

Finishing

John Ball



Darn! Didn't quite catch you – Well maybe next time! – photograph by Bob Wells

This article is the last in a five part series. In previous issues, we discussed:

The Start.

The Weather Mark

The Downwind Gate

Hailing – discusses various rules and tactics

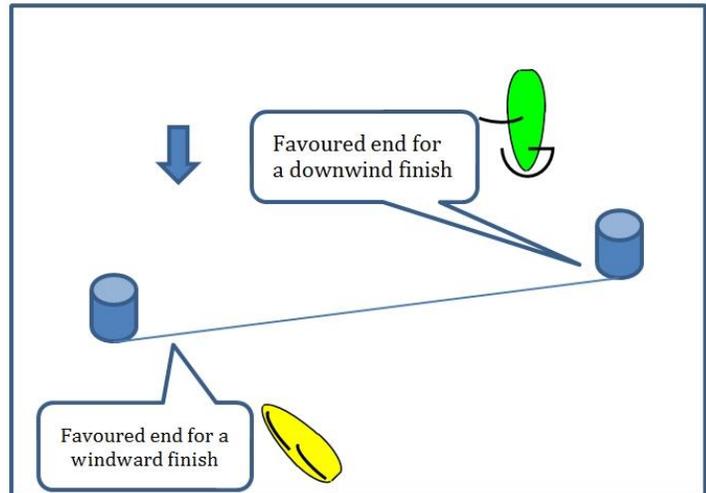
If you were able to apply the tactics and advice in those articles to your racing, you should be in a good position in the fleet as you round the final mark. Now you are on the final beat to the finish line. At this point, you need to decide whether to be aggressive and try to pick off boats, or be conservative and consolidate and try to protect your position. If you are in a multiple fleet HMS style regatta with promotion and relegation, then the first priority is to be high enough to be promoted, or high enough NOT to be relegated. If the regatta uses 6 up/6 down, and you round the last mark in (say) fifth place, then you need to sail hard to the finish to stay in front of sixth and seventh place – especially seventh. By now, the fleet should be spread out, and getting clear air should not be an issue. Concentrate hard on your sail trim. Ease the sails a little, and drive the bow down for speed. Watch for the heel angle to increase to show that you are powered up, and try to hold that groove. Speed is your friend to minimize leeway and make the best Velocity Made Good (VMG) to weather. Cover the sixth place boat – go the same way that they do and try to stay between them and the finish line. If they tack, cross ahead and then tack to cover. That way you are inside them on any lift, and yet clear to tack if there is a header. Now is the time to throw bad air at them to slow them down. If the seventh place boat splits tacks, try to sit on sixth so that they want to tack away to clear their air – now they are both going the same way, and you can throw a loose cover over both boats. Better yet, they may start fighting each other, allowing you to sail off to the finish.

In HMS promotion, if you are in the top group, your actual finish position in this heat does not matter, your objective is to get promoted. Your actual finish position in the overall race will be determined in a subsequent heat. If you are in the A fleet, then you want the highest finish position you can gain, but the logic of attacking boats ahead – by splitting tacks – or covering boats astern by staying between them and the finish line still applies.

Finding the favoured end

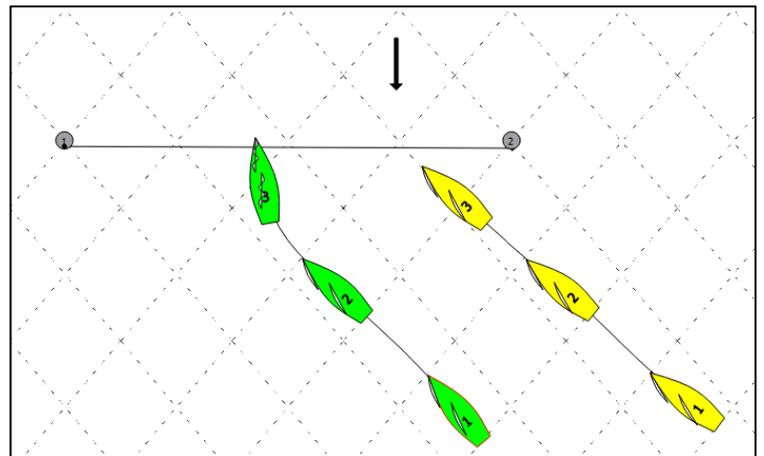
You want finish as soon as possible, so look for the favoured end of the line— hint – look where the leading boats are finishing. You should always try to be on Stbd tack for the finish line, so try to make your final tack from Port to Stbd so that you can easily lay the favoured pin on Stbd. It is better to over stand a little than risk being unable to lay the pin and having to lose time and distance making extra tacks.

