

## Waypoints



Within the sailing industry, Gino Morrelli hardly needs an introduction. At Morrelli & Melvin, Morrelli with his partner Pete Melvin and their team were tasked with helping to write the AC72 class rule before M&M was hired to join the design team the AC72 for Emirates Team New Zealand for America's Cup 34 this past summer. Morrelli's decades of experience with multihulls and hydrofoils includes Dennis Conner's AC winning 1988 Stars & Stripes catamaran, Little America's Cup C-Class Cats, and multiple Formula 40s, Steve Fossett's 125ft PlayStation.

Sail America caught up with Gino at the International Boatbuilders' Exhibition & Conference (IBEX) in late September in Tampa, Florida, to discuss his experiences with racing, the future of the America's Cup designs, his view on how to get people sailing, and his thoughts on overseas production.

**Sail America:** You started building boats when you were in high school. Most people begin with traditional designs, but you went straight for a (plywood) trimaran. What launched your passion for high-speed boats?

**Gino Morrelli:** My family moved to Irvine, California, from Texas when I was 14. My dad raced dragsters as an enthusiastic amateur, built his own cars in our garage. My younger brother Tony and I grew up in the pits of race tracks. We built mini bikes, go-karts, and soapbox derby cars for fun. When we moved to California, we fell in love with the beach/ocean. My parents bought a Columbia 24 and we taught ourselves to sail. After a year we wanted a bigger, faster boat so we could go to Catalina about 25 miles away. Looking around we saw trimarans sailing around about twice as fast as monohulls and decided we might as well go faster. My dad figured if he could build a dragster that went 180mph he could build a sailboat that went 20!

In about 1973, we bought a set of plans for a 33' Crowther Trimaran, the biggest boat we could build in our suburban backyard! Not knowing any better, we built the boat following the plans closely in about 18 months. I was a junior/senior in high school. I had two shop classes and was a TA in a third my senior year. My shop teacher, Mr. Hanson let me go "home" and work on the boat and use the school's big drill press, tablesaw, etc. whenever I

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needed. He'd come by every once in awhile and check our progress. We launched and raced *KiMo* (best of its kind in Navaho) around So Cal for two to three years 'til my Dad got transferred back to Texas. He sold it, and it's still alive, sailing in San Francisco. Needless to say Tony and I never went back to Texas. Tony became a sailmaker and I kept building, then designing multihull boats.

**SA:** What was your first hull? What were some of your first projects?

**GM:** After we finished our big boat, Tony bought a set of plans for an A Class cat. Wood/foam/epoxy. As soon as he built, launched, and started sailing it, we realized he could modify it to fit the new 18 square meter class (18' long x 18m<sup>2</sup> sail area, no beam limits, no minimum weight, singlehanded) that was just starting up. He was having so much fun, I decided to build one but modify his plans to handle the wider beam 10' vs 8'6" and 196 sq ft of sail area vs 150... Mine was faster.

Not undaunted, he bought a fiberglass prototype of the Nacra 5.2 a few months later and his was faster. The 18 Square class took off—a dozen or two boats in So Cal, San Francisco, Florida, Michigan, Maine got built. I talked a buddy of mine, Craig Ashby, into partnering with me to build a plug and a female mold so we could build a foam/glass version for ourselves. We built them in his dad's shop. As soon as we got my and Craig's hulls out of the mold, two other friends/competitors wanted hulls as well.

By this time, I had graduated from high school and was looking at starting college, intent on studying engineering. I registered my first semester, but was having too much fun building boats, so I dropped out and rented a 20' x 60' shop and started Climax Catamarans. I ended up building about 15–20 boats or sets of hulls in the next two odd years. My first boat weighed 350 lbs and cost \$3,000, was built out of E-glass/polyester/hand laid ... Two-plus years and 20 boats later, the last one weighed 150 lbs and cost \$20,000 and was carbon/Kevlar/Nomex honeycomb/wet preg epoxy!

That was my college of hard knocks boatbuilding/business school. The gas crisis in 1980 helped kill the class along with the arms race we helped create in the class. I shut my shop down and helped deliver another friend's 40' cruising cat from Newport Beach to Hawaii. It was my first ocean crossing. Once there with no reason to go back I worked a year for the Hyatt Regency on Maui, crewing on the 56' CSK day charter cat. Sailing daily between Maui, Molokai, and Lanai taught me a lot about sailing big cats in heavy conditions... It was a blast!

