

SAMA Handicaps and SAMA 'Event Manager' Software

HANDICAPS FOR RUNNERS AND WALKERS

Many of the SAMA events are handicapped. The theory is that the handicapping system provides an equal opportunity for the slower and faster competitors to win the events. The competitor tends to compete against their estimated times for the nominated distance. When a competitor improves (compared with their estimate), they will generally be in the leading group at the finish.

Four different starting systems are used in SAMA events:

- 'Scratch' - everybody starts together and the quickest competitors win. 'Scratch' starts are used for all championship events, short distance events (sprints up to 200metres), and some winter events when weather or other circumstances make handicapping too complicated or inconvenient.

- 'Yacht' - the most common - time handicapped at the start where the slowest competitor leaves first (off scratch), and everybody else starts at a time equal to the slowest competitor's estimated time, less their individual estimated time. If everybody achieves their estimated times, all competitors will finish at the same time.

- 'Sealed' - where all competitors start together, and the winners are determined by who is most under their estimated time.

- 'Turkey' - the competitor nominates their estimated time, and competes without a watch or clock. The winner is the competitor closest to the estimated time.

In the summer competition, 'Yacht' handicaps are applied to most 400m track events and longer. In the winter, the majority of events are 'Yacht' handicapped.

SAMA has not used distance handicapping very often as used by the 'Pro' runners (eg Bay Sheffield) except for social events and the the Bay Sheffield special events. The main reason is because it is too time consuming to organise as we do not generally run events where entries are closed weeks before the event as the 'Pros' do. The other reason is because by having distance handicapped events, only the back marker would ever compete over the full distance, and the slower runners would not have a time for the distance because they always would be competing over a lesser distance.

ESTIMATED TIMES USED FOR HANDICAPPING

The person with the dubious honour of setting estimated times for all competitors is called the 'handicapper'. The handicapper has the support of the SAMA committee to set the estimated times for each competitors and for each event that a competitors may nominate to compete in. The number of different entries to manage is therefore very large as this table includes competitors who only compete occasionally. In the winter season, the handicapping system is used to determine prize winners. This raises the 'seriousness' of some competitor's estimated times a notch during these events.

Competitors are encouraged to advise the handicapper when their estimated times are clearly wrong so that all competitors have the same chance winning an event. Contact John Hore if you have issues.

The 'Event Manager' software (described below) has been developed to assist in managing the large number of estimated times, and apply handicaps based on these estimates. This system applies pre-defined algorithms the individual competitor's estimates based on the previous results for the same distance.

When the competitor went faster than estimated, the new estimated time will be adjusted by 75% of the difference between the original estimate and the new result (eg ran 20 seconds quicker, change the estimated time to the old time minus 15 seconds).

When the competitor went slower than estimated, the new estimated time will be adjusted by 25% of the difference between the new results time and the original estimate.

Distance events are always recorded in the Event Manager software, as minutes per km (speed). The speed is based on a 5km run (ie if a runner completed 5km in 20 minutes, the the speed will be recorded as 4 minutes per km. Estimates for different distances are calculated based on the mins per km speed by using a conversion table which allows for the fact that a competitor will normally slow down in speed over a distance longer than 5km, or speed up in shorter distances. The conversion table has been developed through trial and error over a period.

Note that the 'Event Manager' software is an aid to managing the estimated times. The handicapper often manually adjusts estimates when it is clear that times need to be adjusted to make an individual competitive. Often this occurs after long term illness or injuries, where previous estimates are clearly not achievable within the foreseeable future. Manual adjustments are generally not made for 'short term' injuries where the competitor is expected to fully recover within a month or so.

Generating start lists and backmarker boosting for yacht handicapped distance events

One of the main reasons that computer generated handicaps do not work well (compared with manually managed systems) is because the slower competitors vary large amounts while the faster competitors only vary a small amount. As a result, yacht handicap events will favor the slower runners who are having a good day. For example, a slower runner may have swung 2 minutes or more in a 5km run, while a fast runner would normally be within 15 seconds of their previous times.

To help offset this, an adjustment is made to the calculated handicap values. The current setting is 4% for runners and 6% for walkers. In this adjustment, the fastest competitor will receive the maximum adjustment (ie handicap reduced by 4% for runs and 6% for walks). The adjustment is apportioned across all competitors so that the fastest competitor receives the maximum adjustment, and the slowest competitor receives a zero adjustment. Those in the middle receive half of the adjustment.

For example: The fastest runner receives a handicap of 10 minutes in a 5km race with an estimated time of 20minutes where the slowest competitor has an estimated time of 30 minutes. As a result, the handicap for the fastest runner will become 9:36 (ie 10 mins less 4%). Runners with an estimated time of 25 minutes would be adjusted by 2% and their handicap would become 4:48 (ie 5 mins less 4%/2). The front marker would retain the 0 sec handicap. In this example, the fastest runner would receive a benefit of 24 seconds, which would give the runner a better opportunity of winning a yacht handicap even.

The backmarker boost system has been in place for the last 12 months, and has resulted in more backmarkers finishing high in the results of handicapped distance events.

EVENT MANAGER SOFTWARE

SAMA has it's own application for managing weekly events. The 'Event Manager' software has been developed by John Hore using Microsoft Excel Forms, VBA programming language over Excel tables. The approach of using Excel rather than established database software was taken because the system was developed over several years, and having familiar Excel tables available made it possible to use either the 'front end' GUI (Forms), or the 'back end' Excel tables to run an event.

The system has been developed around the way that SAMA operates. Many SAMA events as 'Yacht' handicapped and a lot of the effort within the system has been directed towards managing time based handicapping.

FEATURES:

- Provides a configuration table which is used to set up event headings, event measurement standards (seconds, minutes, meters) and report layouts. The config table also controls the 'start lane number (eg start in lane 2 not 1), and the maximum number of competitors in a heat, and lane allocation based on previous performances)
- Enables rapid event data entry using either competition numbers or surnames (including name search facilities)
- Generates events when entries have closed. Event generation may include handicap details, heat number, lane number allocations. Late entries can be added and heat number etc controlled when entering. Late entries will have the correct handicap applied for handicap events.
- Provides a results entry form where time based entries (h:mm:ss) can be entered as decimals to minimise entry effort. The results entry form also has the facility to sort by various options including clock time, performance time, estimated time, competitor number and surname. This provides flexibility in recording results.
- Manages athletes tables (competitor number and athletes name and other detail)
- Manages historical results tables
- Manages competitor estimated performance tables used in generating handicaps
- Has facilities to automatically calculate new estimated performances based on results and configurable algorithms
- Has the facilities to generate a full event results report used for emailing or printing.
- Calculates world age graded results for members (where age group is entered)
- Generates a text file results report suitable for loading onto the internet.