

# ERIC HANSCOM Interview

## Drone pilot for noble acts



**Hey Eric, thank you so much for agreeing to share some thoughts with us today. To start things off can you tell everyone a little bit about yourself?**

Sure, I'm a patent and trademark attorney who lives in Carlsbad, CA with my wife and 9-year old son. My wife is from Thailand and owns a small resort there, along with a few small farms. We fly over to visit her family and check up on things at least once every year (and of course I take my drones). My son is an avid drone pilot himself (he even has a Dronestagram account) and has won two elementary school awards for his drone photography and a drone video he shot and edited.

I practice Intellectual Property Law for the law firm of Hanscom, Alexeev & McDaniel. Although our law firm handles everything from corporate formation to estate planning and immigration, I love to focus my work on emerging technologies and, in particular,

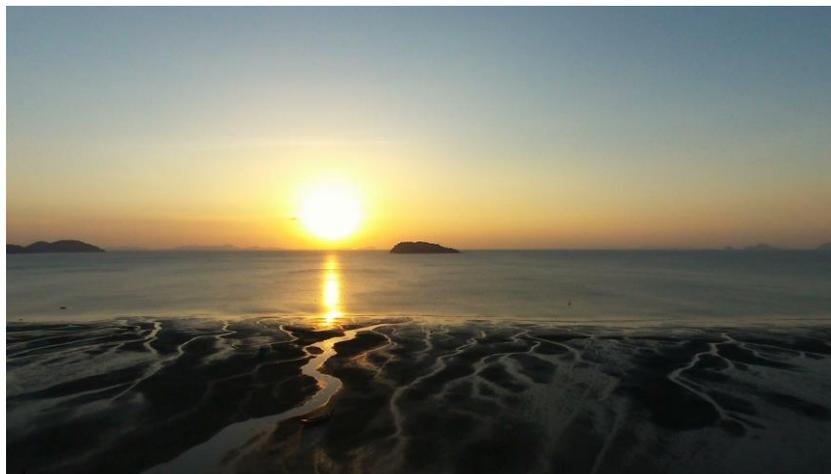
drones. I have a number of drone clients right now and have even filed my own patent application for a new drone propeller (it has been approved and should issue around the time this interview is published). Before I became a patent attorney I was competed at surfing and kayaking, and ran an international kayak tour company for nearly a decade.

I have taught a number of “continuing education” classes for lawyers and always try to use drones as examples when discussing the various ways that patents, trademarks and copyrights can be used by inventors and companies to protect themselves. Several months ago I co-taught a course to the California State Bar’s Intellectual Property meeting in Palm Springs on drones and drone law. Following the course, we took any lawyer interested in flying drones out to a grassy area near the resort and let them fly a Bebop (Parrot generously donated two Bebops to the event). The lawyers loved flying, and I appreciated the fact that every time they crashed into a tree (which happened frequently), I just put the Bebop back on its feet and off it flew.

Earlier this week, I taught another MCLE (continuing education) with a couple of other lawyers. During one section, I had a couple of the lawyers discussing privacy as it relates to drone law, and as they were filming, I flew a Bebop right outside the window, as though I was spying on them. We hope it ends up being funny, because these MCLE’s are usually terribly boring.

## **You’ve been shooting for years now, what led you to first getting started in aerial photography?**

My first exposure to drones was a few years ago when a friend of mine, Steve Walden, sent me a link to a surfing video that was shot from a drone. I watched the video and instantly realized the possibilities for drones to show things from a new perspective. Within 10 minutes I had researched the (few) available drones back then and ordered one from Amazon.com. Once it arrived, I watched some YouTube videos to actually see how to fly one, then started flying, taking pictures and videos.



We have a vacation rental out in the Anza Borrego desert, so I first started flying around our house, and pretty soon our house “Borrego Palms” should have been called “Borrego Ocean” as it was a blue sea of Panoramio dots on Google Earth. Once I got comfortable flying the drone, I took it out to shoot some of the sculptures in Galleta Meadows. These marvelous metal sculptures, some of which are 350 feet long, were commissioned by the late Dennis Avery, a major benefactor of the Borrego Springs community and built by the sculptor Ricardo Breceda. Since the sculptures are in the middle of the desert, it was a perfect place to fly.

That summer we took our annual trip to Thailand and I brought along my drone. I was flying my drone around my father-in-law’s house when my wife’s brother, a Buddhist monk at a local temple, came by for a visit. When he arrived, I was actually doing a drone roof inspection for my father-in-law trying to find a leak through the roof, and he asked me if I would do roof inspections at his temple. We piled in the back of my father-in-law’s pickup truck and drove over to the temple.

