## One void too many

It has been a very long time ago since players at the Bermuda Bowl shuffled their own cards. Computer dealt hands were introduced decades ago, and players had strong feelings at the beginning that these hands were sort of funny and too wild. It has long since been accepted that this came about because manually shuffled boards were too flat because of insufficient shuffling by the players. Still, every now and then, the subject pops up again.

We had some extraordinary exciting matches with difficult hands this championship and rumours were buzzing in the halls. We ran a statistics program over all hands of the qualifying and the first four sessions of the Quarter Final, 484 hands in total. The results were extraordinary for us, not because the hands were so exceptional, but the other way around, they conformed almost spookily to what they should have been. For example here is a table of the amount of voids, singletons, etc of all the 484 hands.

Suit-length	Actual	Theoretical
	occurrences	expectation
0	100	99
1	596	620
2	1569	1594
3	2278	2217
4	1890	1848
5	916	966
6	317	322
7	67	68
8	10	9
9	1	1

Only one void too many! You would actually expect a little more deviation over such a relatively small sample of hands.

The dealing program that is in use at WBF events since the Olympiad in Maastricht in the year 2000 is named BigDeal, and was written by Hans van Staveren, a mathematician and currently a director at the Transnational event. The program makes use of the fact that although the number of possible bridge hands is very big, it is actually a finite number. To be precise there are

53,644,737,765,488,792,839,237,440,000 possible bridge hands, a number impossible to pronounce. The program actually generates random numbers between 0 and the above number and then converts that number into a bridge hand. So in effect you are just playing a number!

Details about the program, including full documentation and all the sources are available on the Internet at <a href="www.xs4all.nl/~sater">www.xs4all.nl/~sater</a> so everybody interested can have a look or even try to find an error in the software. We actually invite all NCBO's to ask a mathematically skilled member to have a good look at it. A copy of the documentation can also be picked up from the pressroom. There is also a signup sheet there for interested parties that want to attend a question-and-answer session about

BigDeal or dealing software in general. This session will be held Thursday at 4PM at a location that will be posted in the pressroom.

One thing that having good software does not eliminate is the need for correct procedure. The actual generation of the deals is done by our operations director Ton Kooijman on a computer in the duplication room not connected to any network. The distribution of hands does not actually leave that room until the players are seated for the round. Even Ton Kooijman himself does not see the hands until they are printed about ten minutes after play starts.

So stop worrying about where the deals are coming from, and start thinking about how to play them.

Hans van Staveren