



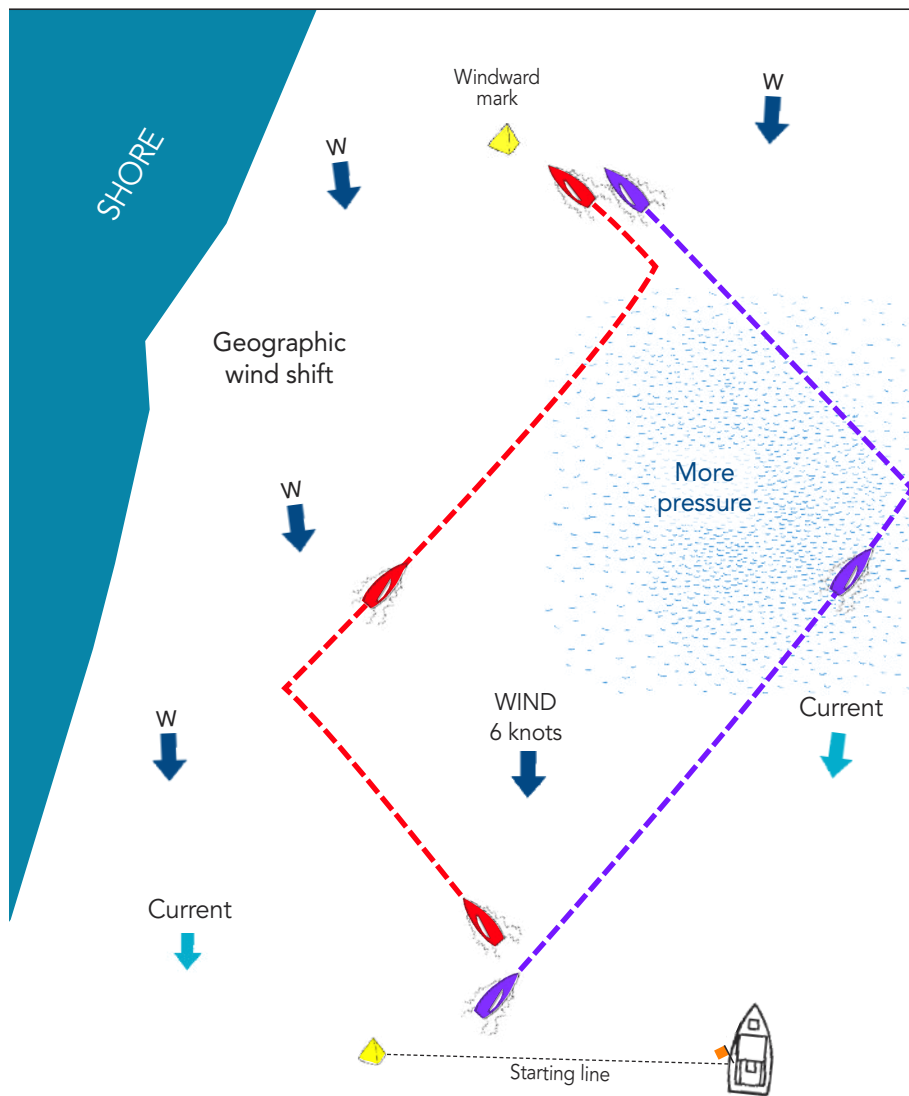
WORKBOOK 3: Upwind Strategy **Definitions**

Sail fast and smart upwind

Sailing upwind is a critical part of almost every race. To be successful on windward legs you need fast boatspeed, good boat-on-boat tactical maneuvering and, perhaps most critically, a smart strategic plan. You can be the fastest boat in the fleet with the best tactical moves, but those things won't help much if you keep going the wrong way. That's why you should always make the effort to create at least a basic plan for how you will play the beat (i.e. where you will go.) This issue is all about that subject – Upwind Strategy.



JH Peterson photo



STRATEGY

Your upwind strategy is a plan you make for getting to the windward mark as quickly as possible (in the absence of other boats). It's the course you would choose if you were racing against the clock, taking into account factors like wind direction, wind speed, current and the location of the next (windward) mark.

Red boat strategy: Before the start Red sailed around the course area and found a geographic shift coming off the shore, plus less adverse current closer to land. Her strategy for the beat, therefore, is to play the left side.

Purple boat strategy: While testing both sides of the course, Purple saw more pressure on the right side. Even though she also saw worse current there and a geographic shift near land, her strategy is to play the right side because more pressure is critical in light air.

SPEED & Smarts™

WORKBOOK 3

Upwind Strategy

INTRO Definitions.....1
 STRATEGY Principles.....2
 STRATEGY Left or right?.....4
 STRATEGY Priorities.....6
 STRATEGY Tacking.....8
 STRATEGY Ladder rungs.....9
 STRATEGY Windshift theory.....10
 STRATEGY Windshift strategy.....12
 STRATEGY Rules of thumb.....14
 TACTICS Tactical considerations.....16

This issue is the third in a series of new workbooks. The next issue, Upwind Tactics, will explain a bunch of boat-on-boat tactical moves.

ISSUE #146

Speed & Smarts (ISSN 1075-5772) is published by Four Winds Inc. Address: PO Box 435, Easton, CT 06612 Phone: 203-445-0734

E-mail: David@SpeedandSmarts.com
 Web site: www.SpeedandSmarts.com

Publisher: *David Dellenbaugh* Manager: *Joanne DeLuca* Art: *Brad Dellenbaugh*

© 2018 *Speed & Smarts* No part of this issue may be reprinted or shared without written permission from the publisher.

Subscriptions: We offer two versions of *Speed & Smarts*: Email (PDF) or Paper. The *Email version* is available everywhere for \$38 per year (one year = 6 issues).

The *Paper version* is available in the U.S. \$48 (includes PDF!) and Canada \$53.

* Subscribers get a 20% Discount on all Back issues and Gift subscriptions!

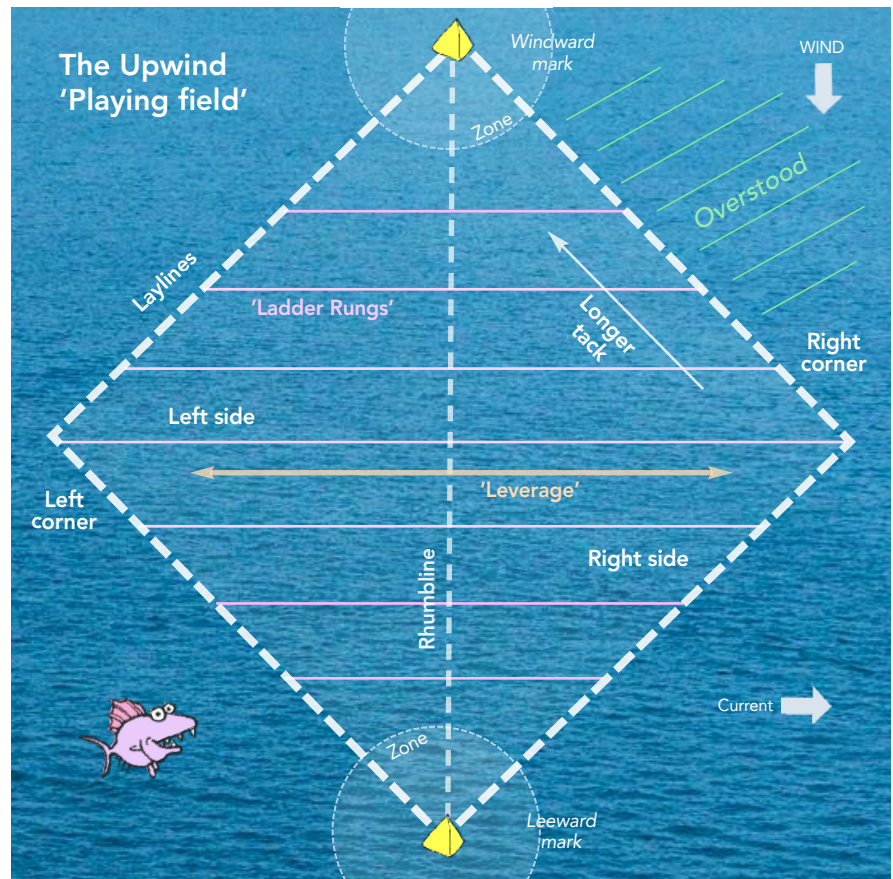
Speed & Smarts is published bi-monthly (roughly), and issue #s are sequential.

This issue includes some material from the workbook that goes with the *Speed & Smarts* seminar on Upwind strategy and tactics. If you like this issue, you might be interested in attending one of our seminars normally held from January to June. You can find more info [here](#).

Why upwind legs are so important

When it comes to overall racing priorities, I usually suggest a focus on sailing fast and smart upwind. It's not that you shouldn't do the same downwind, but if you can be in the top pack at the windward mark, it makes the rest of the race a lot easier. Here are some reasons why I think it's important to focus on windward legs:

- During most races, boats spend more time going upwind than they do going downwind.
- The upwind 'playing field' (below) is relatively wide, so strategically there are lots of chances to gain and lose.
- You experience more shifts, puffs and lulls while sailing upwind than you do going downwind.
- A beat favors boats at the front of the fleet, so everyone else has to work harder to follow their strategic plan and keep clear air.
- Boats frequently converge on opposite tacks on beats, so there are many tactical chances to gain and lose.

