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Log in to the virtual village

An app for folklore

Tablet computers could help villagers in the Kalahari preserve cultural knowledge for future generations

Niall Firth

THE Herero people know just what to do when a horse is too wild or unpredictable: they lash a donkey to it, which forces the horse to slow down and helps to tame it. Unruly animals have been dealt with this way for generations by the inhabitants of the small village of Erindiroukambe, which lies in the heart of the Kalahari desert in eastern Namibia.

But times are changing and, as young men leave to work or study in cities like Windhoek, 400 kilometres away, it becomes much harder to hang on to this kind of local knowledge. Kasper Rodil, at Aalborg University in Denmark, and his colleagues want to see if tablet computers can help bridge the gap. "The human race would lose some colour if we lost this kind of knowledge," says Rodil.

Typically, young men stay in the city for a few years before returning to their home village to pick up the traditional semi-nomadic lifestyle, working the land and keeping cows and goats. But this gap means that they miss out on much of the village's accumulated knowledge, which is traditionally passed on orally by the elders.

Along with researchers at the Polytechnic of Namibia in Windhoek, Rodil's team is working with Erindiroukambe's elders to develop a 3D visualisation of the village on a tablet computer. Their knowledge will be embedded in this virtual village to be stored for future generations. Rodil is also developing a drawing app for the tablet which mimics the way the elders draw diagrams in the sand to explain what they mean. "The idea is that we have as little friction as possible between the device and the user," he says.

It is crucial that the elders are involved in the development of such an app, says Rodil. "The participatory design is key. We don't want to just impose our ways upon people."

For villagers who had never used a computer before, the intuitive swipes and finger taps of a tablet interface proved easy to pick up. "If this is how to use computers, then I have no problems," said one old woman who tried it out.

The 3D environment, running on an Android-based Motorola Xoom tablet and based on a 3D video games engine, shows

"Video segments, such as the slaughtering of a goat, pop up as floating 2D panels in the virtual village"

avatars that depict the villagers as they are engaged in various tasks. Short video segments, such as the slaughtering of a goat, or the lighting of a sacred flame, pop up as floating 2D panels in the virtual village. Other links will access more general knowledge, such as which herbs can be used to treat specific ailments, how to look after animals or how to navigate between scattered villages using the sun.

Despite a few teething problems – elders complained that the colouring of the cows was not accurate enough, for example – the animations met with overall approval. "They are good in their look and in the sense that they will be kept there forever and they will never be forgotten," said one Erindiroukambe elder.

Rodil will present his latest work at the Participatory Design Conference in Roskilde, Denmark, in August.

Urban migration has disrupted how information has historically been passed down the generations, says Niall McNulty, who helps run the Ulwazi programme in Durban, South Africa. This uses digital technology to enable communities in the area to record indigenous knowledge and history.

"As mobile devices become ubiquitous in Africa, the need for this type of regional and language-specific content, and the tangible link it provides between communities and their multiple pasts, becomes all the more important," McNulty says. ■

One tablet per child

Laptops are great, but if you've never seen one before, you need someone to show you how to use it. Touchscreens are far more intuitive, which is why Nicholas Negroponte, who founded the One Laptop per Child initiative, is turning his attention to tablets instead.

Together with the Massachusetts Institute of Technology's Media Lab, he delivered solar-powered tablets to a handful of villages in Ethiopia, one per child. Each tablet was preloaded with educational software, but no instructions, and logged how the children interacted with the device. Within two weeks the children, who previously couldn't read, were using an average of 57 apps each and learning to recite the alphabet.