

SYMPOSIUM ON INTEGRATED APPLICATIONS (B5)
Integrated Applications End-to-End Solutions (1)

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“SPACE4EDU: SATELLITE TECHNOLOGY FOR SMART RURAL SCHOOLS IN SOUTH AFRICA”

Abstract

Rural schools in South Africa (SA) are faced with the challenge of an acute shortage of educational resources and qualified teachers. During the past 15 years this problem has been tackled by a unique initiative called “Rally to Read” (R2R), that has visited more than 700 schools (out of 3,000 rural schools country-wide). R2R is an annual event in which representatives of sponsoring companies and individuals, travelling in 4X4’s and SUV’s, meet and visit clusters of rural schools in 10 different regions of SA. The visits deliver to the schools books and other educational materials and kick-off the teacher training programme conducted by the non-profit organization READ Educational Trust, in collaboration with the South-African Education Department. The idea for an ESA ARTES applications project in support to R2R was introduced in early October 2011 with a paper at the UN/IAF/IAC in Cape Town, which created high interests and excitement from all the local stakeholders and the SA Minister of Science Technology (former Minister of Education). The project named “Space4edu” was formally kicked-off in January 2012

as part of the Sway4edu project (Satellite way for Education), which is an ESA ARTES 3-4 project led by Openet (Italy) with SES (Luxembourg).

Space4edu is primarily dedicated to providing an ICT-based solution for the professional training and qualification of local teachers. In addition, outside of working hours the system can be used by the local community members as a light cyber café supporting chat and emails, Skype phone calls between remote villages and other teaching activities that do not require reading skills – all unheard of in these rural areas.

The system consists of small, low-cost, interactive satellite terminals providing Internet connectivity using the Sat3Play product developed by Newtec (Belgium), solar panels/batteries, laptops, Android-tablets, and projectors/loudspeakers to interact daily with READ tutors based in Pietermaritzburg (SA). Through the online Openet eLearning platform, the teachers can complete the eLearning courses to obtain in-service training certificates.

The pilot activities with 12 pilot schools in the Kwazulu-Natal region of SA have been kicked-off in November 2012, aiming in 12 month time at providing literacy certificates to more than 100 teachers.

The paper will present the main achievements and lessons learnt under the technical, operational and human-system perspectives, of the pilot activities and the envisaged roadmap to prepare for a sustainable and ambitious expansion of the network up to 1,000 rural schools by 2015.