**SA:** Can you talk more about some of your early sailing days?

**GM:** A former client Bob Osmer called me up and asked if I thought I could design/build a

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45' cat to race in So Cal to break the Ensenada Race record. I jumped on a plane back to California. We worked out a deal and, a month or so later, we set up a shop in Huntington Beach where we built the boat I designed that was originally called *White Knuckler*. It took about 18 months. I was about 24. It was first to finish a couple times in following years.

I traveled to France with a portfolio of photos, where I teamed up with a French skipper, Alain Petit Ettiene, who somehow got a sponsor so we could build a 60' cat for the blossoming ocean racing circuits there. *Region de Picardie* was the boat's name. We had some good success with it, winning Mille Mille de Deauville race against the best boats of the day: Marc Pajot's Elf Aquitaine, Phillipe Poupon's Fleury Michon, etc. I raced several races on the boat, La Baule to Dakar, Around Europe, Trophy de Multicoque, etc. It was my baptism by fire into the big leagues. And I learned to speak French.

That success led to Randy Smyth asking me to design/build a cat for the debut year of the new Formula 40 class in France. He convinced American Bob Caffray to back us and I went back to California, and I built a modified set of hulls out of the *White Knuckler* mold with my buddy Bob DeLong/RD Boatworks. We put a boat together and threw it in a container in three months, just in time to make the start of the first race in Brest, France in 1986. We ended up dominating all the French and English teams, winning the five-race circuit that year.

The next year I got a job to design and race a new Formula 40 boat for a Belgium team: Richmond. I went back to Bob DeLong and we built my latest design there in about eight months, launched it in Dana Point, CA, sea-trialed and trained there for four to six weeks before throwing it in a container bound for Brest, France for the 1987 series. Once in France, the sponsor decided it should be an all-Belgian crew, and unceremoniously kicked me and my two brothers-in-crime (Hobie 16 champion Randy Hatfield and friend Brian Kfoury) off the boat! They got hammered.

In the summer of 1987 the new owner of *White Knuckler*, now called *Wind Warrior*, Steve Shidler and I raced it to Hawaii from LA in the multihull version of the TransPac. It was quite a stretch racing a coastal racer to Hawaii. I knew it could be wild after spending a year there sailing in the Pailolo Channel (which translates to "crazy water" in Hawaiian). This was pre-GPS, Yellow Brick, waterproof VHF's. I convinced Bob DeLong, Randy Hatfield, and my surfing/sailing mentor Mickey Munoz to join us. There were three boats at the start. Rudy Choy's 65' Aikane X5, a Corsair Tri, and us. We had to dead reckon the whole way due to overcast skies day and night, when we thought we were close we used an AM/FM radio as a radio direction finder to locate a radio station. We thought we'd be crushed by the bigger cat but finished a few hours ahead of them in seven days and I can't remember how many hours... Probably a record for a 48' boat that still stands today!

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Shortly afterwards I got a call from Dennis Conner/John Marshall to come join the San Diego Yacht Club's defense of the America's Cup. And the rest is history. After a few court battles we won AC in 1988 with *Stars and Stripes* beating the Kiwi's Big Boat *KZ1* badly.

**SA:** Can you expand on your more contemporary designs?

**GM:** In 1991 Pete Melvin and I joined forces to design/build/race the C Class, *Freedom's Wing* in an unsuccessful challenge in Australia.

In 1997 we started racing with Steve Fossett, first on *Lakota*, a 60' VPLP Tri, then *Stars and Stripes* '88 after Steve bought her from Dennis Conner. Then we designed and built *PlayStation* at Cookson's in New Zealand in 2000. She set 12 world records; I raced extensively on her as a watch captain with Brian Thompson, Ben Wright, Stan Honey navigating... We had a few near-death experiences together!

In 2010, we helped *Oracle* win the America's Cup in Valencia and helped with the *Emirates Team New Zealand AC72* challenge in 2013. In between was designing Lake Geneva 41ft racing tri's, "Happycalopse" and Ernesto Bertarelli's first "Alinghi", Gunboats 48/62/66/90, Robertson and Caine cruising cats, 37-47ft, Nacra F18s/Olympic 17/F20c....

**SA:** Did you test any concepts that, in retrospect, seem a little crazy now? And, in reverse of that, do you see any concepts now that, 15 years ago, you would think, "No way."

