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See You on the Net

BY JAMES F. MOORE

*Director, Construction Education
USGA Green Section*

It seems like just a few years ago I was writing my first article about using computers in golf course management. Highlights of that article included the need to purchase an IBM PC (there were no compatibles at that time) with a whopping 64K memory, monochrome screen (some will remember it was quite some time before CGA cards with four colors came out), and two floppy disk drives (two drives was quite an upgrade from the standard one, 360K unit).

For the next couple of years I gave numerous talks on using computers to help the superintendent in keeping records. And I distinctly remember trying to somehow justify an extra \$300 dollars to purchase a 300 baud modem. Justification was difficult, however, since there was really no information "on-line" that could remotely prove useful to the golf course superintendent.

Frustrated, I bought the modem out of my pocket and started my own turf-related bulletin board.

Unfortunately, since virtually no other superintendents were using computers at the time, my little bulletin board stayed quiet. I eventually opened it up to public access and began to be overrun with users — people who didn't care anything about turf but knew computers inside out.

Over the next few months a few turf-related bulletin boards did pop up, including Turfbyte and finally, and on-line world started to offer useful information for the golf course superintendent.

When the USGA-sponsored Turfgrass Information File was developed at Michi-

gan State, the golf industry had its first real information resource. But unfortunately, few superintendents in those early days were ready to tackle the unpredictability and still buggy world of on-line computer communications.

How far have we come since the early days of personal computers on the golf course?

Well, most superintendents I visit now have seriously powerful PCs, most with memory measures in megabytes of RAM (instead of K's) and gigabytes of hard

and how do you get to it? On the internet of course, and getting to it is much easier than you might think.

Briefly, the internet actually offers a variety of services, the most prominent of which are the World Wide Web (WWW), electronic mail (e-mail), USENET (a collection of news-groups) and File Transfer Protocol (FTP).

*The WWW is often used interchangeably with the phrase "internet" since it is easily the most glamorous aspect of the next. The web is the graphical portion of the internet and by far the most fun.

*E-mail is the net's mail system and allows net users from all over the world to communicate easily and efficiently.

*USENET is like a giant collection of discussion groups (often called newsgroups) on which you can trade opinions with others on virtually any topic you can imagine.

For example, I bumped across a newsgroup the other night composed of a bunch of folks who really hate Barney. On the more useful side of things, there are newsgroups that provide valuable information

and discussion on various diseases, finance, travel, child rearing, religion and every sport on the planet.

As you might imagine, the newsgroup for golf is one of the most active of the sports-oriented groups. There are literally thousands of newsgroups.

*Finally, FTP is the protocol, or program, that allows files from one computer to be transferred to another. For example, you might wish to download the USGA's guidelines for our recom-



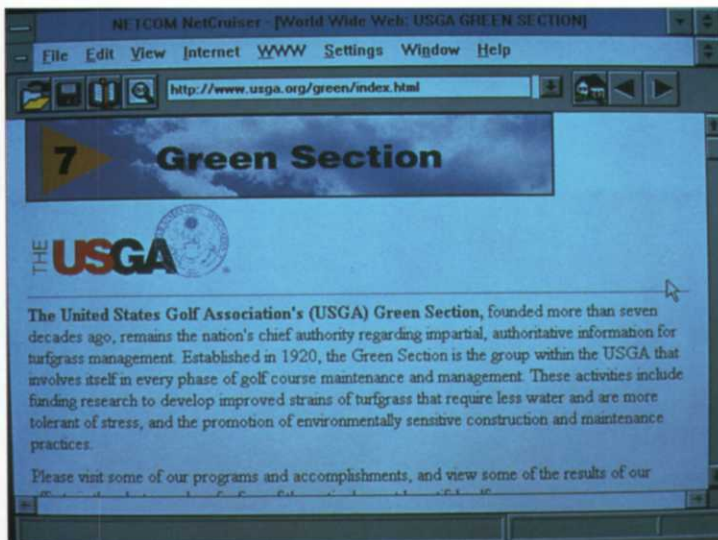
USGA Internet site. Photo by James Moore.

disk storage. Most are equipped with modems boasting speeds of 28,000 — over 80 times faster than my first modem.

But best of all, there is now an unbelievable amount of agronomic and turfgrass information on-line. And while a major land-grant university library may well contain more turfgrass information,

I guarantee that information won't be as up-to-date as what you can get through your computer and modem.

Where is all this on-line information,



USGA Green Section Internet site. Photo by James Moore

mended method of green construction. Your computer would use FTP for this process.

