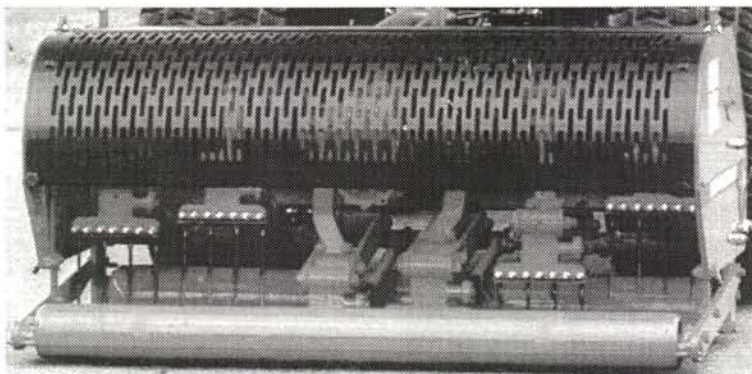


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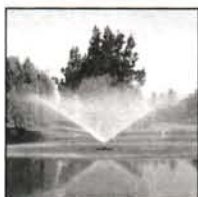
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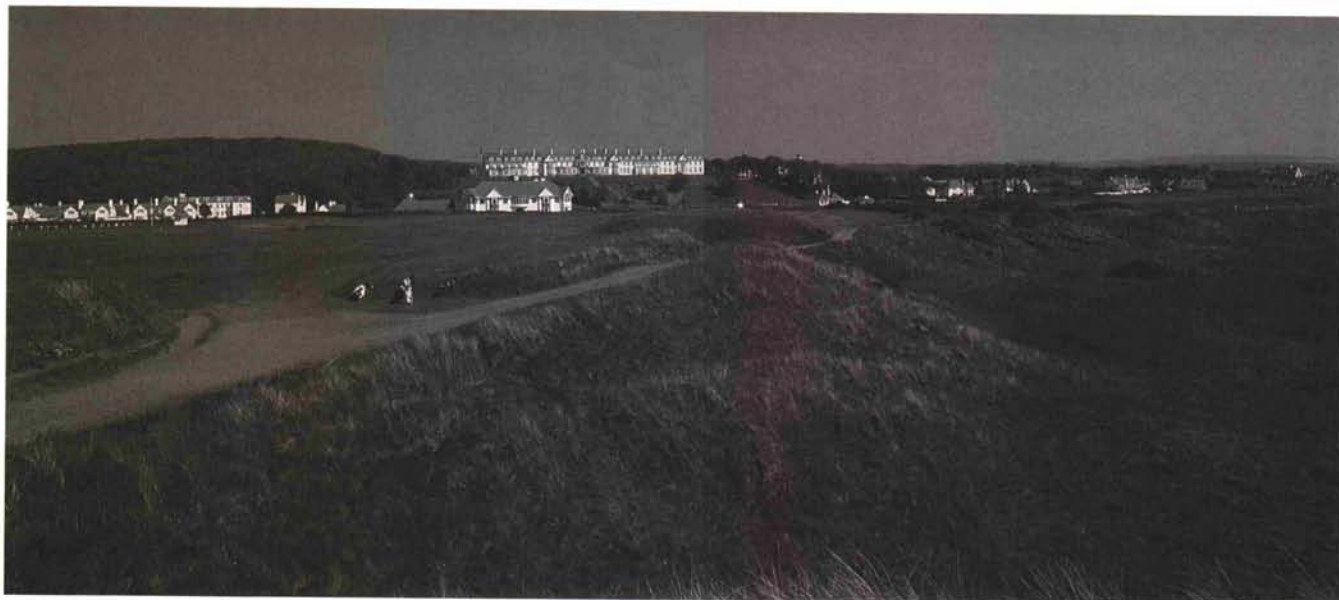
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The 18th at Turnberry-Ailsa.

Rub of the Green

(continued from page 10)

To emphasize that point, caddies are commonplace; there wasn't a "trolley" to be seen. To the Scots, carts are scorned. In fact, "course" in the term "golf course" implies a pedestrian event. While carts produce revenue, they tend to slow overall golf traffic, compact turf and inhibit golf's pleasurable pace.