**GM:** We are still trying to figure out how to make kite rigs work offshore for race boats... Still no luck...

**SA:** You've been familiar with hydrofoils for quite some time. In fact, there's an article in *Professional BoatBuilder* from 2001, in which you talk to Steve Callahan about hydrofoiling. What has changed from those early days to the America's Cup this past summer?

**GM:** Lots more money! We could have been doing this 10 years ago. Never had the chance or reason to do this at this scale. We needed the impetus of the Cup to garner the funds, talent, and the motivation to fly.

**SA:** How did your experience building Little America's Cup C-Class Cats with those rigid wings prepare you for where the sport is today?

**GM:** In the early days, the wing was more important because sails were so bad! Now with carbon sails the delta is not as big, but the boat weights have plummeted. C's in 1976 weighed 600-700 lbs. Our C in 1991 weighed 330-ish. Now they're below 250-275 lbs.... But fragile!

**SA:** Defining the rules for the AC72, what were some of your biggest challenges? Was it difficult to basically invent the parameters for such a high-profile race?

**GM:** Writing class rules was fun. Politics to get what we thought would be a good, reasonably reliable, measurable boat agreed upon is tough. It was fun trying to prevent clever designers from finding loopholes we did not anticipate.

**SA:** What kinds of advantages (if any) did this offer *ETNZ* when you were hired to design their boat? How did your years of experience benefit them?

**GM:** We probably had a head start thinking through the permutations that might work, but also fresh eyes looking at the same problem can sometimes find glaring loopholes or opportunities. I think from our SL33 boats and Nacra 20s we and others were on the verge of flying cats. We were just steps away. We went after flying straight out of the box where *Oracle* and *Artemis* took it up after the fact. I think we scared the Kiwis a bit with our ambitions but they saw pretty quickly, the only way to slay the giant *Oracle* was with a bold plan and our mini Manhattan project was afoot.

**SA:** AC34 was stand on your feet exciting, for many reasons, in part because of the media, the fact that it was in San Francisco and spectator friendly, and that final showdown between *Oracle* and *ETNZ*, but mostly people were abuzz over the new rule. Talking with Ken Read ([Waypoints April 2014](#)), it was clear the boats were, for lack of a better word, intimidating. What are some insights you can offer about this past summer's America's Cup?

**GM:** It was a relief to see the boats actually race in anger, in San Francisco, full on and stay together! We had to determine min and max class weights almost two years before the finals and it's a credit to Pete [Melvin] and the smart guys in our and *Oracle's* offices we got the engineering close enough that those monsters got built and were remarkably reliable.

Usually in a start-up class, someone gets it right and smokes everyone like we did in F40 years ago. This time *Oracle* and *ETNZ* managed to come at the race from fairly different corners and converged in nearly door-to-door racing at 45 knots! That was cool!

**SA:** What's the most impressive part of the AC72s, in your opinion? Is it the wing, the daggerboards and hydrofoiling, the hullshape?

**GM:** The race was won and lost underwater. This time it was the daggerboards and dag control systems. Next time it will be the combo of dag and rudders now that they let us take the hand rakes off the rudder control.

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**SA:** What will endure and what will most dramatically evolve? Or do you see it as one unit, evolving together?

**GM:** Foiling is here to stay, but we are like the Wright Brothers. We are just learning how to fly. I would be surprised if we don't see meaningful development in next Cup cycles if venues are decent, not too light-air dominated. Hulls will be foil delivery devices! Learning to fly in bigger and bigger sea states is on tap. I fully expect to see fully foiling tacks in the next Cup, venue permitting. The Moth class is the indicator of things to come. It will not take long until we see a fully contested AC race when no one touches down after the starting gun!

**SA:** Can you take a moment to compare the boats sailed by Oracle Team USA and Emirates Team New Zealand (ETNZ)? I will send you a link to my IBEX Presentation....

**SA:** Sail America focuses a great deal of its energy on bringing new people into the sport of sailing and developing young non-sailors into actual sailors. Are you involved in any programs that encourage sailing among beginners?

**GM:** Indirectly, we designed the 13' Hobie Wave that sold in the tens of thousands. Lots of adults and kids I'm sure got on these things at hotels and resorts and had a blast.. Lots were bought and still serve as a great entry-level boat. Tough , rotomolded plastic, kid friendly. When we designed them we built two to three prototypes for Hobie in our secret shop. I'd take my kids then, like 5-7 years old, sailing and watch what they did, where they put their hands and feet. We made a big effort to reduce "boat bites," things that scratch and bruise kids and adults. No tools required to put together and no shackles you could lose pins for.. It was a fun project. Too bad our royalties contract had a limit!

