By MARGARET MORABITO

Telecommunications is quickly becoming a tool for education, especially as the price of computers and modems falls. A myriad of on-line opportunities are now in the works, serving teachers, administrators and students. As national and state networks, as well as local BBSs, get involved with education, the possibilities for communicating and studying with others are extending beyond the boundaries of a single school, community or even state.

This month, we'll explore some of this on-line activity at the local level and discuss the potential for telecommunications in education.

Telecommunicating Teachers

Earlier this year, Ken Blystone, a 15-year veteran teacher of English and computer literacy in El Paso, Texas, contacted me about his on-line educational activities using Commodore equipment.

Blystone has been involved with telecommunications for about a year-and-a-half now. Last year he was prompted to explore the communicative aspects of telecommunications when the state of Texas mandated that computer literacy be taught in all 7th and 8th grades. At the time, many teachers wondered if they would be asked to teach the courses and, if so, how they would approach the task.

Blystone explored various possibilities for getting teachers in touch with computer experts so that they could ask questions, get advice and start learning about computers. One solution was to get the teachers on-line.

Texas was already involved with providing on-line opportunities for statewide education organizations

This month's column discusses how teachers are using telecommunications in education.

with its connections on The Electric Pages network, in Austin. The Electric Pages holds public and private networks for a variety of educational agencies, as well as the Texas Computer Education Association. These networks give members a chance to exchange ideas with others in their areas of expertise, to post messages and to read the latest policy decisions from the state and national level. It was a good place to learn how educators could benefit from on-line activities.

Blystone decided to implement this concept on a local level by starting up a SIG (special interest group) on an existing BBS (KiloNet) in El Paso. The new group was named Edu-SIG, and its goal was to promote communication among teachers and to share curricular ideas. In addition, the teachers could gain access to computerists in other SIGs who were regular users of KiloNet, to ask them questions and to get advice about computers.

The choice to use a local BBS rather than a national or state network was a monetary one. To join the SIG, the teachers wouldn't have to pay the subscription fees, hourly connect fees or long-distance phone bills that an outside network would cost them.

One problem encountered with Edu-SIG was that the KiloNet board

was very popular and had about ten other SIGs on it. It attracted several hundred users, and, because it was a single line BBS (only one caller at a time), the teachers in Edu-SIG frequently couldn't gain access. This problem finally led Blystone to stop Edu-SIG and start a separate BBS devoted solely to education.

Electric Chalkboard

Blystone began his new BBS, the Electric Chalkboard, last April. The new service has a different focus from his previous SIG. Aimed at instructional activities for students, the board currently provides after-school enrichment courses for young people in the El Paso area.

Blystone is excited about the instructional potential for this type of educational BBS. He has contacted teachers with computers to teach on the BBS. The teachers create their own lessons in the form of articles and tests. Subjects currently scheduled include astronomy, computer history, vocabulary development and reading.

The board is designed so that students can log on and access the teacher-prepared lessons. The lessons can be read on-line and can be downloaded for study afterwards. When the student feels comfortable with the material, she or he can take a test on-line.

Students can request test answers from the board's SYSOP (Blystone) and score the test themselves. There is the option for direct student-teacher communication, with students using a private message feature to leave questions about certain subjects for the specific teachers.
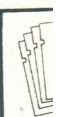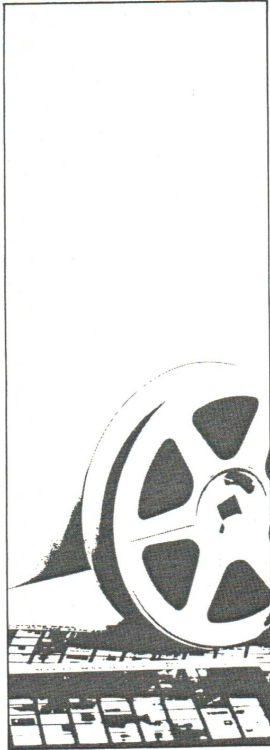
R The Resource Center

The BBS is open to everyone, but most students on the Electric Chalkboard range in age from 11 to 17. Users are from various schools throughout the district, creating a diversified user base.

Possible Applications

The Electric Chalkboard has a lot of potential for implementation by schools, as well as by other teachers working out of their homes. Schools could set up their own BBSs and tailor the materials to their particular curriculum. Teachers could then post lessons, assignments and quizzes that were directly tied in with their classes, and they could offer enrichment courses.

The benefits to students are varied. For example, a student who is homebound with an illness could keep on schedule by being able to access assignments, submit homework by uploading it on-line and even take tests. Interaction with the student's own teachers could be maintained on a daily basis through the BBS.

