

Back to the future

'You can call us protectionists,' says Ed Connor

BY MARK LESLIE

Pete Dye, Tom Fazio and their compatriots are taking golf course design into the 21st century. Ed Connor and his compatriots are "going the other way."

"We're protectionists, champions for the dead architects," Connor said. "You could call us the Dead Architects Society."

Connor, whose Golforms firm is headquartered in Casselberry, Fla., has taken a new computerized technology to several courses to help preserve the original design of their greens, bunkering and traps. If PGA and other officials who have seen the results are correct, Connor will be busier in the months ahead.

"I think it is of the utmost importance that the work of the masters (of golf course design) — who were many years before their time — is preserved," said Peter Stillwell, director of the PGA World Golf Hall of Fame in Pinehurst, N.C.

Stillwell, who paid close attention when Connor helped Pinehurst #2 management reconstruct all its greens four years ago, added: "You're preserving a masterpiece. It's like saving a Mona Lisa, preserving it and putting it in the condition it was originally meant for; the same is true of golf course architecture."

The technology — which uses a field surveying instrument called a laser theodolite to turn physical data into a gridded topographical chart of a playing surface — is an important advance for everyone, Stillwell said. "The greats in architecture today ... will someday be gone, and now their work can be preserved," he said.

Connor said, "There are just too many instances in which capricious changes were made" to courses designed by Donald Ross, A.W. Tillinghast, C.B. Macdonald, Alister Mackenzie and other famous architects of the past.

He is devoting his energies to compiling contours of the old masters' courses along the East Coast that haven't yet been changed, working at courses where officials want to



Cypress Point's 15th hole is now preserved for posterity on a computer disc.

renovate the greens or trapping, and researching original sketches and data on the more famous courses where management wants to undo changes.

A common manifestation at older courses today is putting surfaces that have developed a hard layer, making them impermeable to moisture and oxygen to the root zone, and whose grasses have been encroached upon by other types.

"In the case of Pinehurst #2, they wanted to replace the grass on the greens entirely with another strain of Pennecross bentgrass," Connor said. "They had been advised that in order to attract a major tournament they would have to go back to bentgrass greens, and they had been in bermuda for about 10 years. At the same time they wanted to improve the subsoil stratification with the USGA specifications, so we went in and made electronic images of the putting surfaces and stored them on a floppy disc and estimated the putting surfaces down to about 20 inches and made a replica of the original putting surface and subgrade. Then we put in drain tile and new layers of rock and sand to USGA specs, and replaced the exact same putting surface using data off the floppy disc and translated to our survey program."

At Sedgefield Country Club in Greensboro, N.C., management wanted to rebuild all the greens and "put back the original bunkers and traps," said General Manager Drew Boyland.

Sedgefield's greens committees over the years had made many changes to the Ross layout. So officials called in the Golforms crew and went to the

archives at the PGA Hall of Fame to change back to the original trapwork and greens, Boyland said. "The (theodolite) technology worked well for us... I think for a lot of older courses this could be a tool of the future to put back what's been torn out."

Connor said research found that a number of bunkers as well as greens had been altered at Sedgefield, destroying the Ross design.

"One of the features of the course was these marvelous depth-perception bunkers that were placed 20-30-40 yards out from the green but obscured the ground between the putting surface and the bunker and forced you to fight the tendency to underclub ... which would get you into Ross' classic chipping game, ending up in one of these little hollows around the green and trying to chip to the hood of a car. But all that was eliminated because the greens chairmen felt, at various times, 'Well, those don't come into play; let's save some money on maintenance.'

"That happened enough that all the holes were starting to look alike," he said. "The greens chairman would say, 'Let's take this bunker out because it's out of play; let's put two little sliver bunkers in here on either side of the green, because that's where bunkers are always put.' It didn't have any thought to it; it was just a way of letting people know who was in charge at the time."

Connor said finally Sedgefield "got a group in there who said, 'Wait a minute, let's stop this nonsense. Having a Ross design is a positive asset, something we want to protect and preserve.'"

An example of preservation Connor

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Technology changing design

Technological advances in the field of civil engineering are changing the golf industry, as witnessed by Golforms' work in preserving the designs of famous courses along the East Coast.

Golforms President Ed Connor, who for 18 years worked on course renovations the hard way, is pioneering work on golf courses with a technology which he says has been around for about five years, being used mainly in subdivision and major highway work.

"At the time August National was done, about four years ago, the equipment was still too expensive for this type of application," Connor said. "But it has come down in price to a point where it is still not cheap but at least it is reasonable — about \$20,000."

In previous attempts at replicating putting surfaces, the traditional method was used: Crews would "measure out some type of grid on the putting surface, take shots with a level and make volumes and volumes of notes."

"The advantages of this (new computer) method are that you don't need any marks on the ground," Connor said. "You can shoot it while it's under play. All the data is done by lasers, measuring devices built into the theodolite, and all you do is tell this instrument where you're standing. Give the point you're standing on some kind value; it can be arbitrary or it can be tied to a benchmark on the course. Give it an elevation and give it a directional reference point. It takes a series of shots; you walk around the area you want to describe with a prism that selects points for data, that can be entirely at random."

"All the information is stored in a little black box called a data collector — a computer."

Sedgefield CC's #14:

Both before...



... and after Connor's reconstructive work