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India's simple computer for the poor

The Simputer, a new cheap computer developed in India, could help the poor join the information age. Go Digital's Tracey Logan spoke to Vinay Deshpande of the Simputer Trust, ahead of the computer's launch in November.

Q: What's the main use for the Simputer?

A: The idea is that you would have one of these in a village somewhere, or maybe the co-operative would use one.

Q: And they would connect it to the internet through the dial-up modem that is already built in.

A: Almost every village in India nowadays has at least one long-distance telephone booth. So you would go there. This would dial up automatically. The village head or the farmer just needs to connect it and then it would go and fetch the information and convert the text into speech.

And likewise fertiliser information, seeds information - whatever, relating to farming and agriculture.

Simputer uses off-the-shelf components

Q: And there are business applications as well in terms of banking?

A: Micro-banking or sales force automation. Insurance companies in India are looking at using this for each of their insurance agents who go around. Now, they don't have to carry all these huge books that they used to carry, with details of all the policies. They just carry the Simputer with all the information already fed into that.

'Tremendous response'

Q: Now this is due for release in November?

A: In November, yes.

Q: What was your role in the development of this device?

A: I am the managing trustee

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A: I am the managing trustee of the Simputer Trust. The Simputer Trust is a non-profit trust created basically to develop technology that will help take information technology to rural areas. Our initial target is India. And if it is applicable in India, it will also be applicable in the rest of the third world.

We have had a tremendous response from all over the world - from South America to Australia and every other country in between, including

Deshpande: Our initial target is India

some of the developed countries. Even the developed countries are interested in seeing how they could use it; not just for applications for the poor, but also applications for the urban elite, the urban affluent.

Click here to tell us whether you think a device like this can survive in the commercial world

Q: What kinds of things are they interested in?

A: Sales automation, for instance; the DHL type of delivery - where these days they carry a huge device that keeps track of your package or parcel. This makes it much simpler. It is much lighter and smaller, so it makes it much simpler for them to carry it around - but more importantly with a GPS transceiver built in.

Q: Which can actually locate the device through satellite technology.

A: It will be much easier for him to locate or get information back and forth with the head office, depending on where he is. So if he can't locate a particular address, he can get back to the head office or branch office or whatever and get appropriate directions. Or the computer can itself say - depending on the location: "ok, go 10 steps more, 20 steps right", or whatever.

Likewise, salespeople who, based on their location, need information specific to that location. Let's say an insurance salesperson in Normandy in France has needs that are specific to that area. So, the Simputer will automatically, based on that location, get the information specific for that location.

Sharing information

Q: Looking at how this Simputer might be used in practice in India, it is a wonderfully simple device. A lot of different people can use it basically at the same time by having these smart cards. By using these smart cards which you can slot into the back of it.

A: So what could happen is a group of 10 farmers could get together and buy one. So now their cash input comes down to $20 dollars, which is definitely much more affordable than $200.

Q: But then how do they use it in a personalised way, so that other farmers can't see their private information?

A: That is facilitated by the smart card. Each farmer would have his own smart card, which costs only $2. So, their

Computer designed to be small and cheap

cost is $22, and yet they can use it as it as if it were their own for the period of time that they have it.

Q: You have a smart card stuck into this Simputer. It just looks a little bit larger than an ordinary credit card.

A: It is exactly the same size as a credit card.

Q: But it has its own little chip on it?

A: Yes, it has a built-in chip.

Q: What information does that chip hold?

A: You can hold several hundred letters for instance. You can hold your bank account information; you can hold your personal information - your driver's licence, your identity, your picture, your signature.

Likewise you can connect a video camera through its USB port. You could connect keyboards; you could connect printers; you could connect scanners, hard disk drives, etc.

An interesting application with the video camera that we are working with two organisations - one in India and one in Italy - is to turn this into a very low-cost reader for the blind. The visually impaired can use the video camera to scan text, then optical character recognition software converts it into text that a computer can understand, and then our text software converts that text into audible speech. So a blind person could now read.

Multi-lingual device

Q: In how many different languages at the moment?

A: Right now, it is in four or five languages - four of them are Indian languages, but we are working with the people in France to convert into French. We are working with people in the Middle East to work with Arabic. We are working with people in Africa to convert it to Swahili.

> **We are working with people in the Middle East to work with Arabic. We are working with people in Africa to convert it to Swahili**
>
> **Vinay Deshpande**

Q: Now the cost of $200, one-fifth of the cost of a normal PC. How did you manage to produce something this useful for that small amount of money?

A: First of all, it uses all off-the-shelf components so they are mature technology components that do not have a very high price.

The second thing is that all of the design effort for this was donated by seven of us. There are seven trustees. Four are professors from the Indian Institute of Science in

Bangalore, and three of us from my company.

Q: So, a bunch of you came together with your expertise in all the necessary areas to bring this project to life?

A: It has been a two-and-a-half year project and at the end of it all, that effort was donated. So we don't have to amortize the cost on any number of devices. Normally, something like this would cost some say $20 million or $30 million to develop. If you would amortise it over the first 100,000 or first 500,000, you can imagine the amount of money that you are going to add to the cost simply because of the design effort.