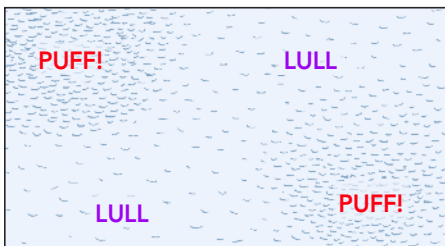


5 Strategic factors to consider when making a strategic plan for racing upwind.

1. Wind direction



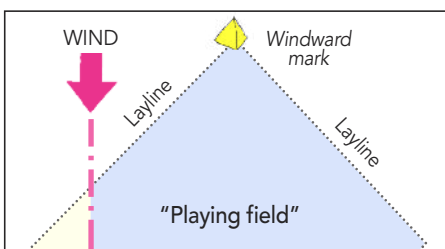
2. Wind speed



3. Current



4. Top mark location



5. Waves



Making a strategic plan

A strategic plan is a valuable road map to help you sail the next windward leg as quickly as possible. It must consider every factor that could affect your performance, including wind direction, wind speed, current direction, current speed, the location of the windward mark and the presence of waves (but not including onboard speed variables or the presence of other boats).

Strategizing for an upwind leg should begin (and, ideally, be complete) before you start sailing that leg. For the first beat, this means you have to make a strategic plan before the start; for other windward legs you should have a plan in place before you round the leeward mark. Of course, that plan may or may not work for the entire beat. Strategic variables are always changing, so you must constantly re-think your game plan (*see below*).

A dynamic strategic process

Collect data while observing the race area.

Make a **game plan** using the data you collected.

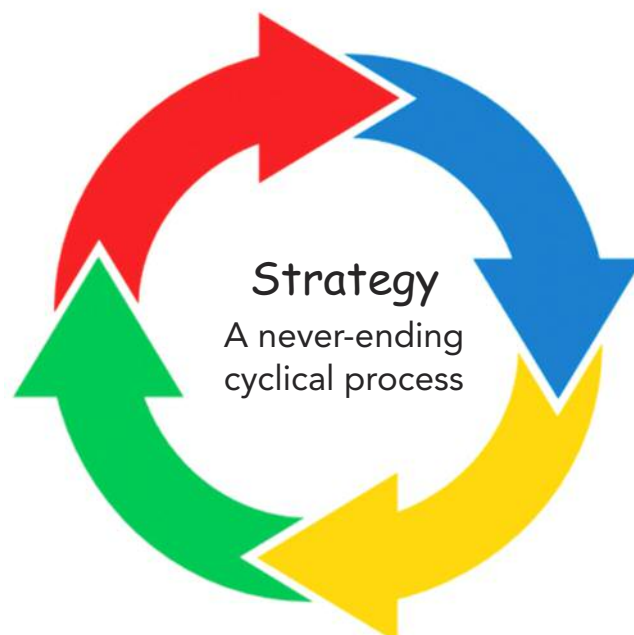
Use this game plan as your strategic **guide**.

Collect more observations and data while racing.

Revise your game plan (if necessary).

Use your revised plan as your new **guide**.

Repeat this process until you finish the race.



Pick a side

Should you play the left side of the beat, or the right side? This is one of the most-often-asked questions on any boat that is (or is about to be) racing upwind. The way you answer it can make the difference between finishing near the front of the fleet or at the back.

The process of developing a strategy for the windward leg begins before the start (or before you round the leeward mark) and continues until you reach the windward mark. Your strategy is a plan for how you can take advantage of the conditions on the race course, considering such factors as which way you think the wind will shift next and where is the best current. All of these

strategic variables are different every time you go on the water. They change constantly while you are racing and often vary around the race course.

In order to figure out which side of the beat is 'favored,' you must observe the wind (and other variables) for a while – then put together a strategy for where you will go. This should be a plan, or 'blueprint,' to help you sail as quickly as possible to the windward mark. It could be as simple as 'Hit the left side hard.' Or it might be more detailed like 'Play oscillating shifts up the middle right side and watch for better pressure on the far right.'

Because the wind and other factors are constantly changing, you need to keep re-evaluating and updating your strategic plan

while you are sailing upwind. Watch the rest of your fleet to see (as early as possible) which side of the beat is paying off. Don't assume that the favored side on the first beat will also be favored on the second beat (but it might!).

There will be times when you begin a windward leg with no idea whether to go left or right. Don't worry – even very experienced sailors are often unsure what the wind will do next. When this happens, don't over-commit to either side. Stay near the middle, wait to see where boats are gaining, and then sail in that direction. Whenever you are in doubt about which way to go, a great rule of thumb is to sail the tack where your bow is pointed closer to the windward mark (see page 15 for more on the longer tack).

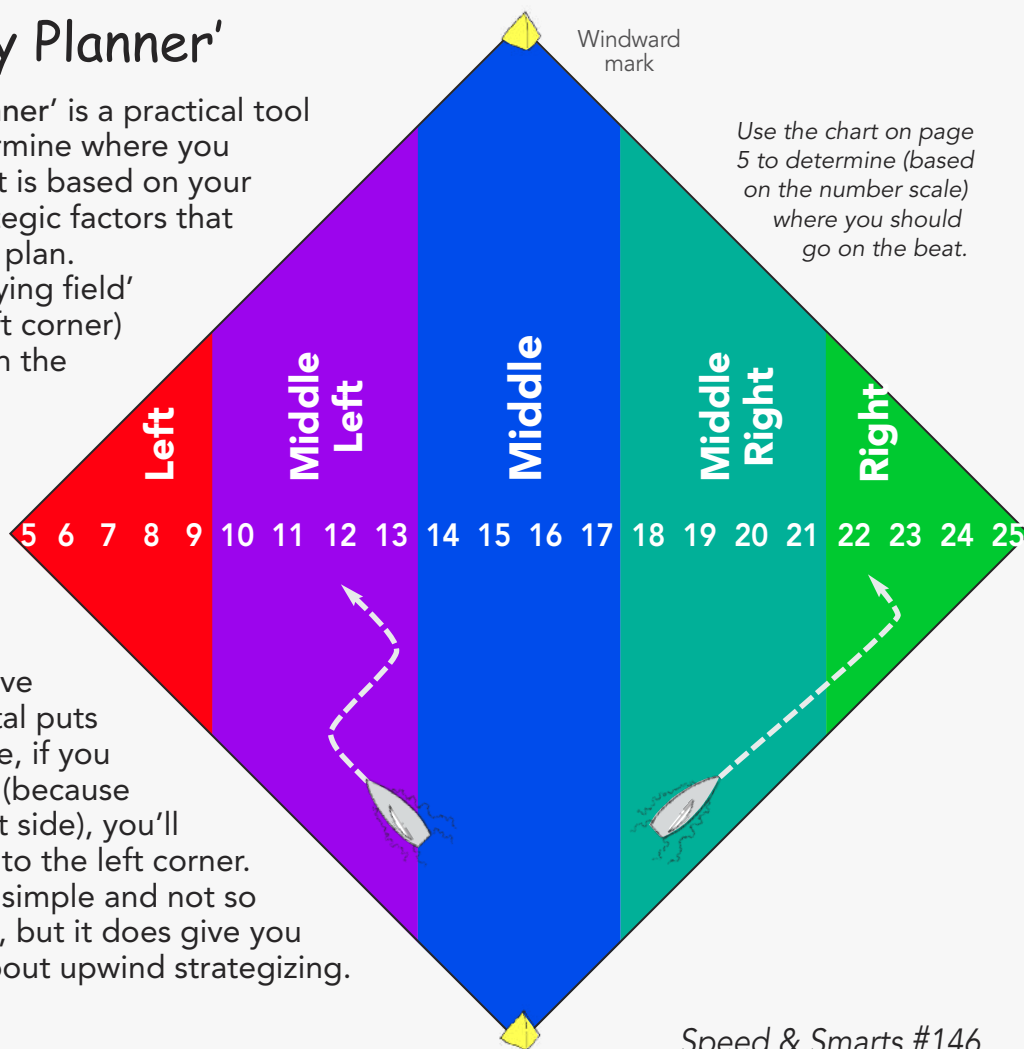
'Upwind Strategy Planner'

The 'Upwind Strategy Planner' is a practical tool you can use to help determine where you should go on the first beat. It is based on your assessment of five main strategic factors that influence your upwind game plan.

At right is an upwind 'playing field' with a scale from 5 (in the left corner) to 25 (in the right corner). On the next page is a list of five key strategic factors with a scale from 1 to 5 for each.

Before you begin any beat, rank each factor: A 1 means that factor favors the left side a lot, while a 5 means it strongly favors the right. Add up all five scores and see where the total puts you on the beat. For example, if you give each factor a score of 1 (because they all strongly favor the left side), you'll get a total of 5. This says go to the left corner.

This planning tool is a bit simple and not so practical for use while racing, but it does give you a methodical way to think about upwind strategizing.

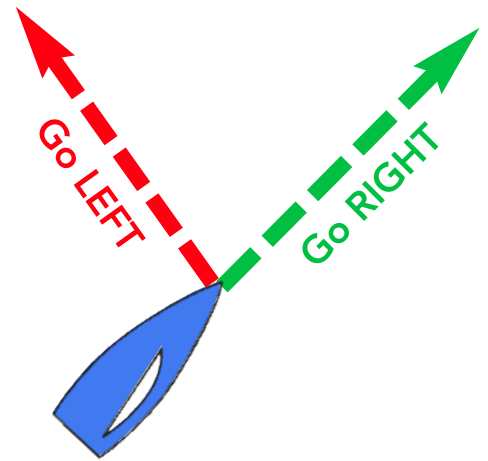




You have only two choices!

