

## TELESPAN'S WILD & UNEXPECTED APPLICATIONS CONTEST - 2005

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**Title of Application:** Africa's first virtual classroom brings education to underprivileged learners

**User Organization:** Ulwazi E-Learning Project, St. Alban's College, South Africa

### **Contact Information for User Organization**

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### **Why does this qualify as a "wild and unexpected" application?**

The Ulwazi E-Learning project is the first project of its kind – reaching students and educators across the Mamelodi area in South Africa, an area that is historically known for its disadvantaged township. The Ulwazi project focuses on providing education via distance e-learning for students that would otherwise have to travel great distances to receive equitable education. Central to the project are SMART Board™ interactive whiteboards, webcams and speakers used in Beyers' e-learning lab and remote classrooms, connected via the private broadband wireless network using the Motorola Canopy™ product and Microsoft® NetMeeting® conferencing software. Using this technology, Beyers and his remote learners can see, hear and interact with each other in a virtual interactive and collaborative classroom.

### **Brief history or background of this application**

Many disadvantaged communities in Pretoria, South Africa, are plagued by a shortage of qualified teachers and a lack of resources for students. Students spend up to two hours a day commuting to more privileged schools for core classes their own schools can't offer.

Realizing the sacrifices these learners make for a basic education, an educator from St. Alban's College decided to create a solution – the Ulwazi E-Learning project, believed to be Africa's first virtual classroom.

"Working with Richard Gerber from the Department of Communications, I conceived the idea of employing technology to facilitate a virtual classroom to connect my classroom with Gatang High School in Mamelodi, some 15 km away," says Ron Beyers, Director of Technology at St. Alban's College.

Beyers says what's most important about this virtual classroom is that students can do more than simply watch as he teaches – they can actively participate in lessons in real-time.

Gatang High school can't afford supplies such as chemicals for Science experiments. But now, using a web cam and speakers with the SMART Board interactive whiteboard, students can participate in Science classes. Information is transmitted virtually instantaneously to the other classroom, says Beyers. From the remote classroom, students watch as colors of chemicals change and listen to the noises chemical reactions create while Beyers conducts experiments.

For instance, using the interactive whiteboard with NetMeeting software, Beyers can begin a drawing and then ask a learner from the virtual class to complete it. Or, he can write a formula and ask a learner to substitute the variables and record the answer on their own interactive whiteboard. The SMART Board interactive whiteboards provide a level of interactivity between the two classrooms that would otherwise not have been possible.

Seeing the impact the Ulwazi project has had on learners at Gatang High School has made Beyers and his colleagues eager to create more remote classrooms. Through a donation from the Motorola Foundation, the project has expanded to include three other schools, and there are plans to include a further 100 schools in the Tshwane (Pretoria) area and the greater Johannesburg area. The intention is to develop a regional and finally a national grid of learning and innovation, where learners and educators are connected to shared resources and are able to draw on the benefits of communities that are interconnected.

**URLs for additional information about the application** (such as where to find pictures, where to find earlier write-ups, and where to find archived video or other media documenting the application, if it exists)

Beyers has over 25 years of teaching experience in ten different subjects, and has co-authored 34 text books in technology education.

- See the Ulwazi project in action at <http://downloads.smarttech.com/media/pr/Ulwazi.wmv>
- Check out the attached photos (please credit the photos to "TheWirelessMonkey")
- More project details at <http://www.ulwaziproject.co.za/>