We have a bit of a hand in getting people back on the water by designing SUPs for Boardworks that I hope reintroduce young, old, women, teens back to the ocean. I am glad to see this surge of continuing SUP sales to non-surf, non-race folks. One of the first steps to getting folks sailing, is getting them back to the ocean, bays, and rivers first. If even a handful get tired of SUPs and jump to a dinghy, cat, or powerboat, great. Having fun first is step.

I'm afraid there's a lot of barriers to sailing that the US is not going to overcome easily. Yacht club membership as a prerequisite to race has been an issue. Europe, NZ, Australia, Asia have a more community based sailing environment that allows almost any kid, regardless of his parents' interest or ability to join a yacht club, to get to the water and give it a try.

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**SA:** How do you envision the future of the sailing industry as a whole? Where do you think we're headed?

**GM:** Downhill..... It's going to be a fringier, fringe sport/lifestyle except for the top end of yachting (social races like in the Caribbean, Med, Asian, Australian events where participating is as important as winning), where it's getting healthier now and is still attractive lifestyle for lots of folks.

Socializing and fun have gotten beaten out of most American youth sports where specializing by the time you're eight is required. Kids get washed out of sailing, due to pressure to win races in YC programs and there's little alternative.

**SA:** You recently returned from China. Can you talk about what you're doing? What's on your horizon?

**GM:** We have been building more and more boats in China for the last five to seven years, all for export. Production and semi-custom mainly due to lower labor and overhead costs and the world economic downturn and exchange rate turmoils. This has forced good Kiwi, Australian, American, and European boatbuilders to go to Asia to find boatbuilding jobs. We are building boats in Thailand and Vietnam also. The economic downturn forced a lot of middlemen out of the supply chain loop. We can buy US and Euro parts in China for the same prices as in California or Florida. The explosion of windmill blade and airplane manufacturing market in China brought all our favorite US, Kiwi, Australian, and European high-tech suppliers to China! We are benefitting from this big global shift as well. It's a bit of the Wild West in China building boats, but it's attracted some really talented, open-minded builders, engineers, and entrepreneurs who make it fun and exciting to be building these crazy projects over there.

Due to long distances from the market (Caribbean, Euro, Med, East Coast USA), we can build either boats we put in boxes/containers like Nacra Cats, 16'-20', or we build HH55/66 and bigger cats where they are big enough to sail on their own bottoms or the shipping is not over 8-10% of the cost of the boat.

The middle range cats we designed are built in Cape Town, South Africa, still. Leopard 38'-44' production private and charter sail and power cats by Robertson and Caine where labor is still low compared to US/Euro and delivery to the prime markets is a lot less than Asia. These cats are sold through The Moorings/Sunsail and are used in their charter fleets all over the world. I think we are a bit over 500 boats built to our designs to date by RC.

Just to break the trend, we hope to start building the recently announced new Tartan Yachts 44' sail/powercat next year in Ohio. That will be great! Cut back on my airplane food

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consumption! Happy to see an established US boatbuilder branch out into multihulls. This was a strategy pursued by Beneteau years ago with the Lagoon catamaran line and more recently by monohull sail and powerboat builder, Bavaria Yachts, who purchased the French "Nautitech" catamaran line.

We still build custom one-off yachts in the US. We've built two MM65 cruising cats at Westerly (Santa Ana, California) and are finishing a Gunboat 66 there now. We built a really nice cat at Lyman Morris a few years back. We are discussing some new custom projects with these and other US builders now that we seem to be shaking off the recession of the last four to five years.

**SA:** Do you have any upcoming speaking engagements or anything you'd like us to mention in conclusion?

**GM:** I will be at the Annapolis Sailboat Boat show and doing a couple seminars at the the Miami Boat Show in February. We will have our new scale models in the HH Catamaran and Tartan Yachts booths at Miami as well.

We also started our own yacht brokerage to help connect our little growing world of owners and buyers of our designs like the Gunboats, MM65s, Leopards to each other. After helping brokers for years sell our designs, we decided to jump in the middle. Who knows our designs better than us? Check our website at [Morrellimelvin.com](http://Morrellimelvin.com) for links to our listings on [Yachtworld.com](http://Yachtworld.com)

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