

Trash that talks

By Eric Sylvers

Published: September 21, 2008

DUINO AURISINA, Italy: It looks just like any other trash bin in any other square in any other Italian village.

Yet the bins in this village's main square, noteworthy only for a town hall adorned with the white stone that has been mined in nearby quarries since Roman times, can talk.

A metal box about the size of a one-liter, or one-quart, milk carton lying on its side is screwed onto the top of the trash bins and hides beneath a radio connection that lets it communicate with approaching trucks and a SIM card to relay data back to a control center.

The rectangular device, dubbed the MSD-112, is being used to provide information on how full the trash bins are and what they contain. Before the test run in this village of 8,000 people nestled in the far northeastern corner of Italy on the border with Slovenia, the bins were emptied every day, regardless of how full they were. That meant the trash trucks were often blocking traffic and idling while they emptied bins that were less than half full.

"With this new system, we save time and gasoline and the trucks are on the road less so they create fewer stoppages of traffic and pollute less," said Livio Verh, an employee with Acegas, the company that collects trash in Duino Aurisina and several nearby communities, including the provincial capital, Trieste.

Today in Business with Reuters

Radical change for Goldman and Morgan

European stocks ease as investors digest bailout and oil rises

U.S. Democrats start setting terms for bailout

The MSD-112, for multiservice device - with the 112 representing the first three numbers in the Fibonacci sequence, a mathematical series in which each number is the sum of the previous two - uses ultrasound to measure the level of trash in the bin and has been tested for four years on 40 of Duino Aurisina's 300 bins.

A full rollout here is expected soon, though Acegas and Luciano Generali, an engineer with Elcon Elettronica who invented the device, have moved slowly, aware that an unsuccessful demonstration could set them back for years.

"The test in Duino has gone very successfully and we are ready for the next step, but we won't really know how well the device performs in tougher conditions until we are able to implement it in a larger city like Trieste," said Marino Bozic, the director of the trash collection department at Acegas.

The system works like this:

As the driver of the truck gets to within about 100 meters, or 330 feet, of the bins on the side of the road, an LCD screen in front of him automatically displays the level of trash and he can decide whether to stop.

At the same time, the SIM card continually relays information back to a central computer system, allowing a specific route to be created and sent back to the truck driver so he can go only to the bins that need to be emptied.

"Acegas asked for a way to improve the way they collected trash, so we went to work," said Generali, the inventor of the MSD-112. "The concept is actually relatively simple and not expensive to implement."

Each device costs about €100, or, \$140, though that price could fall if they were produced on a large scale, Generali said. Each runs on a solar-powered battery that has lasted three years - and sometimes longer - during the tests, helping to keep maintenance on the MSD-112 limited.

In a town of 200,000 inhabitants, about 200,000 liters, or about 53,000 gallons, of gasoline, or 25 percent of that used by the company collecting the trash, could be saved each year with the use of the MSD-112, according to Generali's calculations.

"This does not just reduce the time and costs of collecting trash. It can also be a way to control the whole process, to have a record of how many times a bin has actually been emptied," Generali said during a conversation at his office in the Science Park of Trieste, a cluster of companies specializing in high-tech, biotech, aerospace, physics and telecommunications. "Any anomalous activity is recorded. With this system we can also know what kind of trash is in the bin, and that can help with recycling."

The MSD-112 could have other uses. One, Generali said, would be as part of an early warning system for forest fires. The device can be outfitted to measure temperature and send that information back to a central computer, he said.

- E-Mail Article
- Listen to Article
- Printer-Friendly
- 3-Column Format
- Translate
- Share Article
- Text Size

Video



See all videos »
\$700 billion dollar bailout

The US Treasury Secretary Henry Paulson is seeking public approval after plans were put forward to Congress to...

Most E-Mailed

24 Hours | 7 Days | 30 Days

- Roger Cohen: The fleeing of America
- Young and Arab in land of mosques and bars
- In a financial crisis, Obama shows a steady hand
- U.S. weighs bailout of foreign banks, too
- Staying one step ahead of the crowd
- Radical change for Goldman and Morgan
- Global banks expect to fall under U. S. bailout umbrella
- Land of Gandhi asserts itself as global military power
- Is fast fashion going out of fashion?
- McCain's war story is a fading memory in Vietnam

INTERNATIONAL
Herald Tribune ih.com/biz

AIG takeover likely to have wide ramifications in Europe

More from Business:

- Lloyds seals deal for HBOS
- Barclays considers buying further Lehman assets
- Graphic: A year of heavy losses

Blogs: Managing Globalization

Join the IHT's Daniel Altman in a lively discussion of the day's economic news with an eye on globalization.



Ads by Google

waste bins
You can continue to search or find waste bins here.
www.trashcan24.com

Ashtrays & Litter Bin
Ashtrays For Table & Wall-Mounted Wide Selection Of Litter Bins
www.a1barstuff.co.uk

Hotel Alla Valle di Banne
Il miglior rapporto qualità/prezzo della città di Trieste!
www.lavalledibanne.it

Why Your Stomach is Fat
Stop making these 5 mistakes & you will finally lose your ugly belly.
www.StomachFatsUgly.net

» Save up to 72% on morning home delivery of the IHT