Recently, I received a newsletter that promoted its services with lines like "GOLF COURSES TEE UP GAMES & GIMMICKS" and "HIGH-TECH ON THE FAIRWAYS." This is 100% contrary to what golf is intended to be. Why promote "high-tech" when the most pleasurable experiences on the golf course are low-tech. I'll concede that carts are good for the economics of the game, but they are still an infringement upon the unique pleasure of the experience. In Scotland and Ireland, the industrial, electronic and information ages were left far behind, or at least in the parking lot. This is golf, laddie, not a computer lab.

Most caddies I had were reliable, using their local knowledge of conditions and strategy to aid

the golfer. Great caddies encourage you throughout the round and can "club" you (determine your golf capabilities) within two or three holes. A little known fact is that carts can't help you find a ball in deep meadow grasses, can't point you toward a distant target or advise you on a putt. Caddies, I believe, speed play along and may eventually help save golf from itself. Think of the pleasure gained if we didn't have carts, of the jobs created and additional rounds generated. We should applaud clubs that support caddy programs and support the courses that actively promote them.

The beauty of these courses is in the drama produced by their rugged, raw beauty and simplicity. As I prepare plans and specifications for new golf courses, or review master plans for existing clubs, it is my intention to increase the strategic "playable" level of the courses with bunkers, tees, landscape improvements, etc. But I am also actively seeking locations to increase natural habitats and unmaintained areas, resulting in reduced maintenance. Superintendents should begin the process of reviewing maintenance requirements in these "low priority" areas.

Course management and design with a long view and a greater environmental perspective is necessary for golf to sustain itself through the next century. Architects and golf course superintendents can be leaders in this venture. Introduction of naturalized areas with an Audubon Cooperative Sanctuary Program is a solid and positive first step. Audubon Sanctuary Program improvements meet a host of problematic golf course issues, including, and maybe most importantly, a better public perspective of the golf industry and golf course maintenance practices.

Every golf course possesses a "difficult-to-maintain-area," like a "high dry" area or a "wet low," that must be treated with greater attention and more labor-intensive detail. It is in these locations that maintenance budgets are stretched. North American golfers, club managers, green committees and club boards who have become overly involved with manicured fairways, fast greens and thick, rich rough, must be enlightened by golf course architects and golf course superintendents to a new understanding of golf design and management.

(continued on page 28)

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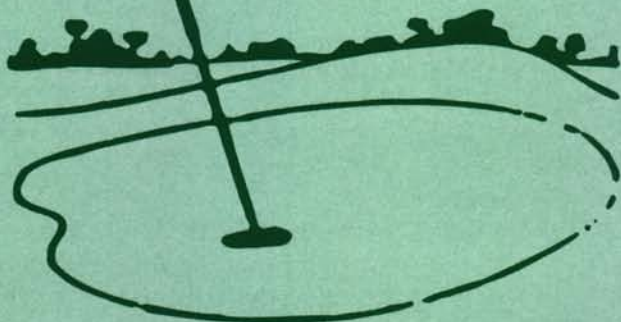
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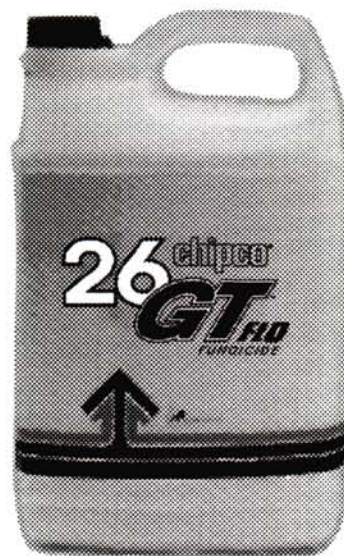
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A Clearer Picture