Just like a starting line, a finishing line can have a favoured end – one end is closer to the wind than the other. If you are finishing on a beat, then you want the lower end, but if finishing on a run, then you want the upwind end. The finish line is frequently the same line that was used to start the race. If the left pin was favoured at the start, then for a weather finish, expect the right end to be favoured for the finish – however check you sailing angle, compared to what it was on the previous beat. If you are sailing higher on Port, then the wind has gone left and the left end is even more up wind – so the right end is even more favoured for the finish. If you are sailing higher on Stbd, then the wind has gone right, then the right pin may be more upwind so look for the left pin to be the best end to finish.



Shooting the line

A useful trick to have in your toolbox - In this diagram, Green and Yellow are dead even at P1 and P2 as they approach the finish. Green luffs up just before P3 and crosses the line first. This is often called 'Shooting the Line'. What Green is doing by luffing is using her momentum to increase her VMG towards the finish line. Practice this to understand how far your boat will carry – go too soon and you will run out of steam before the line and let the other boat's bow get in front.



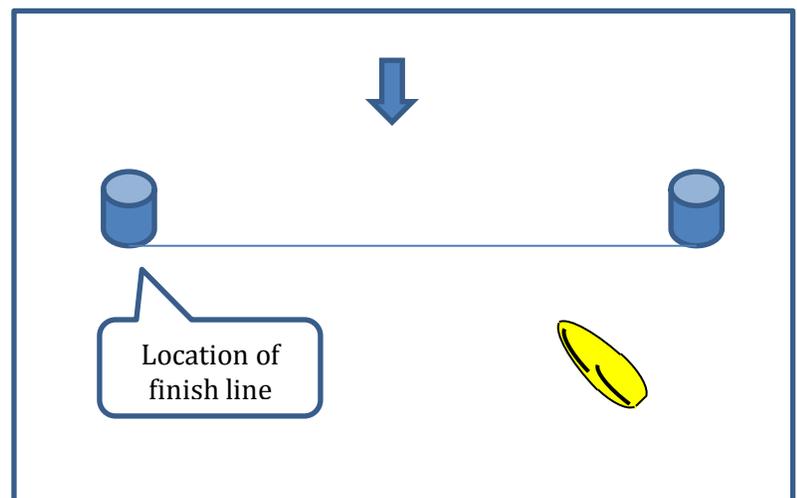
Video from the 2015 IOM Worlds at Foster City. Orange hull 171 nips White hull 73 by luffing right at the line <https://youtu.be/5oqK2ey3ZGY?t=75>

Where exactly is the finish line?

RRS Appendix E3.4b

(b) The starting and finishing lines shall be between the course sides of the starting and finishing marks.

