

News - Human

'BioMaps' Track Urbanite Moods

Tracy Staedter, Discovery News

Aug. 11, 2006 — A research project using Global Positioning System (GPS) and lie detection technology is helping build maps that show how people feel as they navigate city streets.

The Bio Mapping project, led by artist and designer Christian Nold, a lecturer at the University College London, not only puts municipal technologies in the hands of citizens, but could also stimulate community discussions about urban regeneration, crime, pollution and noise.

"As soon as you put surveillance technology into the hands of the individual to analyze their own body it ceases to be surveillance and becomes something different and useful for the user," said Nold.

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The idea for the project evolved out of conversations centered around surveillance technology in London. In the city alone, 225,000 closed-circuit cameras keep watch over citizens.

On any given day, a person could be captured on video 400 times, said Sebastian Groes, a lecturer at the Universities of Greenwich and Birkbeck, who specializes in urban space and maps of London. Groes is not a member of the Bio Mapping project.

Nold thought it would be interesting for people to use security technologies — designed for monitoring — to instead interpret their own biometric data.

To date, roughly 600 people in more than 15 cities have participated in the project.

Each participant is given a small lie-detector set, consisting of two finger cuffs worn like thimbles over the index and middle fingers. The cuffs are connected by a wire to a PDA-sized component carried in a shoulder bag.

The cuffs have sensors that measure changes in the skin's perspiration. Large changes show strong emotional arousal.

Each participant also carries a GPS device in the shoulder bag,





Mood Map



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For about an hour, the person wanders through neighborhoods, taking any preferred route.

At the end of that period, they return to Nold's office. Nold downloads the data and, using software he wrote, formats the information for Google Earth to produce a map of the person's hour-long journey.

Lastly, Nold and the participant annotate the map with captions that describe the experience along the way.

The finished map shows the mountainous peaks and valleys representing the person's mood overlaid onto the city's grid. At each peak or valley, a small caption describes what the person was feeling.

"It's visualizing more directly what's happening in the mind and body and not just the surface," said Groes.

For now, Nold is gathering qualitative data that he hopes will generate discussion about crime or areas slated for renovation. In the next phase of the project, he will work with neuroscientists to analyze two years of data.

At that point, Nold hopes to develop new approaches for community workshops, such as asking people to walk through neighborhoods at night.

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