Computer Checkup: PRESCRIPTION FOR SLOW PLAY?

Don Cook, president of Donald B. Cook & Associates, offers his computerized golf course simulator service, designed to determine the comfortable course capacity of an existing course and expected capacity of a planned course renovation or new course by STEPHEN W. BYERS

The slow play bug-a-boo has plagued golf courses since America's interest in golf outdistanced construction of playing facilities. The National Golf Foundation has recently called for acceleration in the building of public courses to check the increasing player congestion on available golf facilities and to ensure that course construction keeps pace with the rising numbers of initiates to this burgeoning sport. But until a balance is reached between the number of golfers and the number of courses needed to accommodate them, the industry must face the problem of how to unplug those bottlenecked holes that can suffocate player interest and stifle the golf course revenue required to perpetuate the game.

Don Cook, president of Donald B. Cook and Associates, is now offering, as a possible vaccine for slow play, his GCS (Golf Course Simulator) computer simulation service specifically developed for use by golf course architects. Although there is to date little evidence of GCS's effectiveness, Cook is confident it will help course designers to reduce waiting time on existing courses and to spot design problems before construction money is spent for course remodeling or building a new facility.

WHAT IS GCS? WHAT CAN IT TELL YOU? GCS is designed to:

1) Develop data to produce a more effective starting time system for an existing course;

2) Evaluate a proposed design renovation as to "playability";

3) Evaluate a design proposal for a new course project with an eye peeled for rough spots that could later develop into bottlenecks and attendant slow play problems.

GCS integrates actual time study statistics, data provided by the architect, and a carefully programmed computer network to develop key course information before the architect puts the finishing touches to his design. The time statistics were decided, according to Cook, from over 200 time study observations of different golfers playing several different courses. From these studies playing time values were developed for computer simulation on over 30 key playing elements such as hitting the ball from the tee, walking and putting.

Though an explanation of how these time values were determined for each of the many elements would be too lengthy for this article, GOLFDOM will show how Cook arrives at a value for the element of hitting from the tee. The two units of time the computer will use for this element are: 1) the average (of 200 observations) time it takes for a foursome to hit from the tee, starting the study when the first hitter addresses the ball and ending when the last hitter hits the ball; 2) the time range between the slowest to the fastest hitter of the foursomes from 200 observations. This, says Cook, builds golfer variability into GCS. The computer has been programmed to select random specific time values that fall within these given ranges. This results

continued

GCS ARCHITECTURAL DATA SHEET

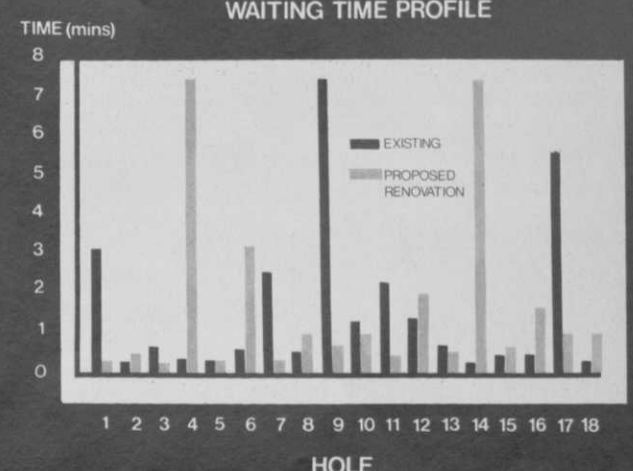
COURSE: WOODWAY C.C. ALTERNATIVE A

HOLE NO.	HOLE PAR	DESIGN DISTANCE (yards)	DIFFICULTY code	DIFFICULTY location	BETWEEN FROM/TO	HOLES DISTANCE (yards)
1	4	337	1	—	1ST TEE	X
2	3	137	1	-	1-2	117
3	4	320	1	-	2-3	92
4	5	567	2	C	3-4	43
17	5	535	1	-	16-17	54
18	4	403	1	-	17-18	54

DIFFICULTY CODE:
1 NORMAL
2 DIFFICULT
3 VERY DIFFICULT

DIFFICULTY LOCATION
A TEE SHOT
B SECOND SHOT
C REMAINING SHOTS

GCS Architectural Data Sheet above shows architect's appraisal of hole difficulty and other salient features of his proposed renovation or plans for a new course.



Profile above shows the waiting time relationship between the GCS study of an existing course and the study of a renovation.

COMPUTER *continued*

in a simulation that allows for various types of golfers playing the course.

Added to these values for computer simulation is the information supplied by the golf course architect about his specific course project. This will include facts relating to hole design, such as hole sequence, distance and difficulty based, not on par, but on the playing time of each hole. The architect must also render a classification of each hole as "normal," "difficult" or "very difficult" (with GCS, "difficulty" refers to difficulty regarding time required to complete the hole, rather than difficulty in scoring). With this information, Cook says GCS can furnish data such as capacity; waiting time profile, showing waiting at each hole, and playing time data, which measures the golfer's time on the course.

GCS does not redesign the course or explain why the course will have the reported waiting time characteristics, Cook warns. Cook says that golf course architects using GCS can be as successful in designing courses with maximum capacity and smoothness of play as they have been in designing courses that are challenging, beautiful, safe, and reasonable to construct and operate.

The GCS report is written in the architect's language, Cook adds, not in computer terminology. Capacity, playing time and waiting time data are graphically displayed. Used prior to construction or alteration, this information permits the architect to evaluate alternative preliminary layouts, make comparisons to previously constructed courses, and offer corroborative evidence to support recommendations to club administrators or club officials on the playability of his proposed layout.

