Manual

ZW 5
DOCUMENT VERSION 5.03

Contents

Introduction

Let's start with a small intro.

ZW 5 was built on the foundations of ZW 4. I started building ZW 5 in 2017 after I received the original ZW 4 source code from Leo Eggink, written in Visual Basic 6. The fact that you could download and install the new program doesn't mean that it's completely done. Some work always remains to be done. However, I'll focus on scoring regattas, the Race management system that Leo worked to will not be continued. So, no Protest management and importing of Licences. All that is handled by on-line systems nowadays.

So, I've done my best providing you with a solid program, but you may still run into some issues. Please let me know if you do, you can always mail me at zwscoring@zw-scoring.nl

This Manual assumes you went through the installation and registration process just fine. Registration serves no commercial purpose, I just want to know where my program ends up and who is using it, so that I know I'm not wasting my time.

After installing and starting ZW you see this form:
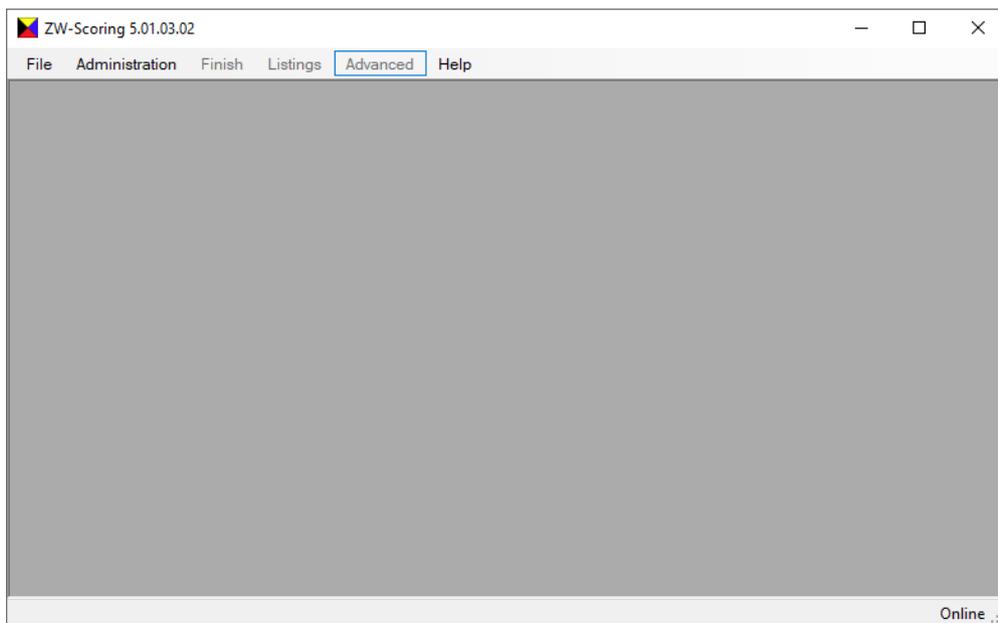
In this document the version number of ZW may vary, in above screen print it's 5.01.03.02.

What to do next?

I'll go through the steps in a 'workflow' order, and try to address options of the program as we go along.

General settings

First you may want to have a look at the general settings form. You can find it under File->Settings

Here you can configure the main directory where ZW will save your regatta data. Also you find your registration data and key. I've hidden my key here. If you want, you can change your registration data.

Furthermore you can select some options that will be default when you create a new regatta. This is just a first set of options, more may be added in the future.

The set of RSS rules and the Scoring system doesn't need explaining I believe.

You can set the language of the texts in the program differently from the language on the printed results.

You can set the default amount of races in a series. When you don't know what to set this to, just leave it as it is. The intention of this setting is to manage the resources that ZW needs. I'll get into this option later, when we are going to create a regatta.

If you have an e-Captain account activated it will show here. The e-Captain link is out of scope of this document, suffice it to say that you can upload your regatta results to your e-Captain account or site through this option.

If you made a donation and let me know your registration key, I can adjust your registration so that you may receive more program options in the future. For now you can export Results to XML.

At the bottom are some settings that also speak for themselves. If you tend not to look at the screen, but just at the finish list when entering results, then a beep comes in handy when ZW finds a problem.

Create a regatta

Let's create a regatta now: File->New gives you this form. You can also reach this form later, when you want to edit an existing regatta, under Administration->General (F2). By default the current RRS rules are selected.
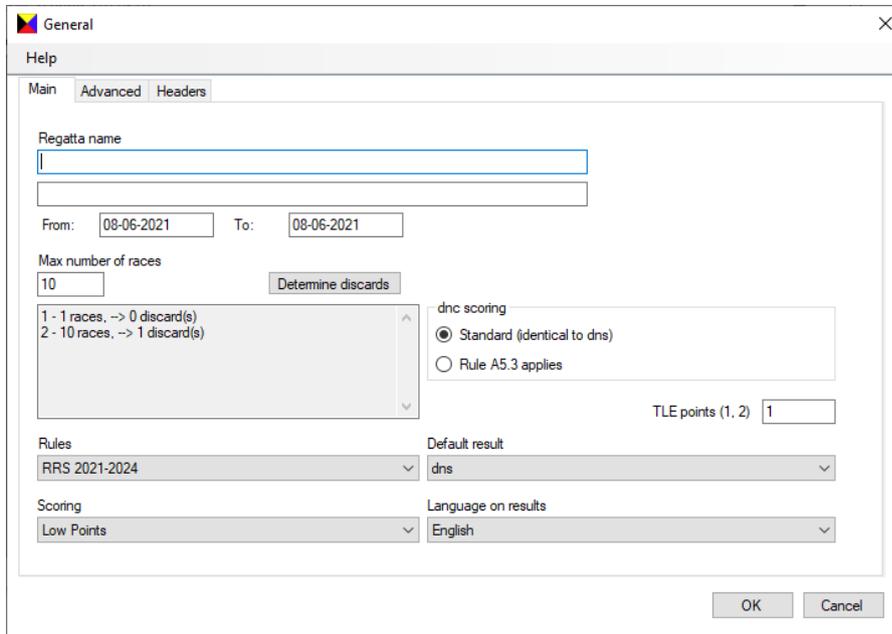
Under Regatta name you can enter two headers, more on those later in this Chapter, when I discuss the Headers tab. You can enter a start and end date, but at the moment those don't appear on regular output. If you don't use the e-Captain link or XML export you can ignore them.

You can enter the number of races that you have scheduled, ZW will reserve space for that. Just enter a realistic value to keep the program working efficiently. Lowering the default value of 15 is not needed. Setting it to too high a value will only slow ZW down. When you start finishing and this number turns out to be too low, ZW will increase it dynamically.

When you press 'Determine discards' you get this nice little form that allows you to configure your discards:
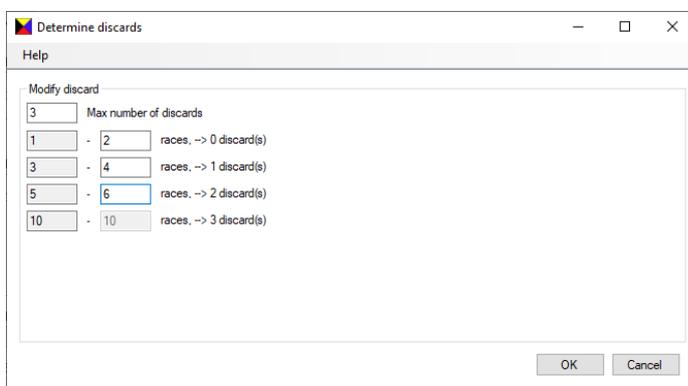
The numbers are just my example. Be aware that when you don't mention discards in your Sailing Instructions, then 1 discard is default. (A2.1)

The rules and scoring options

The rules and scoring options speak for themselves.

