



REGATTA

Scoring and Race Management

Reflections On The Requirements Of Regatta Management Programs

The following is an overview of the requirements of a regatta management system, and a discussion of some features of the scoring program. This memo is by no means comprehensive, but covers some requirements which come to mind when attempting to remember why the program is so versatile as to have no peer. These features are by no means a collection of cute 'geek tricks'. They are features which were included as a result of necessity.

Running a single race is a relatively simple thing, and well suited to a spread sheet approach. This is not true when a multi division and multi race regatta is to be run. The problem becomes yet more complex when time correction methods differ between divisions, when there are partial division combinations which are again run under different rating systems and time correction methods. Then there is the matter of regatta standings, and the scoring systems used to obtain regatta points, such as low point with 1/4 point, straight finish point, Olympic, high point, cumulative corrected, etc. Then there are also considerations for throw outs, dsq permission for throw outs, penalty point base, penalty points over the point base, and the list of intricacies continues.

For every individual regatta option accommodated in a scoring program, the number of program configurations doubles. In high school we have all learned about geometric progressions by the tale of the king who would buy the chess game from its inventor by placing one grain of wheat on the first square, two grains on the second square, four grains on the third square, etc., and then discovered that $1 + 2 + 4 + \dots + 2^n + \dots + 2^{63}$ grains is very much wheat. It is for this reason that most scoring programs are too primitive for generalized regatta management. It should not be surprising that the Regatta Scoring And Race Management program has so far consumed over 3000 hours of programming time.

Most scoring programs are written for one individual event, and they work well when the author operates the program at the time of the event. The original DataEase version of the scoring program suffered badly from this limitation, besides it was not nearly as versatile as required for comprehensive regatta management. In spite of this, it was more comprehensive than other programs were. For example, it was more capable than the programs used for the MYCO midwinters, BYC midwinters, Nimitz regatta, etc. Last year's GGYC races were run on the St.FYC system, but did not function properly most likely because the author was not using it. USSA provides a list of available programs, none of which can be regarded as versatile. The program which they recommended as being the most accommodating required data entry to be done in such a cumbersome way that the help file on the program recommended to do it by creating a WordStar mail merge file. Almost none of the programs can deal with anything resembling mixed regatta management.

To run one kind of regatta with a dedicated system is relatively straight forward. More than that is not. The Regatta Scoring and Race Management program deals with issues so far beyond issues accommodated in other programs that there is literally no adequate basis for comparison.

A comprehensive regatta management system must accommodate the different regatta parameters thrown at it routinely, and it must allow the regatta description to be changed on the fly. It must permit multiple regattas of quite different descriptions to be accommodated simultaneously. It must be fully menu driven so that all actions are prompted, and no programming familiarity can be required. It must permit the regatta to be set up in advance, and the actual race data to be entered quickly. It must provide the race results and regatta standings without any further input, other than making the menu selections to proceed.

The Greatest Problems Encountered Scoring Regattas This Year

The most disruptive problems encountered during the scoring process and the ones causing the greatest headaches and delays, have nothing to do with the scoring program. Rather they are the immediate result of human factors. In order of significance:

1. Last moment entries on the water
2. Race results not being called in by the RC as soon as they are available
3. RC not recording starting time and course length
4. Late entries on the morning of the race
5. Incomplete entry forms, inaccurate entry forms, incorrect sail numbers, changing sail numbers
6. Improper recording of finishing status
7. Inaccurate finishing record on RC boat
8. Inaccurate data transcription
9. Unfamiliarity of the computer operator with the program
10. Computer program malfunction

The RC's who have the least problems are the ones where:

1. They do not permit late entries
2. A hard nosed Entry Officer controls the entries. No nonsense accommodated with ratings, etc.
3. A computer is on the committee boat so that results are entered as the race is in progress (or the computer is housed in a race room on the starting/finishing line right where the RC functions so that all data may be verified right then and there, and there is no delay in the data transcription)
4. One individual is assigned (or has assumed the task) of operating the program. Sometimes there are two individuals, each of whom uses his/her own and separate program

At SFYC there were two program malfunctions during the year. These were:

1. A bug in the sail number resolution routine during a club race early in the season. This caused a minor delay in issuing the results. The bug is fixed.
2. A computer operator unfamiliarity problem, when failing to make use of a feature in the program designed to preempt the potential difficulties of small divisions when course length is not

entered. This caused the results of one division to be unavailable the first day of the second weekend of the fall series. The results were obtained the next day using the program as is. A multi mechanism algorithm is now included in the program to bypass this difficulty when course length is not entered.

3. The multihull division didn't have established ratings available. Then they found the NAMSAs ratings. This is an obscure time correction/rating system. This has now been incorporated in the program, as well as a generic version of it to preempt difficulties with other unlikely scoring systems.

At SFYC all other delays in race results were caused by the other factors listed above. These included:

1. A boat starting in the wrong division, and there being heated discussion as to the application of the starting time difference, or the disqualification of that boat. Since the finish was at Marin YC, the difficulties were not identified until all hell had broken loose. This was clearly not a program problem.
2. A boat starting in the wrong division in a race of the Fall Series and the subsequent confusion by the transcribers as to which RC authority was to issue the ruling as to what data to enter for the boat. Not a program problem
3. Many occurrences of wrong ratings. The Entry Officer must certify the ratings on the submitted entries prior to data entry. Ratings certainly need to be certified prior to the start of the first race. Once ratings are correct, results are correct. Again, this is not a program problem.
4. In the Fall Series a group of 99 raters asked a new division be created to sail one design. Confusion about the combined (original) division scoring ensued causing delays in results, and results which were altered from the originally published ones. Not a program problem.