Implementing your upwind strategy should be a relatively easy task. That's because when you're sailing upwind you have only two possible choices – you can either sail on port tack, or you can sail on starboard tack.

This means you have only two strategic options at any moment on a beat: 1) keep sailing straight ahead, or 2) tack and go the other way. It's a simple choice, but a critical one you have to make dozens of times on every beat. That's why it's key to have a big-picture strategic plan for every beat, and to make each of your 'port or starboard' choices within the framework of that plan.



When racing upwind, you have two (and only two) strategic choices at any moment: You can **go left** (on starboard tack) or you can **go right** (on port tack). In other words, you can keep sailing the tack you are on, or you can tack and go the other way. A simple but critical choice.

Strategic Factors <i>(Use with diagram on page 4)</i>	Left very favored	Left slightly favored	Neither side favored	Right slightly favored	Right very favored
Wind direction	1	2	3	4	5
Wind pressure	1	2	3	4	5
Current	1	2	3	4	5
Mark location	1	2	3	4	5
Waves	1	2	3	4	5

Use this chart and the diagram on page 4 to help you strategize upwind. Score each factor according to whether it favors the left or right (by a little or a lot), or neither. Then add the five scores together and use that total to find a strategic target on the upwind diagram at left.

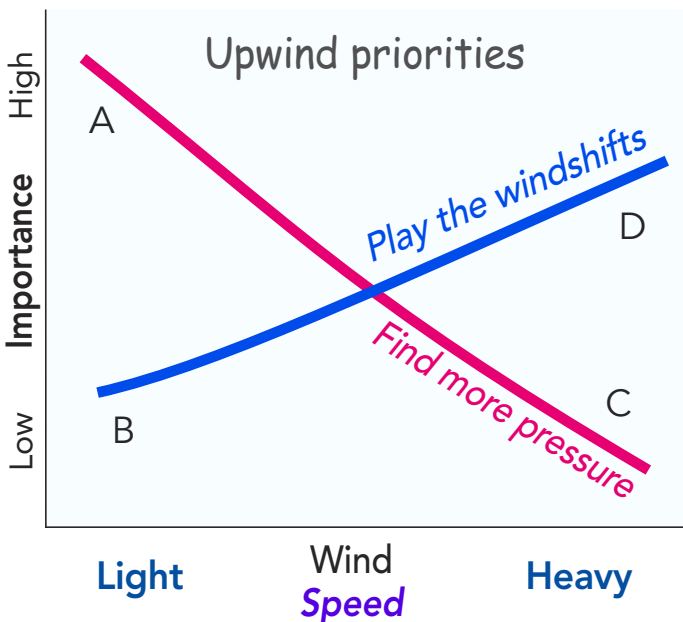
Two important notes: 1) This Planner weighs each strategic factor equally, which is usually not accurate. For example, wind pressure is typically much more important than waves, so you have to prioritize (see pages 6-7) by giving important factors more scoring weight; and 2) This tool doesn't consider the presence of other boats, which could obviously have a big impact on how you sail the beat (*lots more about this coming in Issue 147 – Upwind Tactics*).

Setting priorities

When you're making a strategic plan for the next upwind leg, you must consider a lot of variables including wind shifts, wind pressure, current direction, current speed and the orientation of the windward leg. But not all of these factors should be weighted equally.

On some days, playing the current will be your top priority; on other days it may be much more important to find the best wind velocity. And some days the winning boats will all focus on playing the wind shifts.

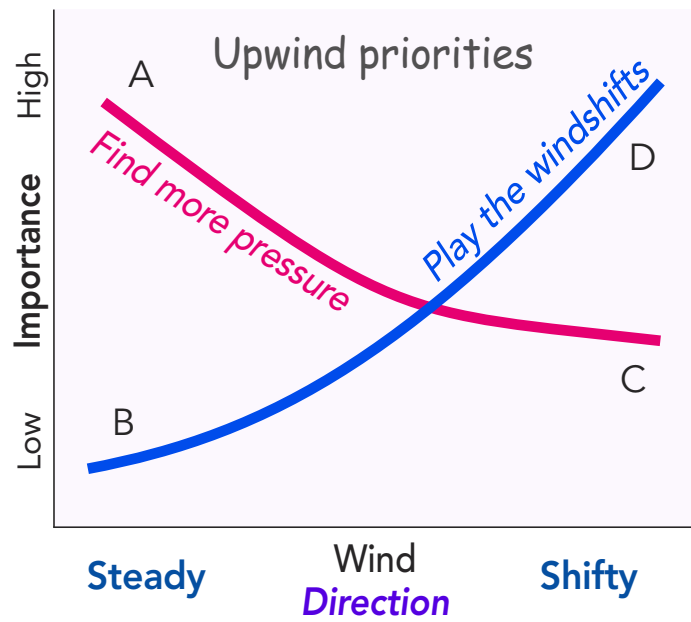
For every windward leg you sail, the key is figuring out which strategic elements are a priority at each moment, and then adjusting your game plan accordingly. Check out the next three pages for some examples.



Light Air vs. Heavy Air

Your strategic priorities should usually be different in light air than they are in heavy air. When there's not much wind, even one more knot of breeze can make a big difference in your performance, so finding extra pressure is a high priority (A). Windshifts will still help, but they are usually less valuable (B).

In strong breeze, more pressure does not usually help much. When you're overpowered, finding another knot or two of wind is a low priority (C). In contrast, windshifts account for most strategic gains (and losses) on heavy-air beats; for that reason they should be a higher priority (D).

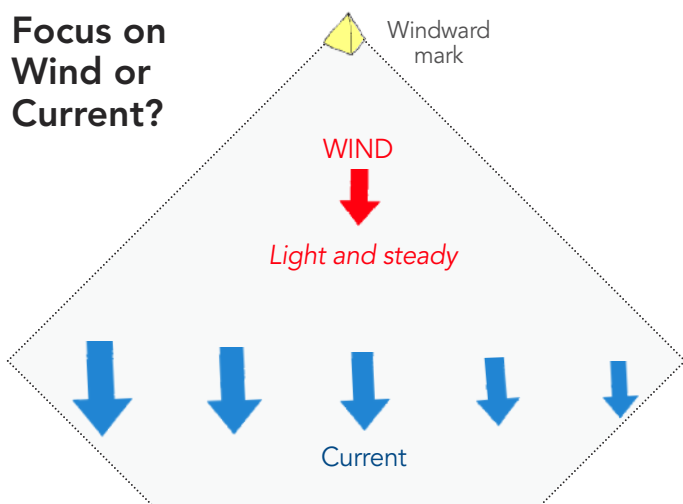


Steady Wind vs. Shifty Wind

The wind direction is usually changing, sometimes a little, sometimes a lot. When the wind is relatively steady, there are not a lot of gains to be made by playing the shifts, so that's not a high priority (B). Instead focus on finding more pressure (A).

The more the wind is shifting, the bigger the gains (and losses) you can make when racing upwind. So windshifts should be your top priority (D), especially when the shifts are frequent or substantial. In shifty wind, changes in velocity are less important. But shifting breezes often bring significant puffs and lulls, so pressure may still be fairly important (C).

Focus on Wind or Current?

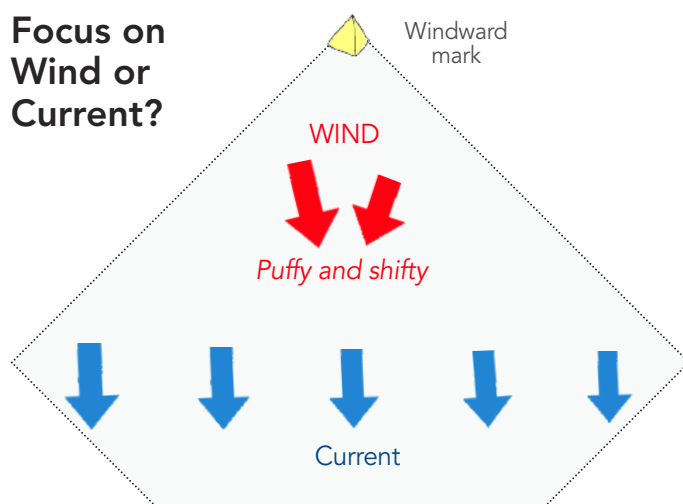


Conditions: The current is flowing in the same direction as the wind and is much stronger on the left side than the right. The wind direction is fairly consistent and the wind speed is relatively light.

Priority: Current – The current is your strategic priority because it varies a lot across the course while the wind is relatively steady. The wind is also light, which makes current more important. In these conditions there is a lot to gain (or lose) by playing the current correctly (or incorrectly).

You should focus on current whenever a) the wind is light; b) the wind direction and velocity are fairly even across the course (i.e. there's not much to gain on either side); c) the current is strong; or d) the current is variable across the course (so there are significant gains and losses to be made).

Focus on Wind or Current?



Conditions: The current is flowing moderately in the same direction as the wind and is slightly stronger on the left side than the right. The wind is oscillating from left to right as much as 30° with significant puffs and lulls.

