

Cellphones answer the call for computers in rural India

Alex Hutchinson, The Ottawa Citizen

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Laptops and PDAs are nearly non-existent in the isolated rural communities around Madurai, at the southern tip of India -- but that doesn't mean there aren't any computers.

Researchers are testing a program that uses the processing power of cellphones to collect data and record financial transactions in these communities, bringing the benefits of the computer age to an area stuck on the wrong side of the digital divide.

The cellphone is a perfect entry-level computer for users with low literacy levels, says Tapan Parikh of the University of Washington, because the input keys use numbers rather than letters, and the phone can provide voice commands.

"When users hear a voice speaking in their own language, it puts them at ease," Mr. Parikh said.

The camera function of the cellphone also enables it to "read" special forms using pattern recognition software -- an important feature for users who can't read or write.

Mr. Parikh's research is aimed at helping "microfinance" groups -- small groups of 10 to 20 people who pool their financial resources to hold savings and provide loans when needed. Across India, there are approximately one million groups with more than 15 million members. Non-governmental organizations often help to keep track of deposits and transactions, but the paper-based accounting process is laborious and error-prone.

"The underlying theme of the work is creating a locally sustainable financial infrastructure," Mr. Parikh said.

A preliminary study of the cellphone-based system was presented yesterday in Montreal at the Association for Computing Machinery's annual conference on human-computer interactions.

Using cellphones as computers makes sense, said Kent Lyons, a computer scientist from Georgia Tech who attended the presentation, since some cellphones have 10 times the processing power of desktop computers from a decade ago.

"Realizing that they are computers is part of the trick," he said.