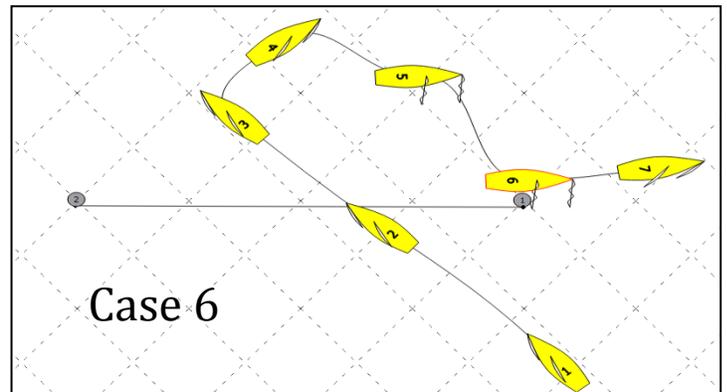
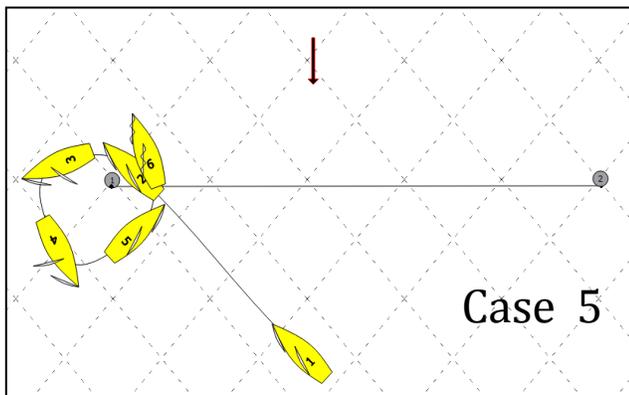
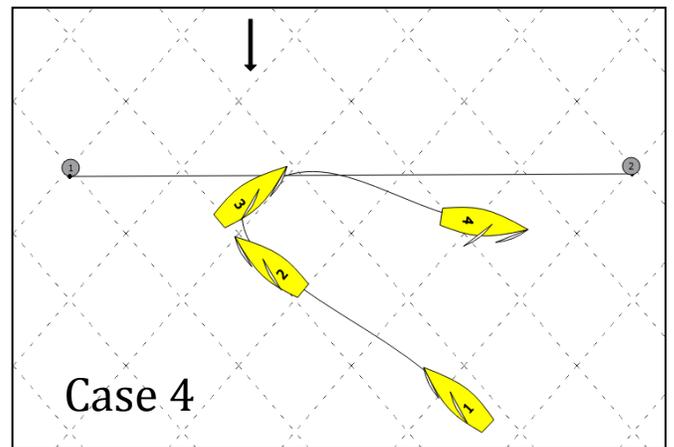
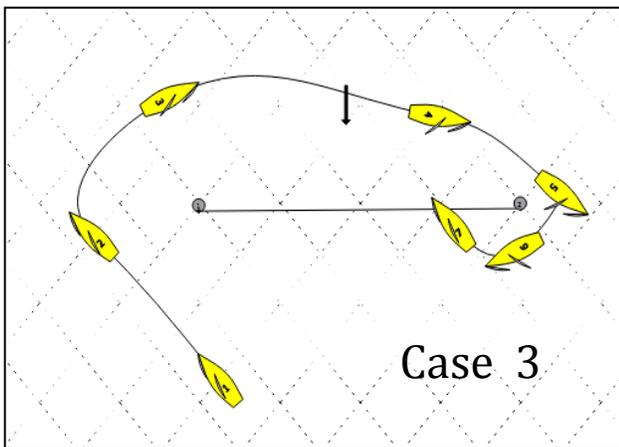
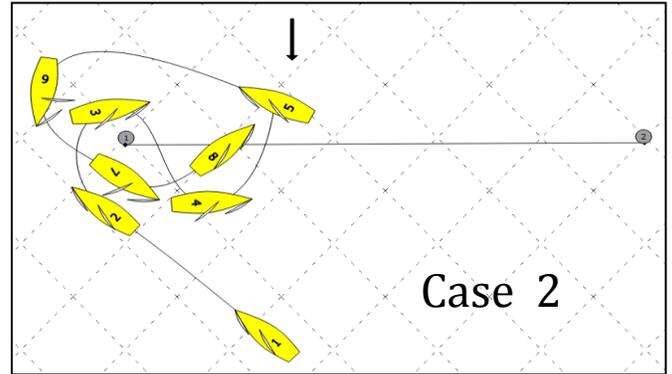
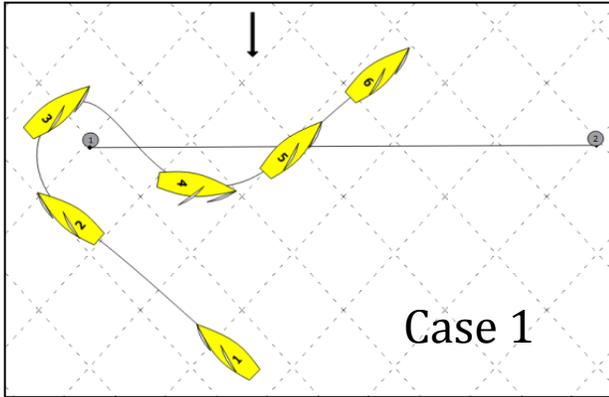
The Sailing Instructions or the Skippers Meeting should describe the finish marks. Unless they state something different like –“the Finish line is between the flagstaffs on the marks”, then the default is that the line is placed on the course