Priority: Wind – The wind should be your strategic priority here because it is much more variable than the current, in both strength and direction. In such conditions there is a lot more to gain (or lose) by playing the wind correctly (or incorrectly).

You should focus on wind when a) the current is weak; b) the current is relatively even across the course; c) the wind is strong (i.e. the boats are going fast compared to the current); or d) the wind is shifty and puffy (which means gains or losses due to the wind could be quite large).

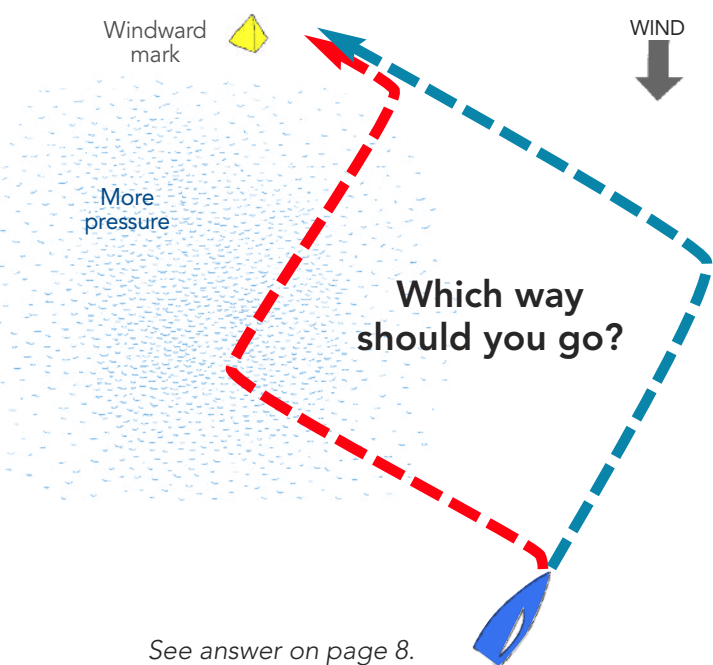
Brain Teaser

Which course is faster?

You are racing upwind on port tack a few minutes from the windward mark. At the top of the beat, on the left, you see an area of better pressure. Should you tack to get more wind (the red path), or keep going to the starboard-tack layline (the blue path)?

Some details about your situation:

- Your choice of course is *not* affected by the presence of any other boats.
- All other strategic factors (e.g. current and wind direction) are even and steady across the course.
- You do not overstand the windward mark.



See answer on page 8.

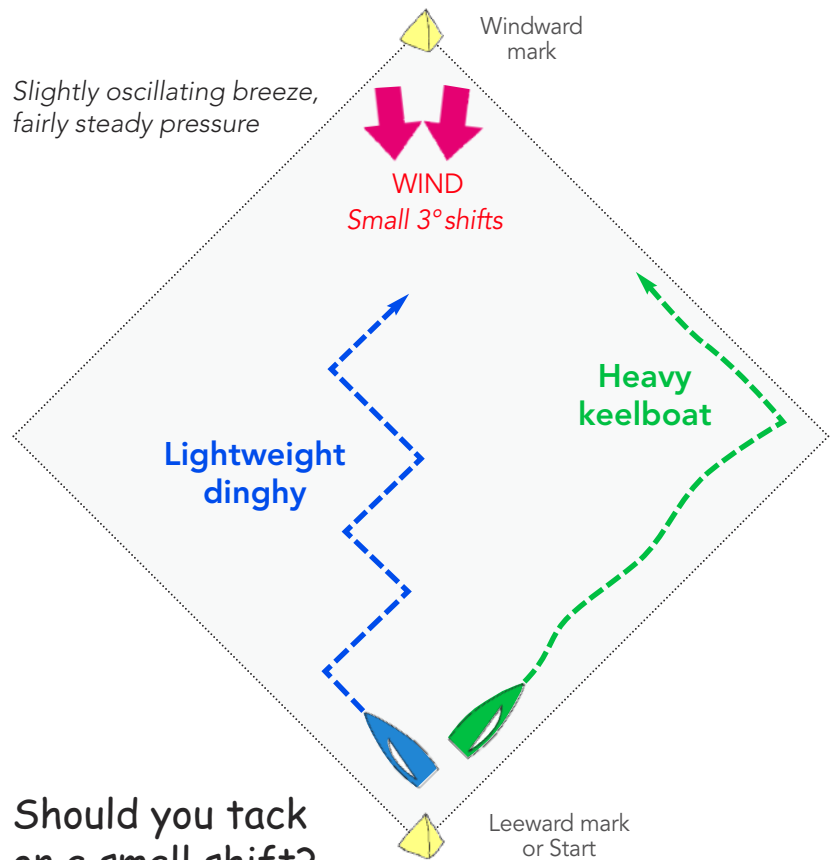
The cost of tacking

As we saw earlier (on page 5), when you're sailing upwind you have only two strategic choices at any time – you can 1) keep going straight, or 2) tack. Tacking is often a good strategy when you get headed, or when it will take you toward better pressure or current.

However, there is almost always a cost to tacking, so it's not always the right move. If you lose more by tacking than you gain from going in that new direction, you may want to go straight.

Wind strength	Distance Lost in a Tack	
	Flat water	Waves
Light	(boatlengths)	
Medium		
Heavy		

Here's a chart to help you evaluate the cost of tacking for **your** boat in various conditions. Fill in the distance lost (in boatlengths) for each of the six boxes. In which condition would you lose the most? The least?



Should you tack on a small shift?

If the wind direction is oscillating just a little, should you play those shifts? It depends on, among other things, the type of boat you are racing. A lightweight dinghy that is good at roll tacking (e.g. a Laser) can tack on very small shifts because she will gain more from the shift than she loses by tacking. But a heavy keelboat is the opposite: it loses more in tacks so it needs bigger shifts to make tacking worthwhile.

Which course is faster?

From page 7: Should you make two extra tacks to get more pressure on the left side? *It depends . . .* on two variables:

1. How much distance will you lose each time you tack? (see above and right); and
2. How much will you gain in the puff? This is a function of puff strength, the average wind velocity (a puff helps more in lighter wind), and how long you will be in the puff.

If you gain more from the puff than you lose by making two extra tacks, you should go for the puff. But if your boat doesn't tack well and/or the puff is small, it's probably better to go straight and minimize tacking.

How much will a tack cost?

Any good strategic plan will take into account how much you lose by tacking in the existing conditions. Here are some factors that usually make tacking more costly in any boat:

- Light wind** – The lighter the wind, the longer it takes to re-accelerate after slowing in a tack.
- Heavy wind** – The stronger the wind, the more drag there is while turning through the wind.
- Waves** – Big waves slow you while tacking and make it harder to get going afterward.
- Heavy boat** – When heavy boats slow down in a tack, it takes longer to get going again.
- Inexperienced crew** – A skilled crew will lose less in tacks than an inexperienced crew.

The 'Ladder Rung' Analogy

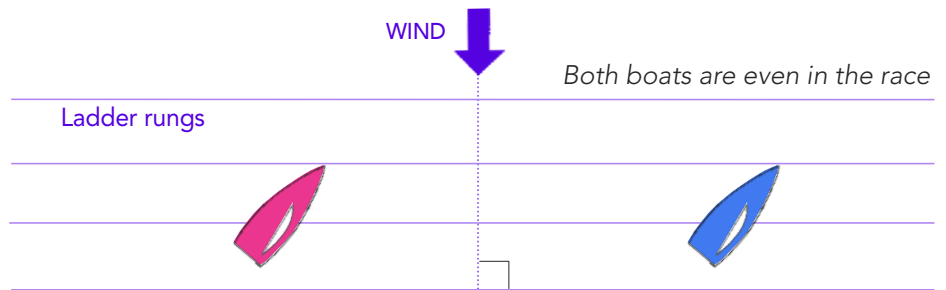
When you're racing upwind, your goal is to make progress as fast as possible to windward. In other words, you want to maximize your velocity-made-good in an upwind direction, since boats farther to windward are usually ahead in the race.

A good way to picture this is by using a concept called 'ladder rungs.' Think of a giant ladder superimposed across the race course, with its rungs perpendicular to the wind direction. Here are some ways this analogy can help us while racing.

'Ladder rungs'...
...are imaginary lines that can help us understand how to play wind shifts.

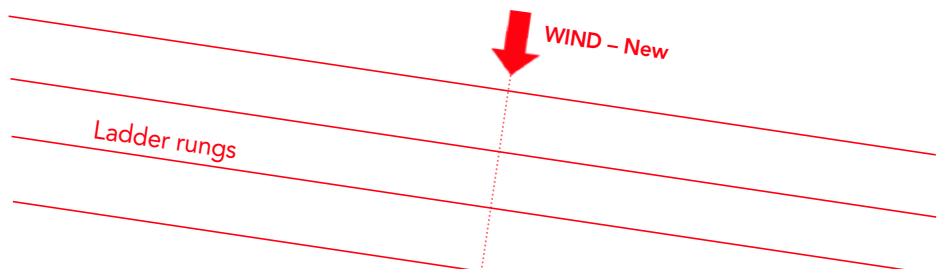


(See the next page for how ladder rungs can help us play shifts.)