Jeff Leuzinger
Glen View Club

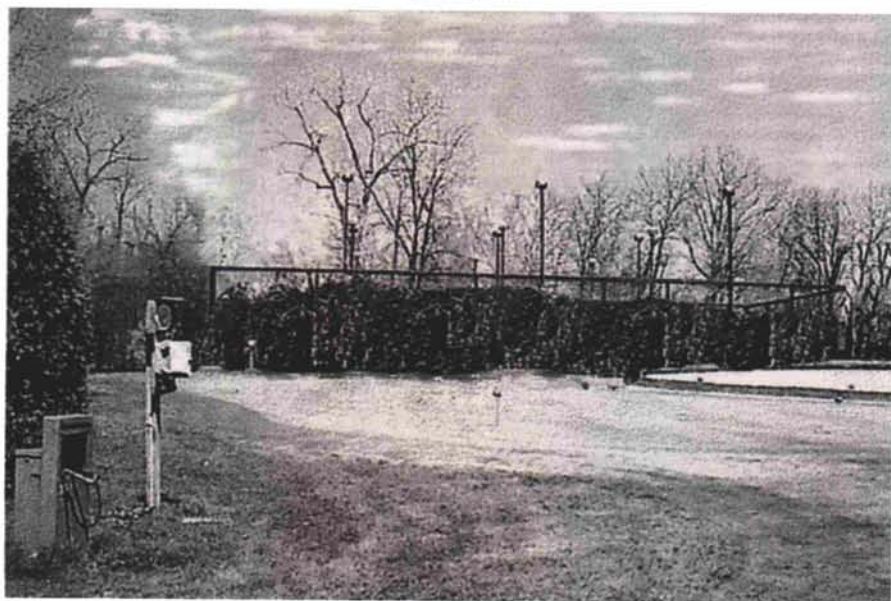
“Oh, you wanted **those** trees removed.” In some way, shape, or form, instructions can be misinterpreted into mistakes both big and small. Although it can become quite humorous after the fact, the shock period just following these words can be jaw-dropping. Conveying my exact thoughts, ideas, and plans has been misinterpreted at some time or another. Now, I have a tool that began as an interest and turned into one of my biggest communicating tools and assets to the club. I would like to share with you our success in the area of computer graphic communication, the benefits, and how easy it is.

The technology of digital photos has been around for several years. Snapping a photo with a special camera and downloading it into your computer used to be quite expensive, user-frightening, and low quality. With the computer market in warp speed, an average person can now render high-quality digital photos at a reasonable price. This has tremendous value on the golf course.

In the fall of 1996, we invested in a digital camera for the computer in our office. With minor upgrades to the existing hardware, we now produce good quality “before-and-after” shots during the planning phase of any project. These rendered photos are more effective in conveying thoughts and ideas than personal sketches and narrative will ever be. Not only is this camera good at previewing a final product, it is also beneficial to have pictures documenting the course throughout the year. The nice part is the



Present view



Future view

minimal wait in the development process. No more forgetting which pictures are on what roll of film. It simply involves downloading into the computer and printing the picture which takes less than two minutes on our “old” Pentium processor and color inkjet printer.

View before you do

As an example, I was asked what it would look like if we moved our paddle tennis courts

closer to a practice green and screened it with arborvitae. The above was the result

A picture is definitely worth a thousand words.

More bang for the buck

Another example demonstrated how trimming the trees would clear the obstructed view of a green rather than rebuilding and relocating the tee on one of

(continued on page 16)



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A Clearer Picture

(continued from page 14)

our par 3s. Because of these two photos, we ended up spending a few hundred on tree trimming rather than thousands on tee construction to achieve the goal of enhancing the view to the green. Also, we were able to utilize additional teeing ground that had been lost due to the overgrowth. The savings on this project alone have more than paid for this camera equipment within the first year.

Other applications

Glen View is in the process of publishing a tree album listing all memorial and donated trees on the course. Since we do not have tags on the trees, only a list on a few sheets of paper served as the official record for several years. Now, all of those trees are stored in digital photo format in the computer. This book will be made so changes and updates can be made on the computer screen and easily fit into the existing album.

