

MIT researchers unveil first Trash Track results in two new exhibitions

A team of researchers from the MIT SENSEable City Lab recently embarked on a major project called Trash Track, which aims to get people thinking about what they throw away and how it impacts the environment. The project uses custom-designed electronic tags to track different types of waste on their final journey through the disposal systems of New York, London, and Seattle.

Waste Management (NYSE: WM) funded the study.

This week, the preliminary results of Trash Track will be unveiled in two new exhibitions: as part of the Toward the Sentient City exhibition, on view from Thursday, September 17 until November 7 at the Architectural League in New York; and on Saturday, September 19 at the Public Library in Seattle.

“Our aim with Trash Track is to reveal the disposal process of our everyday objects. ” said Carlo Ratti, director of the SENSEable City Lab. “The project could be considered the urban equivalent of nuclear medicine —where a tracer is injected and followed through the human body to reveal how a system functions,” said Ratti.

“We funded this study to see if there is a technology to help our entire industry become more efficient,” said Carl Rush, VP of Organic Growth for Waste Management. “We hope that when the results are analyzed, we will see ways to improve the logistics of waste -- from our trucks, to our recycling, to our disposal systems.”

In mid-July, 2009, the Trash Track team began a deployment of 3,000 smart tags on waste objects in New York, Seattle, and London. Working with Waste Management, Inc. they are monitoring the path of the trash in real-time using the tags, which report location data to a central server at MIT, where it is processed and visualized into dynamic maps showing a slice of the city’s waste stream.

"Our tags are similar to a small cell phone, but have no keyboard or screen. To maximize battery life, we use a fine-grain motion sensor within the tags, which currently last for up to two months on a single charge," says Kristian Kloeckl, one of the project's leaders.

The two exhibitions will feature visualizations that show the movement patterns of different household trash objects through Seattle and New York, in real-time. For example, amongst the objects tracked are a Starbucks coffee cup, a plastic yogurt container, an old computer, and a fluorescent light bulb. The movement traces of such objects will be shown together with footage of waste disposal and recycling facilities, filmed by video artist Armin Linke.

With the Trash Track project, the SENSEable City Laboratory seeks to couple high-tech, rapidly evolving technology with an everyday human activity: trash disposal. The project builds on some of the lab's previous projects - including Real Time Rome and the New York Talk Exchange – that explore the ways in which the increasing deployment of sensors and mobile technologies are transforming how we understand urban environments.

“Trash Track has the potential to encourage people to make more sustainable decisions about what and how much they consume, and how it affects the world around them,” said Assaf Biderman, Associate Director of the SENSEable City Lab.

"The project represents a type of change that is taking place in cities: a bottom-up approach to managing resources, promoting more informed decision-making in the public through the use of pervasive technologies and information,” said Biderman.

The MIT TrashTrack team is composed of Carlo Ratti, Assaf Biderman, Kristian Kloeckl, Lewis Girod, E Roon Kang, Armin Linke, Musstanser Tinauli, Eugenio Morello, Jennifer Dunnam, Avid Boustani, Malima Wolf Natalia Duque Ciceri, Kevin Nattinger, Francisca Rojas, Christine Outram, Alan Anderson, Samantha Earl, Sarah Neilson, Giovanni de Niederhausern, Jill Passano, Renato Rinaldi, and advisors professors Rex Britter, Stephen Miles and Tim Gutowski. The project has been developed in partnership with Waste Management Inc., Qualcomm Incorporated., the Architecture League of New York, the City of Seattle, and the Seattle Public Library.

For more information on the project, see:
<http://senseable.mit.edu/trashtrack/>

To learn more about Waste Management visit <http://www.wm.com> or <http://www.thinkgreen.com>.