires less energy, it is more resistant to climatic (humidity, dust, etc.), And its maintenance is kept to a minimum. Finally, we can introduce software to create new applications. "

Illiterate. D'Indian origin, Tapan Parikh was elected "humanitarian of the year 2007" by the prestigious American magazine Technology Review for his work with groups of microcredit in Tamil Nadu. His invention, known as CAM (for camera), is simple: it is a small program that introduces a laptop, can record data on the device before you send SMS to a central server; as soon as the phone is within range of the network. It allows you to replace paper archives by a computer database centrally.

On the ground, Tapan Parikh has realized that small savers were attached to the paper version registers. Reason: Most do not know how to write the numbers and therefore able to carry out the fact sheet (total savings contributions, refunds, etc.). By remembering what question correspond to the different cases. The computer has



therefore added a bar code next to each of the cases. Accountants and take a photo of each barcode with their phone. The software recognizes this code, and asks the user to enter on the keyboard these details. In writing, but also orally (in five languages for the moment) so that the system can be used by illiterate. Once the listing is completed, it is automatically sent to the central server.

Still in the experimental stage, this software is currently used by about 6000 groups of microcredit. At the end of the course, the goal is to improve the transparency of accounts in order to facilitate the work of banks that may lend money to these small savers. "Generally, banks are faced with poorly kept archives, not to say unreadable, summarizes Aditya Vijay Pratap Singh, co-founder of Ekgaon Technologies, the company that sells software to financial institutions. As a result, decision-making is a long, which is crippling both to the borrower for the bank, which loses any interest. With this system, the visibility of financial liability is full and immediate, not only in the group of investors but also the individual .. Specifically, a loan that previously took more than two weeks to be granted, can now be released in less than a day.

Another advantage: users can attach pictures and even videos, to their records. An illiterate can thus shoot with a laptop to explain, in his own language, the project for which he is seeking a loan. Or provide pictures of its activities to support his case. "Alas, send pictures and videos via the mobile networks pay a lot of money," Tapan Parikh regrets.

Weather. Despite the cost of transmission, multimedia options are already put to good use in South America, where the CAM system is used by the inspectors to give small farmers labels "organic" and "fair trade". Microcredit is just one example among many of the potential uses of mobile campaigns in the Third World. Its primary function of oral communication has revolutionized the lives of millions of people. A subsidiary of the Grameen Bank (whose founder Muhammad Yunus, was awarded last year the Nobel Peace Prize), the operator Grameen Telecom of Bangladesh, for example, has equipped more than 220000 women of a laptop in remote villages, that is not connected to the fixed network. In praising the other villagers who want to use it, they generate an income and unexpected. The project has since been replicated in Uganda, Rwanda and Cameroon.

In southern India, mobile has also helped reduce accidents at sea, small fishermen are now able to learn about the weather when they are off. Better yet, but it is used to get information about the price of fish in the various ports in the region to move towards the market the highest bidder that day. At the border indo-népalaise, region or floods are recurring, Ekgaon Technologies also distributed mobiles in schools, responsible for monitoring the rivers. Participants regularly send SMS measures, thus creating a database that will help to anticipate floods.

The use of mobile surveillance for a "citizen" also made a breakthrough in Africa. In the Democratic Republic of Congo, the organization for the defense of human rights Ajedi-ka equipped civilians mobile phones to alert him, in real time, cases of recruitment of child soldiers. "Eventually, the laptop can also be used to fight



corruption," says Srinivasan Keshav, who already sees the citizens of southern countries use their portable cameras to denounce the inefficiency of public services...

"Educate." Throughout the Third World, the mobile found various applications in the health sector since the reporting of new cases of certain diseases through prevention campaigns. Thus, the company Indian ZMQ Software Systems has created educational games on AIDS, which can be downloaded. In a year and a half, the company has identified 10.3 million downloads (free) throughout the country. It has developed new versions for West Africa, in local languages. "The laptop is an incredibly powerful tool for disseminating information, and potentially to educate people most remote," says Hilmi Qureishi, responsible for the development of games.

Also in India, the NGO aAqua (Almost All Questions Answered), she developed what she calls a "Google of Indian agriculture." Clearly, a platform where farmers can send questions to agricultural experts via SMS or the Internet. Only drawback: it is necessary to use it, know how to read or write. But, again, the photo and video functions should eventually solve the problem, at least if the cost of sending images decline.

In fact, the solution already exists: the wi-fi. This technology can easily be incorporated flea portables. But operators refuse to bring it up, for fear that users will use for their oral communications, greatly reducing their profits. The gap has been opened this summer by the American operator T-Mobile. By adding ten dollars a month in dues, subscribers can actually speak via WiFi connection from anywhere in the world.

The Indian government putting itself on Wimax networks, able to cover larger surfaces than the wi-fi. According to a recent report by the firm Maravedis, the country is expected to involve about 21 million subscribers Wimax by 2014. While most private operators are considering for the moment to focus on urban areas, the public company BSNL has already planned to connect some 100000 villages, starting from next year. The beginning may be, a revolution in rural India where, until recently, many had never seen a mobile phone.