

Bill Bailey's Brilliancy

Brent Manley

When he was studying math and computer science at Harvard University in the 1980s, Bill Bailey played hearts and spades, both trick-taking card games. He thought of the games as easy, so not very interesting.



Bill Bailey

When a friend suggested that he check out bridge – described to him as “the chess of card games” – Bailey did so. He bought a book for beginning bridge players and, again, thought he was examining an “easy” game.

Then he discovered something he didn't know existed: a newspaper bridge column. In the column, authors Charles Goren and

Omar Sharif posed a problem involving an endplay that had Bailey stumped. “I couldn't work it out,” he says. When he read the solution, he was impressed. “I was hooked by the cleverness of bridge,” he recalls. For the next 10 to 12 years, Bailey read every bridge book he could get his hands on, starting with Frank Stewart's “Better Bridge for the Advancing Player,” which introduced Bailey, now 52, to squeezes and other expert plays. That sealed the deal and set Bailey on an odyssey that resulted in the creation of one of the most important software developments in the history of bridge – the double-dummy solving Deep Finesse.

The program has become an essential tool for bridge analysts even while perplexing players who examine tournament hand records and grimace while trying to figure out how one should be able to make this or that contract (so says DF) even looking at all 52 cards. The easy solution, of course, is to enter the full deal into Deep Finesse.

Bailey kept up the intensive study of bridge even after being recruited by Oracle, the computer technology company, and moving to Palo Alto, California.

While working for Oracle for the next 10 years developing software for database engineering problems, Bailey read more and more about bridge.

When Bailey picked up “Adventures in Card Play,” the classic work by Hugh Kelsey and Geza Ottlik, “It got me thinking about writing software for double-dummy analysis.”

After 10 years with Oracle, Bailey quit to devote the next 18 months to writing a double-dummy analyzer. “My professional talent as a programmer,” he says, “dovetailed nicely with my passion for bridge.”

Up to that point, after studying the game for a decade and embarking on his software project, Bailey had not turned a single card in a bridge game.

A year into the writing of Deep Finesse, Bailey played bridge for the first time, urged to do so by a player who found out what Bailey was working on and expressed dismay that he had yet to play the game.

Down at the Palo Alto Bridge Club, Bailey was a fish out of water. “I didn't know how anything worked,” he says. “I was speaking the bids, then when I used the bidding box I was

pulling the cards out one at a time.”

Bailey says creation of a double-dummy analyzer is not difficult. “Anyone with a computer science degree could do it.” The key, he says, is creating “clever algorithms to make solving the hand fast.”

A year into the project, Bailey had solved the hard part – making Deep Finesse work quickly. After that came the user interface – putting the Ws and Ls on the cards depending on whether selecting the card is a winning or losing play.

In 1999, Bailey set up a booth at the American Contract Bridge League's North American Bridge Championships in San Antonio, Texas, to demonstrate Deep Finesse. The name, he recalls, came to him while he was playing at the Palo Alto Bridge Club one night.

He had been thinking about something along the lines of Deep Blue, the famous product of IBM's effort to create a computer program that would play chess better than the best human players.

At the bridge club, Bailey was declarer, and at one point he played a low card from hand and another low one from dummy. Dummy's card held the trick. “Nice deep finesse,” said his partner. That was it: Bailey had found a name for his program.

For about six years, Bailey sold Deep Finesse for \$40, but decided to make it available at no charge. It remains free today.

After finishing Deep Finesse, Bailey moved back to Palo Alto to co-found NetLedger.com (now known as NetSuite) for online accounting software.

In his 14 years with the company, Bailey played no bridge, focusing on long hours with NetLedger and the family he and his wife, Susan, had started.

Two and a half years ago, he left NetLedger and started “doubling down on becoming a bridge player.” He recruited world champion Debbie Rosenberg to be his coach and has been playing regularly at clubs and tournaments.

Says Rosenberg, “Bill clearly started with a far, far better understanding of card play than anyone I've ever worked with, and he is improving rapidly. I'm loving working with him.”

Bailey thinks of himself as an advanced player, “but I'm not an expert.”

Max Schireson, of Palo Alto, is Bailey's regular partner and was playing with him in the Transnational BAM this week in Lyon. “We're having a lot of fun,” Schireson said. “Bill is learning a lot. He is a really smart guy and a great partner.”

Bailey says a second version of Deep Finesse – an internet-based application – is six months to a year from completion. He says the plans are to add a single-dummy extension with the ultimate goal of having a single-dummy display in which each card has a number indicating the percentage of success for playing that card. When it's available, it can be opened by any smartphone with internet access at deepfinesse.com/deal.

As is the current version of Deep Finesse, DF 2 will be free. Bailey says he never imagined how popular the program would be with so many people, in particular bridge writers. He says he was really pleased to read a note in one of David Bird's books saying that the book would not have been possible without Deep Finesse. Frank Stewart, whose book inspired Bailey's love of bridge, has also praised Deep Finesse in print.

As he works to better himself as a player and improve his program, Bailey is enjoying life. Asked if he is having fun, he replied: “Are you kidding? Life is all peaches and cream right now!”