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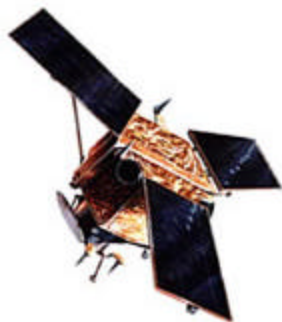
Visit the beach from the
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Miami, which currently hosts the prototype TerraFly. Users can fly at one-metre resolution over the entire continental United States.

You can now fly in real time anywhere in the United States free of charge from the comfort of your computer. With TerraFly, an online marriage between a vast database of aerial and satellite imagery and cutting-edge server technology, you can wing over the mountains of Montana or up the back alleys of the Bronx.

"You can actually see cars and trucks on the streets," says Martha Gutierrez, manager of the High Performance Database Research Center at Florida International University in



TerraFly relies on data from satellites such as

NASA put up the cash and some map data to launch the project. Now the US Geological Survey has added its aerial and satellite data. Within two years, users will be able to fly along coastlines, mountain ranges or city streets anywhere in the United States and the rest of the world's urbanized areas, says Gutierrez. Ultimately, the project will hold 20 trillion bytes of data - the page you are now reading contains about 20 thousand bytes.

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The database was developed as part of a long-running computer-research project. It feeds the data over the web in real time by loading only the part of the image being flown over at any instant and predicting where the 'pilot' might go next. Serving up small packets of information from the right part of the database "is by far the biggest challenge", says Gutierrez.

Mapped out

Although it is currently the perfect free-access workplace distraction, TerraFly is not a public service for the cartographically inclined. "We are developing an e-commerce identity now, so you can buy right offline," say Gutierrez. The US Geological Survey and imaging companies hope to sell high-resolution versions of their maps through the site.



Fly buy: virtual house hunting made easy.
© USGS

project," says Gutierrez.

TerraFly's backers also hope to commercialize the technology by licensing combinations of the images with tourism, real estate or scientific data to other websites.

For example, web-savvy house hunters can already fly over images of downtown Miami superimposed with the locations of houses for sale, zoom in to inspect neighbourhoods and then click on a house to view an image of it. They could then go directly from the image to the estate agent's website for more information. "We intend to commercialize what began as database-research