

# case study

## School of the Air

Charting a Course for Delivery of “Live”  
Online Learning With Centra® Symposium  
The SIASOTA Pilot

### Solution Overview

### Industry — Education

#### Challenge

Leverage the Internet to educate geographically remote children in South Australia

#### Benefits

- Provide real-time access to online course materials, resources and services provided by teachers
- Develop students’ social skills, literacy and a range of socio-cultural perspectives
- Shorten time for teachers to explain processes
- Increased rate of learning

#### Solution

Centra Symposium

#### Abstract

The SIASOTA Pilot involves introducing a virtual classroom to a 50-year-old school that occupies an area four times the area of the United Kingdom. This case study will address the challenges and outcomes of introducing “live” online teaching to 7 through 10-year-olds at the School of the Air in South Australia. Symposium is replacing a radio-based form of teaching for the children.

*“ Feedback from parents, supervisors and students has been overwhelmingly positive. They report increased enthusiasm and excitement about school — concentration spans are longer and students are having fun while they learn. Students commented that they were more involved and alert during class, feedback was instantaneous and they could see what other students were doing.”*

#### The SIASOTA Pilot

This is an exciting new project being piloted for six months in South Australia. It uses Centra Symposium and high-quality Internet access provided via a two-way satellite to bring real-time interactive teaching and learning into the homes of 20 students 7 to 10 years old, living in geographically remote areas of the state, on cattle and sheep stations, and studying by distance education through School of the Air and the R-10 School of Distance Education.

These students are now part of the Open Access College virtual classroom, which is using audio, video and data sharing, Web “mustering” (an Australian term) and other tools for the delivery of rich multimedia.

#### School of the Air

The School of the Air is the school of last resort for those students who cannot attend a conventional school due to geographical isolation in the vast landscape of South Australia. It provides a level of educational

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service comparable to that offered in a face-to-face school, despite significant barriers due to antiquated technology (HF radio is the primary delivery mechanism) and distance.

The school uses the Royal Flying Doctor Service's (RFDS) transmitters to broadcast radio lessons to an area of more than 1,600 miles in radius. The RFDS, established in 1928, is the culmination of a story of how medicine, aviation and radio were combined to bring health care to the people who live, work and travel in the more remote areas of Australia.

Students traditionally join daily air lessons via the HF radio. These lessons support students with various aspects of the curriculum, complementing the set course work. However, they are not without their limitations, particularly:

- Poor quality of audio reception, which is affected by atmospherics in summer
- Their inability to create an engaging, immediate, interactive and relevant learning environment
- Lack of opportunity they offer to develop ICT skills for future learning and employment

### History

Education is one of the key beneficiaries of the Internet because of its capacity to deliver information from anywhere to anywhere, at any time. Access to a reliable, powerful telecommunications infrastructure is a prerequisite in order to fully realize the benefits of the Internet in an educational context. The provision of such access to areas serviced by the School of the Air, namely regional and remote South Australia, is an ongoing challenge.

In late 2000, the state of South Australia sought and received assistance from the Australian federal government to conduct a pilot program for the provision of satellite Internet access, installation and ongoing services for children enrolled to receive distance education in remote and isolated communities, in order to create a rich media learning environment.

The School of the Air at Port Augusta was the main participant in this pilot project, which is referred to as the Satellite Internet Access for the School of the Air (SIASOTA) Pilot. The project's Web site address is [www.oac.schools.sa.edu.au](http://www.oac.schools.sa.edu.au).

The project is using high-quality Internet access, via a two-way satellite, to present an opportunity to evaluate the ability of new information and communication technologies, to provide similar levels of student-student and student-teacher real-time interactivity, and instantaneous feedback, which is taken for granted in conventional school environments.

The pilot was conducted during Terms 1 and 2 in 2002, with two-year-old and five-year-old children in 20 remote locations.

