SKYWRITING

USING OFF-THE-SHELF HARDWARE AND CUSTOM SOFTWARE CREATED BY COLLABORATORS, BRITISH ARTIST **JEREMY WOOD** TURNS GPS TECHNOLOGY INTO A SATELLITE-POWERED ETCH-A-SKETCH. HIS "GPS DRAWINGS"—DRAWN ON LAND AND SEA AND IN THE AIR—EXPLORE THE INTERSECTIONS OF TYPOGRAPHY, CARTOGRAPHY AND TOPOGRAPHY. **JANET ABRAMS** AND **PETER HALL** FIND OUT ABOUT HIS HAND-HELD PERAMBULATIONS.

ON PAGES 274—275, WOOD PRESENTS HIS DIARY OF THE MAKING OF *MERIDIAN DRAWING*, WHICH WAS COMMISSIONED FOR THE OPENING PAGES OF *ELSE/WHERE: MAPPING*.

E/W Editors: How did you start GPS drawing?

Jeremy Wood: Back in 2000, I was using a very basic GPS receiver for a different project: to locate images geographically. I took it on board an airplane, stuck it by the window and recorded some holding patterns on the way from Berlin to Heathrow. They were just these extraordinary large and beautiful objects and lines. It was tracking my movement, leaving a dot-to-dot line of where I had been. I thought: well, one could use this to make very large-scale drawings.

The receiver has to be in line of sight of a satellite, so you can't sit in a middle seat, right?

You have to wedge it between your shoulder and the window, or put an antenna up.

Did you go on that journey to try it out?

I didn't take it there specifically to draw. It was a new toy and I'm into gadgetry, so I was just using it to see what it would look like. It was my luck there was a queue to land at Heathrow, which resulted in these holding patterns. On small-scale European flights, you have to wait around for a while, whereas international flights—because they travel so far—get priority.

How do you turn the "dot-to-dot" of where you've been into what is shown on your website? How do you overlay the basic GPS wobbly outline of a word on a map?

<www.gpsdrawing.com>

A GPS receiver records your latitude, longitude and altitude, so all the information is in 3D. I've collaborated with an exceptionally talented programmer called Hugh Pryor who created a program that enables me to manipulate the GPS tracks, view them in 3D, and treat them as sculptural objects. He's created a very valuable tool: an application to control the drawings that allows you to look at them from the side, or make an orthographic view, or look from inside if the drawing is really large. If you have a photograph, you can line it up from the same viewpoint in the application, by superimposing the GPS tracks. Most of the images I've made have been simple orthographic projections onto an aerial photo, a satellite photo or a map. They all have their different qualities. The drawing itself takes place as and when I'm traveling. That's

See pp. 2—9.

quite important. The image is a reproduction of that drawing, and being digital, it can be reproduced infinite times and in infinite ways. I've overlaid certain drawings onto both aerial images and maps, just to see the difference. With maps, you can relate the lines to space and place. Aerial images are more ambiguous because you have to be familiar with the area in order to recognize it. Aerial images are beautiful. Much of my childhood was spent staring out of airplane windows, because my father was a commercial pilot for Pan Am, based in Berlin. I always insist on a window seat!

You subvert GPS, using it not to find out where you are so much as to detour it. You take the machine for a walk, and thus turn its intended function inside out.

I'm using it to find out where one has been. Most users of the technology don't really need that. Pilots certainly don't want to know where they've just been, because it's quite distracting.

Some images on your website are quite playful, like the Brighton *Elephant*. Some, like the word *Information*, are more prosaic, while others—like the holding patterns—are quite abstract. What have been your reflections on making them?

