A Fresh Look at Your Golf Handicap

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February 25, 2005

Introduction:

A handicap system is a means to level the playing field for golfers of all skill levels. The traditional handicap system was devised before calculators, computers or the internet, and therefore the math and statistics incorporated was purposefully limited to allow the calculation to be performed using pencil and paper. This restriction, requiring "manual" calculation resulted in the waste of information inherent in your golf scores (data). The computational means available to the average golfer today provides the ability to use much more of the information contained on your scorecard, resulting in a much better indicator of your playing capability.

Information Loss:

It is important to understand the three primary characteristics of the traditional handicap that result in a substantial amount of information loss. Anytime you "throw away" good data, you reduce the information that can be extracted. Loss of information occurs within three principle parts of the Traditional Handicap Calculation:

Adjustment of Individual Hole Scores

Use of Net Adjusted Score

Using a Subset of All Net Scores

Adjustment of Hole Scores:

Instead of describing the detail of how adjustments are made to the hole scores, the reasons for such adjustments will be addressed. In order to prevent artificial inflation of ones handicap by the posting of a large score for one or more holes in a round, the traditional rules require you to limit the number of strokes permitted on any hole. The Maximum Stroke Limit is based on your current handicap. After you change each hole score in your round that exceeds your limit, you then add all 9 or 18 hole scores to arrive at your Net Adjusted Score. You have now lost any information related to how large these adjustments were and how often they occurred.

Use of Net Adjusted Score:

The simple quantity of individual hole scores presents a bookkeeping challenge for the use of pencil and paper methods. For this reason, the traditional handicap method simplified the calculation by only using the Net Adjusted Score for each round. However, not only have you lost the information associate with adjustments you made, you have lost all information related to the trend and variation of all your individual hole scores.

Use of a Subset of all Net Scores:

The traditional handicap uses only a subset of your Net Adjusted Scores to calculate your capability. At the very best, one half your scores are used. Or maybe more appropriately, one-half your scores are thrown-away/ignored. At worst, only one fifth of your scores are used.

Using More Information:

Even with the loss of data inherent to the traditional handicap calculation, it is a pretty good system. That said, by taking advantage of common place, readily available technology, improvements can be made to this aged system. For the purposes of this article, we will focus on areas that increase the accuracy of a handicap by decreasing the amount of data (your scores) that are "thrown-away," never to be available again.

Golf itself, led by many of the governing organizations, is steeped with tradition. Tradition is part of golf, but should not get in the way of progress. It is important to not let "tradition" translate into simple "resistance to change." When was the last time you saw someone calculate their handicap using pencil and paper? Or for that matter, have you ever seen anyone calculate their handicap without the aid of a computer? Maybe it is time for some changes!

Next Step:

Once the decision is made that it is no longer necessary to limit the sophistication of the bookkeeping, or limit the mathematical and statistical methods to those that can be performed with pencil and paper, the ability to accurately assess ones capability, i.e. establish a handicap, is greatly enhanced. Using individual holes scores instead of a subset of the Net Adjusted Scores provides 18 times more data from which handicap information can be extracted.

Although there are almost countless mathematical and statistical models that can be employed to make sense out of the individual hole data, it turns out that a simple normal distribution model works quite well, and in-line with the traditional handicap, does not take a Ph.D. to understand. A normal model provides an estimate of the expected value (average) without ignoring the scatter, or variation, of your scores (data).

As you would imagine, low handicap golfers will tend to have both a lower average and a smaller variation than higher handicap golfers. By normalizing the data, the average and the amount of variation (Standard Deviation) can be evaluated against the model for a "Normal Golfer" and from this model, the golfer's capability, or handicap, can be computed.

Just like the traditional handicap, scores need to be adjusted for the "relative difficulty" of the course played. The Course Rating and Slope Rating are measures of the difficulty of the course and can be used to adjust the individual hole scores in a manner similar to that used by the traditional handicap method to adjust the Net Adjusted Scores. Once this adjustment is made, all individual hole scores are "normalized", and therefore, comparable.

<u>Use of Individual Hole Scores:</u>

The first discovery found is that there is no longer any reason to adjust any individual hole scores… the golfer simply needs to enter whatever they shot on the course. Instead of adjusting individual hole scores, the model distribution is used to identify scores that are outside of the golfers normal distribution (outliers), and these scores are simply ignored (not deleted) and a new average and standard deviation is calculated. This process is repeated until the distribution of the golfer's scores fit within the model distribution, at which point the handicap is calculated.