If several schools in a district had their own BBSs, computer literacy classes could well use these as opportunities to learn about telecommunications. Students could practice skills such as logging on, capturing textfiles into a computer's buffer, downloading, uploading, leaving and sending mail and even real-time chatting. This would be free practice.

Furthermore, there is the possibility of using the BBS as an after-school tutoring center for basic skills. Blystone's school, Desert View, already has an after-school tutoring program. This concept could be applied to a community or school BBS without the restrictions of time schedules or physical presence.

The BBSs could also be used as a point of contact to talk with teachers for any purpose: academic problems, counseling, job referrals and bibliographic information, to name a few.

Cost and Equipment

Setting up the Electric Chalkboard with Commodore equipment made the project quite affordable for Blystone. He uses a C-64 and two 1571 disk drives to run the board (1541s can also be used). He also uses a 1525 dot-matrix printer, a 300-baud Westridge modem and a television set as a monitor. The BBS uses the Telemessage Software from Tailored Solutions ($79.50).

Blystone is very enthusiastic about the Commodore line of computers. His setup cost him only $600, which he estimates would be about the average cost for anyone just starting out. Blystone has a C-128 that he'll be using for the board when Tailored Solutions comes out with the C-128 version of their software.

Some Thoughts

On-line education is still new, and there are problems that have yet to be discovered and ironed out. Teacher training is a big concern. If telecommunications is to succeed in the community and in schools, teachers must learn how to handle their own on-line activity. Teacher training sessions will have to be offered so that the learning is shared and encouraged.

There is also the cost involved for the BBS hardware and software. A single BBS, like Blystone's, is quite affordable and might be all that is needed for a single school. For a large school district where each school will be using their own BBS, the costs would be multiplied.

Also, schools have to pay to have more telephone lines installed. At a minimum, a school should have one line installed that will be used strictly for the BBS and then at least one other line devoted to a computer with modem that could be used for telecommunications activities. This minimal setup wouldn't be very expensive, but the cost of providing an entire computer lab with modems could get steep.

In addition, students and teachers have to buy modems for their home computer systems. In Blystone's case, this is the biggest roadblock right now. While many of the students and teachers have computers, they do not yet have modems; however, prices of modems for Commodore computers continue to fall and are now available for well under $50.

Although there are problems to consider, we must also consider that computer use and telecommunications will be a part of our students'

futures. This is certainly an area that will be getting more attention.

If you would like more information about the Electric Chalkboard BBS, contact Ken Blystone at 3012 Killarney, El Paso, TX 79925. For information about the Telemessage Software, contact Tailored Solutions, PO Box 183, Washington, DC 20044. Also, if you would like information about the Electric Pages Network in Austin, write to PO Box 2550, Austin, TX 78768.

News

Speaking of telecommunications, the Resource Center on Quantum-Link is in action. Also, there are two new education features on Q-Link: a tutoring center and on-line courses. If you would like to teach in these new areas, contact me in the Resource Center—either by mail or on-line.

Also, if you are already running an education BBS, please contact me. I am compiling a list of these BBSs and

would like to find out how they are being used.

I was recently contacted by a representative from Newton's Apple television show. Many schools use this PBS science series as a classroom tool. The underwriters of the show offer curriculum materials to schools as a supplement to the television shows, and they are now offering a free disk of educational programs directly related to these shows. This freeware disk will be available to any local educational BBS. Contact me if you're interested in getting this.

Lastly, the Young Astronaut Council has announced the creation of the Young Astronaut Continuing Education Foundation. Its main focus will be to provide $1000 awards to young people who graduate from a college or university with a bachelor's degree in math or science.

In order to be eligible now, a child under the age of ten must be nominated by an individual who donates

$27.50 to the foundation. The first awards will be given in 1997. Contact the Young Astronaut Council, PO Box 64532, Washington, DC 20036 or call 202-682-1986 for more details.   **R**

If you are using Commodore computers for educational purposes (at home or at school) and would like to share your experiences through The Resource Center, write me a letter detailing the equipment you're using, the subject areas involved, the age or grade level of your students, software you have found effective and any other information you feel like including. Send letters to:

> Margaret Morabito
> The Resource Center
> c/o RUN Editorial
> 80 Pine St.
> Peterborough, NH 03458

You can also leave messages in my on-line mail boxes: CompuServe (70616,714), Delphi (MARG M) and QuantumLink (MARG M). The Resource Center now has its own on-line SIG in The Learning Center on QuantumLink.

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