



COMPUTER USE IN GOLF COURSE MANAGEMENT

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Computers are very much a part of our everyday life today and without question will continue to be more so in the future.

Computers are being used everywhere you look: the weathermen use them with their forecasts; engineers use them to aid in designing structures; pro shop personnel use them to record members' scores and then produce their handicaps.

Computers are very powerful machines, in fact far too powerful for most of us to conceive. These powerful machines are now becoming useful in the turf industry. We see them used in controlling pump stations and irrigation cycles, disease prediction, monitors on sprayers, record keeping and electronic bulletin board networks, to name a few. We also have the capability of retrieving information from the Michigan State Library Turfgrass Information File through the use of our computer.

These were some of the uses I found while researching the potentials of having a computer in my office. In the meantime, our pro shop purchased a tee-time reservation software system which forced them to purchase three new computers.

The hospitality division at the Kohler Company also implemented a network system that links all of our businesses together via telephone lines and computers. Through the development of this large network system many other computers were purchased and I was fortunate to receive a computer as part of this expansion.

When I first saw this new computer in my office, my initial reaction was, "Now I have a computer, how do I use it?" Fortunately my computer was equipped with a hard drive which basically eliminates the use of disks. Included in the hard drive were four software programs: D-Base, Lotus 1,2,3, WordPerfect, and ProComm.

The next step was to learn how these programs could benefit my department. Each of these programs have a specific function: D-Base is a data base file

system; Lotus 1,2,3, is a spreadsheet program; WordPerfect is a word processing program and ProComm is a communication program which is required if a modem is going to be used.

Lotus: Lotus 1,2,3 was the first software program I worked with; it truly fascinated me. This program deals strictly with numbers and number operations. Its format consists of columns and rows, commonly called a spreadsheet. I have found this program to be very useful in budget preparations, recording of weekly man-hours, keeping monthly records on individual accounts, chemical price quotes, monthly labor expense projections and capitol equipment replacement schedules.

Labor comprises about half of my operating budget. Thus when it comes time to reduce the budget, labor is the most scrutinized account. Lotus is perfect for adjusting my labor account.

I received a program from my accountant that deals strictly with labor budgeting. The file is broken down into monthly columns. The rows consists of adjustable factors such as average wage, head count and average hours worked per week. The program is set up to automatically multiply the previously mentioned three factors to produce a monthly labor amount. By adjusting any one of the three, the totals automatically change. Once the spreadsheet is set up, making the adjustments is simple and the results are produced instantly.

Projecting capitol equipment replacement is another area where Lotus can be very helpful. I created a spreadsheet to help me lay out a five year equipment replacement program. Listed in the left margin or Column A are the primary pieces of equipment used and also replaced on a regular basis: utility vehicles, sand trap rakes, green mowers, fairway mowers, etc.

Column B contains the 1992 price for each piece of equipment. Column C shows the number of pieces of each type of equipment in our fleet and Column D is the expected life of each piece.

For the 5 year projection, I use 2 columns for each year. One column for the required number of units (Column E) to be replaced in a given year and the second (Column F) to show the cost.

Column F is a mathematical operation; it takes the number of units required from Column E and multiplies by the 1992 price found in Column B.

For the year 1993, I built in a 5% inflation factor. So the 1992 price of a piece of equipment is multiplied by 105% and then multiplied by the number of pieces being requested in 1993. The inflation is increased by 5% each year; i.e., 1994 is equal to 1992 price times 110%.

The columns are then totaled for each year to give an annual equipment replacement cost projection. This has

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proven to be very beneficial as capital dollars are always being adjusted. I can easily work backwards from a target figure or show how I need a certain amount due to life expectancy and the numbers that we operate with.

In addition to the examples listed above, Lotus is capable of computing more in-depth, involved functions. It can average, sort, round-off, format and graph figures. Numbers in a spreadsheet can easily be converted into a line, bar or pie graph.