Examples for the different scoring systems:

Low Point System		Low Point System 1 = 0.9		Low Point System 1 = 0.75		Austrian (Starters)		Austrian (Competitors)		Bonus Point System	
Points	1	Points	1	Points	1	Points	1	Points	1	Points	1
1	1	0,9	1	0,75	1	1142	1	1180	1	0	1
2	2	2	2	2	2	841	2	879	2	3	2
3	3	3	3	3	3	665	3	703	3	5,7	3
4	4	4	4	4	4	540	4	578	4	8	4
5	5	5	5	5	5	443	5	481	5	10	5
6	6	6	6	6	6	364	6	402	6	11,7	6
7	7	7	7	7	7	297	7	335	7	13	7
8	8	8	8	8	8	239	8	277	8	14	8
9	9	9	9	9	9	188	9	226	9	15	9
10	10	10	10	10	10	142	10	180	10	16	10
13	dns	13	dns	13	dns	101	dnf	0	dns	19	dns
13	dnc	13	dnc	13	dnc	0	dnc	0	dnc	19	dnc

The Austrian values are calculated in ZW with the formula
$P = 101 + 1000 \log A - 1000 \log N$ (A=Amount of competitors, N=Finish result)

For you to check the ZW results, I took this from an Austrian lookup table:
http://home.kpn.nl/hstelten/nvs/oostenrijkse_puntentellingorgineel.htm

A = aantal deelnemers

N = positie in einduitslag	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	101	402	578	703	800	879	946	1004	1055	1101	1142	1180	1215	1247	1277
2		101	277	402	499	578	645	703	754	800	841	879	914	946	976
3			101	226	323	402	469	527	578	624	665	703	738	770	800
4				101	198	277	344	402	453	499	540	578	613	645	675
5					101	180	247	305	356	402	443	481	516	548	578
6						101	168	226	277	323	364	402	437	469	499
7							101	159	210	256	297	335	370	402	432
8								101	152	198	239	277	312	344	374
9									101	147	188	226	261	293	323
10										101	142	180	215	247	277
11											101	139	174	206	236
12												101	136	168	198
13													101	133	163
14														101	131
15															101
16															

The Austrian Point System is in here for your convenience, in case you want to use it.

The Bonus Point System has not been in the RRS for a while now, but there's no need for me to take it out. You can use it if you want to. From RRS 2009-2012:

Finishing place	Low Point System	Bonus Point System
First	1	0
Second	2	3
Third	3	5.7
Fourth	4	8
Fifth	5	10
Sixth	6	11.7
Seventh	7	13
Each place thereafter	Add 1 point	Add 1 point

DNC-scoring (Did Not Come)

- Standard (identical to dns)
  - o dns, nsc, dnf, ret, dsq, dnc shall be scored points for the finishing place one more than the number of boats entered in the series (A5.2)
- Rule A5.3 applies
  - o dns, nsc, dnf, ret or dsq shall be scored points for the finishing place one more than the boats that came to the starting area
  - o dnc shall be scored points for the finishing place one more than the number of boats entered in the series

TLE points (Time Limit Expired)

- TLE is not mentioned in the RRS of 2021-2024, but is mentioned in the Sailing Instructions Template (2021AppendixLGTemplate28112020-[26803].docx): https://www.sailing.org/tools/documents/2021AppendixLG28112020-%5B26802%5D.pdf

  - o *16.3   The Finishing Window is the time for boats to finish after the first boat sails the course and finishes. Boats failing to finish within the Finishing Window, and not subsequently retiring, penalized or given redress, will be scored Time Limit Expired (TLE) without a hearing. A boat scored TLE shall be scored points for the finishing place [one][two] more than the points scored by the last boat that finished within the Finishing Window. This changes RRS 35, A5.1, A5.2 and A10.*

  - o *RRS J2.2 (18): the time limit, if any, for boats other than the first boat to finish and any other time limits or target times that apply while boats are racing*

- I realize this is causing a lot of discussion, but I added this score to support Racing Committees that want to use it.
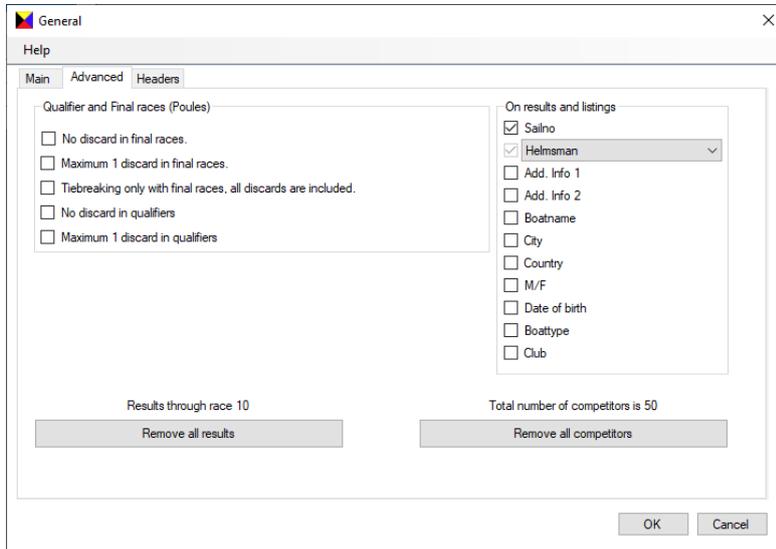
Examples (1 race, 9 competitors)

A5.2		A5.3		TLE 1 point (+ A5.3)		TLE 2 points (+ A5.2)	
Points	1	Points	1	Points	1	Points	1
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
10	dns	6	dns	3	tle	4	tle
10	dns	6	dns	3	tle	4	tle
10	dns	6	dns	8	dns	10	dns
10	dnc	10	dnc	8	dns	10	dns
10	dnc	10	dnc	8	dns	10	dns
10	dnc	10	dnc	10	dnc	10	dnc
10	dnc	10	dnc	10	dnc	10	dnc

And last but not least: with the 'default result' option you specify the default scores that ZW uses when you start entering the finishes for a race, or when you add a competitor when already one or more races in a series have been finished.

The 'Advanced' tab

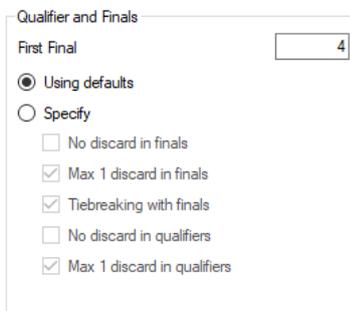This tab gives you some extra options and (output) settings that can be overruled when actually creating the output.
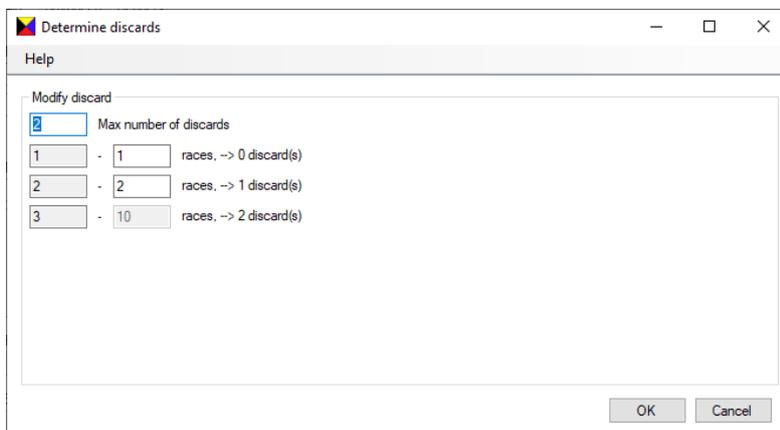

You can also clear your regatta from all competitors and results, and start fresh.

Examples for the Qualifier and Final races options:

These options can be overruled for each fleet on the fleet form:

20 competitors, 3 Qualifier races and 3 Final races, 2 discards as follows:

No options selected	No discard in Qualifiers	Max one discard in Qualifiers

Scores take into account 2 discards

No	Sailno	Name	Points	1	2	3
1	7	Competitor 7	1	2	1	1
2	3	Competitor 3	1	7	2	1
3	2	Competitor 2	1	1	1	4
4	12	Competitor 12	1	1	6	dns
5	4	Competitor 4	2	4	3	2
6	6	Competitor 6	2	5	10	2
7	8	Competitor 8	2	9	2	3
8	13	Competitor 13	2	2	5	9
9	16	Competitor 16	3	3	4	3
10	9	Competitor 9	3	3	3	4
11	17	Competitor 17	4	4	5	5
12	11	Competitor 11	4	9	4	6
13	10	Competitor 10	5	6	8	5
14	19	Competitor 19	5	5	7	9
15	18	Competitor 18	6	7	6	6
16	14	Competitor 14	6	6	7	7
17	5	Competitor 5	7	8	10	7
18	15	Competitor 15	8	10	8	8
19	20	Competitor 20	8	8	9	8
20	1	Competitor 1	9	10	9	10

Scores take into account 2 discards

No	Sailno	Name	Points	1	2	3
1	7	Competitor 7	4	2	1	1
2	2	Competitor 2	6	1	1	4
3	4	Competitor 4	9	4	3	2
4	3	Competitor 3	10	7	2	1
5	16	Competitor 16	10	3	4	3
6	9	Competitor 9	10	3	3	4
7	8	Competitor 8	14	9	2	3
8	17	Competitor 17	14	4	5	5
9	13	Competitor 13	16	2	5	9
10	6	Competitor 6	17	5	10	2
11	12	Competitor 12	18	1	6	dns
12	11	Competitor 11	19	9	4	6
13	10	Competitor 10	19	6	8	5
14	18	Competitor 18	19	7	6	6
15	14	Competitor 14	20	6	7	7
16	19	Competitor 19	21	5	7	9
17	5	Competitor 5	25	8	10	7
18	20	Competitor 20	25	8	9	8
19	15	Competitor 15	26	10	8	8
20	1	Competitor 1	29	10	9	10