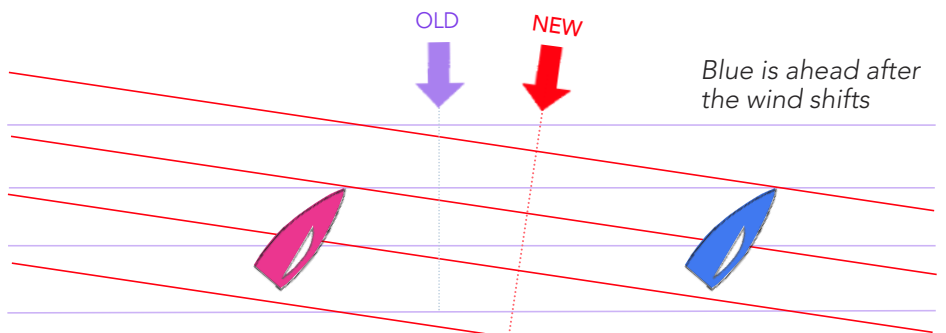


▲ Imagine a series of virtual lines (ladder rungs) drawn across the race course perpendicular to the wind direction.

- On an upwind leg, the goal is to climb **up** this ladder.
- Two boats on the same ladder rung are even in the race (because each line represents equal progress to windward).



▲ When the wind shifts, the ladder rungs also change their angle so they are perpendicular to the new wind direction.



▲ When the wind shifts, the boat that is closer to the new wind direction ends up on a higher ladder rung.

Closer to new wind direction = Higher ladder rung

👍 Rule of thumb

Sail toward the next shift

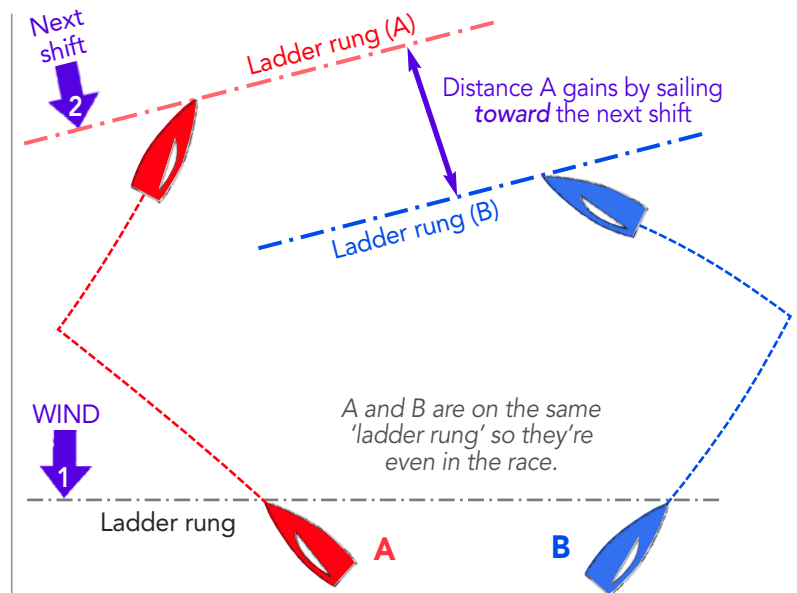
We learned two important things from the ladder rung analogy (see page 9):

1. When you're racing upwind, your goal is to climb higher **up** the ladder; and
2. When the wind direction shifts, the boat that is closer to the new wind direction ends up on a higher ladder rung.

So if you want to get ahead in the race (by climbing faster up the ladder), here's a key rule of thumb: **Sail in the direction from which you expect the next shift.**

Of course, in order to do this you must be able to predict the direction of the next windshift. That's not always easy. It means collecting a lot of wind data before and during each race. For ideas on how to do this, see the next few pages.

When you're not sure about the next shift, here's another good rule of thumb: **Sail the longer tack first** (see page 15).

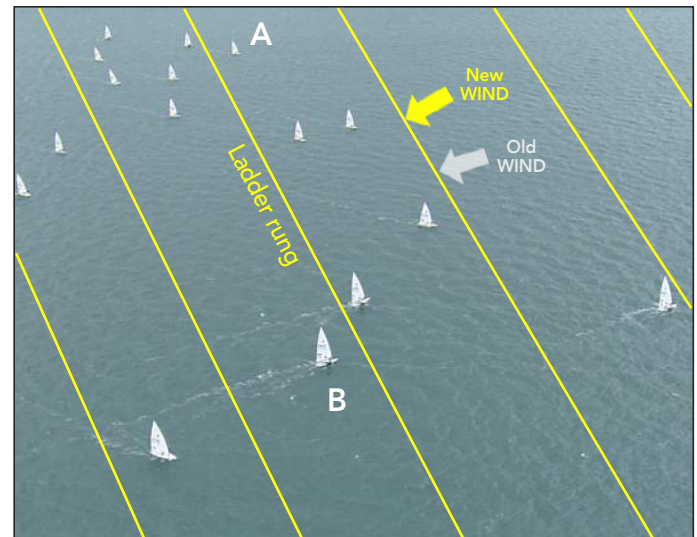


The next shift: Boat A thinks the wind will shift left, so she sails on starboard tack toward that side. B thinks the wind will shift to the right, so she sails on port tack. When the next shift comes from the left, A is closer to this new wind direction, so she ends up on a higher ladder rung and is ahead on this upwind leg. She gained by sailing **toward** the next shift.

Of course, windshifts are not the only important strategic variables. If there's a lot more wind pressure to the right, for example, B might gain even though she missed the shift.



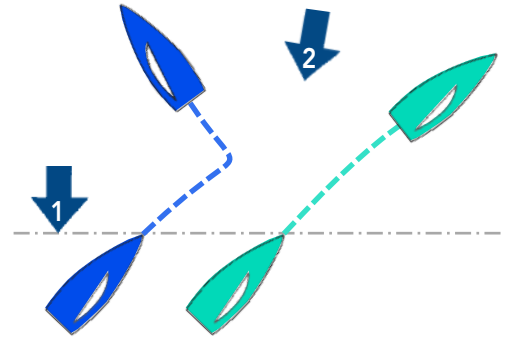
Boats A and B are racing upwind. Both boats are on exactly the same ladder rung, which means they have progressed equally far upwind toward the windward mark. Therefore, they are even in the race at this point (assuming neither has overstood the mark).



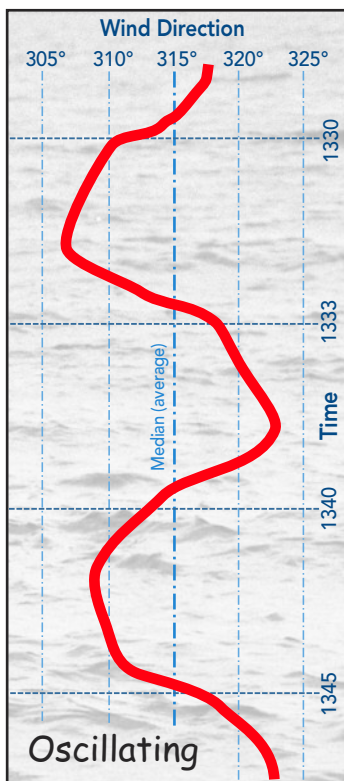
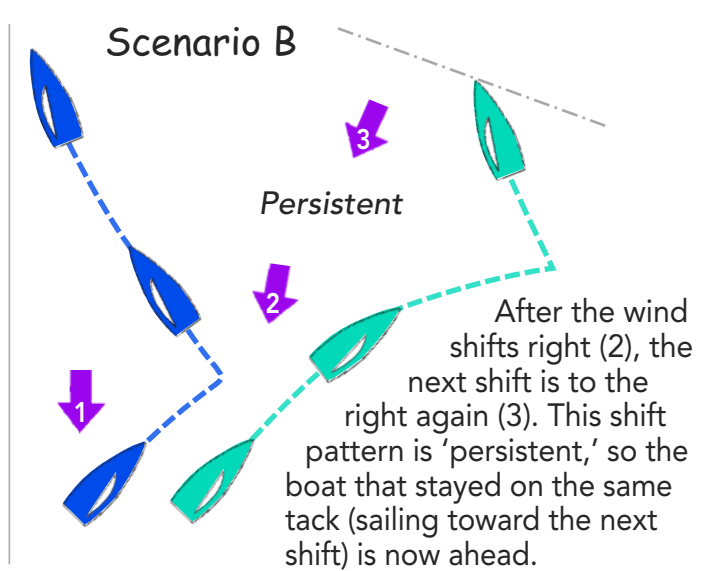
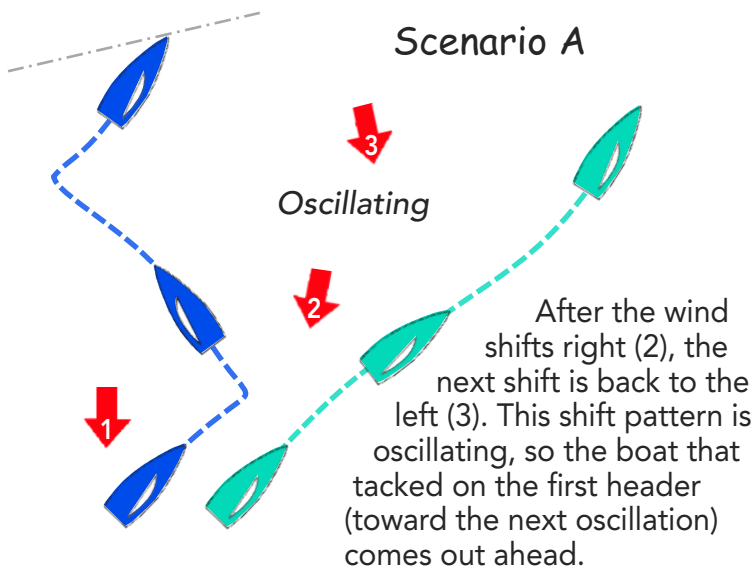
Now the wind shifts left, and the ladder rungs adjust accordingly (to stay perpendicular to the wind). Boat A had been sailing closer to this new wind direction, so she ends up on a higher ladder rung, which means she moves ahead of Boat B in the race.