My son and I set up the drone and flew up and over the temple roofs, and the monks were blown away with the fact that they could see the condition of the roofs without having to risk their lives climbing rickety old ladders. The monks crowded around the iPad during the flight and then watched as we ran the footage on our laptop. I noticed that the younger and skinnier monks were particularly delighted with the drone, since they are usually the ones who get stuck doing the roof inspections. We downloaded the stills and videos for them, and they successfully used the drone footage to apply for and receive a substantial government grant to repair their roofs.

Word spread that if you let the droning family at your temple, you get a free roof inspection and may even get to fly a drone a bit, so pretty soon we were flying over temples all over Thailand. Some days we would rent a van and spend the entire day driving from temple to temple. When we got back to the US, we would print out a couple of large pictures of each temple on poster board, then bring them back to the monks on the next trip as a thank you.

Several years ago I got involved in the efforts to save the Salton Sea. I was flying my drones around the Salton Sea, taking pictures and videos of the special places like the mud volcanoes, Salvation Mountain, and the flower fields. I have some friends at EcoMedia Compass, which one of the leading environmental groups in the Salton Sea region, and they mentioned that they would like a record of what various parts of the Salton Sea look like as the water level recedes. At the time we had this conversation, I already had a few years’ worth of footage, so I cataloged it and went out and re-shot some of the locations again. I then copied an entire hard drive of Salton Sea drone stills and video for them for use in promoting the various programs that are trying to restore the Salton Sea.

## Can you tell us about your gear and drone setup?

For the Salton Sea project, my son flies the Bebop I got from Parrot as part of the Parrot Ambassador Program, and I fly the Bebop2, also courtesy of the Ambassador Program. I usually use a SkyController, but sometimes when I have to hike in long distances to do the shooting, I'll just take a Bebop and an iPad mini to save on weight. When I'm flying with my son, he usually grabs the SkyController before I can get to it, so I have to use another iPad to control mine.

## How did you happen to use a Bebop to monitor the restoration efforts of the Imperial Irrigation District?



I like how small and quiet the Bebop is. The Salton Sea is either home or at least a stopover for over 400 species of birds, most of which do not like noisy drones buzzing through their nesting areas. The Bebop is small enough not appear as threatening as a larger drone, and quiet enough so it has a better chance of blending into the surroundings and not frightening the birds – not much point in documenting the restoration of bird habitat by scaring away all the birds. The camera is certainly good enough to capture the scenes I am trying to document, and it is light enough so I can

carry it where I go. A couple of times I've had to hit the Emergency kill button when birds are getting too close, and never had a problem just flipping the Bebop back on its legs, cleaning off any leaves or twigs, then firing it up for more flights.

Just recently I was honored to be asked to "drone over" a 4WD vehicle event put together by Randy Brown (the first person to walk around the shoreline of the Salton Sea) and Ecomedia Compass (of which I'm a Board Member). This event featured a guided tour of some of the Salton Sea's more famous landmarks, culminating in over 60 Jeeps and other 4WD vehicles spelling out "SOS" (for Save Our Sea) on the beach. I flew my Bebop 2 over the vehicles and went through two batteries documenting the event.

### **Can you tell us the story behind this project?**

As the Salton Sea recedes, various government agencies and environmental groups are trying to figure out a few problems. First, as the water continues to evaporate out of the Sea, the Sea will become saltier and saltier, eventually reaching the point where nothing can live in it. How to prevent, or at least geographically limit, the "unlivable" salinity? Second, unless more water is allowed to flow into the Salton Sea, the water level will continue to drop, making it more and more important to use the diminishing water in an intelligent, environmentally sound manner. So, one such experiment is the current Red Hill Restoration Project, which is designed to mitigate dust emissions and enhance wildlife habitat. I'm using my drone to document the before and after look of the area.

### **How helpful is your Bebop for that purpose?**



The Bebop line is an excellent choice for the Salton Sea area. There are a couple of key features, which work with both the documentation of the Salton Sea's water level/restoration efforts, and flying around some of its more attractive features. When I'm flying to document changes in water level, I generally get the drone up to different altitudes, then pan laterally across the seashore. The Bebop is great at maintaining its altitude, even in windy conditions, and giving us clear photos and videos that we can use to compare with previous flights at the same location to show how more and more of the sea bed is being exposed as the water level drops.

Another of the things I try to document around the Salton Sea is how the decreasing sea level exposes more and more of the tilapia nests. When the Salton Sea was formed over 100 years ago, it was freshwater, and for decades was host of a variety of freshwater game fishes. Because the Salton Sea has no outlet, as water evaporates the Sea becomes more and more salty. As it became saltier, the freshwater species were gradually replaced by introduced saltwater game fishes such as corvina and sargo. When the Salton Sea finally became too salty for even the sargo, the only "game" fish remaining was the tilapia – a very hardy freshwater fish that has adapted to the harshly saline water.