Scores take into account 2 discards

No	Sailno	Name	Points	1	2	3
1	7	Competitor 7	2	2	1	1
2	2	Competitor 2	2	1	1	4
3	3	Competitor 3	3	7	2	1
4	4	Competitor 4	5	4	3	2
5	8	Competitor 8	5	9	2	3
6	16	Competitor 16	6	3	4	3
7	9	Competitor 9	6	3	3	4
8	12	Competitor 12	7	1	6	dns
9	6	Competitor 6	7	5	10	2
10	13	Competitor 13	7	2	5	9
11	17	Competitor 17	9	4	5	5
12	11	Competitor 11	10	9	4	6
13	10	Competitor 10	11	6	8	5
14	19	Competitor 19	12	5	7	9
15	18	Competitor 18	12	7	6	6
16	14	Competitor 14	13	6	7	7
17	5	Competitor 5	15	8	10	7
18	15	Competitor 15	16	10	8	8
19	20	Competitor 20	16	8	9	8
20	1	Competitor 1	19	10	9	10

These three settings determine the 'Split for finals' process!

In case you are studying this and have questions about tie-breaking, later in this manual I go into that with examples.

For the following I selected 'Max one discard in Qualifiers' and did the 'Split for finals' with that. If you want to test out all other combinations you can just go ahead. Let me know if you run into issues.

No other options selected	No discard in final races

Results: Pampus - Silver

Scores take into account 2 discards

No	Sailno	Name	Points	1	2	3	4	5	6
1	11	Competitor 11	15	9	4	6	3	3	2
2	10	Competitor 10	17	6	8	5	7	2	4
3	5	Competitor 5	18	8	10	7	2	10	1
4	14	Competitor 14	20	6	7	7	4	4	3
5	17	Competitor 17	20	4	5	5	6	9	8
6	1	Competitor 1	21	10	9	10	1	1	dns
7	19	Competitor 19	24	5	7	9	8	7	5
8	18	Competitor 18	24	7	6	6	10	6	6
9	15	Competitor 15	26	10	8	8	5	5	dns
10	20	Competitor 20	31	8	9	8	9	8	7

Results: Pampus - Gold

Scores take into account 2 discards

No	Sailno	Name	Points	1	2	3	4	5	6
1	6	Competitor 6	14	5	10	2	1	3	3
2	4	Competitor 4	17	4	3	2	8	2	2
3	8	Competitor 8	18	9	2	3	3	6	4
4	3	Competitor 3	19	7	2	1	4	1	dns
5	7	Competitor 7	19	2	1	1	2	4	dns
6	9	Competitor 9	22	3	3	4	5	5	6
7	2	Competitor 2	23	1	1	4	10	10	1
8	12	Competitor 12	27	1	6	dns	7	8	5
9	13	Competitor 13	27	2	5	9	6	7	7
10	16	Competitor 16	32	3	4	3	9	9	8

In the first column above you can see that Competitor 11 and 14 for example still have one discard in the first three Qualifying races although the score for race 3 and 1 respectively are worse than the three Finals races.

In the second column there are no discards in the Final races, and still one discard in the Qualifying races, as specified. So there will not be two discards.

Maximum one discard in final races	Tiebreaking only with final races, all discards are included
Results: Pampus - Gold Scores take into account 2 discards	I have yet to create an example that will show this function working

Results: Pampus - Gold

Scores take into account 2 discards

No	Sailno	Name	Points	1	2	3	4	5	6
1	7	Competitor 7	7	2	1	1	1	4	dns
2	3	Competitor 3	8	7	2	1	4	1	dns
3	4	Competitor 4	9	4	3	2	8	2	2
4	6	Competitor 6	12	5	10	2	2	3	3
5	8	Competitor 8	12	9	2	3	3	6	4
6	2	Competitor 2	13	1	1	4	10	10	1
7	9	Competitor 9	16	3	3	4	5	5	6
8	12	Competitor 12	19	1	6	dns	7	8	5
9	13	Competitor 13	20	2	5	9	6	7	7
10	16	Competitor 16	23	3	4	3	9	9	8

In the column above you see that now one discard was taken into account for both the Qualifiers and the Finals.

The 'Headers' tab

The 'Headers' tab gives you some more output title options:
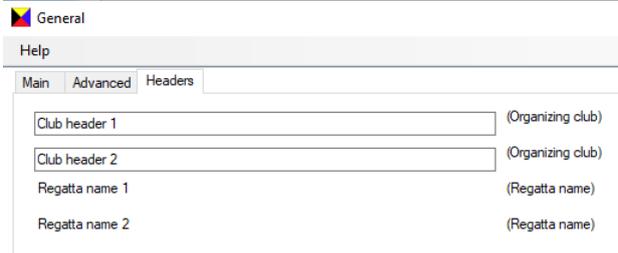
It will appear like this on your output:

When you're done, click 'OK', and your regatta is created.

You'll notice that the main form has altered a bit:
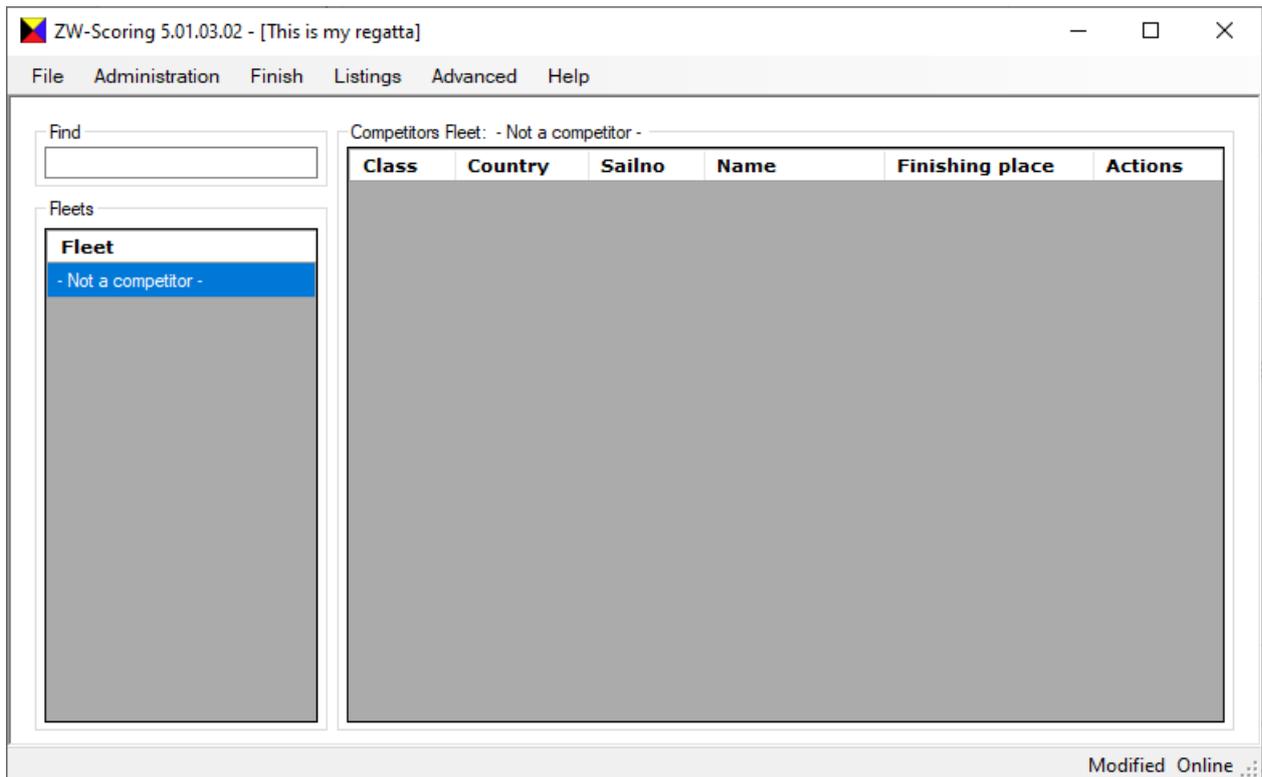
The '- Not a competitor -' fleet is a default fleet that ZW creates. When you want to take competitors out of the series, but don't want to delete them, you can park them in this fleet. ZW 4 worked the same way, but there this fleet was invisible. Usually it will be empty.

In the status bar on the bottom you can see on the right side that the regatta is modified, so the program will ask you if you want to save it when you close the regatta or the program itself.
You can also see that the system is connected to the internet, which is necessary for options that get available through your registration.

