Radio Amateurs of Canada
Youth Education Program

NEWSLETTER #13

June 12, 2005

The 2004-05 school year is rapidly drawing to a close and I suspect that neither students nor teachers will be sorry to get started on their the upcoming summer break. Don't forget, the YEP Committee is looking forward to receiving a report from your school and your club about what you did and how you did it. Please let others benefit from your efforts and experiences. Last year, I sent out a questionnaire which generated some responses. I was hoping that it wouldn't be necessary to go to that length this year.

The report, below, was just received from Ken Pulfer - VE3PU - and illustrates some extremely creative thinking on the part of those involved. Maybe next school year, your school will be able to monitor the signals sent down from a space suit in orbit!

I am proud to announce that today the ARISS-US team has delivered their portion of the Suitsat hardware to the NASA Johnson Space Center. NASA is in the process of shipping this hardware to Energia in Russia where it is expected to be certified and integrated with the Russian team's Suitsat equipment for eventual launch on the 19P Progress launch vehicle in the August/September 2005
timeframe.

The Suitsat amateur radio system, coupled with a school artwork DVD project that will be delivered later this month, is planned to be installed in an outdated Russian Orlon spacesuit in late September. It will then be deployed from the ISS during an Extra Vehicular Activity (EVA, or spacewalk). The Suitsat amateur radio system will beam down special messages and an SSTV image from within the Orlon space suit as it floats in space. Suitsat radio system will allow hams and students to track the suit and decode special international messages, space suit telemetry, and a pre-programmed Slow Scan TV image through its specially-built digital voice messaging system and amateur radio transmitter. As built, Suitsat will be a transmit-only capability that will run on the space suit's battery power.

The idea for Suitsat was first conceived by the ARISS-Russia team, led by Sergey Samburov, RV3DR, and was extensively discussed at the joint AMSAT Symposium/ARISS International Partner meeting in October 2004. The project, also called Radioskaf or Radio Sputnik in Russia, is being led by project manager A. P. Alexandrov and Deputy Project Manager A. Poleshuk from RSC Energia, located in Korolev (Moscow area)

Russia. On the US side, the hardware project development was led by Lou McFadin, W5DID.

Since October the Suitsat design concept matured and evolved due to the challenging development time constraints. A joint NASA letter, allowing the ARISS team to proceed forward with the Suitsat project was signed on May 10, 2005. In the four short weeks since that letter was signed, the US project team, has designed, built and tested a simple, yet fully featured system that we hope will inspire hams and students around the world.

On behalf of the ARISS International team, I want to congratulate the Suitsat hardware development team for their "Can Do" spirit and ability to deliver the Suitsat hardware on such a very challenging schedule.

Congratulations!!!!!

Frank H. Bauer, KA3HDO
ARISS International Chairman
AMSAT V.P. for Human Spaceflight Programs

I would like to sincerely thank Brian Jackson - VE6JBJ - of Chestermere Lake Middle School for this very thorough report, below. Unfortunately, Brian will be leaving this school to move to Airdrie next year. Hopefully, the program at Chestermere will be able to continue while Brian moves toward getting a program started in his new school.

Chestermere Amateur Radio Program
2004-2005
Final Report

It is hard to imagine that only a little over one year ago, we started using amateur radio in our classroom. It has become so woven into the fabric of my classroom that I truly can't imagine what it was like without radio. Nor could I ever go back and not use it.

Here are the highlights of our year:

Eco-pals- In conjunction with Neil Carleton (VE3NCE), our classes participated in a program called Eco-Pals. This program randomly links schools across the country in a variety of different projects. However our initial proposal came in with a special request that we be partnered together and be allowed to introduce an amateur radio component. This opened up the whole world to us as we took the Eco-Pals project into a variety of directions. We started off with a project called "Class-to-Class" in which we exchanged artefacts that described our areas. At the same time, kids were matched up with a student in the other class and had the opportunity to introduce themselves to their partner on the radio. We followed this up with regular letters and a variety of other written projects. We started offering a Question of the Week, a project that had one class ask

a question on Monday that could be surveyed in both schools and then shared the results on Friday. The next week, a group from the other school would send the question and then meet again on Friday to exchange results. We exchanged approximately 16 weeks worth of questions between the classes. Most recently, we have started Audio Book Reviews- a chance to share your favourite book and assorted details with your Eco-pal. We have thoroughly entrenched amateur radio into this existing program to a point that I could not do the Eco-Pal program again without the radio component.