Which boat will come out ahead?

In the middle of the first beat, two boats are even in the race (on the same ladder rung) and sailing upwind on port tack near each other (1). Then the wind shifts to the right and they get headed (2). The Blue boat decides to tack, while the Green boat bears off and keeps going on the same tack. Which boat will come out ahead?



Answer: It depends . . . on where the next wind shift will come from (see Scenarios A and B below).

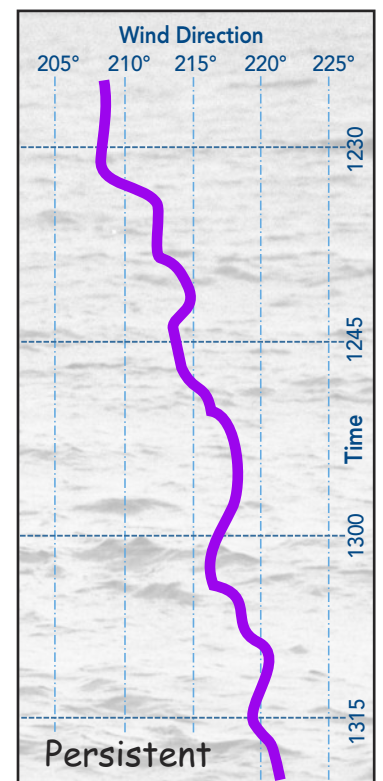


Oscillating or Persistent?

The wind is almost always shifting, at least a little, and even small changes in direction can lead to big gains and losses. Therefore, if you want to get to the windward mark in good shape, you must be skilled at recognizing and playing the shifts. This may be the most important ingredient in your upwind strategy.

In most races, the shift pattern is either oscillating or persistent. As you can see from the examples above, the best way to handle an oscillating shift is opposite to the strategy you would use for a persistent shift. Therefore, it's very important to ask yourself (before the start and constantly during the race) whether the windshifts are oscillating or persistent.

The way you answer this question affects almost every aspect of your upwind strategy. If you play an oscillating shift as persistent, or a persistent shift as oscillating, you probably won't be in great shape at the top mark.



You likely have **Oscillating shifts** when:

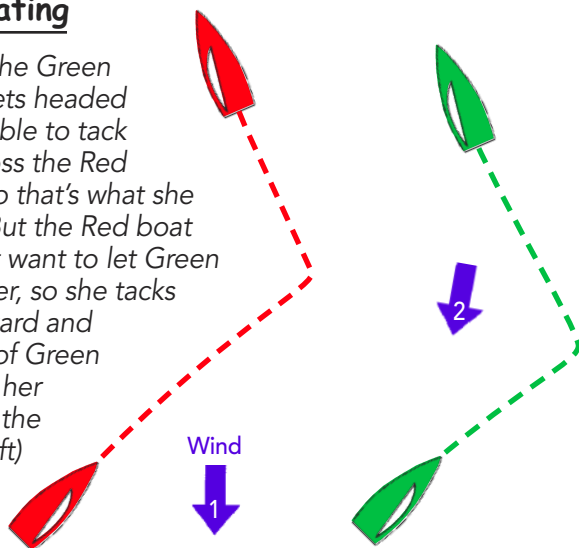
- Your headings on each tack go back and forth over a relatively steady median (average) direction.
- The wind is blowing off the shore.
- The wind on the water looks puffy; variable wind speed usually means variable wind direction.
- You have a gradient wind after a cold front.
- Boats are lifted and headed across the course.
- Boats make gains and losses at various times on both the left and right sides of the beat.

Oscillating shifts: Rules of thumb 👍

- **Tack on the headers.** Tack when you are headed to the median so you always sail on the lifted tack.
- **Sail the longer tack first.** When in doubt about the wind phase, get on the tack where your bow points closer to the windward mark. The longer tack is also usually the lifted tack.
- **Avoid laylines as long as possible.** The laylines are strategic dead-ends because you can no longer play shifts. Sail the longer tack to stay closer to the middle; as you get closer and closer to a layline, be willing to tack on smaller and smaller headers.
- **Sail fast on lifts.** Put your bow down slightly and sail fast toward the next shift.
- **Treat the last shift as persistent.** When there's only one more shift before you get to the windward mark, sail into it as if it's a persistent shift.
- **Cross other boats when you can.** Tack and cross other boats when you gain an advantage on them.
- **Don't let other boats cross you.** Tack to leeward and ahead of other boats so you will lead them back toward the next shift (see below).

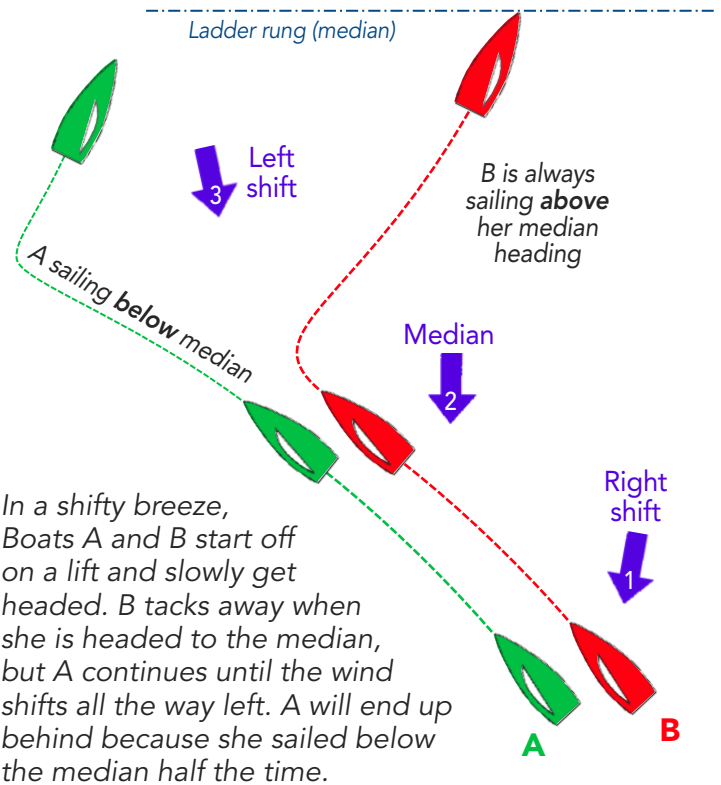
Oscillating

When the Green boat gets headed she is able to tack and cross the Red boat, so that's what she does. But the Red boat doesn't want to let Green cross her, so she tacks to leeward and ahead of Green to lead her toward the next (left) shift.



When to tack in oscillating shifts?

The beauty of an oscillating breeze is that boats can take a shortcut to the windward mark by sailing on the lifted tack. A boat can stay on the lifted tack for an entire beat by never sailing below her median heading on either tack. To do this she should tack whenever she gets headed to the median.



In a shifty breeze, Boats A and B start off on a lift and slowly get headed. B tacks away when she is headed to the median, but A continues until the wind shifts all the way left. A will end up behind because she sailed below the median half the time.



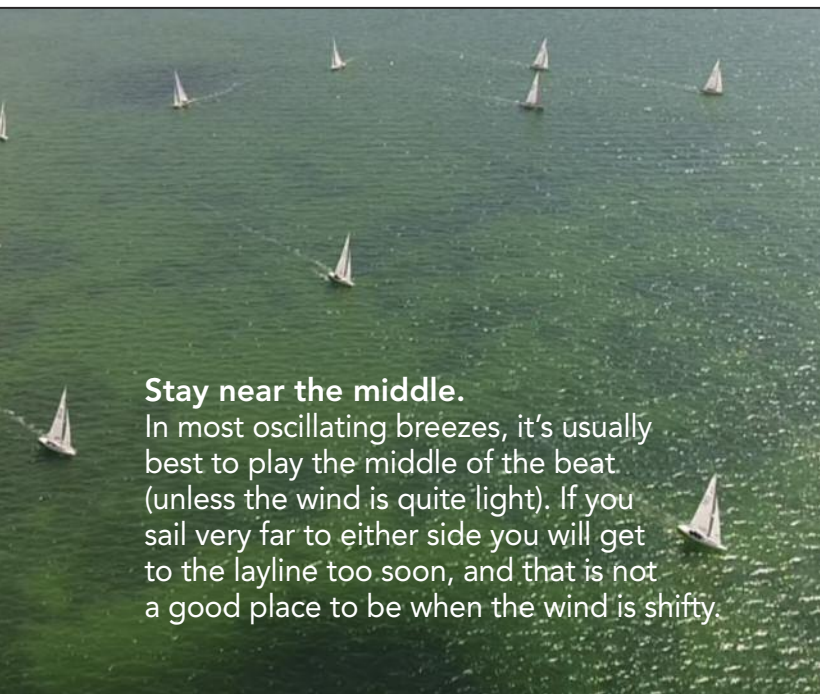
Felipe Juncadella photo

You likely have **Persistent shifts** when:

- Your headings on each tack trend in one direction.
- The wind is blowing onshore (i.e. there is a long fetch to windward).
- The wind on the water looks steady, not patchy.
- There is land close to one side of the course.
- You are sailing in a building or dying seabreeze.
- The farther you look to one side of the course, the more the boats there are lifted or headed.
- Boats always gain or lose on one side of the beat.