### Project Development

Project objectives to address specific outcomes for students, SOTA and the community were developed. These are to:

- Provide quality Internet services to children enrolled in remote and isolated communities in South Australia, ensuring equitable access to educational programs and services
- Test the improvement in education outcomes for students through the delivery of an e-learning curriculum
- Test an alternative communication solution to HF radio
- Prove the sustainability of such a solution in terms of value for money, technical requirements and delivery of education outcomes, and encourage Internet uptake in rural South Australia

In pursuit of these objectives, a steering committee was formed to plan, implement and evaluate the project. This involved appointing a project manager, who developed a Satellite and e-learning project plan that included strategies, milestones and indicators to roll out and manage a solution

that included resource requirements, decision and responsibility requirements, indicative project costs, assumptions, risks and a baseline against which to monitor actual cost and progress.

### The Students

There are more than 20 students between 7 and 10 years old involved in the pilot. They live on cattle and sheep ranches across a vast landscape 50% larger than Texas. Symposium lessons are delivered from the Open Access College in Adelaide, the capital city of South Australia. Port Augusta is a major regional center and the site of School of the Air.

### Come in Centra

Optimal education services provision requires a high degree of interaction and multichannelled communication. The SIASOTA pilot plan required a responsive, interactive e-learning environment for teachers and students that was not possible using HF radio.

A request for proposal (RFP) for an online educational delivery solution was developed and sent to six organizations that distributed “virtual classroom” solutions. The RFP detailed the specific, functional and other requirements demanded of the solution. Each proposal was rated in each category by means of a non-numerical classification scheme and, using these as a guide, all proposals were ranked according to how well they satisfied each category in comparison to other proposals.

Proposals were then ranked through a pair-wise comparison evaluation process. The end result was a separate ranking (across proposals) for each evaluation category. Each proposal was then evaluated in terms of its “value for money.”

Appcon Pty. Ltd. presented Centra Symposium to provide the functionality sought through the RFP. Appcon’s proposal and subsequent demonstrations revealed the interface to be simple, intuitive and devoid of complexity. The quality of the audio, demonstrated through a 31.2 kbps analog

connection, exceeded the expectations of the evaluating committee. In the ranking assessment, Symposium was ranked above all other products in terms of its compatibility and suitability.

### Outcomes

An evaluation of the educational outcomes for the students through the delivery of an e-learning curriculum found that Symposium is already making a real difference to the early education of these children.

The indicators used to evaluate the success of the pilot include:

- Frequency with which the Internet is accessed
- Ease of access
- Cycle times for assessment and feedback
- Improvements in reading and comprehension skills
- Observed changes in attitude to study and the behavior of SOTA students
- “Downtime” and numbers of broken links
- Type of Internet use
- Overall effectiveness of the service
- Assessing the qualitative improvement in curriculum delivery and the embedding of learning
- Effectiveness of training packages

Feedback from parents, supervisors and students has been overwhelmingly positive. They report increased enthusiasm and excitement about school — concentration spans are longer and students are having fun while they learn. Students commented that they were more involved and alert during class, feedback was instantaneous and they could see what other students were doing.

Teachers remarked that it took less time to explain processes, and they were able to monitor learning levels and difficulties. Parents said their children were eager to do school work, rather than avoid it, and that their rate of learning had increased dramatically.

In particular, observations were:

- Audio quality is much better than HF radio.
- “The kids can now hear their teacher and other students clearly all the time. They can have more involvement with their teacher and other students.”
- Difficult concepts are made more visual and easier to understand.
- Having that added dimension of visually communicating with each other has been an eye-opener for students and has given them many ideas. They share a great sense of pride and achievement when they see their own work displayed for the other children to see.
- Communication and collaboration are reducing isolation.
- “Interacting with a group of students her own age in many and varying ways has helped her communication skills.”
- More fun, motivation and real group cohesion is being developed.
- “When students are split into small groups and put into ‘breakout rooms,’ **they have had to learn about working** with each other, with no adult to lead them. This is something new. It is then fantastic that the children can share their work with everyone back in the ‘main room’ and see what the other children did in their groups.”

### Conclusion

This project is making a real difference to the remote community in South Australia, with significant interest having already been received on the use of Symposium from several other regional community groups, Aboriginal schools, other educational organizations and agencies and schools. Keeping the telephone available for emergencies in remote and isolated areas in Australia is vital, and Internet access via two-way satellite, rather than a telephone landline, makes this possible.

The benefit of using Symposium with the students is becoming obvious. It is seen as supplementing — not simply substituting — conventional curriculum-delivery mechanisms.