D-Base: The second program I dove into was D-Base. The main function of D-Base is to compile and extract data in various fashions. Some of the data base files that I have developed using D-Base are an Employee File, an Equipment File, and a Hazardous Materials File.

The Employee File contains a complete history of each employee working in my department. Included are the names, addresses, phone numbers, clock numbers, date hired, classification, which course they work on, wage, last raise date, amount of last raise, training received, and any disciplinary notices. After all of this information has been entered, it can be retracted in almost any format. Some examples of how information might be pulled from the file are: a list of all employees earning between \$5.00 and \$5.25 per hour; a list of all employees hired in 1991; a list of all employees and phone numbers; or a list of all employees that have had hazardous materials training.

Another data base file I have developed is an Equipment File. In this file I have all the equipment stored in our building listed with date purchased, purchase price, vendor, serial number, Kohler asset number, type of fuel used, the department equipment is owned by, maintenance records, and dollars spent repairing each piece of equipment. By entering a few simple commands information such as a list of all Toro equipment, all 1989 Club Cars, or all Jacobsen equipment purchased between \$5,000-\$10,000 in 1991 and that uses diesel fuel can be retracted.

The most recent D-Base file we developed consists of all the hazardous materials in our maintenance building. We started this file to aid in the development of our hazardous communication program. The information stored in this file on each hazardous material includes: common name, trade name, type of material (fungicide, fertilizer, oil, fuel, cleaner, etc.), location of material (mechanic's shop, fertilizer storage area, pesticide room, janitor's closet, etc.), department that purchased material, quantity on hand, MSDS on file yes or no, and where to find the MSDS in our Hazardous Communication Book.

Having this information in the computer allows us to keep an up-to-date file on all the hazardous materials found in our maintenance building. When a new product is purchased it will be entered into this file. We then have the



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capability of printing out a complete list of all our hazardous materials or, more specifically, all hazardous materials used by the janitor or mechanics. Hazardous communication books have been developed for each area in our building that houses these materials; i.e., pesticide room, fertilizer room, mechanic's shop, janitor's room, pump house, and fuel area. The first page of each book is a listing of all materials found in the area that the book is located.

The list includes commonly used name, trade name, and a location where to find the MSDS of each product within the book. As products are added or deleted this list can be easily updated on the computer and a new list printed out and placed in our Hazardous Communication Book.

Following this list in each book is a copy of our Hazardous Communication Program, which we keep in our word processing program, and the third section includes all the MSDSs for products listed on page one.

D-Base is a wonderful filing system. It allows you to retrieve information readily and in a variety of ways. It is not difficult to use and I am sure I will find many other ways to use D-Base in the future.

Word processing: Word processing is probably used more than any other system on computers today. Word processing and the computer have replaced the old fashioned typewriter.

Typing with the use of a word processor can make a typist out of anyone. Mistakes are easily corrected by back spacing and making the corrections. Margins are easily set through the use of a few simple commands. Complete paragraphs can be moved to another location within a document or completely eliminated.

After completing a paper, a great feature called the *Spell Check* can be executed. This tool scans the paper, stops and highlights any word it does not recognize. You then have the opportunity to replace a misspelled word with the correct spelling from a list of possibilities offered by the program. A Thesaurus is another convenient tool found in most word processing programs.

Through the use of word processing an article like this can be typed at home then taken to your office on a disk to continue writing. Once the article is finished it can be mailed on a disk to Monroe Miller who then can load this article into his computer and edit it as he likes.

Word processing is also used to type form letters. From a list of names and addresses, a single letter can be personalized to every person on the list. Mailing labels can also be generated from the same list to be placed on envelopes.

Modems: Computers have the capability of communicating with other computers through a small device called a modem. A communications program, such as ProComm, is necessary to operate a modem. Modems convert computer information into pulses that can be transferred to other computers via telephone lines. This allows the already powerful personal computer to link up with other computers and become even more powerful.