The 'find' box will give you all competitors that contain the search string in:
Name; Boat name; Info 1; Info 2; Boat type; Sail no

When the regatta is saved the filename will show in the status bar on the left.

Fill the regatta with classes, fleets and competitors

Classes and Fleets

For adding Classes, Fleets and Competitors there is a quick way of importing those through an excel document. First I'll go through the regular way using the ZW User Interface. After that I'll explain the quicker way.

So, now you need to define the Classes that your competitors sail in, and their Fleets, or Start groups if you want to call them that. The names for the Classes and Fleets are defined in this form. This can be a bit confusing.

First we create a few classes, and at the same time create fleets for them.

Go to Administration->Classes, you get the form as shown below.
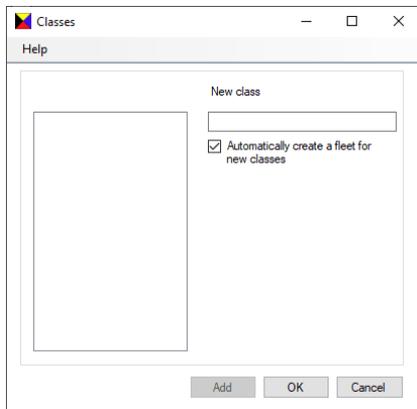
When you fill a new class, the Add button is enabled, allowing you to add the class. Hitting Enter will also work. When you check the 'Automatically create a fleet for new classes' box, ZW will also create a fleet where you can assign your competitors to.

In the example below I added a few classes, and automatically added Fleets for them.
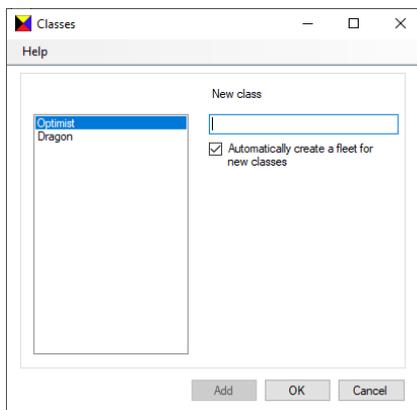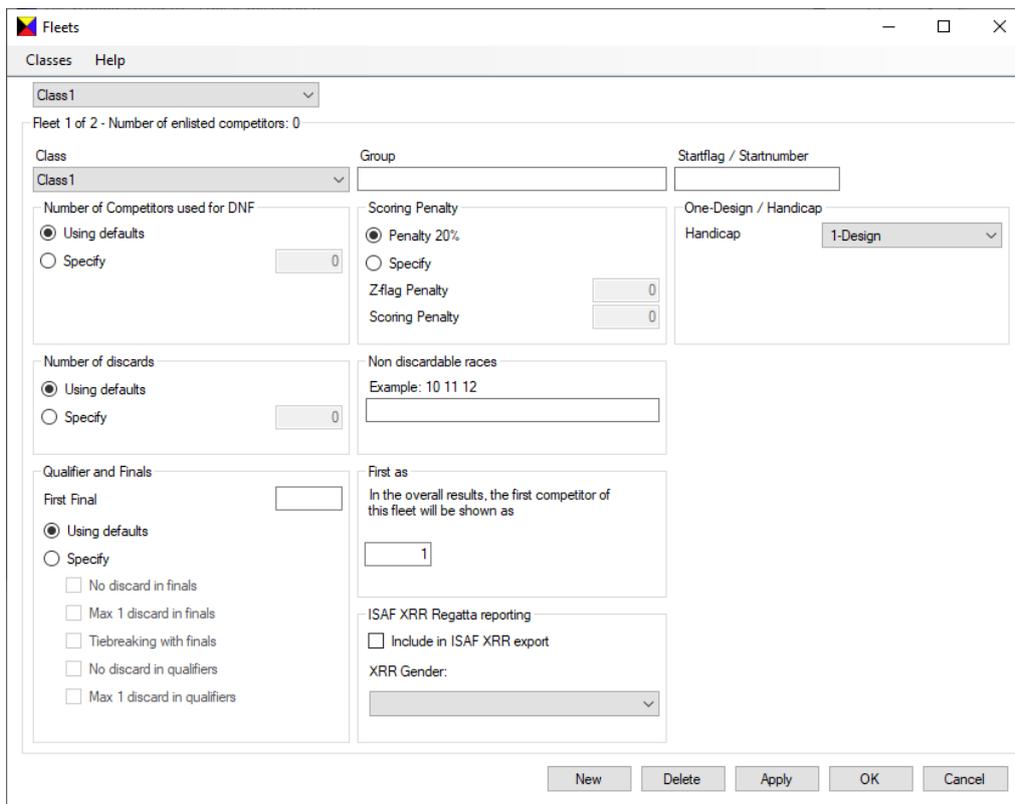
The result on the main form is this, fleets are ordered alphabetically:
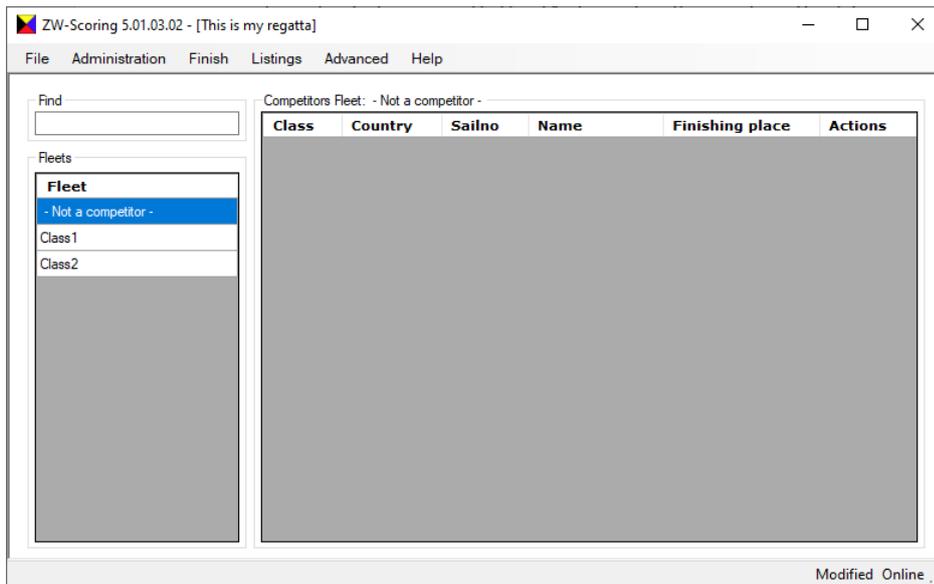
It's not possible to create duplicate class names, there's no use for that.
When you make a typo you can edit the class names by right-clicking on them.

You can double click on the Fleet names and edit the settings of the Fleet.

I will go into Groups and Handicaps later in this document.

One remark though, when you select a handicap system for this fleet other than '1-Design', you get the option to add a second handicap. You can use it, it creates some Sub-fleets and you need to assign the competitors. In this document I won't go into this.

Add Competitors

Now you're ready to add competitors. Click on a fleet name on the left, and then right click on the pane on the right.
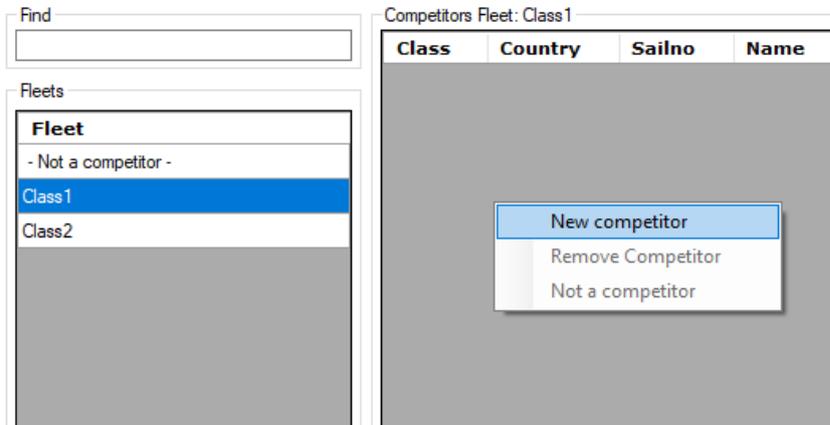
Click on 'New competitor', you'll get the Competitors form:
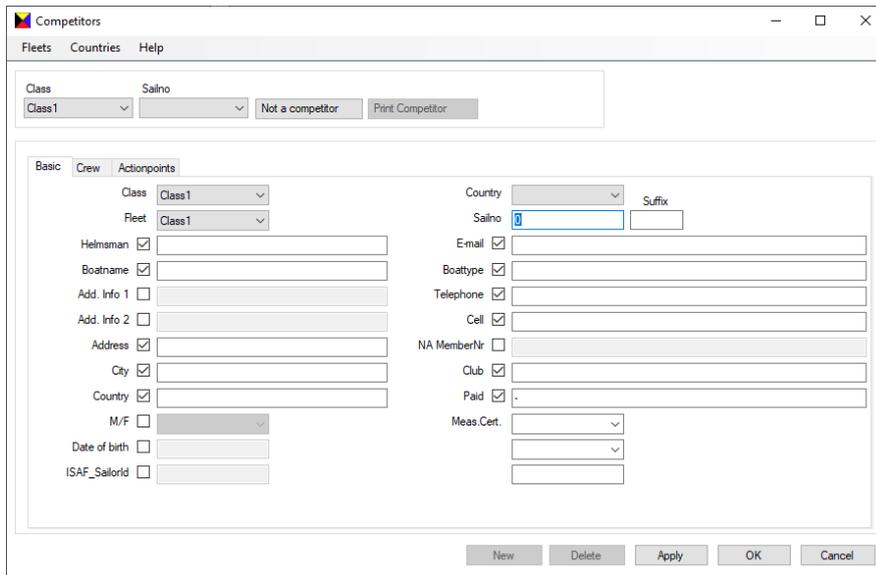
The bar on top is for selecting other competitors from here, you can also page up and down. If you uncheck items, the will be skipped when tabbing through the items.