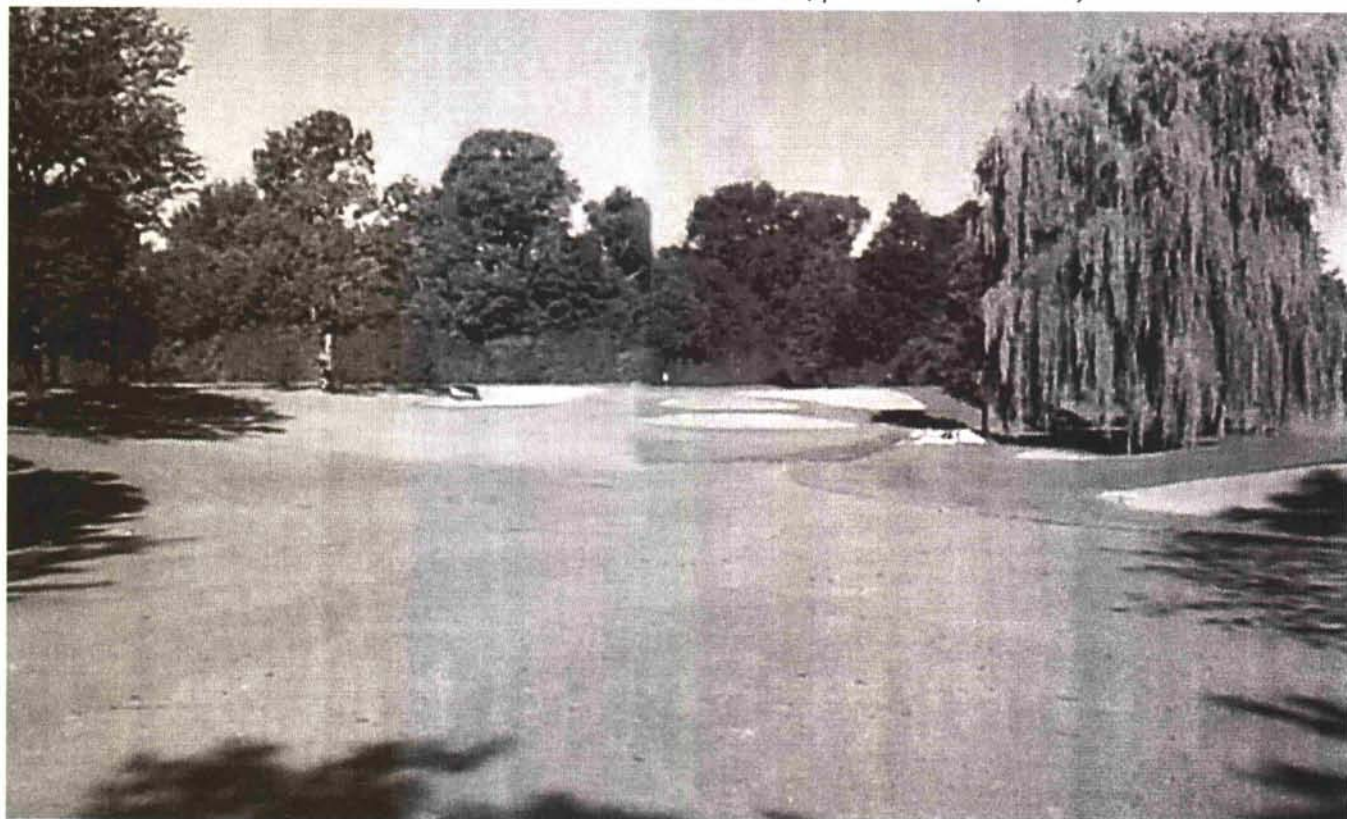
Most of the applications thus far have been tree related. However, in a short period of time, we can produce a before-and-after shot of virtually any project. I know we are not the first to use this method of communication as I have seen Paul Vermeulen employ this new technology with great success in his USGA Turf Advisory Service reports. The

research crew at the University of Illinois use digital photos in a big way. All of the research reports and slides were presented digitally at this year's NCTE. Going digital is not only a convenience, it is a timesaver when preparing and organizing a presentation, speech, or document. How valuable is your time?

(continued on page 18)

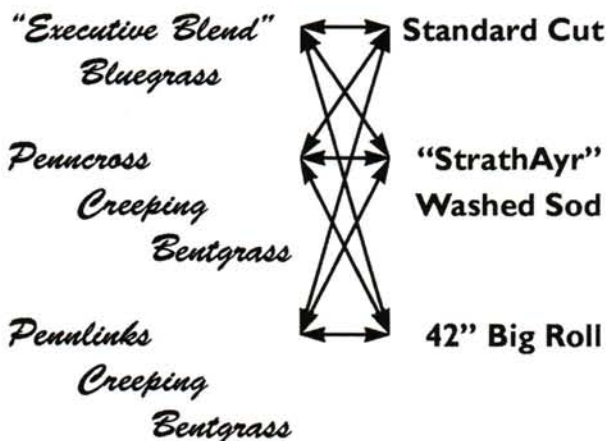


14th tee, present view (fall 1996).