What this can mean to the golf club, says Cook, is that mistakes made in course design that might have gone undetected until actual play on the new facility had begun, can be caught and rectified before actual construction. Cook's fee for GCS averages $1,500 per course, which is slight compared to the cost of remedying a design error subsequent to construction. If GCS can do what Cook says it can, the club also would benefit from increased revenue derived by maximizing the course capacity and from the heightened golfing pleasure, which results from smoother playing and less time spent in waiting.

Cook doesn't minimize the aesthetic factors in golf course design but believes they must be balanced with "best attainable course capacity and smoothness of play features" in order for clubs to operate on a sound financial basis.

WHAT PROOF THAT GCS WORKS?

As yet, there are few examples attesting to the practical application of GCS, but those architects who have tried it have reported generally favorable results. The GCS service produced some "interesting findings" (according to the club) for the Woodway CC in Darien, Conn., where altering the course to permit simultaneous starting on the first and 10th tees was evaluated. But the club president reported that Woodway had not yet incorporated Cook's GCS-propounded suggestions.

Architect Geoffrey Cornish of Amherst, Mass., says he was "most satisfied" with the results of two GCS studies requested by his firm. At both York Downs G & CC in Toronto and at

continued on page 64

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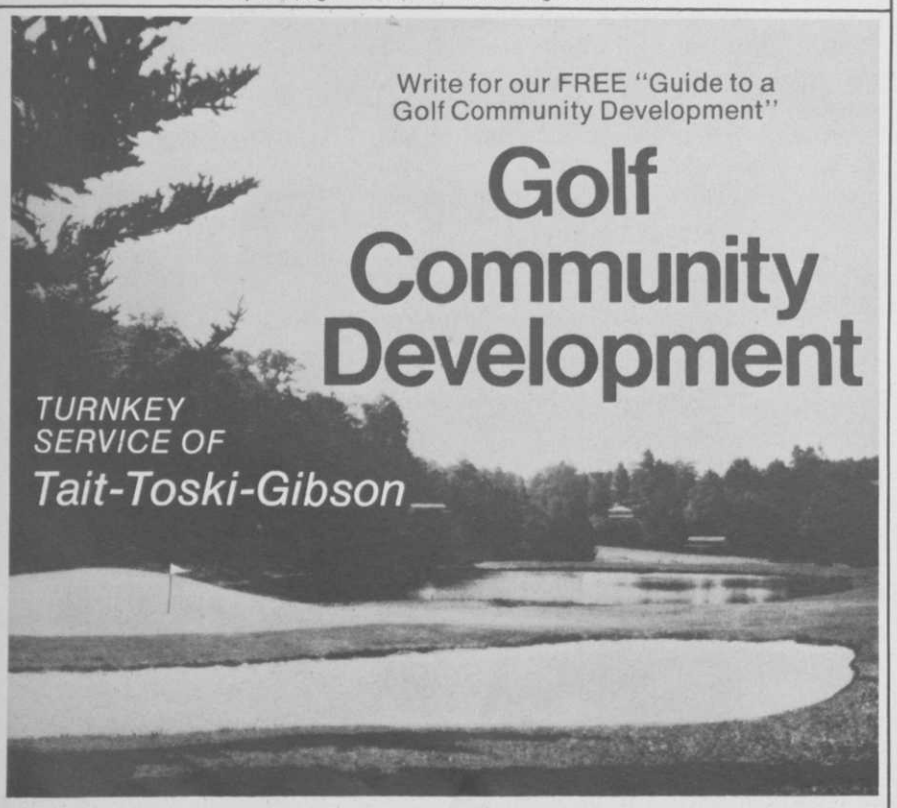

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COMPUTER *from page 62*

Stamford Municipal GC, Stamford, Conn., Cornish used GCS. He says design plans were sent to Cook, whereupon GCS predicted certain "tie-up holes." Cornish incorporated GCS conclusions into his design changes and later applauded the playing smoothness of the completed course which GCS had helped make possible.

But other course designers surveyed by GOLFDOM were not as positive about GCS as Cornish. Architects who attended the GCS presentation at the American Society of Golf Course Architects in Jamaica seemed generally indifferent to GCS as a practical design tool. The problem of convincing architects that GCS will do what Cook says it will, is two-fold, according to golf course architect, Roger C. Rulewich, of Montclair, New Jersey: "It is hard not to be suspicious of Cook's previously developed data on playing time. He doesn't factor in enough variables to allow for different sections of the country," says Rulewich. "Most architects set great store by their own intuition when it comes to hole design and would be loath to change their thinking based on Cook's computer simulator until there is more substantive evidence available that the system works."

Some of the other GCS presentation attendees voiced similar suspicions but for the most part they indicated a wait-and-see attitude.

At present, Cook's innovation seems to be swimming against the current of a "Catch 22." Golf course architects are reluctant to try GCS until more examples of its success are forthcoming; yet, there will be no successes or failures if course designers don't use it.

One encouraging fact about GCS, however, is that the cost of the service is relatively low. Maybe that factor will induce some course designers to take a gamble on it before waiting for proof that it will succeed. □

EDITOR'S NOTE : Don Cook is president of Donald B. Cook & Associates. His firm, located in New Brunswick, N.J., provides management consulting in industrial engineering, operations research, and systems design and installation. Cook is a registered professional engineer.