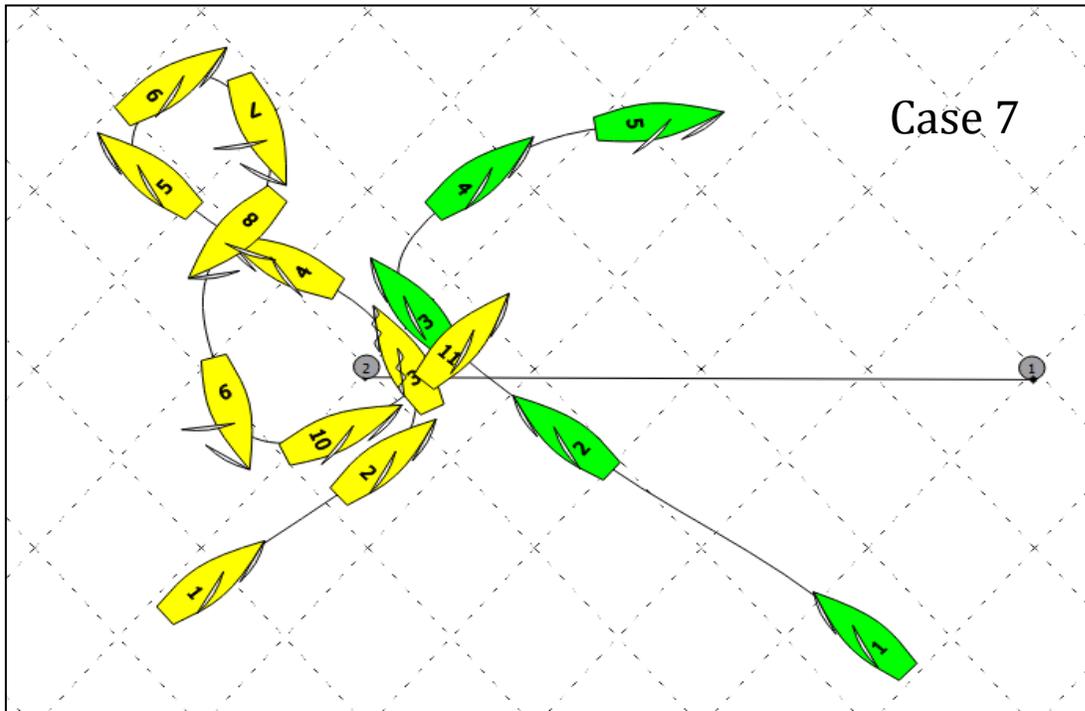


side of the edges of the marks – not the centre line of the marks.

A Finishing quiz

Let's test your knowledge with a quiz – you may be surprised by how much you know already. Decide your answers. Then read the rules and definitions below, and take then the quiz again to see if you want to change anything. There are seven diagrams. In each case, the question is “Has Yellow finished Correctly”?





Finishing and the Rules

Basically, you finish a race when you cross the finish line from the course side, having sailed the course around all the marks on the correct side, in the correct order, and completed any penalties. However, you are still subject to the racing rules until you have cleared the racing area. Here are some extracts from the RRS that provide the basis for my simplified summary.

Definition & Rules that relate

Finish A boat finishes when any part of her hull, or crew or equipment in normal position, crosses the finishing line from the course side. However, she has not finished if after crossing the finishing line she

- (a) takes a penalty under rule 44.2,
- (b) corrects an error under rule 28.2 made at the line, or
- (c) continues to sail the course.

Racing A boat is racing from her preparatory signal until she finishes and clears the finishing line and marks or retires, or until the race committee signals a general recall, postponement or abandonment.

28 SAILING THE COURSE

28.1 A boat shall start, sail the course described in the sailing instructions and finish. While doing so, she may leave on either side a mark that does not begin, bound or end the leg she is sailing. After finishing she need not cross the finishing line completely.

28.2 A string representing a boat's track from the time she begins to approach the starting line from its pre-start side to start until she finishes shall, when drawn taut,

- (a) pass each mark on the required side and in the correct order,
- (b) touch each rounding mark, and
- (c) pass between the marks of a gate from the direction of the previous mark.

 She may correct any errors to comply with this rule, provided she has not finished.

31 TOUCHING A MARK

While racing, a boat shall not touch a starting mark before starting, a mark that begins, bounds or ends the leg of the course on which she is sailing, or a finishing mark after finishing.

E3.4 Starting and Finishing

(a) . . .

(b) *The starting and finishing lines shall be between the course sides of the starting and finishing marks.*

With these extracts, go back and take the quiz again. See if you want to change any of your answers?

Spoiler - My Answers

Case 1. No, this boat has not finished correctly. See R 28.2 (the string rule). If you pull the string tight, then the boat's course will lay on the wrong side of the finish mark. Yellow needs to unwind by sailing back outside the left mark and then crossing the line from the course side. If she does not correct the error, she can be protested and the Protest Committee would DSQ her under R 28.2.

Case 2. Yes. This boat (from Case 1) has now finished correctly.

Case 3. Yes. This boat has finished correctly. I did this myself just recently – I was so focused on getting to the lay line of the weather mark that I forgot this was the last leg and sailed beyond the finish line. This case is covered in the ISAF Case Book, Case 106 which says:

When the string representing a boat's track lies on the required sides of finishing marks or gate marks, it is not relevant that, when drawn taut, it also passes one of those marks on the non-required side.

When the course requires boats to pass between two marks at a finishing line or at a gate, a boat complies with rule 28.2 if the string representing her track when drawn taut passes between the marks from the direction of the previous mark. She complies with rule 28.2 even if the string also passes one mark of the finishing line or gate on the nonrequired side. In this case the boat passed the buoy serving as a mark of the finishing line on the non-required side before passing it on the required side.

Case 4. Yes. This boat finishes when the bow crossed the line. She may clear the line in any direction – but be careful not to foul any other boats still racing. We don't normally see this in RC racing, but I have done it myself in big boat racing – struggling just to get to the line in light winds against a foul current – it was much faster to clear the area by bearing off and using the current to get clear. The important items to note here are that you have finished once you clear the finish line, and you are no longer *racing*, BUT under the preamble to Part 2 of the RRS, as a boat that WAS racing, you have to keep clear of boats still racing. So if you foul someone, you can be protested and DSQ, but as you have finished and cleared the area, you cannot now do an R44 penalty and go back and refinish!