14th tee, proposed view.

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A Clearer Picture

(continued from page 16)

For those who have large photo libraries, digitizing can be of tremendous value. Scanning physical photos onto a CD saves space in your filing cabinet as well as protects them from any physical damage that naturally occurs over time to photo paper. Basically, the sky is the limit when it comes to the applications we can perform on the computer. Computers do much more for us now than just word processing and spreadsheets. They help us organize and give speeches, run irrigation systems, even run our equipment and diagnose their problems.

Our system

I consider our system to be of minimum capacity to be running this type of application. The hardware consists of an IBM-compatible 90 MHz Pentium, 1.2 GB hard drive with 32 MB RAM. We upgraded drive space and RAM to accommodate the memory-hungry graphics. We purchased a Kodak DC40 digital camera for around \$900 and installed the provided software onto the existing computer. Total spent was around \$5,000 with most of this spent on the new CopyJet color printer and color scanner. The printer is able to accept special photo paper, producing the best quality picture possible. The scanner allows us to acquire more images. We can render other pictures besides those taken by the digital camera. This setup is certainly not state of the art but is good enough to produce effective photos in a reasonable amount of time. Also, I did not do this on my own. A consultant investigated and purchased the hardware and software and is always nearby when I have a problem or need technical support.

Too much money for a toy? No way! Remember, we saved nearly \$10,000 on the 14th tee

because of this equipment within the first year. This new process enables us to communicate our ideas easier and more effectively as well as save money by executing projects in a more efficient manner. Projects progress much easier when everyone can start with the end in mind.

If I can do it . . .

The old adage is true: If I can do it, so can everyone else. My computer literacy has always been average. However, technology has brought user-friendly applications to perform operations we never thought imaginable before. For younger students, the computer is second nature. For those of us learning computers the hard way,

it can be quite intimidating and frightening. In my early days, I was terrified to find my document was deleted because I didn't save it before turning off the computer. I eventually learned to hit the save key quite often. Come to think of it, the first green I cut wasn't very good either, but I eventually improved. ■

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THE GREAT IRA DEBATE: ROTH OR TRADITIONAL?

Darin Lickfeldt
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In 1998, the new year will bring new opportunities, new resolutions and a new retirement savings vehicle you can consider—the Roth IRA. But before you sprint to open one of these new accounts, you may want to compare your IRA choices to see which vehicle best suits your needs.

Amidst their differences, two key similarities remain: (1) you or your spouse must have earned income to make contributions, and (2) the maximum annual contribution. Assuming you qualify, you can contribute up to \$2,000 annually for IRA purposes, regardless of whether you invest in a traditional IRA, Roth IRA or a combination of IRAs. Beyond these points, the distinctions between the two IRA types begin:

ELIGIBILITY FOR CONTRIBUTIONS

Traditional: Any eligible participant for the traditional IRA may contribute up to the \$2,000 annual maximum contribution.

Roth: Contribution amounts to a Roth IRA are limited if an individual's adjusted gross income (AGI) is between \$95,000 to \$110,000. Those limits are adjusted to \$150,000 to \$160,000 for joint returns. If your individual or joint income exceeds these limits, you would not be eligible to contribute to a Roth IRA.

TAX DEDUCTIBILITY

Traditional: Depending on your income level and whether you are covered by an employer-sponsored retirement plan, you may be able to deduct all or part of your annual contributions to a traditional IRA.

Roth: Because contributions to a Roth IRA are made with after-tax money, they are not tax deductible.

TAX-DEFERRED VS. TAX-FREE GROWTH

Traditional: Any interest, dividends or capital gains in your traditional IRA grow tax deferred until you start making withdrawals.

Roth: The Roth IRA's investments grow tax-free as long as you abide by the withdrawals rules.

WITHDRAWALS

Traditional: The traditional IRA allows penalty-free withdrawals after you reach age 59 1/2, and the withdrawals are taxed as ordinary income.

Roth: The Roth IRA allows you to withdraw your original contribution amount at any time (this provision does not apply to account balances

(continued on page 22)

