

Intelligent Computing Chip

May, 2010

fly there from Delhi? We wrote software that would let us “see” our computers from anywhere through the Internet. We wrote software to prevent Windows from hanging, and to protect desktops from accidentally getting deleted.

Q How do you ensure that the PCs are not misused for viewing inappropriate content over the web?

A There is a frequently voiced concern about access to pornographic material through kiosks that are connected to the Internet. While this has happened once in a while, it is quite rare. First of all, our kiosks are meant for children below 15 years. That audience has only some marginal curiosity about pornography, that too among the upper age groups. Second, our kiosks are in highly visible public places, which make it rather difficult for children to browse pornographic content. Third, our kiosks are monitored remotely and the screens are visible over the Internet. The children know this as every kiosk has a sign announcing it. Also, the kiosks are designed to be used by children, making it difficult for adults as they would need to be in a rather peculiar position to use them. It is interesting that some adults have, nevertheless, not been thwarted in their attempts to misuse the kiosk. Fortunately, their numbers are small.

Q What were the initial reactions from the children?

WHAT NEXT?

Currently, in his capacity as a Professor of Educational Technology at the School of Education, Communication and Language Sciences at Newcastle University, UK, Dr Mitra is experimenting with this concept in schools there with 8-12 year-old children. The students are divided into small groups and asked to answer basic science questions with the help of the Internet. After finding the answers, the children bounce ideas off each other and discuss them amongst themselves. And when the students were given a surprise test a couple of weeks later on the same subject, they scored well. This showed that they were capable

A They take about 20 minutes to figure out the mouse. Then they start to work in groups and rapidly progress with trial and error. But how does this magical computer literacy happen? It took five years, a lot of travel, and a lot of money to find out. There were great surprises and many disappointments on the way. But in the end, nature's lessons were simple, direct, and, in retrospect, obvious. After the heady rush of the Kalkaji experiment, it was time for some scientific introspection. Within six months, the children of the neighbourhood had learned all the mouse operations, could open and close programs, surf the Internet, and download games, music and video. When asked they said they had taught

of learning on their own. They related this information with their immediate environment and also retained it much better.

In another interesting incident, when Dr Mitra had last visited India, he asked the children in Hyderabad what they would want to use Skype for. He was surprised when the children replied that they would want a British grandmother to read them fairy tales. So he has recruited a British woman to spend a few hours each week reading to the children, and has set up webcams so that a life-size image of the storyteller is projected on to a wall in India.


themselves. They were describing the computer in their own terms, often coining words to describe what they saw on screen. The hourglass symbol was “damru”, the mouse cursor, “sui” or “teer”.

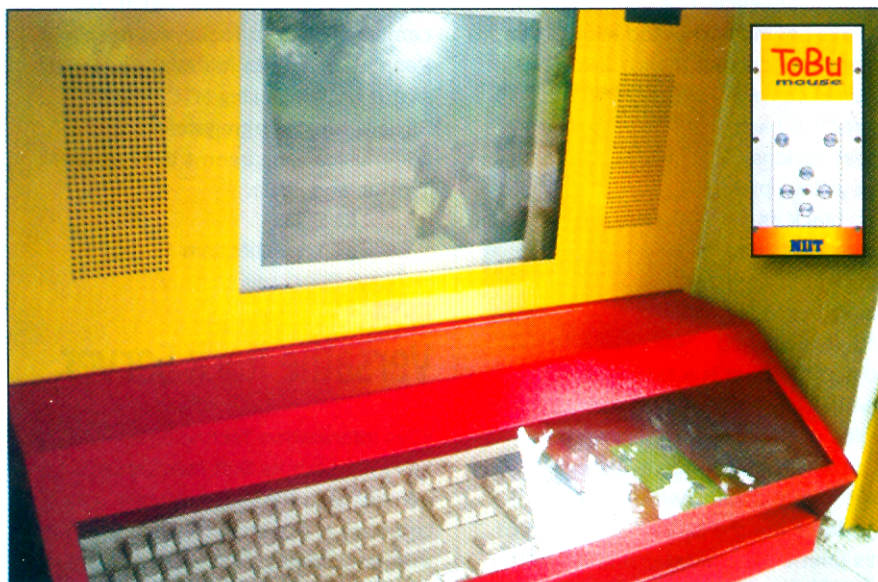
Q How is this project funded?

A The initial funding was from NIIT, the IFC, ICICI Bank, the Government of Delhi, etc. Now the intellectual property is with 'Hole in the Wall Education Ltd', a joint venture between NIIT and the International Finance Corporation. They service all orders.

Q In what ways would you say this project has helped disadvantaged children?

A A very large number of children seem to benefit from the kiosks. In independent studies conducted at Madangir, New Delhi, three organizations concluded that 6,000 out of the 9,000 children in the area were computer literate. This was achieved over three years through 20 effective computers. This indicates that up to 300 children can share one playground computer.

If the Hole in the Wall project is changing the children's analytical skills, English and other language skills, and certain value systems, then its consequences are far greater than I could ever have imagined. In the slums, local adults laugh and say, “If you take away their free time, petty crime and other naughty stuff will not happen”. I am amazed that I never thought of it that way. 



A typical Hole in the Wall computer kiosk and (inset) the touch-sensitive mouse.

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