Case 5. No. This one is more difficult to see. Yellow touches the finish mark and breaks R 31. She must now do a penalty of one tack and one gybe before finishing. Yellow bares away and gybes to port, then rounds up and tacks to stbd to complete the penalty BUT she has not completed her tack before she re-crossed the line, so the penalty was not yet complete and so she has still not finished correctly. As in Case 1, if she does not correct the error, she can be protested.

Case 6. Yes. Yellow has cleared the finish line and marks so she has finished. Later, she drifts down and hits a finish mark, but as she has already finished (fits the definition) she does not have to do a penalty and refinish. But note she is still in the racing area, so she must still avoid other boats. ISAF Case 127 covers this and says in part:

A boat clears the finishing line and marks when the following two conditions are met: no part of her hull, crew or equipment is on the line, and no finishing mark is influencing her choice of course. For example, a boat that clears the finishing line and then continues to sail toward a finishing mark, where current sets her into the mark, is still racing and has broken rule 31. However, a boat that crosses the finishing line, and sails to a position at which no finishing mark is influencing her choice of course, is no longer racing. If, later, she hits a finishing mark, she does not break rule 31.

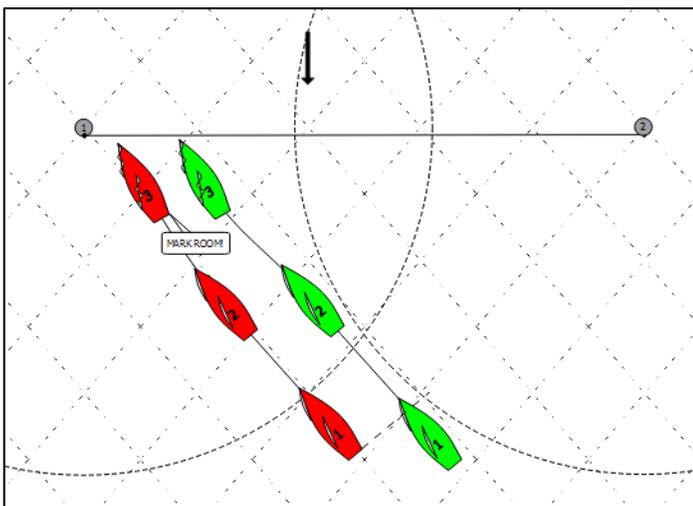
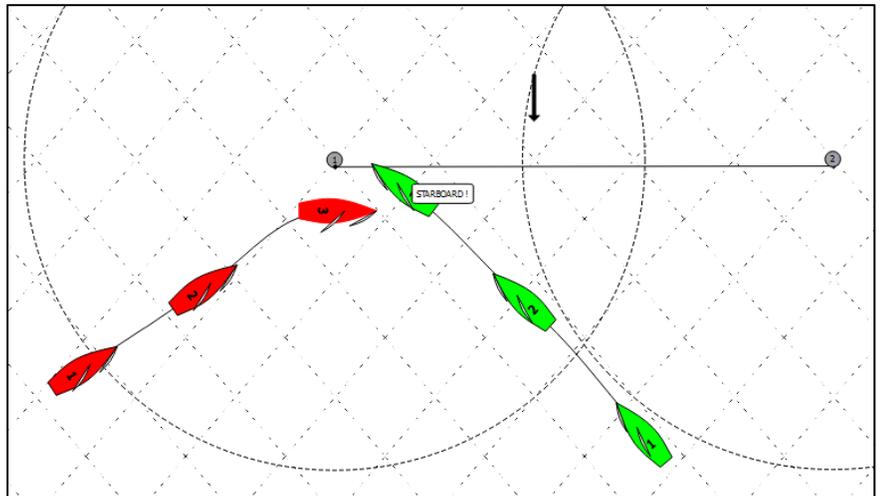
Case 7. Yes. There are several things going on in Case 7. Yellow tries to squeeze in from port tack to avoid a stbd boat (Green), but in doing so, she hits the mark while still racing (she has not cleared the line). As she is clear of other boats, she does a tack and a gybe, promptly (meets the definition of a penalty), and then she returns, outside the mark, to the course side of the finish line and refinishes. It does not matter where she does the penalty, as long as she completes the penalty before refinishes correctly. A penalty is not a 360 degree turn – just a tack and a gybe, promptly, in the same direction. She returns outside of the line, before re-crossing to finish. This was not a requirement here, but the ‘string rule’ requirement is satisfied anyway – see case 3 above.

