



Maker

RECYCLED RUBBER

It's more fun to make a laptop bag from an old wetsuit than it is to buy one. By Saul Griffith

It's easy to make money, as long as that's all you wish to do. I find it easier to make things than to make money, and it appears that that's all I do. Fortunately we live in a society where many raw materials are free as long as you have a few favorite dumpsters.

The false economies of making your own stuff are addictive. Most everything I own is an amalgam of trash reconfigured with a rather large and expensive set of scratched and greasy tools. It's always a good idea at the time: make a bicycle trailer (the store-bought ones don't suit my needs), build a kite, sew a laptop bag.

Jack O'Neill was probably in a similar situation when the surfing boom of the 1950s saw many Southern Californians enjoying a new lifestyle of longboards and Woodies. He, however, was stuck in San Francisco, as I am, where year-round water temperatures hover in the 50s (Fahrenheit). Not to be stopped cold in feeding his addiction of surfing, Jack set about pioneering the wetsuit.

Like most backyard innovators, he started with that glorious jumble of the local surplus store and its army/navy frogmen suits. Surfing was still small enough that most people knew most other people, and everyone was hacking their gear to get more out of their passion. One contemporary of Jack's was known for wearing a navy jumper soaked in Thompson's water seal — better than coating yourself in a thick layer of pig fat, but not the convenience they all yearned for.

The frogmen suits were pieces of rubber glued together that — along with a layer of air trapped in your underwear — would provide some insulation,

though rough surf always found a way to open everything up and throw cold water on your ideas and other sensitive body parts.

Jack's first wetsuit was polyvinylchloride (PVC) glued to thin sheets of plastic in the form of a vest. It was hard to work with, somewhat fragile, and wore out quickly.

Like most lifestyle surfers, odd jobs were the order of the day and "Eureka!" came to Jack while he was carpeting the aisles of a DC-3 passenger aircraft. Under the carpet was neoprene. It was used on planes as sound and thermal insulation. It is easy to bond, floats, and is flexible and robust.

Neoprene is a closed-cell foam. Closed-cell foams are basically thousands of tiny bubbles surrounded by rubber where none of the bubbles join any others, making it waterproof. Open-cell foams are those where all the bubbles intersect and overlap. These become waterlogged and don't trap air, which is a better insulator than any plastic or rubber by itself.

Jack starting making wetsuits out of neoprene and an industry was born. Wetsuits have changed enormously since the 1950s with new designs, more supple materials and stretch zones, new stitches patterns, and new glues to eliminate stitching altogether.

Anyway, all of this is to say I just bought a new laptop, one of those cultish ones with the piece of fruit on the cover. It's the first laptop I ever bought, because I've generally been able to convince the military-industrial-education complex to buy them for me. Fortunately, they never seemed to mind that a laptop has a six-month life expectancy in the hands of a lifestyle surfer and cyclist. It's a good idea

Photography by Saul Griffith and Talia Braude





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to land on your laptop when you crash your bicycle; it's softer than your spine and, despite thoughts to the contrary, is less valuable than your collarbone.

However, now I have to pay for laptops myself, so I thought I'd try and make it last at least a year or two. Browsing the laptop bag offerings at the store, they

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seemed to offer far too little padding for my liking, and all looked like an advertisement for laptop theft. I had some old wetsuits — the kind with tears in all the wrong places, which prevent you from being able to pee inside the wetsuit to keep yourself warm. (Admit it, you do it too.)

HOW TO MAKE A LAPTOP BAG

Wash and deodorize the wetsuit. Gentle detergents, a dash of vinegar, and warm-water hand agitation does the trick nicely.

Wetsuits don't have a lot of flat straight pieces, so you'll see mine is made from strips cut from the least worn pieces of the old suit. I don't have much need for measuring — I just eyeballed and oversized the panels a little to allow for the seams and ended up with a stretchy case, like sexy spandex for your computer.

Neoprene can be hand-stitched, which gives a wonderful Frankenstein aesthetic, but it's a lot faster to use a sewing machine, and you'll be able to make more mistakes without feeling guilty about starting over. Most strong home sewing machines will do the trick; just make sure you use a large denim needle and thick polyester thread. I have sailmaker's Dacron thread, which is perfect.

If your machine is weak, you may need to manually help the poor little motor by winding with the machine on the down-stroke and letting it find its own way home coming back up. This is slow, but better than hand stitching. If the neoprene is really thick, you'll get better results by lifting the sewing machine's foot completely to accommodate your wad of material.

I put my seams on the outside. I'd like to say this was to make it look cool (which I think it does) but it was really because I forgot to turn it inside out before I was done. When I finished sewing the thing, I realized the bag needed pockets for batteries, power packs, passports, and a toothbrush. So I placed

a couple of squares of neoprene on the inside. Because it is stretchy, it's pretty tolerant of low accuracy. I reinforced the sides with old polyester hiking bootlaces. When tied in a loop, they fastened perfectly to the shoulder strap I found on some old luggage that had been offered to the gods on the side of the road. To clip it all together I used a couple of child-restraint belts scavenged

from abandoned shopping carts. Apparently, it's illegal to use parts from abandoned shopping carts.

The result is lush, soft, bouncy, waterproof, and orange. All things I like, plus it will stretch to fit two notebooks and a burrito. I got overzealous and even built a matching iPod case that has protected my music machine in dozens of falls.

While I don't think it's sufficiently wonderful to start my own O'Neill-type business, it is a fun bag, gets noticed (by hipsters not thieves), and makes me feel like I foiled the landfill again. All that, and it only took about four hours to make.

This article also took about four hours to write and paid me enough to buy several laptop bags. False economies indeed, but I'd wrestle the auto-threading mechanism happily to do it all again.

Saul Griffith thinks about open source hardware while working with the power-nerds at Squid Labs (www.squid-labs.com).

Scoring Used Neoprene

If you don't surf or dive, ask a buddy who does. He or she should be able to set you up with a thrashed suit.

You can recycle some of the 5 billion dot.com mousepads that still plague us — they're made of neoprene, too.

On eBay, you'll find plenty of wetsuits being sold by people who liked the idea of surfing after watching *Endless Summer* and gave up after swallowing a pint of ocean the first time they got in the water.

You can also buy new 51"x83" sheets of neoprene from places like tearmorder.com, but that sort of defeats the purpose.

