Review of Cosmo Pilot Project Phase 1
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Summary of Report
The Cosmo eBrailler with BERT software will provide support to braille Students who live in remote areas throughout the Atlantic Provinces. The Cosmo will make it possible for the braille teacher to provide the student with daily instructions for braille, as well as immediate feedback through a distance education setup.

Background - Atlantic Provinces Special Education Authority (APSEA)
APSEA provides services for students who are Blind and Visually Impaired, Deaf and Hard of Hearing and Deaf Blind in the four Atlantic Provinces of Canada. The four Atlantic provinces cover an area of 502,927 km$^2$ (194,181 sq mi). The population of this region is approximately 2.3 million. There are a number of small cities in Atlantic Canada, as well as many small communities and out port villages that are mainly located along its coastal region.

The APSEA Agreement is unique within Canada, and as such, can serve as a model for service delivery to a region of the country. Operational costs are shared by the four Atlantic Provinces while each maintain their own educational department and school boards. APSEA students are therefore provided with services in their home communities.

Description of Process
Due to their remote locations, many APSEA students meet with their braille teacher on average once a week. Due to the distance for travel, the teacher is restricted to visiting one student per day, whereas, in larger communities the teacher would see three to four students a day. On days when the braille teacher is not present he/she must rely on the expertise of the educational assistant (often with limited Braille Skills) to support the instructions received.

Phase 1:
One location in New Brunswick was selected for the trial phase of the Cosmo/BERT system.

Step 1: Preparing the device for travel: Prior to using the device at the schools, two laptop computers (one designated student, one designated teacher) and two Cosmo devices were set up at the APSEA Centre in Halifax. This was the most challenging part of the trial. Through consistent communication with David Pillisher, the devices were connected with the BERT server. This stage required time and coordination between APSEA and the creators of the product. Four sessions were required.
Step 2: Using the device with access through the school system. For convenience, the traveling Cosmo devices were trialed in the City of Moncton in New Brunswick. The Assistive Technology Supervisor met with the local vision teacher to trial the Cosmo/BERT teacher-student system in the school. This school selected was by the fact the School wifi system for APSEA devices was already in place. The “test run” of the teacher to student system functioned very well.

Step 3: Connecting the Student device at the remote school setting. The final step of phase one, was to try the device at a remote school location. The “student” laptop was sent prior to the trial, to provide the IT staff with time to connect the student’s laptop to the school’s wifi system.

The teacher-student connection at the remote school was more problematic. The school firewall initially prevented access to the BERT Server. Through the support of a dedicated IT staff member at the school, and David Pillisher, the problem of the internet communication was resolved. The student and teacher laptops were then able to transfer the information via Cosmo and BERT without difficulty.

Recommendations:
The “glitches” that occurred in this school, indicate that the wifi setup within each school district is different. For future planning, the APSEA Assistive Technology Supervisor and the Information Technology specialist, should be present when the devices are set up in the schools.

Summary Phase One: APSEA Staff liked the product, and hope to trial the system next in Rexton New Brunswick. Other potential sites would be remote locations in New Brunswick and Newfoundland.

Once the connection issues are worked out with the school wifi systems, the device becomes very effective for the purpose of remote teaching.

- For younger Braille students, it was noted that the Itinerant teachers benefit from team work and interaction with other professionals including the Classroom Teachers, Literacy and Numeracy Specialists. This device could be used for non travel days (or winter storm days) to provide the student with continual Braille practice. For instance, if the teacher can only travel one day a week, the teacher could provide lessons via Cosmo for the other school days.
- For older Braille students, individualized Braille Instruction, with a Skype or phone communication would be very efficient and effective.
Planning for Phase Two:

Two Cosmos with the BERT system will be purchased and installed in two school locations (one teacher, one Student) in New Brunswick.

Training will be given to the teacher to, in turn, provide online Braille instructions to the student.

A room in the school will be dedicated to the Cosmo set up. A speaker/microphone will be installed by APSEA.

Other instructional sites will be considered, especially in areas where travel is difficult for the teacher, and continuous Braille Instruction is required.

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