Persistent shifts: Rules of thumb 👍

- *Sail into the headers.* A persistent breeze keeps shifting in one direction, so don't tack on a header – continue sailing toward the next shift.
- *Sail the shorter tack first.* When the wind is shifting persistently, the longer tack usually takes you away from the next shift, so sail the shorter tack first!
- *Sail toward other boats that look good.* Identify the side of the course where boats are gaining, and sail that way as fast as you can.
- *'Bite the bullet.'* Be willing to cross behind other boats (*right*) if this takes you toward the next shift.
- *Sail toward one side of the course.* The layline (or just below it) is not a bad place to be when the wind is shifting persistently (*right*).
- *Don't overstand the mark.* Tack a little short of the layline so you won't overstand the windward mark if the wind continues to shift.



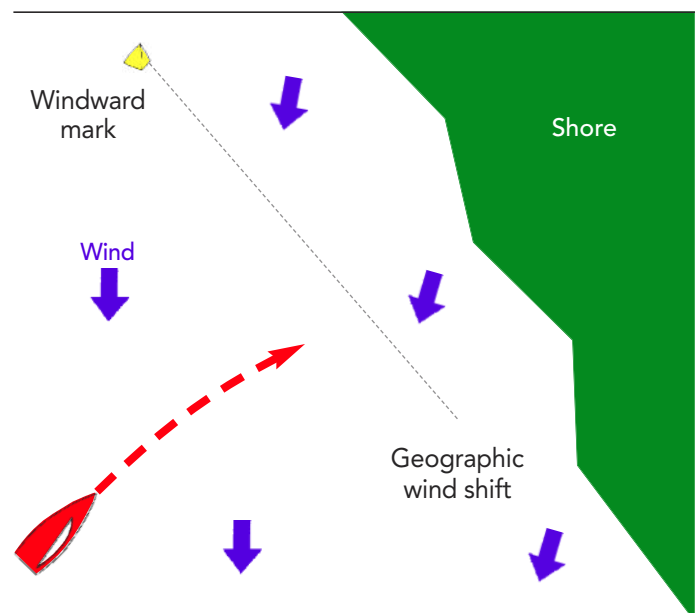
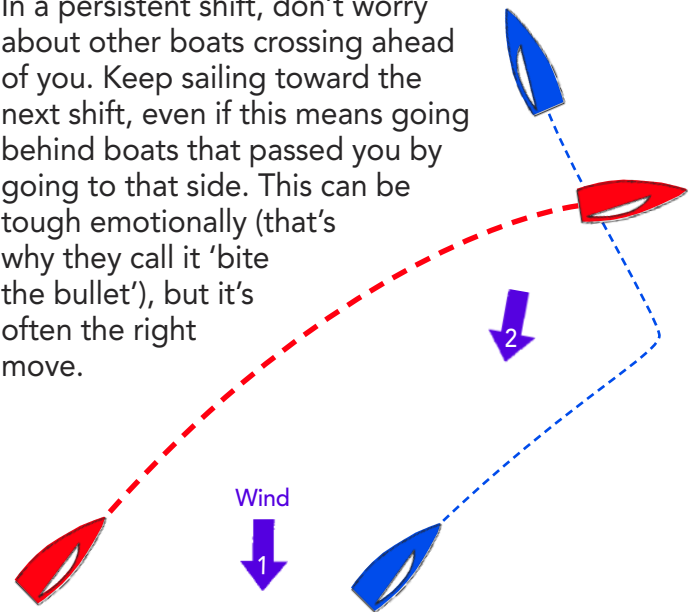
Stay near the middle.

In most oscillating breezes, it's usually best to play the middle of the beat. (unless the wind is quite light). If you sail very far to either side you will get to the layline too soon, and that is not a good place to be when the wind is shifty.

Persistent

'Bite the bullet'

In a persistent shift, don't worry about other boats crossing ahead of you. Keep sailing toward the next shift, even if this means going behind boats that passed you by going to that side. This can be tough emotionally (that's why they call it 'bite the bullet'), but it's often the right move.



Sail toward one side of the course

When the wind is shifting persistently in one direction, head for that side of the course. Sailing toward the expected wind direction will put you on a higher ladder rung when the shift happens, which means you will be farther advanced toward the windward mark.

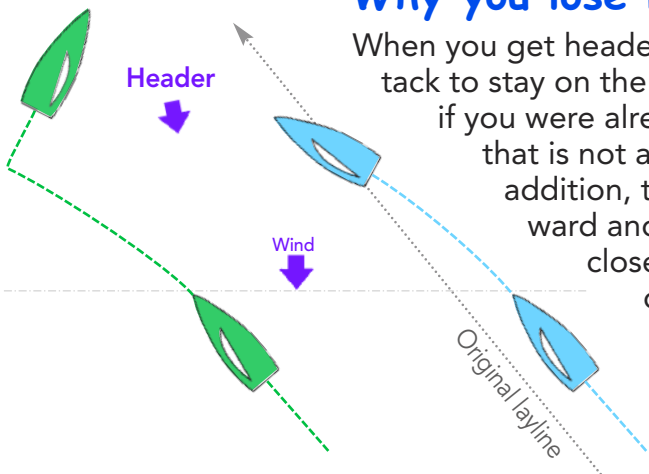
This strategy works any time one side of the course is consistently favored, whether that is due to shifting wind, more pressure, better current or a geographic wind shift (*above*).

Strategically, the layline is a



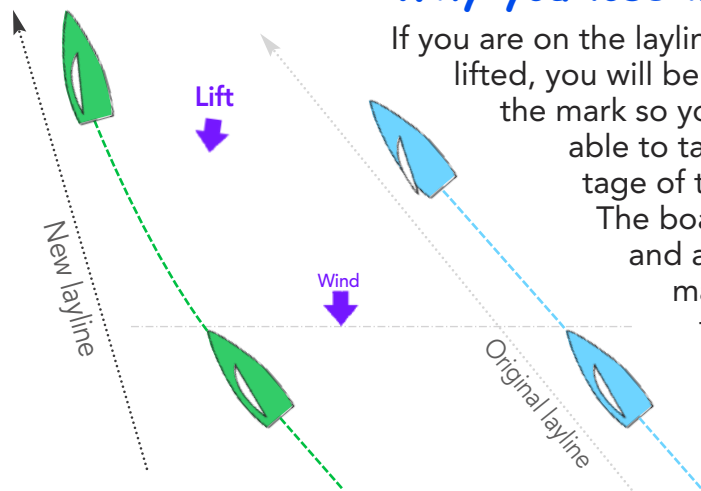
When you are on the layline and the wind shifts, you will lose distance to almost every other boat in your fleet. Here's why:

Why you lose in a header



When you get headed, you normally tack to stay on the lifted tack. But if you were already on the layline, that is not a great option. In addition, the boats to leeward and ahead of you are closer to the new wind direction, so they will end up on a higher ladder rung (i.e. ahead of you).

Why you lose in a lift



If you are on the layline and you get lifted, you will be overstanding the mark so you won't be able to take full advantage of the wind shift. The boats to leeward and ahead of you may now be on the new layline and will likely get to the next mark before you.

Locating laylines

The laylines are always moving due to changes in these factors:

- Wind direction
- Wind speed
- Current
- Wave conditions
- Your boat's tacking angle
- Your boat's leeway angle



Good things about getting to the layline early:

- **No more tacks.** You won't have to tack again before you get to the mark (unless you end up in bad air, or headed). Not many more good things about hitting the layline early.



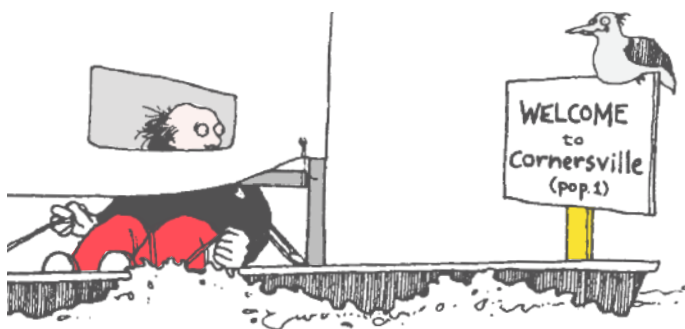
Bad things about getting to the layline early:

- **Losing in a windshift.** The laylines are a strategic dead-end because once you get there you can no longer play shifts (*left*).
- **Bad air.** The upwind laylines (especially the starboard layline) attract a lot of company. Unless you are leading the race, if you get to a layline early there's a good chance that another boat will tack on your wind.
- **Overstanding the mark.**

It's hard to judge the layline when you are far from the mark, so it's easy to overstand. Each boatlength you sail past the layline is wasted distance that is lost to every other boat in the fleet. Even if you pick a perfect layline, you will overstand if you get lifted, or if you have to tack to clear your air.



Avoid the laylines.