Enter a Sailno and Helmsman name at the least, press Apply, New and enter the next competitor. Cancel will leave the form without saving, Apply does a save and stays on the form.

If this competitor is in a fleet that is not a 1-Design, you'll get an extra handicap.
The button 'Not a competitor' moves this competitor out of this fleet.

This is it really, add competitors until you're done.

There a some smarter ways to add competitors to your regatta, like importing them from a .txt, .csv or .xslx file. Competitors can also be saved to and retrieved from a special ZW database table. More on that later.

Handicaps

The best way to work with Handicaps in ZW is as follows. I'll use SW factor as an example.

Create a regatta and add a Class and Fleet like so:
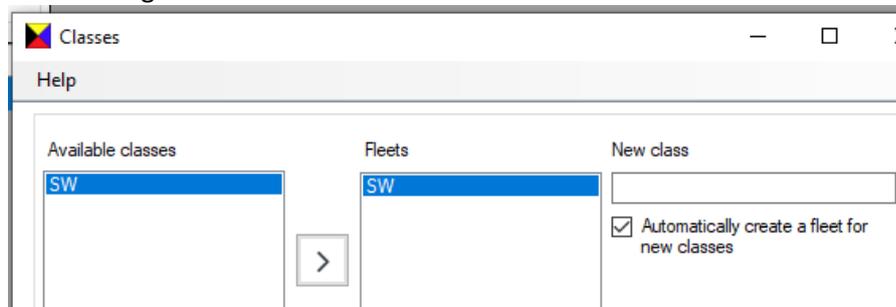
ZW supports a bunch of Handicap systems, you define the Handicap system in the Fleets form:
When you select 'SW Factor' for example, the form changes to this:

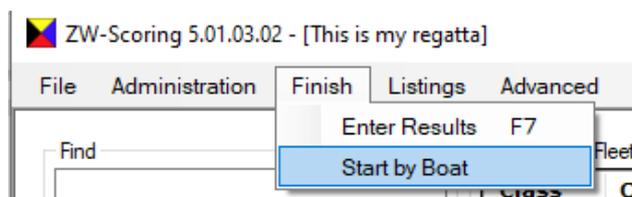Leave the 2nd Handicap alone, it's for special cases. Only use it when you know what to do with it.

The 'Enable start time by boat' gives you an extra option here, but it only works if there are already competitors in the regatta:

Enter your competitors, filling at least a Sail no, Helmsman and, in this case, Boat type.

The competitor form now also has extra tabs for entering your Handicap factors:

In this case an SW Factor can be entered. All factors can also be imported through the Excel option.

When you change the SW factor for a competitor in a certain boat type, ZW will ask to change the factor also for the other competitors with the same boat type.

Sometimes a committee wants to change to SW factor during a race, but doesn't want to influence the results that were already entered. You can then 'Freeze' the results

The 'Modify all handicaps' option gives you the possibility to make all fields writeable, instead of only the fields that are relevant to your handicap system.

Saving and retrieving competitors from the ZW Database

If you use a more or less fixed set of competitors for you regatta that you want to reuse regularly, you can save your competitors to the ZW database and recall them later.

This option is available in the Administration menu:
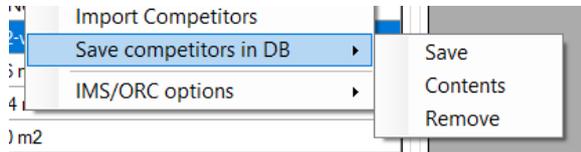
It works very crudely, so to say. 'Save' will save all competitors in your Regatta to a database table. You can view its contents by selecting 'Contents':

| Class	Country	Sailno	Name
Pampus		1	Sailor 1
Pampus		2	Sailor 2
Pampus		3	Sailor 3
Pampus		4	Sailor 4
Pampus		5	Sailor 5
Pampus		6	Sailor 6
Pampus		7	Sailor 7
Pampus		8	Sailor 8
Pampus		9	Sailor 9
Pampus		10	Sailor 10
Pampus		11	Sailor 11

Class   [Pampus   ⌄]   [Delete]

When you 'Save' again existing competitors will be updated, new ones will be added. On this form you can only delete by deleting the whole class.

The 'Remove' option on the Administration menu will clear the whole Competitors database table. These are the only maintenance options you have. If you want to do anything more sophisticated you have to create you own strategy for that.

How to use this feature

The Classes that are stored in this table will be visible in new regattas when you go to the Classes form:
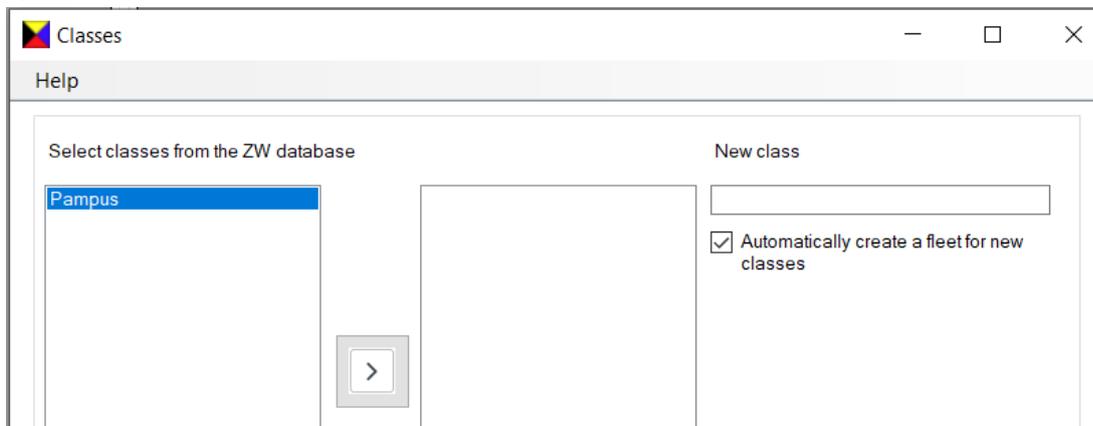
You can add it to the active box and when pressing OK a new fleet will be created. You can now add competitors to this fleet. When you want to add a competitor from the saved list you enter the sail number and press enter.

When you want to add all competitors from the list you enter * in the sail number field and press enter. ZW will copy all competitors for this class from the backup to your active regatta.