R 18 and Mark Room at a finish mark

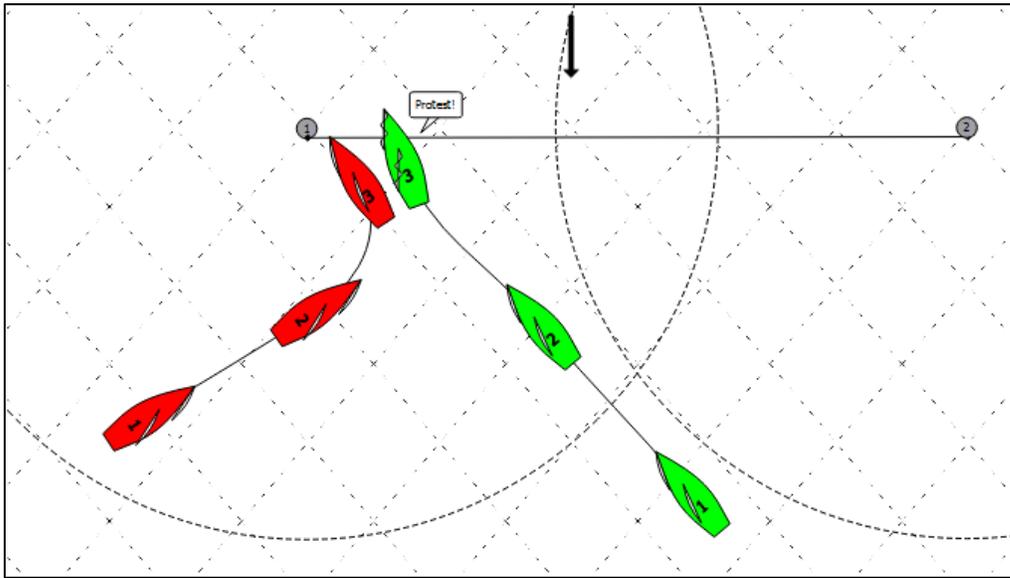
The marks at each end of the finish line are marks of the course – and just like a rounding mark, they each have a required side and they each have a zone. So R 18 applies just as at any other mark. And just like any other mark, how R 18 and Mark Room applies, depends upon the sailing angle of the boats as they approach the mark.

When the finish is on a beat to weather

If the finish is a beat, then R 18.1.a says Mark Room does not apply to boats on opposite tacks on a beat to windward, and so R 10 (P/S) applies between them. In the diagram right, Green is on Stbd and Red, on Port, has no Mark Room rights (R 18.1.a). Red has to keep clear, so she ducks Green before hardening up to finish. Hint - Always try to make your final approach to the line on STBD tack to give you right of way.



If the boats are on the same tack as they enter the zone, then R 18.2.b applies. Here on the left, Red, with Mark Room hails Green to remind her to give Mark Room. As they were fetching the mark from outside the zone, Red is allowed to luff up to head to wind if she needs to, and Green as windward boat must keep clear.

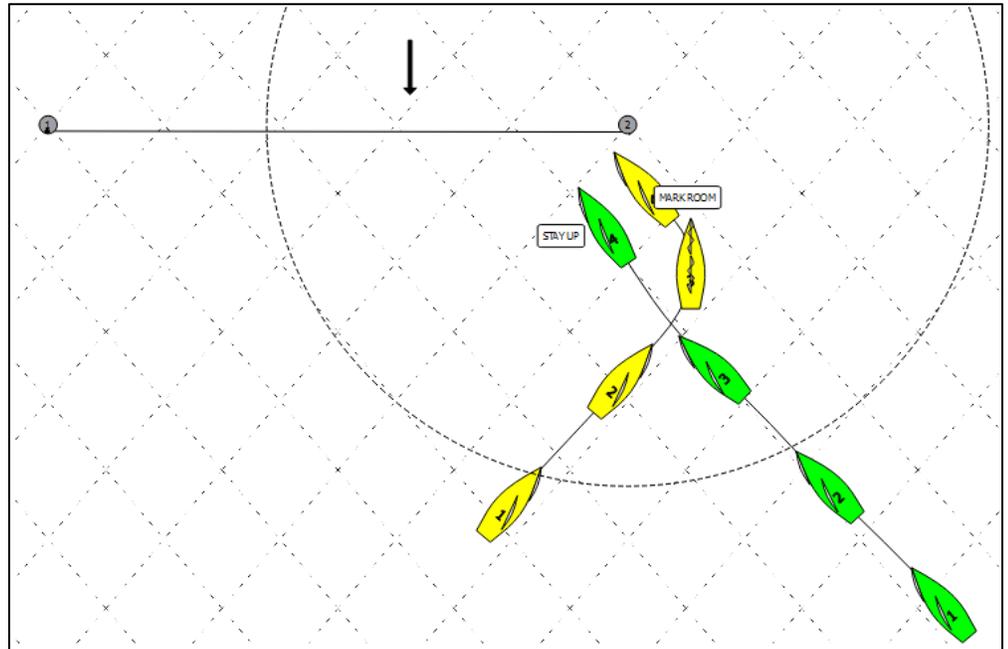


Tacking in the zone of a Finish Mark

In the diagram on the left, Red comes in on Port and tacks to try to squeeze in. Green has to luff above close hauled to avoid Red. Red breaks R 18.3.a.- just the same as if they were rounding a 'Marks to Port' weather mark.