They demonstrate the possibilities of the technology and the art form. One result of experimenting with the medium is that the type and flavor of the drawings have changed over time. Early on they were very playful: the *Brighton Elephant* or the *Brighton Boat* are effective and accessible images, but I find they have no relevance to the places themselves. I'm not aware of any elephants in Brighton, so I'm no longer taking that approach. I've kept up the idea of the pictorial journey—the latest versions would be the Las Vegas dollar or the Phoenix Metroglyph—but now they have much more relevance to place. I've recently moved to London, so it's pretty much a blank canvas. I'm going to explore the structure of the city through its transportation system. The London Underground diagram is a heavily distorted illustration; it's questionable whether it's a map or not. People use the Underground to get to places that really aren't that far apart at the surface level. My project will explore the geographic relationship between these points.

<gpsdrawing.com/gallery.htm>

How do you fund your work?

I have a very generous mother! Seriously, though: mainly through workshops. I take GPS drawing to schools, museums and galleries, and I find that immensely rewarding. It incorporates a lot of disciplines—such as geography, art, technology. It's outside the classroom, it's practical, and it enables young children to understand spatial relationships just by walking to the far end of their playing fields.

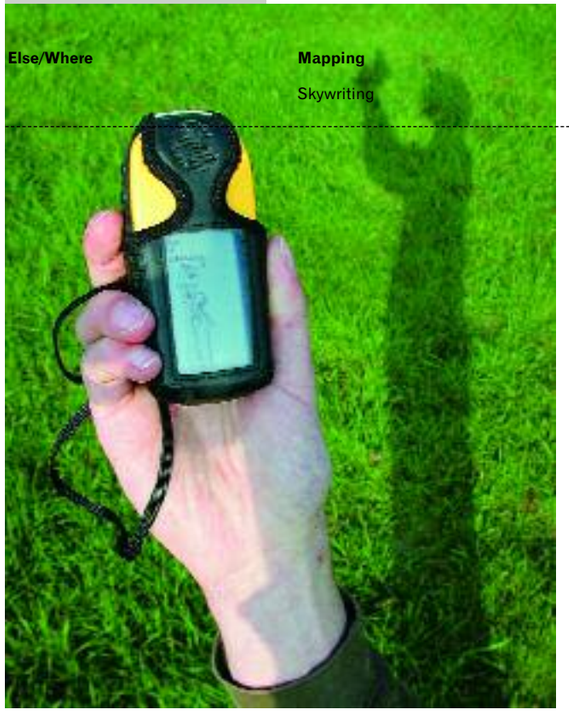
How old are they and what kinds of reactions do they have?

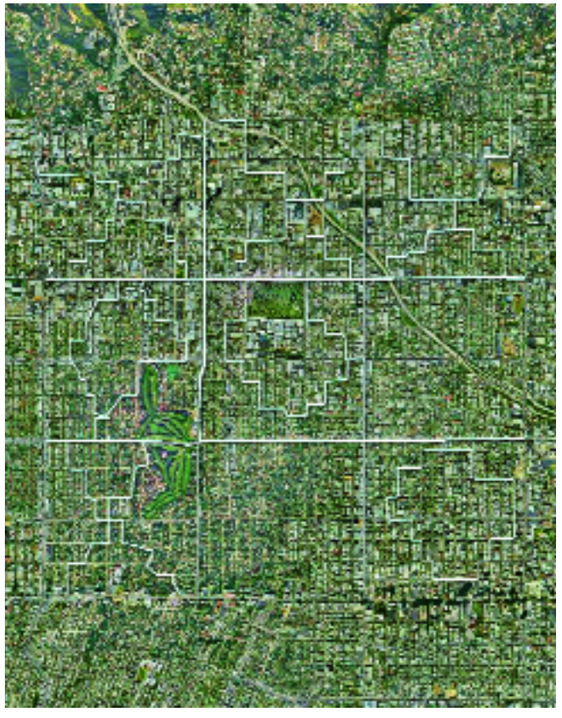
The youngest group I've worked with were girls, age six and upward. You can't expect children that age to walk around in a recognizable shape. So I would lead them, and they'd follow like ducklings, holding their GPS receivers, sharing one between two or three kids. You have to direct them, otherwise they tend to wander off. And they get distracted by other features. There's a speedometer on the screen, so they usually see how fast they can run! It's interesting to see how they approach something I do almost every day: how they operate in groups, take initiative and use each other as markers on the field—and their perceptions of scale and distance. It's a lot to ask: hand this foreign technology to someone, have them figure out how it relates to the space they're in and what the screen's doing. Often, the second time is better. It's not as easy as you think.