There were a number of races at SFYC where final results were posted before the committee boat entered the harbor. Notable on this score was the Around The Islands Race. The Calcutta race format is an unusual one, and there is no other scoring program that can deal with that.

The Resin Regatta was another fine performance of the Club. Aside from the usual confusion of data transcription and communication between the committee boats and the scoring staff, the results were out quite quickly. Above all, the revised results after protests were posted within five minutes of the conclusion of the hearings.

Some Features Of The Regatta Scoring and Race Management Program

The program has a built in data base to contain regattas, yacht clubs, classes and boats in master files. This makes these items available by selection from indexed selection lists.

Data bases must be maintained. They must be kept up to date. When the rating of a class changes, all boats of this class must be revised. Mechanisms must be in place to expedite this process.

Yacht Club File:

- Fill in screen entry
- For result printout enhancement.
- Various abbreviations to assure fitting the YC name in the allotted space on printouts

Ratings

- Fill in screen entry
- 15 Rating types - user selectable
- 6 rating unit types - linkable to rating types
- Select which rating types to be protected
- Copy one rating type to another - club ratings based on PHRF for example

Class File

- Fill in screen entry
- Class Name in various abbreviations to fit in space on printouts
- Ratings for class
- Default rating type

Names

- Fill in screen entry
- Automatic alphabetizing name
- Address for automatic envelope addressing
- Phone number for informational purposes
- Yacht Club affiliation for race results and regatta standings

Boat File

- Fill in screen entry
- Class with class ratings
- Boat ratings
- Strict class rating attribute flag
- Preferred rating type
- Default rating
- Owner with address and yacht club
- Boat file is updatable from class file
- Non strict boat ratings are not updated
- Strict boat ratings are updated
- Class ratings are always updated
- Duplicate sail number resolution automatic

The regatta file is a master file which contains information on the individual regattas. In a way it is a regatta file, rather than a master file. It is described next.

Regatta File

- Fill in screen entry
- Regatta name
- Regatta dates
- Master regatta template
- Use any regatta as regatta template
- Don't use regatta template
- Number of divisions
- Number of races
- Starting signal interval
- Starting interval
- Number of throwouts
- Races required for throwouts
- Starting method
 - Mass start
 - One start for each division
 - Reverse starting order
- Time correction method
 - Boat for boat
 - US Time on time
 - Time on distance
 - ORCA
 - Elapsed time multiplied by rating
 - Elapsed time divided by rating
- Scoring
 - Point for place
 - Low point with 1/4 for first
 - High point with 1/4 for first
 - Olympic point system
 - Accumulated corrected times
- Special point base
 - Number of entries in division in regatta
 - Number of starters in individual race

- Special points
 - DNC -- DNS -- PMS -- DNF -- WDR -- DSQ individually assignable
- Combined division scoring
 - Individual division scoring only.
 - Overall scoring only
 - Individual and overall scoring
 - Any multiple arbitrary partial division combination scoring
 - Default regatta and overall rating type
 - Calcutta scoring

The following files are regatta specific files. They include the regatta division, entries, race information, and time card files.

Division file:

- Fill in screen entry
- Automatic regatta default fill in
- Every division can use its own description, and override regatta defaults
- Select race result printout format
 - One design
 - Complete time analysis
 - Boat by name
 - Boat by type
 - Boat by Skipper
 - Minutes behind
- Record finishing protocol
 - By position or time for one design
 - Default to time for handicap
- Establish requirement for starting verification
 - Record starter -- record starting -- record finishing
 - Record starting -- record finishing
 - Record finishing only

Entry file

- Fill in screen entry
- Type in sail number only to select from file
- Enter skipper if not entered by owner, otherwise use default of owner
- Verify default rating
- Assign entries to divisions
 - All boats to one division
 - By class to division
 - One by one to division
- Entry printouts
 - By sail number
 - By rating type by rating by sail number -- for assistance in division layout
 - By division by sail number
 - By division by rating by sail number
- Committee boat packets
 - By race
 - Scheduled starting times
 - Entry Lists
 - Starting Forms
 - Finishing Forms
- Starting data entry -- race information
 - Fill in screen entry
 - Starting verification protocol selection
 - Starting time
 - Course length
 - Race validation
 - Race info printouts
- Finishing data entry
 - Fill in screen entry
 - Starting verification protocol selection
 - Finishing times

- Automatic hour indexing -- enter minutes and seconds only -- avoids transcription errors
- Manual hour selection -- enter hours, minutes and seconds
- Print finishing times
 - All entries together
 - Entries by division
- Print elapsed times
 - All entries together
 - Entries by division

- Finishing order -- one design only if desired
 - Enter sail numbers in order of finish
 - Enter sail number and finishing position
 - Print finishing order
 - All entries together
 - Entries by division

- Finishing status
 - Select individual finishing status
 - Print finishing status

- Race results and regatta standings
 - Interlocked to recalculate when entries have changed to affect results
 - Select race to calculate and print race results
 - Select division to calculate and print regatta standings

The calculations for race results and regatta standings are fully automatic. Simply select the race and division for which a printout is desired. Once starting and finishing data has been entered, the result printouts are immediately available by menu selection.