In the diagram right at P4, Yellow is hailing "Mark Room" and Green is hailing "Stay Up". Yellow tacked in the zone, clear of Green, so the question is "Is Yellow entitled to Mark Room, or can Green force Yellow away to miss the mark"?

The answer is that Yellow is entitled to Mark Room and Green cannot force her into or outside of the mark. This is one of those situations where R 18.2.a applies because the other parts of R 18 do not apply. R 18.2.a is difficult to apply as it is the exception and you have to eliminate the other parts of R 18.2 and 18.3 first.



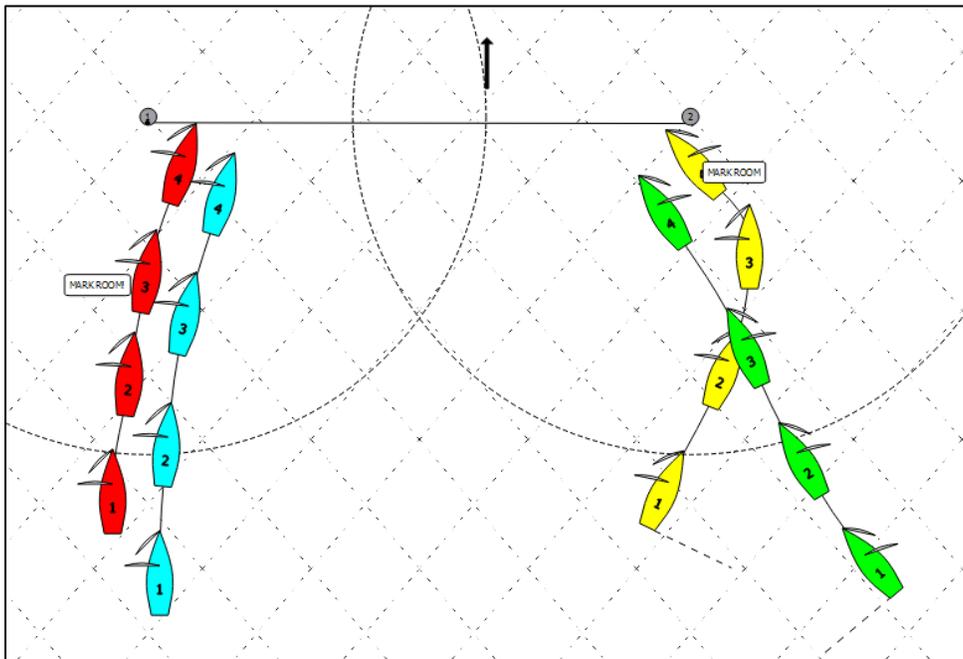
At P1 and P2, as Yellow approaches the zone on Port and Green is on stbd. R 18.1.a says that R 18 does not apply. So initially, we have an R 10 P/S and Yellow keeps clear. At P3, Yellow tacks to weather of Green and does not break R 13. After Yellow has completed her tack at P4, we have a new situation and both boats are both now on the same tack, so R 18.1.a no longer applies, but as Yellow tacked in the zone, R 18.2.b and 18.2.c do not apply either. When someone tacks in the zone, you would normally look at R 18.3 Tacking in the Zone, but that does not apply here either, as it is conditional upon one of the boats 'fetching' the mark. If you look at the definition of 'Fetching', a boat has to be able to pass to weather of the mark on the correct side, without tacking. Here, Green is going to pass to leeward of the mark, and so is not 'fetching' the mark. So R 18.3 Tacking in the Zone does not apply. So finally, we are left with R 18.2.a. and Green must give Mark Room to Yellow. There is a restriction in R 18.2.e in case Green is unable to give the required room, but that does not exist in our Q2 situation.

When the finish is on a run

A downwind finish offers several opportunities to attack a boat in front of you. If you are in a good breeze, then look for the quarter wave of the leading boat and surf along it to close the gap. Once you are close astern, get right behind and just on the weather quarter to use your big main sail to throw a wind shadow at them. As they slow down, you can either pass to weather or to leeward to hit the line, before they clear their wind and re-accelerate. If going to weather, try to time it so that you are overlapped before their bow touches the zone – that way your Mark Room rights kick in and prevents them from luffing you. If you are passing to leeward, don't go too soon, or you will run into their wind shadow and begin to slow, giving them a chance to regain their speed.