How do you do it?

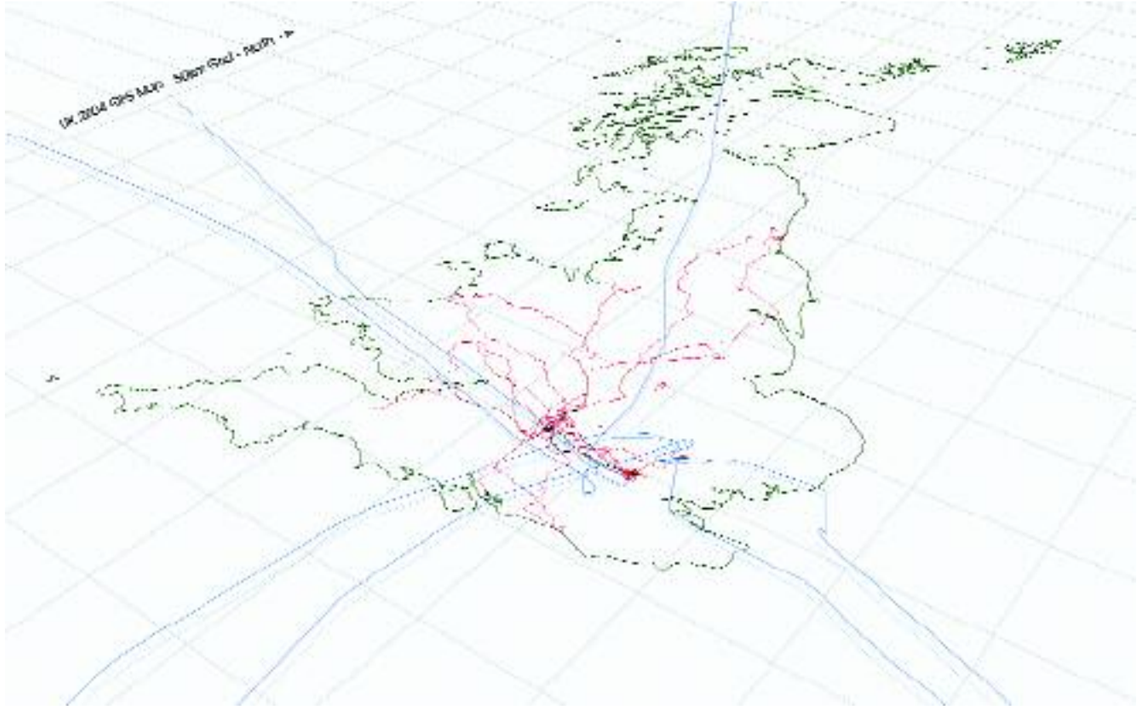
I walk, or bicycle, or fly. I've divided the drawings into *On Land*, *On Water* and *In the Air* because they produce different qualities of line. It helps to make tidy categories as you're scribbling over the planet. Drawings over land can be very inaccurate because of obstructions, and buildings and trees. They can be incredibly detailed and very small, because you can record points quite often. Often, they are very flat; the altitude information doesn't show up much. That's the attraction of flights: the sky is truly an open 3D blank canvas. If I only had a pilot's license, I'd go wild up there. With boats, it's the biggest wide-open space on the planet: you can travel around the sea in any shape you like. You're not restricted in distance, space or shape of travel.

See "Signal Failure," pp. 166—175.

