The Electronic Pipeline

By Dennis Thorp

Let's take a look into the future: It is a hot July night in the early 1990s and Golf Course Superintendent John Q. Grassmanager cannot sleep. His wife and children are fast asleep, but something is bothering him and he can't seem to drift off. Finally he gets up and goes to his desk for some thinking time. He uses his personal computer to check on his golf course and there are no apparent problems there. The computer controlled irrigation system is functioning normally, but perhaps that south-facing slope on 14 fairway could use another 10 minutes of water, so he changes that. The microclimate reporting system gives him readings from around the course and alerts him that the conditions will be optimum for Pythium development in three days. A call to the Turf Grass Information File (TGIF) at Michigan State for a quick check on the latest in Pythium control and Poa decline shows that a researcher in New York has just published a paper that shows promise for an interesting new control technique. That might bear looking into, and he "downloads" (moves copy from one machine to another) the file so he can print it out in the morning. A quick check of his inventory shows a potential shortage of fungicide if he has to spray one more time than he anticipated when he placed his chemical order last January, so he places an order with Chuck. Messages on TURFBYTE show that he isn't the only person with grass problems. The St. Louis area has been particularly hard hit by disease this year and the crabgrass in Pittsburgh has been notably resistant to control. The information that Duane out in Lawrence, KS sent to him was very helpful, so he sends a thank-you there and Jon down in Louisville, KY has been having trouble with his new XYZ fairway mower and a tip on an adjustment technique is sent there. Finally, John ties into Compuserve and checks the bookstores in the Electronic Mall for the new bestseller he has been looking for. It's in, so he orders it online. His mind at ease, Mr. Grassmanager turns off his computer and goes to sleep. Total time involved — 20 minutes.

Even though the preceding paragraph seems to cover an abundance of items, it is really only about one thing — the flow of information. At present, Mr. Grassmanager has to physically go to his course to see how the irrigation system is performing, and then he may have to talk to the night waterman or check a printout to see what hopefully happened. As for evaluating the microclimate. . . most of us have to rely on a thermometer, rain gauge and the weather report. Information on the latest research comes to us at meetings and shows, or through our reading. When I was in college, it was a maxim that the information in a book was at least three years out-of-date by the time it was published. With the sum total of human knowledge doubling every eight years or so, we need faster access than that. Magazines are much faster and electronic file transfer faster yet. Then there is the game of the 80's — telephone tag. "Hello, this is Duane. Is John in?" Sorry, he's out on the course." "Have him call me when he gets in. And on and on. It happens all the time with other superintendents, sales reps and family. Plus the minute I hang up, I always remember something else I wanted to talk about. How much easier it can be if we can compose messages on a word processor and transmit them to a central clearinghouse at the touch of a button. Then the person we want to contact can compose a reply at leisure and transmit it back the same way. Imagine the day when a ringing telephone no longer interrupts our train of thought. TURFBYTE, Compuserve and the Turfgrass Information File exist today and I will tell you more about them later.

During the early 1980's, the personal computer (PC) was forecast to be the next common home appliance, much like a toaster or radio. The PC would monitor and control the home environment, help prepare the family meals and balance your checkbook. There were two little problems with this scenario: anyone not smart enough to know how to balance a checkbook could never figure out how to use a computer; and using a $2,000 PC to do what a $9.95 calculator could do just as well did not make much sense to most people, and rightly so. It would be like using a chainsaw to slice butter. I have always followed one simple rule when I choose whether or not to "computerize" a task: KISS (Keep It Simple, Stupid). If any task is better done with pencil and paper, then do it that way.

There is one task that the PC can do for any homeowner or small businessman better than any other alternative: Telecommunications — a PC with a MODEM (modulator-demodulator. Do not get too concerned with what it is or how it works — basically it converts what you see on the screen into a format that can be transmitted or received over the phone lines) and access to the telephone lines, has access to massive data bases, containing billions of bits of information on everything from Alpha particles to the Zodiac, are updated continuously. People and computers are linked together by networks allowing inter-active and almost instantaneous response. This is what I call the "electronic pipeline."

After my first article, I got a nice note and package from Peter Cookingham, Project Manager of the Turfgrass Information Center at Michigan State University. He had checked the 11,200 references currently in the TGIF to see what was listed under the heading of "computer". The resulting printout is 43 pages long and it would take me a year to read all the abstracts on that subject alone. I'm almost afraid to ask about crabgrass. Pete says they should be ready for dial-up access in a month or so. For the present time, contact him at the USGA Turfgrass Information File, Turfgrass Information Center, Library W-212, Michigan State University, East

Lansing, MI 48824-1048. Their telephone number is (517) 353-7209 and they are open Monday-Friday 8 a.m.-5 p.m. EST. I plan on making much more use of this service.

Just last week I received a news release from Duane Patton, Lawrence Country Club, Lawrence, KS, announcing TURFBYTE, an electronic bulletin board maintained by golf course superintendents for golf course superintendents. It is just getting off the ground and currently supports 300 and 1200 baud modems with parity settings of 8 bits, no parity, 1 stop bit. (Your communications software will ask you for this information.) The hours of operation are from 4:30 p.m. to 7:00 a.m. Central Time daily. The phone number is 913-842-0592, and Duane is available during business hours for voice communications by dialing the same number. I have not yet had the opportunity to tie-in, but I am looking forward to doing that. This is another opportunity to contribute to growth in our profession, as the more this service is used, the better and more valuable it will be. Programs and tips will be shared by the participating superintendents, and it will be a chance for people with similar interests to communication with one another.

An electronic bulletin board is very similar to the bulletin board at your shop. Messages can be posted there and read by interested parties. The only difference is that you need a computer, modem, communications software and a telephone line to use an electronic one. There is probably a local electronic bulletin board in the city where you live.

Those people who saw the movie *War Games* got a demonstration of telecommunications and using one computer to communicate with another one at a remote location. The hardware is much more sophisticated now, but the principles are the same. Messages can either be read by everyone contacting the service or addressed to one particular person. It is similar to going to the post office to check the mail.

Information flow continues to increase in speed. Just keeping up with the daily newspaper and the nightly news consumes a lot of time. Our professional reading can more than fill the time available and the computer and telecommunications can help us keep up.

Topics for next month: my first contacts with TURFBYTE and developing an electronic budget.

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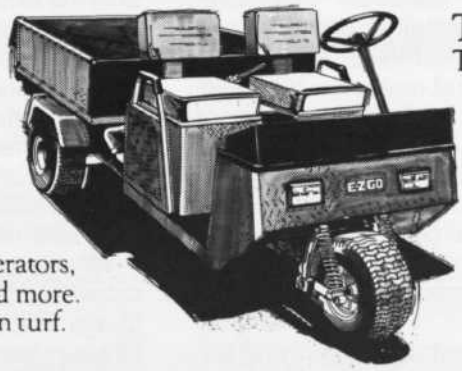

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