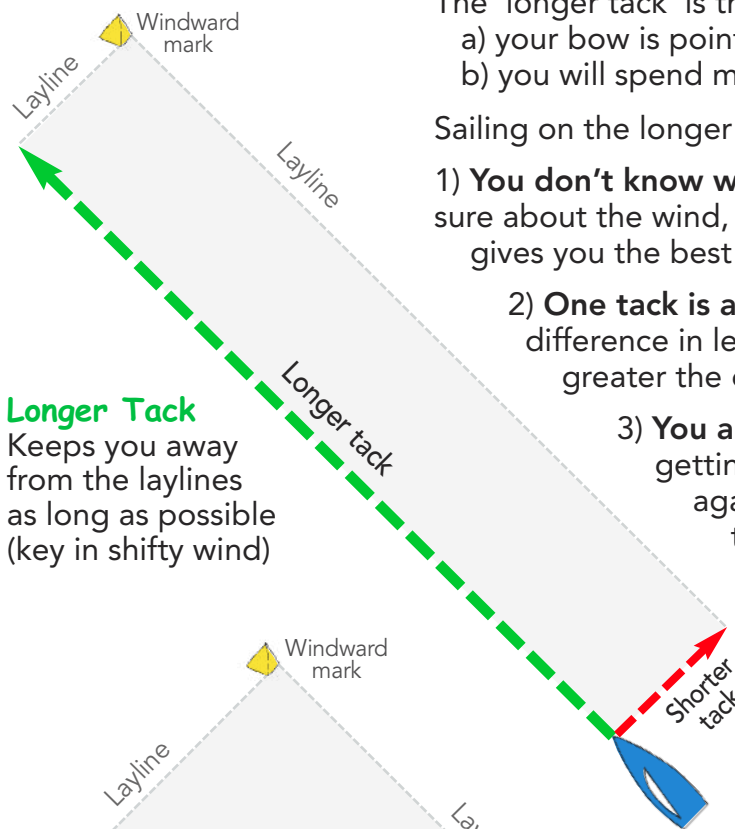


If you're in the corner of the windward leg you are on the layline with a very long way to sail to the mark. This is usually not a good place.



To stay away from the laylines you should:

Sail the longer tack first!



Longer Tack

Keeps you away from the laylines as long as possible (key in shifty wind)

The 'longer tack' is the tack on which

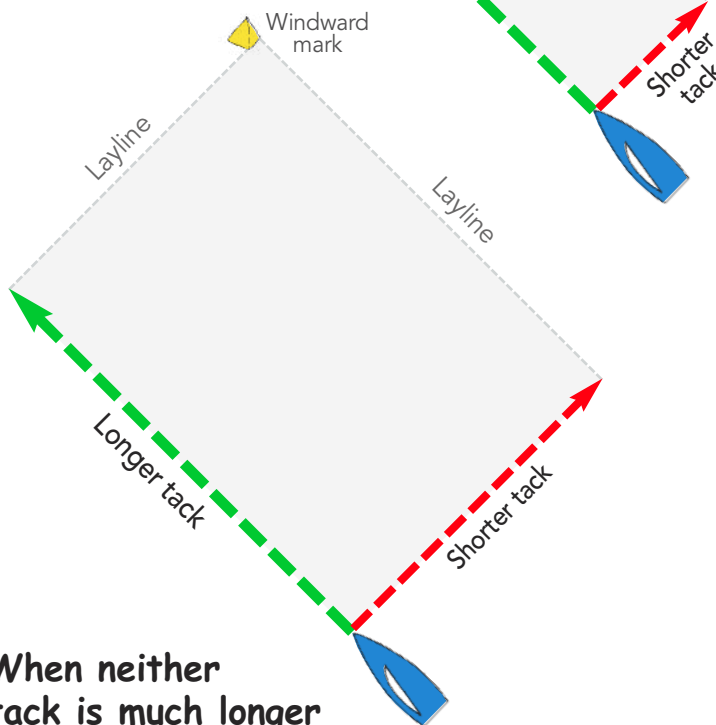
- your bow is pointing closer to the windward mark, and
- you will spend more time sailing to the windward mark.

Sailing on the longer tack is a good idea when:

- You don't know what the wind will do next.** When you're not sure about the wind, avoid the laylines! Sailing the longer tack gives you the best odds to play any wind shift that comes along.
- One tack is a lot longer than the other.** The greater the difference in length between port and starboard tacks, the greater the odds it will pay off to sail the longer tack first.
- You are far from the mark.** A big reason to avoid getting to a layline too early is to protect yourself against unknown wind shifts. When you are close to the mark, you're less likely to see a shift before you get there. In that case don't worry too much about the longer tack.

Shorter Tack

Takes you directly to the closer layline (OK to sail this way into a persistent shift)



When neither tack is much longer

If one tack is only slightly longer than the other, it's not so important to sail the longer tack first. The danger is getting close to a layline too soon; if you can sail the shorter tack without approaching the layline, it's a viable option. Of course, the more you sail the shorter tack, the more the odds favor the other (longer) tack.

When you are close to the mark

The closer you are to the windward mark, the less likely it is that the wind will shift before you round it. Therefore, it's not so critical to play the 'windshift odds' by sailing the longer tack. You can (and should) focus on bigger priorities, like tactics and boathandling, that will be necessary for a good rounding.

For more info or to order:
[Speed & Smarts Subscriptions](#)
[Speed & Smarts Renewals](#)
[Speed & Smarts Bundles](#)
[Speed & Smarts Back Issues](#)

['Learn the Racing Rules 2020'](#)

An online training course by David Dellenbaugh that explains the current racing rules.

For more info click [here](#) or send us an [email](#).

To purchase the course click [here](#).

©2018 Speed & Smarts

All the material in this (and every other) issue of Speed & Smarts is copyrighted. Reproducing, sharing or giving this material to other people without permission from the publisher is prohibited.

WORKBOOK 3: Upwind Strategy

Tactical considerations

Don't let other boats mess up your strategic plan

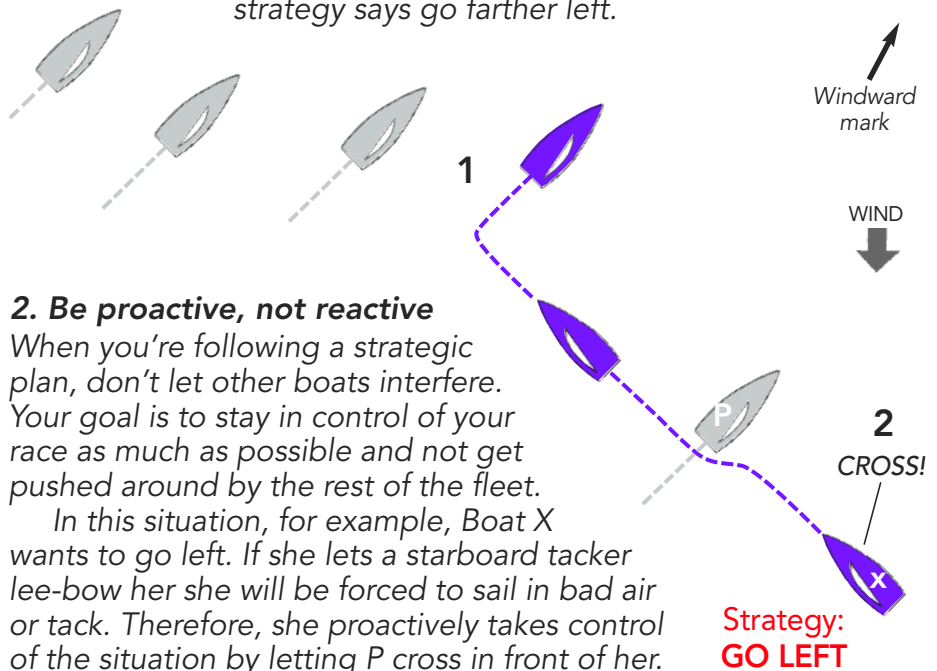
The subject of this entire issue has been how to develop and implement a strategic plan for boats, *in the absence of other boats*. Though we are seldom alone in a fleet race, strategic planning usually works best when you begin by thinking about what you'd do if anything was possible. In other words, if you were the only boat on the race course, where exactly would you go on the beat in order to take advantage of wind and current and get to the windward mark as quickly as possible?

In reality, however, we are usually in the midst of a fleet when racing upwind. Other boats have their own strategic plans (which may be similar to yours), and they can make it tough to follow your ideal strategic plan. That's why you need good boat-on-boat tactical moves to implement your strategy (see right). The next issue of *Speed & Smarts* will be all about Upwind Tactics.

1. Be willing to compromise

When you're in first place, you can usually go wherever you want on a beat. But when there are boats ahead of you, this may not be possible. If you try to follow your ideal strategic plan, you might end up sailing in bad air or overstanding the mark. To avoid this, you might have to be willing to compromise.

In the situation below, Boat X's strategy is to go left on this beat. However, she is behind a number of boats coming out of the left corner. If she keeps going left she may not find a lane of clear air on the longer port tack, so her best option may be to tack below those boats, even though her ideal strategy says go farther left.



2. Be proactive, not reactive

When you're following a strategic plan, don't let other boats interfere. Your goal is to stay in control of your race as much as possible and not get pushed around by the rest of the fleet.

In this situation, for example, Boat X wants to go left. If she lets a starboard tacker lee-bow her she will be forced to sail in bad air or tack. Therefore, she proactively takes control of the situation by letting P cross in front of her.