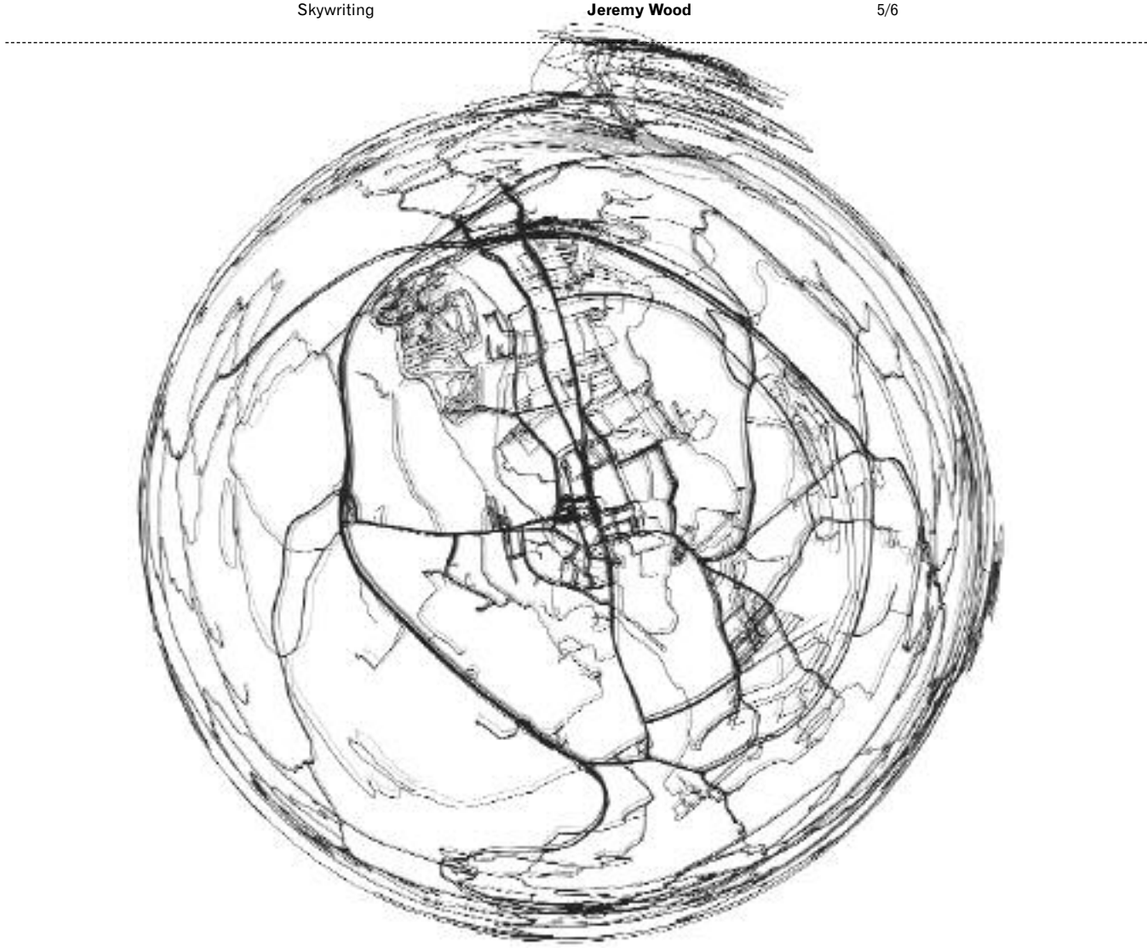




Jeremy Wood (clockwise from top left): self-portrait of the artist with GPS receiver, 2005; sore feet "after a good amount of walking in a muddy field," 2005; *Vegas Dollar,* GPS drawing, March 25, 2004, eight-mile high dollar sign drawn over Las Vegas; *Hollywood Tic-Tac-Toe*, GPS drawing, March 12, 2004, played over 23 square miles, game over after 52 miles of driving.