Space does not allow discussing each of these aspects of the web in any great detail. Since most of the turfgrass-related information is found on the web (WWW), let's concentrate on the steps necessary to get you up and running with the least amount of effort.

1. You must have a computer. The good news is you don't need the latest and greatest powerhouse Pentium machine. In fact, your old 386 will actually work very well — assuming you have a good modem.

2. You must have a modem — and a good one is worth the extra cash. Be sure to purchase one that is rated at 28,800 baud or better. Don't try to save \$50 and settle for the 14,400 model. Although you can definitely cruise the net at 14,400, it is sort of like staring at ryegrass seed and waiting for it to germinate.

You will also have to choose between an internal or external modem. Both have their advantages. The internal will be slightly cheaper and obviously does not take up space on your desk. The internal also will have built onto the board the high-speed communications, or comm chip, that allows you to communication at speeds over 14,400. There are three main disadvantages to internal modems. First, you have to take the cover off your machine and install the card. Although

happen). The only method of resetting the internal modem is to reset the entire computer. The third drawback is the internal modem does not have lights to let you know what it is doing.

The external modem is slightly more expensive (usually around \$25 more). However it comes with an on/off switch in case of lock-ups.

The lights on the front panel let you know when you are connected and when data is being transferred successfully. You will need another AC outlet to power the external model.

Your computer will also need to have an open serial or comm port on the back to connect the external modem to the computer.


this is no big deal some folks would rather not mess with the inside of their computer. A larger disadvantage to me is that you cannot reset the internal

m o d e m should it lock up (not as frequent an occurrence as it used to be, but it does still

However, on older computers there is another major drawback. Most older machines use what is called the 8250 UART. This chip cannot pass information from your modem to the computer at speeds about 14,400. So even if you have the 28,800 modem, your connection speed will be limited by the 8250 chip. To realize the full benefit of the faster modem, you will need to upgrade your serial card to the 16550 chip. These cards cost around \$50.

How can you tell which comm chip you have? If you have Windows on your machine (doesn't everyone by now?), exit Windows to the DOS prompt. Change directory to the Windows directory (CD\windows) and type "msd" (without the quotes). This is the Microsoft diagnostic program. Click on "comm ports," and you will see which type of chip is installed on each port on your machine.

3. So let's assume you have your computer and modem. What next? You need



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Note: Some of the addresses listed may have changed by the time this article is published.

United States Golf Association
<http://www.usga.org/>

National Golf Foundation
<http://www.gate.net/~ngf/ngf.html>

PGA of America
<http://www.pgaonline.com/>

Golf Course Superintendent's Association of America
<http://www/gcsaa.org/gcsaa/>

American Phytopathological Society
<http://www.scisoc.org/>

The National Agricultural Library
<http://www.nalusda.gov/>

National Weather Service
<http://www.nws.noaa.gov/>

Florida Agricultural Information Retrieval System (FAIRS)
<http://hammock.ifas.ufl.edu/>

University of Nebraska-Lincoln Institute of Agriculture and Natural Resources (IANR)
<http://ianrwww.unl.edu/>

Chemical Fact Sheets
 gopher://
ecosys.drdr.Virginia.edu:70/11/library/gen/toxics

Texas Plant Disease Handbook
<http://cygnus.tamu.edu/Textlab/tpdh.html>

Penn State Gopher Site
<http://www/realtime.net/turfgrass/penn.htm>

Texas A&M University Turfgrass Files
<http://leviathan.tamu.edu:70/1s/mg/turfgras>

Guelph Turfgrass Institute
<http://www.uoguelph.ca/GTI/ghome.htm>

University of Georgia Extension Service
<http://www.ces.uga.edu/ces/pubs.html>

The Regional Climate Centers
http://met-www.cit.cornell.edu/other_rcc.html

Response of Turfgrass and Turfgrass Weeds to Herbicides
<http://hammock.ifas.ufl.edu/txt/fairs/wg/18059.html>

TMIC Turfgrass Manager's Information Service
<http://www.realtime.net/turfgrass/>

Turfgrass - Michigan State University
<http://msue-web.canr.msu.edu/msue/iac/turf.html>

Turfgrass Insects Sheet
<http://hammock.ifas.ufl.edu/text/en/turfins1.html>

The Basics of Turfgrass Fertilization
<http://www.ces.uga.edu/lawns/basicfer.html>

TurfFiles Publication Index (North Carolina State University)
<http://www.ces.ncsu.edu/TurfFiles/pubs/>

a phone book. Now is the time to start looking for an Internet Service Provider, or ISP. These are the folks who will provide your connection to the internet. Expect to spend around \$20 - \$25 per month for unlimited access time. Although you can get on the internet through services such as Compuserve, Prodigy and America Online, I prefer the more direct connection of the ISP due to the increased speed of access. A local ISP provider is also a lot more likely to provide the help you may need to get your

internet software set up.

