See You on the Net

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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

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,

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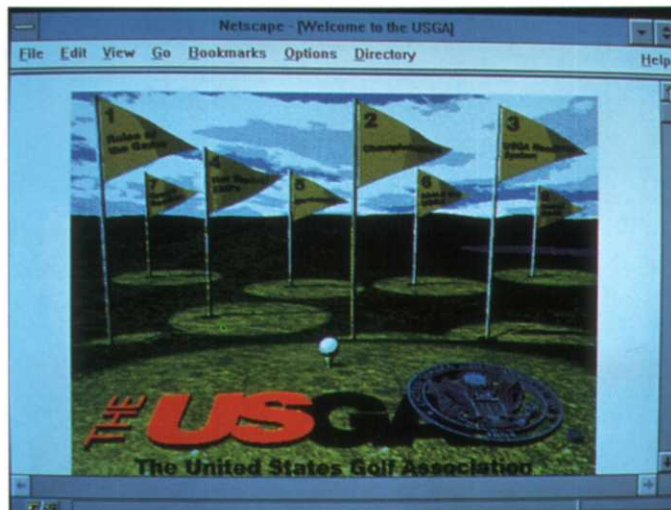
*USENET is like a giant collection of discussion groups (often called newsgroups) on which you can trade opinions with others on virtually any topic you can imagine.

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-
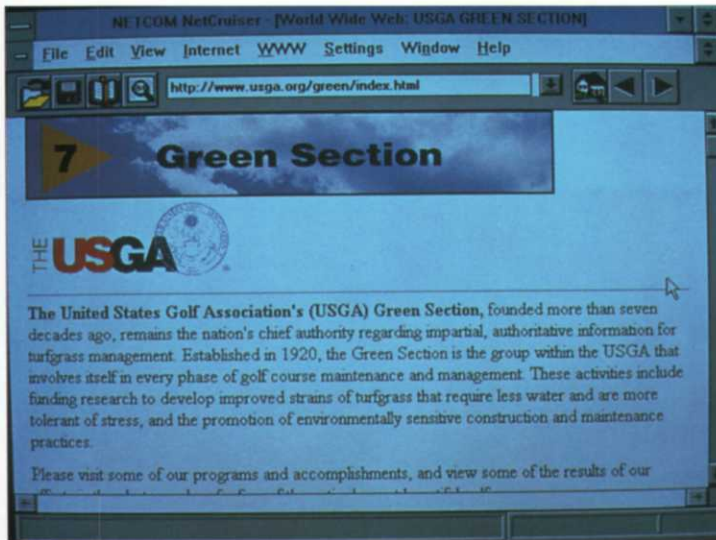
NETCOM NetCruiser - [World Wide Web: USGA GREEN SECTION]

File   Edit   View   Internet   WWW   Settings   Window   Help

http://www.usga.org/green/index.html

7 ▶ **Green Section**

THE **USGA** ®

The United States Golf Association's (USGA) Green Section, founded more than seven decades ago, remains the nation's chief authority regarding impartial, authoritative information for turfgrass management. Established in 1920, the Green Section is the group within the USGA that involves itself in every phase of golf course maintenance and management. These activities include funding research to develop improved strains of turfgrass that require less water and are more tolerant of stress, and the promotion of environmentally sensitive construction and maintenance practices.

Please visit some of our programs and accomplishments, and view some of the results of our

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 28,8000 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

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 modem should it lock up (not as frequent an occurrence as it used to be, but it does still 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.

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

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/Texlab/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/githome.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 internal 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

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!
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