

## BULLETIN

### Mapping cell phone usage

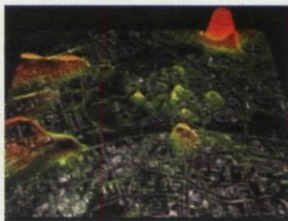
A group of researchers at the Massachusetts Institute of Technology (MIT), Cambridge, Mass., have been able to map an entire city in real-time by monitoring the usage of tens of thousands of cell phones.

Using anonymous cell phone data provided by the leading cell phone operator in Austria, A1/Mobilkom, the researchers developed the Mobile Landscapes project, creating electronic maps of cell phone use in the metropolitan area of Austria's second largest city, Graz.

The researchers used three types of data—density of cell phone calls, origins and destinations of the calls, and position of users tracked at regular intervals (the latter need to register and voluntarily give their consent via text message)—to create computer-generated images that can be overlaid with one another and with geographic and street maps of a city to show the peaks and valleys of the landscape as well as peaks in cell phone use.

"For the first time ever we are able to visualize the full dynamics of a city in real time," says project leader Carlo Ratti, an architect/engineer and head of the SENSEable City Laboratory at the MIT. "This opens up new possibilities for urban studies and planning."

<http://senseable.mit.edu/projects/graz/graz.htm>



Street map of Graz, Austria, overlaid with an electronic visualization of cell phone activity. Image courtesy: SENSEable City Laboratory.

## LIFE SCIENCE

### Growing genome database

An enhanced version of the Integrated Microbial Genomes (IMG) data management system of the U.S. Department of Energy's Joint Genome Institute (DOE JGI) has been made available to the public.

The new version, IMG 1.2, contains 270 additional public genomes and nine new JGI genomes (four finished, five drafts), bringing the total number of genomes in IMG to 618 (318 bacterial, 25 archaeal, 15 eukaryotic, 260 bacterial phage). Forty of the finished genomes and 80 of the draft genomes in the database were sequenced by DOE JGI.

IMG 1.2 enables users to add annotations to IMG as well as save the results of their analysis of organisms and genes. IMG 1.2 also features enhanced comparative analysis capabilities, including VISTA exploration of sequence conservation for selected organisms and KEGG pathway and COG category profiles across all organisms.

The IMG has been running since March 2005 with its next update scheduled for December 1, 2005.

<http://img.jgi.doe.gov/pub/main.cgi>

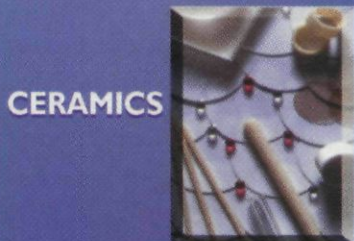
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