It would not appear to be sophisticated enough for business usage in the West but for poorer families of which there are many in the West who could not afford the more expensive units this would be ideal.
Carole Armstrong-Holmes, United Kingdom

Perhaps Trevor Baylis would like to use his wind up mechanism to power this computer. After all, the premise for his adapted invention was to help poor people power electrical devices.
SS, UK

If Linux can survive, then definitely : 'yes'. The technology is great, but more important is the freedom it brings in for the common people: non- dependence on village government officials, expensive foreign-designed PCs, and ability to work in one's own language.
Amar Upadhyay, India

Great Idea. Do you already have contacts in France? I am sure the western market could be interested by this Simputer.
Nicolas Cortesi, France

It is awesome. It has so many features for everyone and also technology wise, it's a good product for world peoples.
Vadivel K, India

This is no doubt the useful product for the rural area in the india, but how you make the illiterate people and farmers to operate it. Second thing is although it is cheap, but those people which hate automation, how would you persuade them.
Bharat Kumar Nayyar, india (hyderabad)

Obviously, Simputer can survive in a commercial market. Simputer is basically a somewhat larger, but more flexible Palm Pilot at 1/20 th of the price. What is important, is that it was developed in what is considered by many as the developing world, and that the R&D cost is extremely low. I have a question? Why are you compromising privacy, by incorporating a smart card, when you have internet access? What is your next task? How about pulling together a team of a thousand of these people. Then you could build something else the whole world needs: a low-cost, reliable, simple, secure operating system.
Egon Phillips, Canada

I think the device will go a long way in bridging the digital divide between the affluent urban population and the rural poor. However, the success of the device would depend upon how user friendly the interface is (given that a large number of people in rural areas are illiterate), what kind of applications exist, its price and the effectiveness of the distribution of this device.
Girish Subramanian, India

It has come to my attention that this machine is basically a slightly glorified palm top, and at a price of $200 it is not cheap either.
James Mansfield UK

I think that that high technology is very interesting because people who live in South America don't have a lot of money to buy a computer. That tiny computer will help all of us to have and get more information with this amazing invent "poor countries" will have more opportunities to understand more about the computer.
Marco X Matheus, Ecuador

You neglect to mention that Open Source software is the enabling factor for this device (specifically Linux). If the developers used a product like WinCE from Microsoft the Simputer would be priced out of the market for users in the Third World
Donovan Jones, New Zealand

It can survive if proper advertisement is given. To encourage people because it is cheaper than branded one. Give good service
T Sriniwas, India

Poor people in countries like India don't need DVD multimedia desktops.This is exactly what will make a great change in their lives.
Mayank, Australia

We do have a lot of technology that sits around, not being used for anything else, so why not start something like this, which could eventually help the world become one people?
Randolph H Murdock III, USA

Excellent use of mature technology for public benefit. If information is power, this can empower an incredible number of people. Imagine the possibilities for direct democracy or instant communications between isolated, poor peoples.
Camins Bretts, USA/Israel

This will surely work for India. Most people can use it to connect to the internet and from there can do almost anything. Good tool.
Sheela, India

This seems like a really cool and brilliant development. But since it is going to be used in the Third World and in villages made of mud huts probably, would it not have been a bright idea to make it of rubbery bouncy waterproof plastic. And although this is different in that it talks, there is nothing new in this idea.
Paul Gibson, Newcastle UK

Simple, low cost, fills a need and fits fairly neatly into current lifestyle of poor (used to using phone exchange points) such things normally point to a degree of positive uptake - it will probably come to be seen as one of Schumpter's "disruptive technologies" in that the commercial world won't wake up to the possibilities until it is too late to compete or catch up (see how txt messaging has taken off). Good luck - if India learnt to embrace open market competition, reform of property rights and education for all it could be the dominant growth economy of the next 100 years.
Huw Sayer, UK

I just can't see something like this taking off in a Third World country. Yes, it is a great idea and it is also great to see people working to help bridge the massive divide there is in information technology across the world, but in my eyes a device like this just won't work. Infrastructure in the third world has to be improved before they will be able to embrace the information age.
Lee, England

I read with interest about the innovation and wish it all the best.Working in Africa for the multilateral development bank, I feel that this is the need of the hour and would revolutionise the entire gamut of governance.

Yaduvendra Mathur, Cote d'Ivoire, West Africa

Nice one. The world needs more forward thinking and unselfish people like Mr Deshpande.
alex, england

The trouble with these initiatives to give "the poor" access to information technology, and particular the internet, is that no-one is taking into account that you still need a phone (and phone bill) to use them. It is not the cost of computer technology that is a barrier to the poor, it is the cost of connecting to the internet. Countries and telcos around the world should band together and make all calls to ISPs free. Only then will be bridge the gap between the "information rich" and the "information poor". Saying that, I think the Simputer sounds like a really good idea. Now they need to make a wind-up one (like the radios) and we will see these taking off all over the world.
Al Evans, Wales, UK

Great idea! Anything to help the poor is noble and worthy motivation in itself.
Kirk, USA

It all depends on how it is marketed and how it can be made even more affordable to the Third World poor.
Victor, Philippines

I think projects such as Simputers should succeed because of the fact that they offer low-cost alternatives to high-cost hi-tech
Amresh, USA

Sounds like a brilliant and innovative and selfless piece of work. Clearly has the potential to work in India and sounds pretty useful in UK context - perhaps a margin for future commercial development and worldwide benefit from a developed world market. The essence of a brilliant idea is pulling different existing ideas to create something new. This is spot on, what is surprising to me is the cynicism from so many respondents. Can my dyslexic youngsters have one?
John Picken, Scotland

Looks like this is a step in the positive direction but probably slightly over ambitious and ahead of the times. I think $200 is still a high price in India. Spending Rs.10,000 is not a joke. Doing that for a device which frankly many people might not be aware of, would not be considered a great investment. One of the key challenges would be how to market and publicise the Simputer to the intended audiences. That would be a key to its success.
Karthik DK, India

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Can the Simputer survive in a commercial world?

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