The tilapia build underwater nests in which they raise their young. As the Salton Sea recedes, some eerily beautiful shapes are exposed as more and more nests are abandoned by the parent fish. Some of my best video of these nests has been taken by flying my Bebop (and Bebop2) about 1 meter off the surface of the water. Since a dunk in the saltwater would probably be fatal to my drones, I don't take this flying lightly, but I really like the way the Bebop line will maintain a steady altitude so that all I have to control is the horizontal directions.

Another place I really like to fly around the Salton Sea are the mud volcanoes. These geologic wonders have a variety of shapes, with some having large fields of boiling mud, and others with isolated mud volcanoes that spit and belch out splatters of mud. The Bebop is an ideal drone for filming these areas as its low profile minimizes the chances that an errant spatter of mud will upset the balance or take out a propeller (or even the camera).

## **Which advices would you give to others who want to get started flying drones?**

First off, pay the money to get a decent drone. Around here in Carlsbad every couple of weeks there is a new "Lost Drone" poster going up in our community – always some \$99 piece of junk that flew away. Second, get the training necessary to drone safely. I

had to learn through a combination of YouTube videos and (the then) lousy owner's manuals. Today, I would suggest that budding dronists use a combination of the (greatly improved) owner's manuals that come along with a drone, and various YouTube videos that explain basic things like updating hardware and software, how to calibrate, and what all those buttons on the controller and screen really mean.

Second, find a safe place to do your first flights, and if possible, fly with someone who already has experience with your brand of drone. Obviously learn and understand your national and local drone rules (and keep updated on the changes). Then, pick a location that is both legal and safe. In Southern California, I like flying out in the desert areas near Borrego Springs and the Salton Sea. There are not many houses, roads or people, and if your drone does come down unexpectedly, there are not many trees or bushes so the drone is relatively easy to find. If you are new to the sport, just ask around; there are bound to be people willing to help you learn.

## **What advances in drone technology are you excited about?**

Wow, since I'm a patent and trademark attorney by trade, I'm fascinated by the rapid increases in many facets of drone technology. Without giving away any confidential information, I find that the improvements in battery life, propeller design, and sense-and-avoid technologies are keeping me busy at nights and on some weekends. I also find the mapping functions to be an extremely important part of the future of drones, as are interchangeable photographic and measuring devices, and other "stuff" that you can removably attach to a drone. What I would personally love to see is a solar recharger that would recharge a drone battery out in the field. I do a lot of my droning miles from my car, and have to make do with the batteries I haul along. I've love to be able to charge one battery while I'm flying with another.

Another area that interests me is traveling with drones. I have been fortunate to win a few drone backpacks in various drone photography and videography contests, and genuinely appreciate being able to hop of a plane knowing my drone will be safe in the overhead bins. Because carrying batteries is such a hassle, I always take the batteries and my drone as carry-on. I have been pulled aside in Japan, China and Thailand for a better look at my batteries, and I always like to show how the batteries fit into the drone. It tends to make the inspection go more smoothly. But, I foresee a real business opportunity in kiosks at airports where you can rent drone batteries during your travels, and then bring them back at the end of your trip.

Outside of the technological advances, I find it fascinating to compare the laws relating to drones in different countries. At our law firm, we are carefully watching what happens

with federal preemption of state drone laws relating to safety and privacy. As training and perhaps certification/proficiency become either “important” for getting insurance, or perhaps even mandatory, I am also watching for trends in drone certification classes (preferably taught by someone who actually flies drones), and drone insurance matters.

### **Is there anything else that we haven’t touched on that you would like to share?**

I really enjoy getting on Dronestagram and looking around the world at drone photos and videos from different parts of the world. Every time I travel and check out the photos in advance to get an idea of fun places to fly drones. I’ve also connected with some of the dronists in other parts of the world and received some very helpful advice on locations, national drone laws, local practices and other things that have really made my trips a lot more fun and productive.



**I'd also like to tell a story about how my drone may have saved my life:**

But for a drone.

But for a drone, some photos were taken.

But for some photos, a Dronestagram account was created.

But for a Dronestagram account, a top pilot interview was given.

But for an interview, a speaking opportunity in England was offered.

But for a speaking opportunity, a side trip to Dover to fly drones was planned.

But for the side trip, a lengthy hike along the White Cliffs of Dover was organized.

But for the length of the hike, extra batteries were taken.

But for the extra batteries, a backpack was heavy.

But for a heavy backpack, a shoulder muscle was strained.

But for a strained shoulder muscle, a typing posture was changed upon return to the US.

But for a changed typing posture, carpal tunnel syndrome was caused.

But for carpal tunnel syndrome, an exercise routine was changed.

But for a change in exercise routine, a back muscle was strained.

But for a muscle strain, a back was examined.

But for the examination, a strangely shaped mole was spotted.

But for the mole, a dermatologist was consulted.

But for the dermatologist, a biopsy was performed.

But for the biopsy, a skin cancer was diagnosed.

But for the diagnosis, a skin cancer was removed.

But for the removal, a dronist is now cancer free.

But for a drone.