

Apex Precision Surfboards

Andrew Hines uses a computer-assisted design software program to determine the shape of his surfboards.

WAVE OF THE FUTURE

Soquel teen defies tradition by designing surfboards on computer



Shmuel Thaler/Sentinel

Andrew Hines, who at 16 has his own surfboard company, hits the waves at Steamer Lane with one of his favorite designs.

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By MICHAEL DE GIVE

Sentinel staff writer

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Andrew Hines talks to his high school physics teacher about hypothetical equations that describe a surfboard's relationship to a wave.

In English class, he tells his teacher about the thrill of creating — that he feels at his core he's essentially a poet.

The intellectual and artistic hemispheres of this young man's mind seem to meet at an apex, like the symmetrical sides of a surfboard. They also straddle a line in the surfing industry, one that some say separates the geometry of a board from its soul.

The rift is over the best way to shape a board — by hand or with the help of computer software.

"There are people who say it's all about soul, and that when you shape a board on the computer there is no soul," said Hines, 16. "I disagree. Whether I shape it with a mouse or a plane, it still has that little piece of me in it."

There's no doubt in the industry that computers will play a larger and larger role in shaping surfboards. The question is, how big a role? And when?

Steve Coletta, who's been shaping by hand 35 years, believes the day will come when a shaper will never

touch the tools of the trade — a plane and sandpaper, shaping a length of polyurethane foam. But that day hasn't arrived, he said. The technology is too new, and shapers haven't had enough time to work with the software.

"It's an evolving technology," said Coletta, owner of Natural Curves Surfboards in Santa Cruz. "When you have the foam in hand, you can make decisions that really yield good results"

You can't feel that on a keyboard, he said.

Michel Junod, a hand-shaper since 1996 and a consultant for Nine or Nothin' in Santa Cruz, believes designing by computer will gain momentum — especially in the segment of the industry that mass produces boards.

"It's a very individual, opinionated deal," said Junod. "Everyone has their opinion on what works and what doesn't."

Mark of a craftsman

M10 Surfboards on Santa Cruz's Westside is one of the industry's leaders in computer-assisted shaping. Owner Geoffrey Rashe, who's shaped 5,000 boards by hand in his career, says designing by computer is now the only way he can keep up with demand for his custom shortboards. And the demand is high for the M10

Please see **APEX** on **BACK PAGE**



Apex Precision Surfboards

Produces surfboards by hand and with computer software.

OWNERS: Andrew and Robert Hines.

LOCATION: Soquel.

CONTACT: 464-3728.

WEB: www.apexsurf.com.

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ANDREW HINES, APEX PRECISION SURFBOARDS

Apex: Teen surfboard maker goes high-tech

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line. Rashe manufactures 1,200 boards a year with software and machinery specifically made for shaping surfboards.

Hines is fit and tan, with bushy brown hair that's cut short, and eyes as white as foam. The Soquel High junior spends as much time riding waves as he possibly can.

He began shaping boards at age 12. To date, his company — Apex Precision Surfboards — has produced 275 boards. Most were shaped by hand, but he's leaning more toward computer-assisted design.

His boards have been used by such local pros as Matt Rockhold, Adam Replogle, Tyler Fox, Noi Kaulukukui and Lucas Klatt. They all offer feedback on how the boards ride, which he uses to improve the design.

Apex Precision Surfboards is at a break-even point, "with sporadic moments of profit," Hines said. Boards retail for about \$420.

Hines' shaping bay on his parents' property in the hills above Soquel has the mark of a craftsman, with shavings that powder the floor like snowfall. Devoid of adornment, it's a space made for creating.

The windowless walls are painted sky blue to contrast with the white foam board on the shaping stand — making it easier for Hines to follow every curve and angle with his eyes.

Fluorescent lighting crackles from the walls at waist height, creating shadows on the board that show him where the nicks or scratches are hiding. He smooths these with an electric planer and sandpaper, adding more flakes to the floor.

Hines shaped his first board at the suggestion of his father, Robert Hines, who is an industrial designer.

"I've always been encouraged to do things myself, and when I wanted to get my first surfboard, my dad said, 'Well, make it yourself — see what happens.'"

So he did.