Selection races in Groups, splitting to Gold and Silver fleet

You can define selection races and groups. For example, you have three selection races with two starts each, where 4 groups of competitors are sailing against each other in a schema like this for example:

```
Race1   Race2   Race3
Startgroup1 (Red)       A-B     A-C     A-D
Startgroup2 (Yellow)    C-D     B-D     B-C
```

This gives a total result which you can then split into a Gold fleet and Silver fleet. You can also define a medal race.
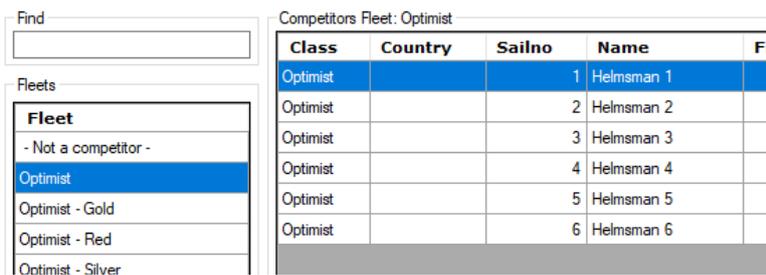
How to do this?
Create a main fleet, Optimist in the picture below;
Create two extra Fleets with a group name Yellow en Red, and if you want to split to finals, also add a Gold fleet and a Silver fleet, like so::
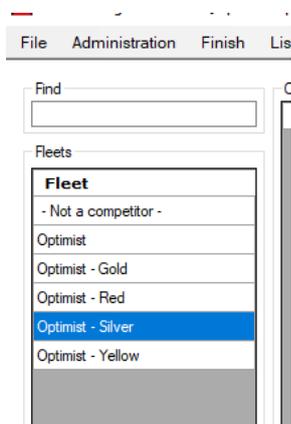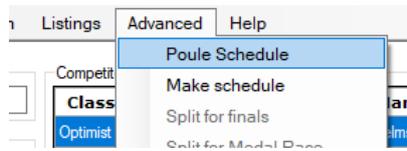

Add all contestants to the main fleet

Go to 'Advanced'->'Poule Schedule'. ZW could do the next automatically ('Make schedule'), but I did not build that yet. You'll get a blank form.

You can now assign competitors to the Starting groups, leave the first column alone. I should protect it, but that's on my todo list.

Click on the fleet name and select the Starting group. If you need to do many competitors you can define a mask and copy that over the competitors that you want to change.

Now start finishing them. The results will be in the main fleet (so not with the starting groups)

Optimist qualifications

Results: Optimist

No	Sailno	Name	Points	1
1	3	Helmsman 3	1	1
1	4	Helmsman 4	1	1
3	1	Helmsman 1	2	2
3	2	Helmsman 2	2	2
5	5	Helmsman 5	3	3
5	6	Helmsman 6	3	3

1

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For info about ZW https://www.zw-scoring.nl

08-06-2021 16:39:33

After the selection you can split into Gold and Silver Fleet. Go to 'Advanced'->'Split for finals'

This is the default, most of the time that'll do.

In my example I only did 1 finish, usually you'll have 3. I was lazy, if I have time someday I'll make this

example more realistic. But I hope you get the idea.

Press OK twice, you'll get a print with 3 pages: the original total score and the lists for the Gold and Silver fleet.

That's it, finish the fleets until you're done.

After the split the results will be in the Gold and Silver fleets

Using Excel or Open Office to import Classes, Fleets, Competitors and Groups

First: ZW only supports the import of .xlsx Excel files directly. For Open Office you need to export your Calc sheet to a .csv file. I'll tell you what to do at the end of this chapter.

If you want to experiment, have large amounts of competitors, or even have a website for entering competitors, it may be much more convenient to export/maintain them in an Excel sheet and import them as often as you want into ZW. In Appendix A you find a complete overview of the Excel columns you can define, for this example I'll stick to the bare minimum.
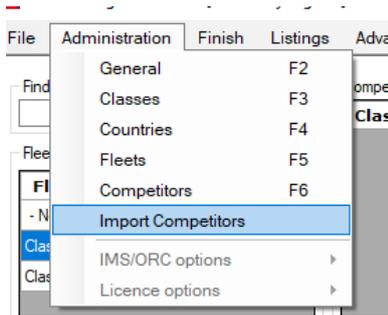
So, just like in chapter 4, create your regatta. Next go to 'Administration'->'Import Competitors' and import your excel. All done, you can start finishing.

What does the Excel/OO sheet have to look like? For the Optimist example above, something like this:
To be sure, the Groups are for completeness of this example. If you just want to have regular races, leave them out. Only the first three columns are mandatory. The order of the columns is free for you to decide. ZW will notice if contestants are already present.

Class	Sailno	Name	race1	race2	race3
Optimist	1	Helmsman1	Red	Red	Red
Optimist	2	Helmsman2	Red	Red	Red
Optimist	3	Helmsman3	Red	Red	Red
Optimist	4	Helmsman4	Red	Red	Red
Optimist	5	Helmsman5	Red	Red	Red
Optimist	6	Helmsman6	Red	Red	Red
Optimist	7	Helmsman7	Red	Red	Red
Optimist	8	Helmsman8	Red	Red	Red
Optimist	9	Helmsman9	Red	Yellow	Yellow
Optimist	10	Helmsman10	Red	Yellow	Yellow
Optimist	11	Helmsman11	Red	Yellow	Yellow
Optimist	12	Helmsman12	Red	Yellow	Yellow
Optimist	13	Helmsman13	Red	Yellow	Yellow
Optimist	14	Helmsman14	Red	Yellow	Yellow
Optimist	15	Helmsman15	Red	Yellow	Yellow
Optimist	16	Helmsman16	Red	Yellow	Yellow
Optimist	17	Helmsman17	Yellow	Red	Yellow
Optimist	18	Helmsman18	Yellow	Red	Yellow
Optimist	19	Helmsman19	Yellow	Red	Yellow

So now save your file and import it:

I hear you think, what about the Gold and Silver fleet?
You can add these through the excel also, just add a line like this at the end:

32	Optimist		31	Helmsman31	Yellow	Yellow	Red
33	Optimist		32	Helmsman32	Yellow	Yellow	Red
34	Optimist	-1		add fleet	Gold	Silver	
35							

The 'add fleet' will cause ZW to create extra fleets. Be sure to put the values for this in the correct columns (class, sailno, name and race1 and race2), also when you add more columns to your sheet.

Re-importing the sheet will show you this, notice the two extra fleets.

You can check the results of the grouping in 'Advanced'->'Poule Schedule'.

Don't forget to configure your fleets, this import does not provide for that.

8.a. Saving to .csv in Open Office

Save your file as .csv and check the 'Edit filter settings'. It seems there is a little bug in OO where it doesn't set all texts to English. ZW has that too, it's complicated to keep track of all your texts. 😊
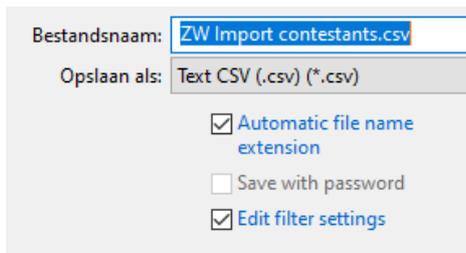
Press save and change the Field delimiter to ;
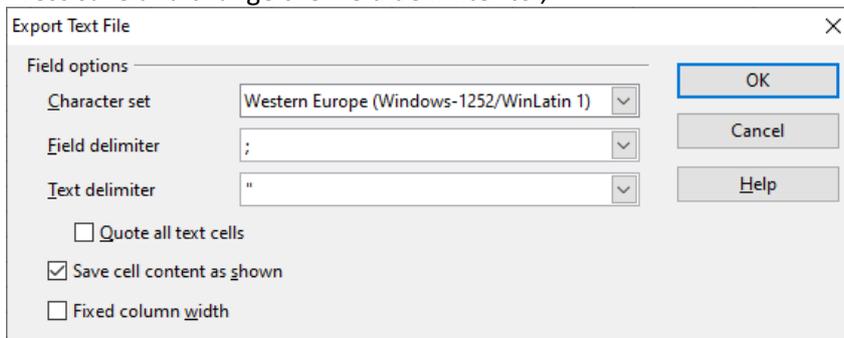
After your file is saved, close it and import it into ZW. You can find the file like so:
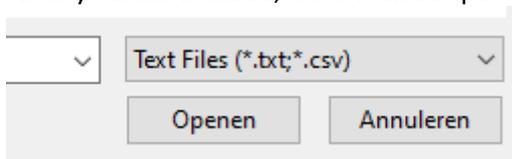
The .txt option allows for tab delimited files (instead of ; delimited in a .csv file)
Select your file, import, and it's done.

Finishing of One-design fleets

When you're all set configuring your regatta, fleets and competitors with maybe even selection races and/or handicaps, we get to the fun part, finishing.