In order to assure stability of the model, no more than one-third of the hole scores will be ignored. In other words, no less than 67 percent of your scores will be used to calculate you capability, compared to 50 percent (at best) for the traditional handicap. Normally the solution converges (the data fits the model) using between 80 and 90 percent of the golfer's scores. Think about it… how many holes in a round make the different between a good round and a bad round? For a very consistent golfer, 100 percent of their hole scores may be used to calculate their handicap.

<u>Rounds Used:</u>

Similar to the traditional handicap, the GolfSuite handicap will use up to 20 of the most recent rounds to calculate a golfer's handicap, but the GolfSuite handicap utilizes more of the information that is contained in your scores. For golfers that play frequently, use of the last 20 rounds is reasonable. But, is looking back 20 rounds reasonable for someone that plays 7 or 8 rounds a year? For these golfers, the GolfSuite handicap is calculated using at least 54 holes played over the last 3 months.

<u>Competitive Play – GolfSuite vs Traditional Handicaps:</u>

A common question is whether someone with a GolfSuite handicap can competitively play someone with a Traditional handicap? The simple answer is yes. But this statement needs some qualification. Since the traditional handicap is considered the standard, the GolfSuite personal handicap is calculated by biasing the traditional handicap with the GolfSuite calculation. So once the golfer has 10 or more rounds that are included in their handicap, the bias factor is very small… and therefore, the traditional and the GolfSuite handicap are practically identical.

For a player with less than 10 rounds, the GolfSuite bias varies from 100 percent (up to 54 holes) to 5 percent (10 rounds). Because the GolfSuite method uses more of the information contained in the rounds, a better estimate can be made for fewer rounds. This makes the GolfSuite method ideal for League and Groups that play together and want to calculate handicaps based only on the competitive play within the league or group. Accurate league handicaps are calculated with only 27 holes of play.

Although it is commonplace for golfers that play frequently to play with golfers that play infrequently, placing large bets on such matches is probably not smart, even if both handicaps are calculated using the same method. That said, friendly games are always more fun when the playing field is leveled, and therefore, both handicap can be used. For someone with five or less rounds, the traditional handicap will provide a very conservative handicap, while the GolfSuite method will provide a handicap that is more representative of the golfer's level of play.

Other Advantages:

Besides the more efficient use of a golfer's scores to provide a better estimate of their capability, technology can be leveraged to improve other areas of handicap management.

<u>Peer Review:</u>

The primary quality assurance factor that assures compliance to the rules is the integrity of the golfer himself. There is an old saying:

"Someone that cheats in real-life, may or may not cheat on the Golf Course, but someone that cheats on the golf course, definitely cheats in real life."

Bottom-line, no matter what handicap system is used, if someone wants to cheat it, they will find a way. So, choose who you play with and bet against wisely.

The second quality assurance factor is threat of peer review. More people having access to a golfer's scores and the ability to file a protest will provide added incentive to report scores accurately. Using the internet, GolfSuite provides almost unlimited access to any golfer's scores, and unlike the traditional system, the GolfSuite system provides the actual scorecard as it was recorded -- for peer review.

Automatic Hole Handicapping, Course and Slope Rating:

The database of scoring data for many golfers of all capabilities and for many golf courses can be used in many ways to evaluate and improve play. Math and statistical algorithms can be developed to systematically calculate Hole Handicaps, Course Ratings and Slope Ratings, thus providing a less expensive method for courses to keep these parameters up-to-date.

Personal Game Analysis:

The database of scores for any individual golfer can be used to help that golfer understand and analyze their game in both absolute terms and relative to other golfers. Like any quality database of information, there is virtually unlimited ways to evaluate and visually present the information. For instance, a golfer could evaluate his play on Par 3s, Par 4s and Par 5s. A golfer could evaluate play on a particular course or play on holes of a particular length. What would be helpful to you?

As stated above, the information that can be extracted is limited to what is available from the data collected. In order to provide golfers a better picture of their game, GolfSuite allows them to record additional information about their play. The Detailed Scorecard option allows a golfer to record club used, shot result, fairways hit, approach result, greens in regulation, penalty strokes, putts, and much more in a simple to enter form.

For more information please visit www.GolfSuite.com.

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February 25, 2005