

## Pencil Technologies Ltd: Innovating ICT for the Rural Poor

Pencil is an ethical for-profit company whose mission is to alleviate poverty, improve education, and strengthen the voice of the world's most disadvantaged by innovating new Information and Communication Technologies.

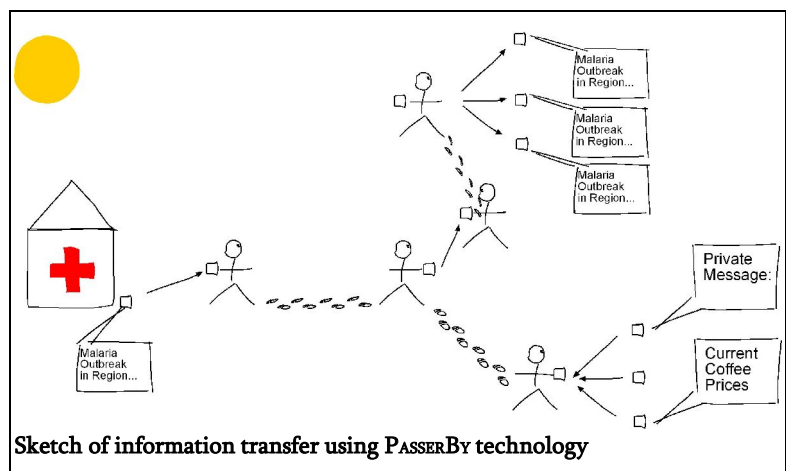
### The Challenge

Despite the phenomenal uptake of mobile telephony in the developing world, access to ICT for the rural poor is limited by inadequate electricity supply, the difficulty of deploying infrastructure such as cellphones towers, limited capability to create content, high per-usage cost relative to income, restricted access to capital to purchase devices, and the significant amount of time spent traveling, away from what infrastructure is available.

### PASSERBY: Zero-Infrastructure Communication for Rural Communities

Pencil has created PASSERBY®, a novel communication technology that uses everyday human activity to provide flexible, free-to-use, mobile communications.

As each person carrying a PASSERBY enabled device passes another, their device determines which of its outbound messages the other device can help distribute and copies those files over. Step-by-step, messages reach their destinations, just like an electronic form of “word-of-mouth”. Messages can be targeted to individuals, groups or any interested recipient (even those unknown to the sender). PASSERBY retains all information, such as copyright protection, originally attached to a file, and privacy can be maintained by using encrypted files. PASSERBY runs on cellphones, PDAs and on Pencil's own low-cost devices designed for the rural poor.



### SECONDVOICE: US\$10 portable communication device for the Rural Poor

Pencil has created SECONDVOICE®, an information device for the world's rural poor, specifically designed to overcome the problems preventing widespread creation, distribution and consumption of essential information to, within and between rural communities.

SECONDVOICE is a solar-powered, audio recording, storage and playback device that uses PASSERBY technology to provide free distribution of content. It enables any member of a community to create audio content and distribute it to their neighbours and friends, and from there to the wider world, even when walking long distances, carrying water, working outdoors or operating machinery. It enables private person-to-person, person-to-community, and widecast communication. It will cost less than US\$10 to manufacture, and with no electricity, networking or content creation costs, it is entirely free to operate.



### Further Information

Please visit <http://www.pencil-in.com> for further information.