Go here or press F7:
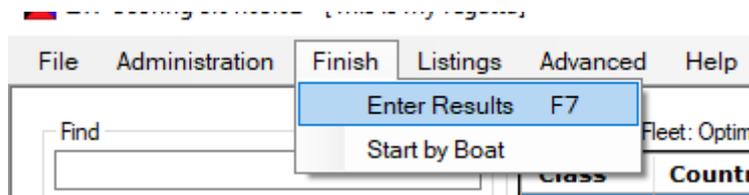
You get to this clever screen
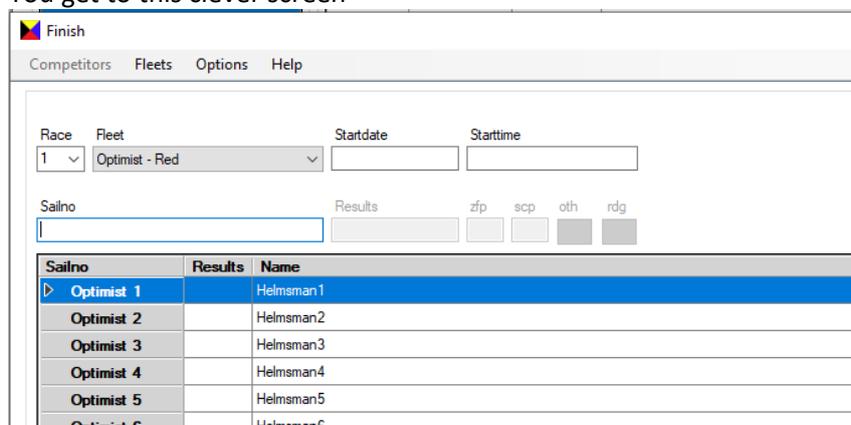
Just enter the sail numbers in finishing order. ZW will find the correct boat and fleet and score them in the order you enter them. So there's no need to separate the finishing boats in order of their starting groups.

If ZW finds duplicate sail numbers, you get to choose from the unfinished boats with that number. You can also finish a group by clicking on the gray cell with the Class/number on it.

After the first boat is finished, the others in the fleet in question get the default score that you selected in the General settings of the regatta.

When you enter a sail number that is not in the system, then ZW will beep so you don't have to look at your screen all the time. You can turn the beep on or off on the ZW Settings form.
I've done my best to make this process as fast as possible, so it should be able to keep up with you entering the finishes.

If you have, for example, many OCS scores, you can change the behaviour of ZW through the Options menu:
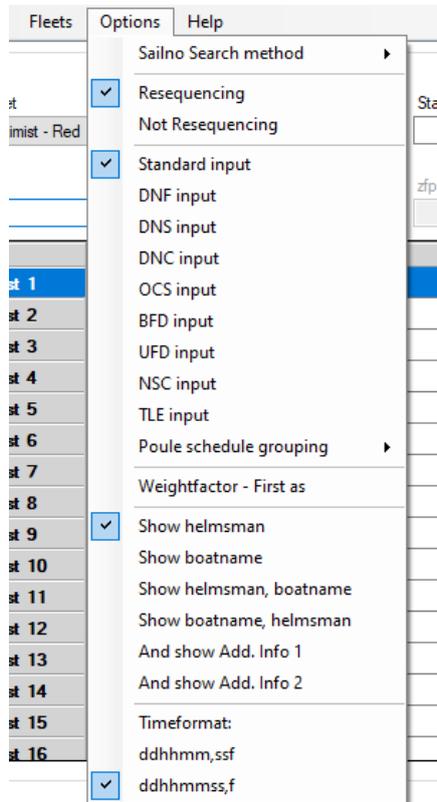
Change the 'Standard input' to 'OCS input', and boats that you finish from then on get an OCS score. Also check out the other options that you can use to modify the behaviour of ZW.

Printing results
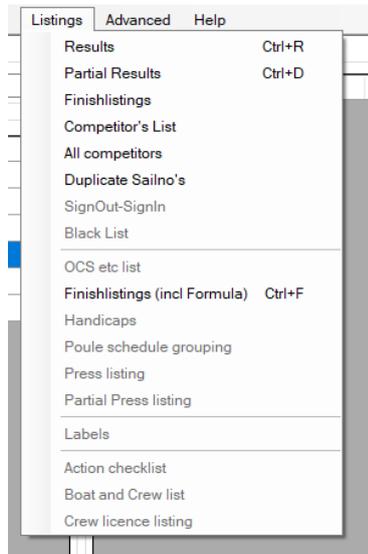
As you can see by the grayed out options, I still have many listings to go. But the most important one is 'Results'. It will take you here:
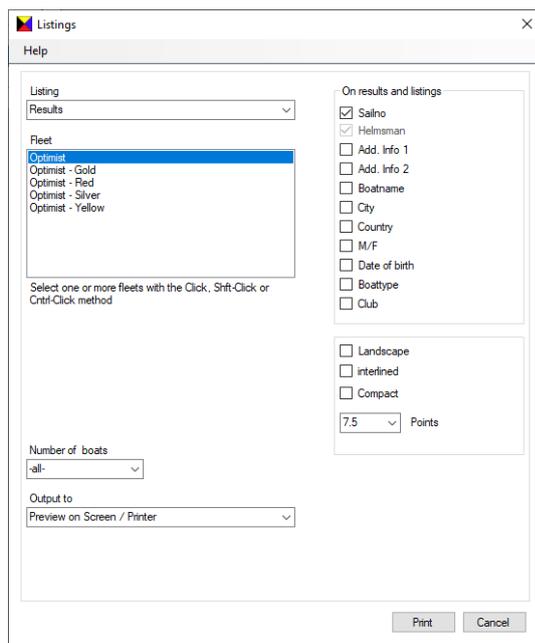
You can select the fleets, modify the output a bit and output to different possibilities
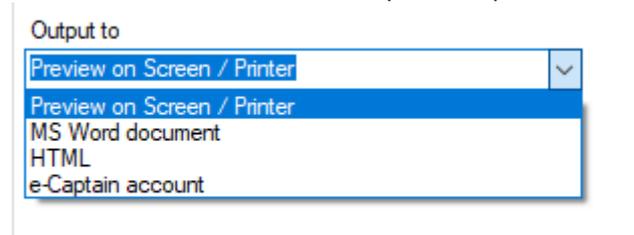
The e-Captain option is out of scope for this instruction. The MS Word and HTML option will output the results to documents in your regatta folder:

But the preview option does just that:

If you're surprised by these points, this was some random result I entered in a selection phase with two starting groups.
You get the results on your screen. The little printer icon on the top left, shows the standard Windows control:

You can print to your printer or PDF or anything you want really.

Scoring

Tie-breaking Appendix A

It gets interesting when ZW needs to break ties between boats with the same amount of points for the series.

RRS 2021-2024 Appendix A states the following

> A8.1 If there is a series-score tie between two or more boats, each boat's race scores shall be listed in order of best to worst, and at the first point(s) where there is a difference the tie shall be broken in favour of the boat(s) with the best score(s). No excluded scores shall be used.

> A8.2 If a tie remains between two or more boats, they shall be ranked in order of their scores in the last race. Any remaining ties shall be broken by using the tied boats' scores in the next-to-last race and so on until all ties are broken. These scores shall be used even if some of them are excluded scores.

Example:
Take the following results:

Results: Tie example

Scores take into account 2 discards

No	Sailno	Name	Points	1	2	3	4	5	6	7	8
1	84	84	13	3	~~5~~	3	~~4~~	3	2	1	1
2	92	92	13	~~4~~	1	1	~~3~~	2	3	3	3
3	56	56	13	~~5~~	2	2	~~5~~	4	1	2	2
4	43	43	20	2	4	5	1	1	~~dsq~~	~~dns~~	dns
5	97	97	25	1	6	4	2	5	~~dsq~~	~~dns~~	dns
6	28	28	27	~~6~~	3	~~6~~	6	6	4	4	4

The first three boats are tied.

For rule A8.1 we have to order the results from best to worst:

sailno	1	2	3	4	5	6	7	8
84	1	1	2	3	3	3	4	5
92	1	1	2	3	3	3	3	4
56	1	2	2	2	2	4	5	5
43	1	1	2	4	5	7	7	7
97	1	2	4	5	6	7	7	7
28	3	4	4	4	6	6	6	6

The tie is broken at the first difference in favour of the boat with the best score. Discards (marked yellow) are excluded. This leaves boats 84 and 92 still tied, boat 56 gets third place.

To break the tie between 84 and 92 we go to rule A8.2. We rank the boats in order of the score in the last race, which makes 84 first and 92 second place.

This example was taken from the internet:
https://afleet.app/great-example-of-sailing-rrs-a8-1-and-a8-2-countback/

A simple example of A8.2 breaking the tie in the 6th race:

Scores take into account 2 discards

No	Sailno	Name	Points	1	2	3	4	5	6	7	8
1	2 2		9	2	1	2	1	2	1	dnf	dnf
2	1 1		9	1	2	1	2	1	2	dnf	dnf

Races 7 and 8 offer no tie breaking solution. To show that ZW also takes into account the discarded races:

Scores take into account 2 discards

No	Sailno	Name	Points	1	2	3	4	5	6	7	8
1	2 2		9	2	1	2	1	1	2	4	3
2	1 1		9	1	2	1	2	2	1	3	4

Here the tie is broken in race 8, you can see that races 6 and 7 (where competitor 2 has better results) were not looked at.