Antarctica- In September, we had the opportunity to research life in the Antarctic and ask any questions of Bill Hance, KD7CWA, a satellite operator and amateur radio operator at Palmer Station in the Antarctic. It was an amazing opportunity to find out about an area that we knew virtually nothing about.

Mount Everest- as many other students across the country did, we too joined in with R. Tait McKenzie Public School in Almonte, Ontario and contacted Professor Sean Egan, the University of Ottawa professor who was attempting to become the oldest Canadian to summit Mount Everest. Four students from the group of approximately 100 people who joined us for the event had a chance to ask Sean Egan questions about his experiences on Mount Everest. We had followed the expedition quite closely up until its tragic end.

Tasmania- Twice during the year, we researched and sent questions to amateur radio operators in Tasmania. We then followed them up with a contact that allowed them to ask their questions live over radio. Where I would normally have used two primary classes for most radio contacts, these two contacts were using a cross-section of other Grade Six students. These contacts went a long way to promote amateur radio in our community.

Australia- Where the Internet can answer a wide variety of questions, we proved it is not the only way to find answers. We proved that the answers can come more quickly if you put in a CQ to the area you would like to know more about and ask them directly. Such was the case when we wanted to know about the constellations that could be seen in the Southern Hemisphere. Hank, an amateur radio operator in Sydney, Australia, answered our call and our questions, despite the fact that it was 2:45 am in Australia. This left a very strong impression on the kids in my classroom.

Scotland, England- In order to introduce the entire program at the beginning of the year, we placed a large number of CQ calls to various IRLP nodes around the United Kingdom. It was amazing for both the students and me to hear so many pleasant, encouraging radio operators who were thrilled to be speaking to school kids. Their messages of support for amateur radio projects in schools were wonderful.

Mount St. Helens - During the eruptions of Mount St. Helens at the beginning of the year, we had the opportunity to speak to an operator who was only 90 miles away from the active volcano and who could vividly describe the atmosphere around his area. Through his descriptions, we could better understand the news that was being sent to us via the media.

England- most recently, we have connected up with David Mackinder , G4DWP, in Lincolnshire, England. David has an amateur radio club in his school and wrote looking for students with which he could connect his classes. After receiving permission from Industry Canada, we tried a series of "Greeting Messages"- short introductions between students that do not violate our lack of a Third Party Agreement. David's students are currently working under a Foundation License and working towards their Basic License equivalents.

Teacher Professional Development- Virtually every morning for the past year, Neil Carleton VE3NCE and I have chatted together via IRLP. Where this started off as an opportunity to plan ways we could connect our

classrooms and students together, it has become much more than that. Our conversations still seek for interesting new plans, but they have become philosophical, discussing the concepts behind education in two provinces. They have started looking forward to ways we can link classes in the school I will be in next year. They have become a very important source of professional development for me.

Related local events:

CARA Field Day - Our school has helped arrange a place for the Calgary Amateur Radio Association to hold a Field Day in late June. This will help promote amateur radio with the community as the students will be invited to visit the field station at the High School east of the town of Chestermere and participate in a field day. They will have the opportunity to witness and join in worldwide QSO's.

UPCOMING:

Summits of Canada - In 2005-06, an expedition of climbers from across Canada will challenge the highest peaks across Canada. Amateur radio will travel along with them as they plan to use radio to communicate with the kids across the country who participate in the RAC YEP. This will be an exciting chance to follow a unique climbing experience and share in the experiences. More to come from this.

And, all the very best for an excellent summer break!

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