This diagram shows several situations. At the left end of the line, Red touches the zone first and Blue is either clear astern, or they are slightly overlapped. In either case, Blue must give Mark Room to Red under R 18.2.b. Note that Blue is

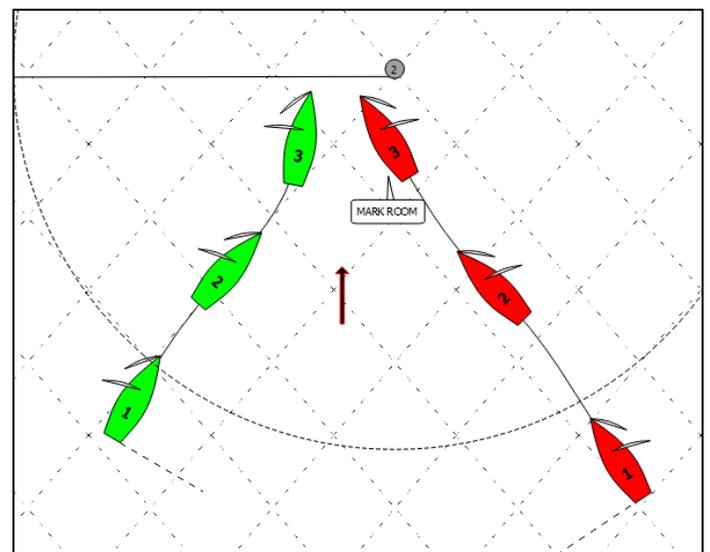
throwing a wind shadow at Red and overtaking – Almost made it. Well, may next time!



At the right end, we have a very complex situation – and Yellow caused it by unnecessarily crossing Green. Yellow on Stbd, reaches the zone first, At P1, and under the definition of Clear ahead/Clear Astern/Overlapped, Yellow and Green are overlapped as neither is behind a line drawn off the other's transom and they are sailing more than 90 degrees off the wind. As they are overlapped when the first boat (Yellow) reaches the

zone, and Green is inside boat, Yellow must give Mark Room to Green – and that include the right to sail her Proper Course if the proper course is close to the mark. Yellow passes ahead of Green and the overlap is broken, but under R18.2.c.1 Green's Mark Room remains even when a new overlap is created R 18.2.c.1. So Yellow is NOT entitled to Mark Room at P4. Green is allowed to sail her proper course R 18.2.c.2, and that could be argued to include bearing off to sail close to the mark – leaving no room for Yellow. While Yellow becomes ROW under R 11, she has to allow Green to sail her Proper Course – including Green sailing close to the mark. The bottom line is that Yellow put herself in a tight situation by crossing Green, and should have gybed at or before P2 and she should have crossed the finish line before Green. This would be a nasty one to argue in a Protest Hearing as it hinges on deciding the Proper Course for Green.

Now look at the diagram - right. Question -Is Red, on Port, entitled to Mark Room from Green, on Stbd? To get to the answer, read the definition of Clear Ahead/Clear Astern/Overlapped, and also read R 18.1 and 18.2.



As they are on a run, they fit the definition of overlapped. They are sailing more than 90 degrees to the wind and neither is behind the line drawn off the transom of the other. Even though they are on opposite tacks (gybes), they are not on a beat to windward, so R 18.1.a does not apply. So we can say that they were overlapped when the first one reached the zone and Red is inside boat. R18.2.b applies, and the answer is “Yes” – Red is entitled to Mark Room. This one is much easier than the Yellow/Green situation from the previous diagram.

After finishing

Once you have finished, it is polite to sail up the course a bit, before heading over to the bank. Avoid sailing back into the course to stay clear of boats still finishing and to avoid confusing the Race Officer who is still calling and recording finishes. Avoid sailing in front of the Race Officers in case you block their view of the line. If carrying your boat back to the launch area, walk behind the Race Officers. If you had to withdraw from the race, go to the Race Officer and at a convenient moment, let them know you have retired, so that time is not wasted looking for you to finish or rechecking the results to see if you were missed.

Protests

If you protested another boat, or were protested, report to the finish line Race Officer as soon as reasonably possible after finishing, to let them know that you are protesting – and whom – or that you took a penalty turn. This has to be matched up with the information from any Race Observers. If you are protesting and the other boat took a penalty, and you both reported in - then the loop is closed. But once you finish, and if there is a need for a protest hearing, then the clock starts for the time limit for you to notify the Race Committee (Appendix E 6.4 – as soon as reasonably possible), and for you to fill out and deliver a protest form (Appendix E 6.5 – ten minutes). However, these limits are frequently restated or modified in the Sailing Instructions.

If you have to go to a Protest Hearing, then look for the bonus sixth article in the series –Protests – to find out what happens behind the closed doors of a Protest Hearing.