Modems provide a convenience which allows the user to access information from a distant location. Computer controlled irrigation systems can be accessed from your home through the use of a modem on each end. Salesmen are able to hook into their company's base computer via their modems.

There are many services available to us through the use of a computer and a modem. Weather Brief, TurfByte, and Turfgrass Information File (TGIF) are three services I benefit from through the use of my modem.

Weather services around the country are available to supply a large variety of weather data to us. I subscribe to a service in Salt Lake City, Utah, called Weather Brief. The initial cost to purchase this program is \$35.00. A charge of \$.20 per minute while connected seems minimal seeing how I spent only \$25.00 last year. The long distance telephone calls are additional, however. Depending on the type and amount of data requested, most requests are downloaded in less than one minute.

Every morning during the golf season I call Weather Brief to get the day's weather forecast and a five-day forecast for zone 13 which is Sheboygan County. If rain is predicted I will also request a radar map of the Midwest to see where the precipitation is and how large of an area is being effected.

The day's forecast is then duplicated and a copy faxed or hand delivered to the pro shop for any out of town golfers who may call and ask about the day's weather forecast. This has proven to be very beneficial to our pro shop staff.

The information and detail available through Weather Brief is phenomenal. There are 26 different selection topics available. Following are a few of the topics subscribers can choose from: 5, 15, 30 and 90 day forecasts; radar maps including current, 12, 24, 36 and 48 hours ago which is helpful when monitoring storm history; severe weather alerts and warnings; soil temperature maps; wind forecast maps at various altitudes; selected major inter-

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state highway weather forecasts, which gives a brief forecast for all the major cities a selected interstate passes through; satellite pictures which include jet streams, high and low pressure areas, and frontal locations can be viewed on your computer screen.

After selecting a topic you wish data on, most times you are then asked to be specific to the area of interest. National maps are available with topics. Some offer detail for portions of the country such as north central, northeast, etc., and others will ask for a specific state and then possibly a specific zone within that state. The service truly is remarkable, very useful and is affordable.

Turf Byte, a bulletin board system for turf professionals, is another useful tool available to us through a computer and a modem. The bulletin board is centered in Lawrence, Kansas, and operated by Superintendent Duane Patton.

This is a great way to communicate with other turfgrass professionals around the country and the only cost involved is a long distance telephone call to Kansas. Messages can be written off-line and then transferred into the

bulletin board when connected, saving you connect time. Messages can also be downloaded and saved into a file and then read off-line at your leisure, again minimizing the length of time you are connected.

New ideas, questions, comments, surveys or just casual conversation goes on everyday with Turf Byte. An abundance of good information passes through the bulletin board which anyone can gain from by just reading the messages. I try to call at least once a week and download the messages since I was last connected. I feel this is a valuable service and if anyone would like a message placed on Turf Byte but does not have a modem or computer, I would be happy to put your message on the wire.

Turfgrass Information File (TGIF), located in the library at Michigan State University, is yet another tool available to turf managers through a computer and a modem. Calling the library via your computer is the fastest way to access the turfgrass file; however, information is also available by calling the library on a standard telephone. Whichever way

you access the file almost all the information ever written on turf is available to you. By calling via a computer it is like having the card catalog at your fingertips. Information can be requested on a specific subject or by a specific author. Complete articles are not available, however abstracts are and they can be downloaded into your computer. There is an annual subscription fee of \$75.00 per year to use this service.

Computers can benefit you as a turfgrass professional. Computer use is everywhere and growing. Just last week I ordered a program called Qquest for our mechanical repairs department. This will keep all the repair parts inventoried and remove them from the inventory as they are used. Preventative maintenance schedules also pop-up when due on a piece of equipment.

Having only been involved with computers for one year, I am very surprised at all the uses I have found in such a short time that greatly assists me at the golf course. It is already hard to imagine doing my job without the assistance of such a tremendous tool as the COMPUTER.

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