Usually the ISP will provide you software to navigate the internet as well. The software used to access and surf the World Wide Web is called a browser. Netscape and Microsoft's Internet Assistant are the two most popular, with Netscape the browser of choice (at least so far) of the vast majority of internet users.

The local ISP company should walk you through setting up your machine and getting on-line the first couple of times. If they are unwilling to do this, go

to someone else. Providing access to the internet is big business with service being one of the most important distinctions between a good provider and one that stinks. Another major factor is line availability. Some providers are cheap and friendly, but this does little good if their numbers are always busy. Ask around - a lot.

So that's about it. You got your computer, modem and struck a deal with an internet service provider. Now what? Where is all that information, and how

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do you get there?

Every web site (locations on the World Wide Web you would like to visit) has an address. This address is referred to as an URL (universal resource locator). This address allows the web site to be found by your browser no matter if the web site is in Australia or Flour Bluff, Texas (my hometown, believe it or not). If you want to visit a specific site, you will need to enter the URL of that site into your browser. To save you some grief I have listed a few at the end of this article to get you started. However, don't hesitate to explore. That is the real fun and excitement of the internet, especially the World Wide Web. On almost every web site you will find links to other places. Click on a line and a few seconds later you may be on a web site on the other side of the planet. You will soon find yourself lost and/or looking at information that has absolutely nothing to do with what you started out to find. Don't sweat it. Just do a quick search (you will find searching

quite easy), and you're back on track.

To embarrass those of you who think you are too old or too computer illiterate to accomplish all this, consider my 9-year-old son, Andrew. Andrew likes bugs and science in general. Outside our back door, Andrew noticed a large wasp digging a hole in our flower bed and wanted to know what kind it was. Based on his description I thought it was probably a Cicada wasp. Checking my old entomology text did not help with the identification since there was no picture. So I told him to get on the net and see if he could find a picture. He fired up Netscape and within a couple of minutes was doing a search for the phrase "cicada wasp." Unfortunately, no direct hits came on this phrase. However, over 20 hits were listed for university entomology departments and other people who share Andrew's interest in bugs. He selected a university in England which listed many of their faculty members' e-mail addresses on the department web page. After clicking on

the e-mail icon (which brought up the e-mail editor) he wrote a quick note to the scientist asking for a little help in finding a picture. Early the next day Andrew received an e-mail from the scientist listing the URL of a web site containing thousands of insect pictures, where Andrew soon positively confirmed the identity of our flower bed resident.

Surely if the 9-year-old son of a Texas Aggie can meet the challenge of the internet, so can you. You just have to dive in, prepare for a little frustration in getting your connections made, and somehow make some time for the fun and overload of information that is about to come your way.

See you on the net!

James F. Moore

Director, Construction Education
USGA Green Section

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~moore

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GCSAA Certification Renewal Policy for Renewal Dates after July 1, 1996

CEU Categories	Tested	CEUs	Verification	Recording	Option
**GCSAA Seminars	Yes	Varies	By GCSAA	As Occurs	1 or 2
Cardiopulmonary Resuscitation (CPR)	Yes	.7 per renewal period	Copy of wallet certificate submitted by CGCS	As Occurs	1 or 2
First Aid	Yes	.7 per renewal period	Copy of wallet certificate submitted by CGCS	As Occurs	1 or 2
GCSAA Board LRP Meetings	Yes	1 per meeting	By GCSAA	As Occurs	1 or 2
Locally sponsored events (preapproved)	No	Varies - .5 minimum	Affadavit submitted by CGCS	Within 30 days of event	1 or 2
CMAA & PGA Seminars	No	Varies - .5 minimum	Copy of certificate submitted by CGCS	As Occurs	1 or 2
Accredited programs	No	Varies - .5 minimum	Copy of certificate submitted by CGCS	As Occurs	1 or 2
GCSAA National Conference Attendance	No	1 per year	By GCSAA conference registration	Receipt of renewal application	1
College credit in turf or business subjects	No	1.5 per semester credit hour	Transcript submitted by CGCS	As Occurs	1 or 2
Pesticide Applicator License	No	1 per renewal period	Copy of license submitted by CGCS	Renewal application	1 or 2
Teaching - turf or business subjects	No	Varies	Letter from sponsor	As Occurs	1 or 2
GCSAA Board Service	No	1 per year	By GCSAA	March 1 of each year	1 or 2
National Committee Service	No	1 per renewal period	By GCSAA	Receipt of Renewal Application	1 or 2
GCSAA Affiliate Chapter Officer	No	.5 per year	Letter from chapter attached to Renewal Application	Receipt of Renewal Application	1 or 2
Certification Attestor	No	.5 per visit	By GCSAA	As Occurs	1 or 2
Chapter Reps Meeting in Lawrence	No	.5 per year	By GCSAA	As Occurs	1 or 2
Speaking at GCSAA National Conference	No	5 per year	By GCSAA	As Occurs	1 or 2
Published articles in GCM	No	5 per article	By GCSAA	As Occurs	1 or 2

