

“Fair racing between different types of boats on handicapping systems in sail racing”

Foreword

This excerpt covers the items presented by the author at the meeting of the Empirical Handicap Committee in connection with the annual ISAF meeting in Cyprus in November 2002.

The intention with this book is to provide an understanding of what handicapping numbers can do for a sailor, a race administrator or a national authority, and what possibilities and problems that are associated with their establishment and use.

Handicapping numbers aim at providing the possibility of racing between boats of different types and sizes. Then you have to master two different disciplines. One is the determination and administration of the handicapping number, and the other is the use of the handicapping number to calculate the corrected time from the elapsed time in a race.

Determining handicapping numbers can be done in two principally different ways. One is to make a rule for calculating the handicapping numbers from dimensions of the boat, and the other is to record the performance of the boat and calculate a handicapping number from statistics of race results. The former we call rule handicapping and the latter we call empirical handicapping.

Typical handicapping rules are the IMS Rule (International Measurement System) of the ORC (Offshore Racing Committee of the ISAF), the IR2000 of the RORC (Royal Ocean Racing Club) and the DH (Danish Handicap).

Typical empirical handicapping systems are PHRF of US Sailing, HN (Handicap National) in France, Portsmouth Yardstick in England, YS (Yard Stick) in Germany or LYS in the Nordic countries.

Empirical handicapping usually aims at determining the potential of the boat itself. This is true for the systems mentioned above, but there are also systems like the Echo system in Ireland, which includes the performance of the crew, more or less like a golf handicap.

When it comes to determining handicapping numbers this book will concentrate on empirical handicapping numbers, but some comments will also be made on

Different skills needed

- **Determination and administration of the handicapping number**
- **Using the handicapping number to calculate the corrected time from the elapsed time in a race**

Two basic principles

- **Rule handicapping
IMS, IR2000, DH etc**
- **Empirical handicapping
PHRF, HN, PN, LYS etc**

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handicapping rules, in particular IMS and ORC Club, and their relation to the empirical handicapping systems.

Calculations of corrected time for scoring purposes are more or less the same, whether the handicapping number is empirical or rule based. In my mind there are large problems and challenges associated with calculation of corrected times, and these problems are not fully understood and appreciated by all sailors and race officials. Sophisticated methods are used to establish ratings, but the calculations used to score races based on these numbers introduce very large biases. These problems will be dealt with in some detail. I will explain why they occur and how they can be improved.