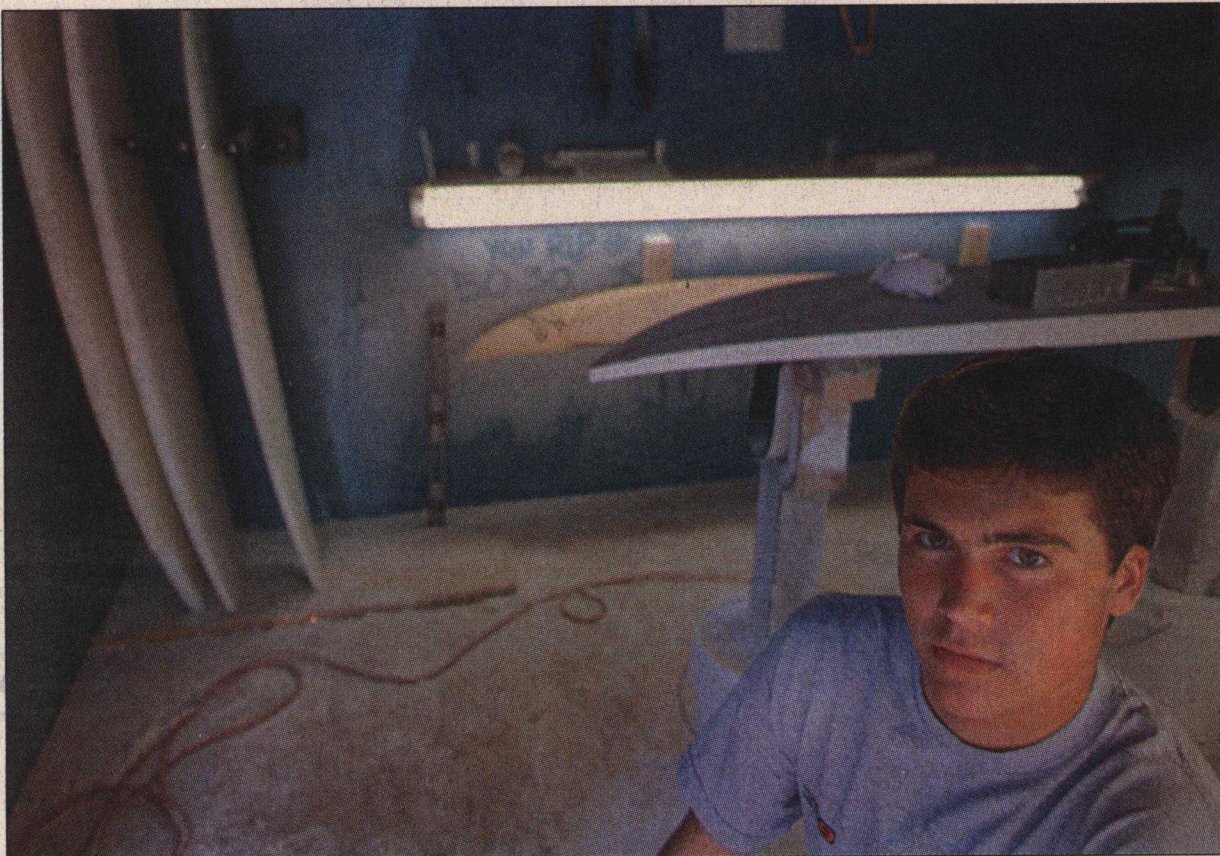
He sought advice from Jeff Divine, a surfboard shaper at O'Neill, and later from Carl Olsen, a shaper at Pearson Arrow Surfboards, who would become his mentor.

Then he built his workshop by renovating a shed in his side yard. He fixed up another shed for laminating boards, but now subcontracts that work to others.

Clicks and keystrokes

More and more, Hines has been shaping his boards outside the workshop and in front of a computer screen. His father's \$26,000 computer-assisted design software, or CAD, has been pressed into service as a surfboard shaper.

A template of a board appears on the screen — a virtual feather that Hines



Shmuel Thaler/Sentinel

Andrew Hines in his shaping shop. The Soquel teen began shaping surfboards by hand and later learned to design them on a computer.

can twist and turn to view at any angle. With mouse clicks and keystrokes, yellow lines and control points appear over the image. Hines uses these to adjust angles and tangents and curves to refine the shape. The adjustments are so precise they seem out of reach of a human hand.

Hines envisions a day when those hypothetical equations he talks about with his teacher are a reality — and can be used to build a board that precisely fits a particular rider.

"I really want to advance the design of the surfboard to a new place," said Hines. "I think it's possible — I think you're going to be able to have an equation to fit someone to a surfboard."

When a CAD design is completed — sometimes after just five minutes of tweaking a design already stored in a database — he e-mails the computer file to Cybershapes, a shop on Brommer Street in Santa Cruz that can machine up to 30 boards a day, said owner Marlin Kless.

Through computer numeric control — a computer-machine protocol long established in machine shops — Hines' computer file tells Kless' table router how to shape a board from foam.

Although Cybershapes has been milling boards from computer files for years, Hines' way of designing is relatively new.

For the most part, Kless' work at Cybershapes begins with a board that

was shaped by hand, not a computer. He clamps the hand-shaped board to a table and scans it with a sensitive probe, which translates the curves and lines into a digital language. The data is made into a computer file, which then tells the router where to cut.

Kless sees room in the industry for computer-assisted designers.

"It still takes someone who knows how to shape; it still needs someone who knows how a surfboard works. It still takes an artist to make the art," he said.

Hines' point precisely. When he describes his love of surfing, there's no doubt there's soul behind his words.

"Every time you stand up on a wave, it's like dancing with the ocean," said Hines, holding a board at arm's length and studying its shape.

"The energy from the ocean can suffice that little gap we all have, and when you feel that, it's so raw and — BOOM! — in your face. You feel so alive," he said.

"You know you've got it when you can take that out of the water with you," he said.

At a young age, Hines seems to already have discovered where his career path is heading.

"You can't go to school on surf design. But what I have is a product, and I want to sell it," he said.

He plans to study business, keep

making surfboards and advance his craft and the Apex line.

While industry sales this year have slowed with the economy, Hines will join what some local shapers say is a growing market — especially for entry-level surfers.

U.S. sales of surfboards were \$195.9 million in 2001, according to Board-Trac, which monitors the industry.

Hines said a much larger piece of the market, perhaps 90 percent of the take from surfing-related sales, is in clothing. His plans include developing a soft line, as well, from which he hopes to put the profits back into advancing surfboard design.

Hines also has been influenced by another mentor, Kim Moriarity, who runs the Jay Moriarity Foundation in honor of her late husband, a famed big-wave surfer who died last year in a diving accident. If he makes it big, he wants to travel to poor parts of the world to find great surfers — and set them up with sponsorships, boards and equipment.

For now, though, he'll stay on the local waves, with an Apex board beneath his feet.

"Riding a board you've made is like riding an extension of yourself — it's almost just like you and the ocean," he said.

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