Option 1: Requires 15 CEUs total (a minimum of 4.9 must be from the tested CEU Categories)

Option 2: Requires 10 CEUs total (a minimum of 7.0 must be from the tested CEU categories) NOTE: As indicated, GCSAA National Conference attendance does not count in this option.

CEUs from GCSAA seminars are earned by successfully completing the examination given at the end of the seminar.

Maintaining certified status requires a renewal process to be completed every five years from the initial date of certification. CEUs must be earned within the dates of a five-year renewal period to be applicable toward fulfillment of that renewal process.

CGCS may opt to retake the certification examination each five-year period to fulfill the renewal requirements.

Keep us informed about weather-related challenges

CHAPTER RELATIONS — GCSAA would like to encourage chapters to keep us informed about regional golf course maintenance problems, especially those that are weather-related. GCSAA will provide information to members in those areas to assist them with answering inquiries from golfers, employers and the media. Timely research and distribution of information will depend on GCSAA's awareness of these problems as they arise.

Last summer, the unusually hot and dry conditions provided difficult challenges for superintendents. While GCSAA was able to provide weather-related information packets later in the summer, the association would like to react more

quickly in the future.

Chapter representatives can contact Don Bretthauer, chapter relations manager, or David Bishop, information services manager, about unusual weather or extreme diseases affecting large numbers of golf courses in their areas.

GCSAA will mobilize its departments, including information services, public affairs, chapter relations and media relations, to send information back to chapters in a timely manner. Information packets, news releases and GCSAA's World Wide Web site will all be utilized to assist and support superintendents facing these unusual challenges.

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Across the country, native plant materials are being incorporated into course design. Golfers should recognize that golf courses are managed land areas that should complement the natural environment. Breckenridge GC, Colorado.

Attitudes must change

BY JOHN H. FOY

Director, State of Florida
USGA Green Section

As with numerous other aspects of every day life in America, television has changed the game of golf. With the broadcast of a large number of tournaments and championships each year, a change in golfer attitudes towards course conditioning has occurred.

A standard of "wall to wall" perfection has been established. Most golfers however, are totally unaware of the amount of work and cost required to put a course into championship conditioning for the few days of a televised event. On the other side of the coin, golf course superintendents have risen to meet the challenge, and across the country, superbly conditioned courses are being provided.

Yet, over the past several years, golf courses and turfgrass have been heavily criticized for their perceived negative en-

vironmental impacts. University research continues to document that properly maintained golf course turf can be provided without detrimental effects on the environment.

Numerous positive steps are also being taken in management and design to further minimize possible negatives and accentuate the positive environmental aspects of golf courses.

It is essential however, that additional changes in golfer attitudes be made to ensure that the game continues to flourish. This is especially true with regard to water bodies and out of play areas. Education of golfers and the general public is an important part of this process.

In 1994, the Center for Resource Management, Golf Digest Magazine, the National Wildlife Federation and the Pebble Beach Resort Company, resolved that the time was right to bring representatives of many of the country's most influential golf and environmental organiza-

tions together to address issues related to golf and the environment.

Following the first meeting in January, 1995, a committee of approximately 25 golf, environmental and government representatives worked together to develop a guide titled, *Environmental Principles for Golf Courses in the United States*. At the second meeting of this group, in March 1996, this document was reviewed and approved. Endorsing organizations include:

American Society of Golf Course Architects

Arizona Golf Association

Audubon International

Center for Resource Management

Club Managers Association of America

Friends of the Earth

Golf Course Builders Association of America



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