Jeremy Wood *Water on Water,* GPS drawing, July 2001 / (top): produced by writing the word "Water" while travelling at an average of 2.4 km/hr in an Explorer 200 rubber dinghy on the English Channel outside Hove, UK; total track length 3 km. (bottom): *UK 2004 GPS Map,* 50 km grid, 2004 / Wood's cumulative GPS drawing tracks around the UK during 2004, showing road travel in red and flights in blue. He logged a total of 63,460 km (39,432 miles), following "an elaborate style of travel that tends to the extemporised and avoids repetition where possible."



Jeremy Wood *GPSograph fish-eye GPS map of Oxford* / (top): a compilation of all Wood's tracks there in 2002, developed using *GPSograph* software, programmed by Hugh Pryor. (bottom): *Information,* GPS Drawing, July 22–30, 2001 / drawn by cycling across Brighton and Hove, UK, for eight days; total track length 36.5 km.

So non-constructed space allows you to go in and find out what shape you want to make. But surely streets are helpful for making letterforms? Medieval cities must be more propitious for serif typefaces, because they're more labyrinthine.

Perfect for serifs, yes.

What forms are you striving for that cities might get in the way of?

It's not quite that defined. If I have an idea, I'll pursue it. If it doesn't end up being very good, I simply won't carry on.

Can you give an example of one that failed?

Well, many. If you're in a park, it's often hard to judge how much space you've got left, and it's easy to run out. I might be drawing a figure, get down to the ankle, and realize there's no more space for the foot—there's a physical boundary.

How good is your internal sense of scale?

It was Average to Good, and now it's Average to Better. My perception of distance and my sense of direction have both improved immensely since I started this project.

How long have you been doing this?

I did the first pictorial drawing in 2000. Hugh Pryor and I were staring at a map of Oxfordshire and found a 13-mile long fish. The best place for its eye was a small village. We hopped in a car, went on this extraordinary journey from A to A, and three or four hours later we had an image of a fish on a GPS screen. Back then it was very difficult to share that kind of image with the world, or bring it to an established gallery. So Hugh developed the software, and I developed the website gallery.

What else are you working on?

I'm teaming up with another very talented programmer, Alex Garfitt, to make an online database of GPS tracks. I've been recording all my journeys, creating maps and compiling the drawings into a pictorial journal. I can call up where I was, when, and how fast I was traveling. Alex has developed a software engine we call *Mapograph* that will enable me to connect all the GPS drawings I've received from people around the world, who have been inspired to travel in funny shapes. Some take the trouble to illustrate their own tracks, but most just email raw data. At first, I welcomed these submissions, but then I realized I was spending more time illustrating other people's tracks than working on my own. *Mapograph* will automate the illustration process: it's a combined GIS and GPS mapping tool that maps all the information onto a 3D globe.

<www.gpsdrawing.com/gallery/land/wfish.htm>

So people will be able to log on and find a GPS drawing at specified coordinates?

Yes. It's the idea of public cartography. Anyone with a GPS receiver can contribute to the database: it's like coloring in the planet with GPS tracks. People could play Tic-Tac-Toe in an open park, tag places and claim territories. On a map, line density usually indicates more important roads, but on GPS maps, thicker lines represent roads that are more frequently traveled upon.

Do you see your work as belonging in the tradition of the Situationists, or of Land Artists like Richard Long?

Yes, though I had never appreciated Land Art until recently, when I found out what they were doing. I'm also thinking of Leonardo, who paced in the streets, to create a map. I've become more attuned to place, and the relevance of history to an area. I want to tackle the *London A–Z*, by traveling through place names in London alphabetically.

Your work seems more formal than political.

The only political piece I've done is the *Vegas Dollar* sign. Even then, it was pointed out that it was political after the fact. I'm not interested in my work being about me and my thoughts and feelings. It's about place, geography and travel. Maps are full of political information, but these boundaries cannot be seen from space.

The satellite view of the earth is invested with a great deal of political authority. Your work seems to deliberately misuse that authority.

I tell my workshops that I use billions of dollars of technology for creative purposes. I'd like to thank the American taxpayer for that.

See "Carto-City," pp. 155–156, and Gazetteer G, *London A–Z* plate, p. 160.