Now that you know all this you can understand this result:

Scores take into account 2 discards

No	Sailno	Name	Points	1	6	10
1	7	Competitor 7	1	dnc	dns	1
2	4	Competitor 4	1	dns	1	dns
3	1	Competitor 1	1	1	dns	dns

In this example no competitors participated in races 2, 3, 4, 5, 7, 8 and 9

Tie-breaking Appendix B (Windsurfing)

As of ZW version 5.03 the program supports tie-breaking as described in Appendix B.
This set can be selected on the General settings form of the current regatta:

```
1 - 2 races, --> 0 discards
3 - 11 races, --> 1 discards
12 - 15 races, --> 2 discards
```

Rules

```
RRS 2021-2024 Windsurfing
RRS 2021-2024
RRS 2021-2024 Windsurfing
RRS 2017-2020
```

Rule A2.1

When changing from Appendix A (regular) to Appendix B (Windsurfing) the discards will be set according to the relevant rule A2.1. This only happens if you have not changed the default value, otherwise ZW will leave the discards alone.

Rule A5.4

ZW 5 does not actively support elimination races. When you continue racing with less competitors the only option you have at the moment is to move the eliminated competitors to the -Not a competitor- fleet or to delete them altogether. In both cases their previous results are lost. If you have a better solution for this that I could implement please let me know.

Rule A8

RRS 2021-2024 Appendix B states the following

Rule A8 is changed to:

> *A8.1 If there is a series-score tie between two or more boards, each board's excluded race scores shall be listed in order of best to worst, and at the first point(s) where there is a difference the tie shall be broken in favour of the board(s) with the best excluded race score(s).*

> *A8.2 If a tie remains between two or more boards, each board's race scores, including excluded scores, shall be listed in order of best to worst, and at the first point(s) where there is a difference the tie shall be broken in favour of the board(s) with the best score(s). These scores shall be used even if some of them are excluded scores.*

> *A8.3 If a tie still remains between two or more boards, they shall be ranked in order of their scores in the last race. Any remaining ties shall be broken by using the tied boards' scores in the nextto-last race and so on until all ties are broken. These scores shall be used even if some of them are excluded scores.*

Example:
Take the following results:

Results: surfplank8.1

Scores take into account 1 discard

No	Sailno	Name	Points	1	2	3
1	4	surfer4	3,0	~~3~~	2	1
2	2	surfer2	4,0	2	~~5~~	2
3	3	surfer3	4,0	~~6~~	1	3
4	1	surfer1	4,0	1	3	~~7~~
5	5	surfer5	8,0	~~4~~	4	4
6	6	surfer6	10,0	5	~~6~~	5

Above list does not show all competitors.

Three boards are tied, according to A8.1 they have been ranked according to their best discards, 5, 6 and 7 respectively.

The example below shows rule A8.2 and A8.3

Results: surfplank8.2

Scores take into account 1 discard

No	Sailno	Name	Points	1	2	3
1	4	surfer4	3,0	~~3~~	2	1
2	3	surfer3	4,0	~~5~~	1	3
3	1	surfer1	4,0	1	3	~~5~~
4	2	surfer2	4,0	2	~~5~~	2
5	5	surfer5	8,0	~~4~~	4	4
6	6	surfer6	12,0	~~6~~	6	6

Three boards are tied, they also have the same discards, 5, so rule A8.1 doesn't solve the tie. We turn to rule A8.2 which ranks all scores, also excluded ones from best to worst and breaks the tie in favour of the board with the best result. This rule causes surfer2 to rank last of the three, but surfer1 and surfer3 are still tied since they have the exact same scores.

Rules A8.3 solves this tie by looking at the best result in the last race first and then moving back if needed. In this case the tie gets broken in favour of surfer3 and surfer1 ends up in the middle.

Sub-fleets

A little something on Sub-fleets.
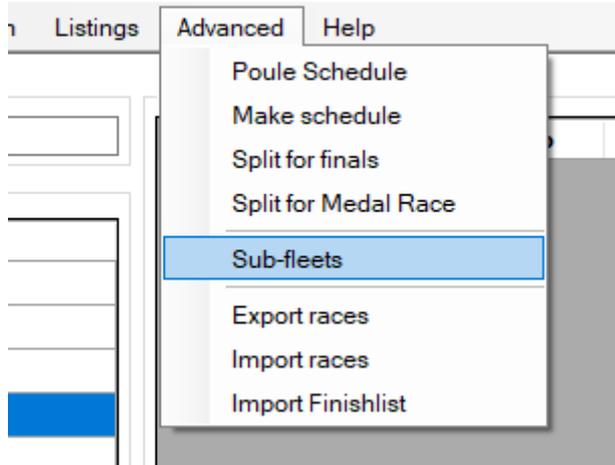
Sub-fleets can best be described as virtual fields. You can create selections on competitors in a fleet and create separate results for them. Like so:
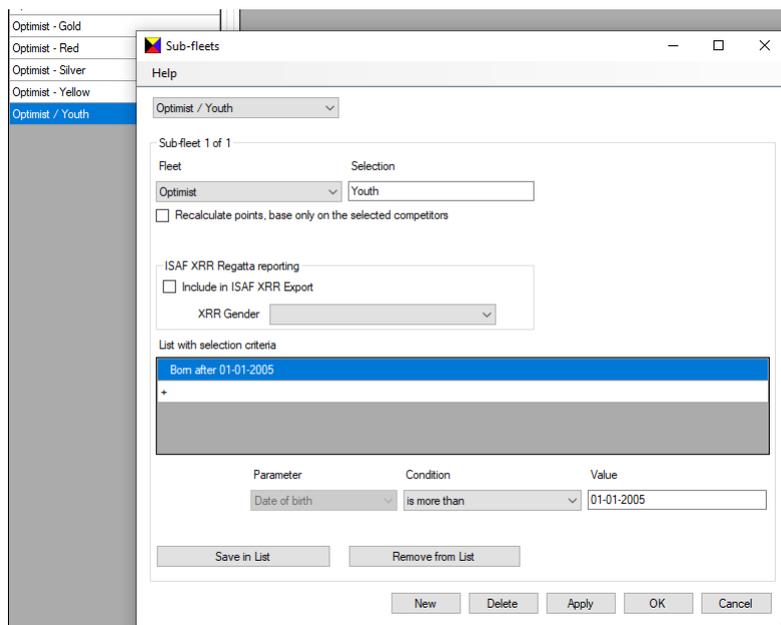
I won't expand on this example, but you can imagine that when you enter dates of birth and sexes to your competitors, you can create results for Men/Women or Seniors/Youths whatever you want. You can create complex queries on the competitors to filter out anything you want. For example all youths from a certain country.

Regattas in a series

To be continued…

ZW Appendix A: Excel columns

These are the column names in English with alternatives that are also valid.
The names are not case sensitive. Red is mandatory.
The order is up to you, ZW will find them.

ZW can also import competitors directly from the Manage2Sail Report ('Uitdraai' in Dutch) option.
Beware that you need a .xlsx file and not a .xls file.

Some colums are edited to match what ZW expects. Since it seems that users have problems filling out the M2S screens correctly, you need to check the export for correctness and fix it yourself.

	Alternatives			Manage2Sail
class	klasse			class
nat				sail number country
sailno	Zeilno			sail number #
boatname	scheepsnaam			boat name
name	Naam			skipper fullname
info1	beman1	crew1		crew1 firstname + crew1 lastname
info2	beman2	crew2		remaining crew
fleet	Veld			
address	Adres	straat	Street	skipper street
city	Plaats			skipper city
country	Land			represented country
phone	Tel	ext		skipper phone
club	vereniging			boat team club
paid	betaald			
tot-i	tot			
tn-sc-lw	lowsn	tot-lw	tn-lw	
tn-sc-hw	highsn	tot-sw	tn-sw	
tod-o	tod			
ilc				
da				
age				
sw				
spi				
overall				
tn-sc-mw	medsn	tot-mw	tn-mw	
cell	Gsm	Mobile	Mobile	skipper cellphone
e-mail	Email			skipper email
birthdate	geb-datum			skipper date of birth
m/f	m/v	sex		skipper gender
boattype	boottype	type		boat type
gph				
tot-o				
tod-i				
plt-i				
pld-i				

plt-o				
pld-o				
orctimestamp				
portsmouth				
texelspi				
isaf-schrs				
tcf	irm-tcm			
irc-tcc				
irc-tcc-ns				
phrf				
phrf-tcf				
orcfileid				
tn-i-lw	tn-ud-lw			
tn-i-mw	tn-ud-mw			
tn-i-hw	tn-ud-hw	tn-ud-sw		
tn-o-lw	tn-cr-lw			
tn-o-mw	tn-cr-mw			
tn-o-hw	tn-cr-hw	tn-cr-sw		
texel				
texel5spi				
texel5				
NatMember				
sailorid				
MCclass	Mbklasse			
MCnat	Mbnat			
MCno	mbno			
DH-TOT				
DH-TOD				