

TagMaster's RFID system creates efficient waste handling in Seoül, South Korea.

Summary

The main waste disposal site in Seoül uses TagMaster's RFID system for automatic access control for the garbage trucks. The system provides an efficient solution for fast and secure access and identification of the trucks, resulting in increased throughput and automatic debiting of the various waste companies.

Challenge

The city of Seoül employs a huge waste dump serving a population of more than 10 million. Around 10,000 garbage trucks collect waste from about 10 different districts in the region, resulting in an enormous task for the city's administration to charge each community according to the amount of garbage disposed.

In the past, the waste plant used punch cards to identify each truck. The truck drivers inserted the cards into a reading device by the access gate for identification. Unfortunately this system created queues and was easily manipulated. It was considered unreliable and the misuse caused considerable loss in revenues.

Solution

After thorough evaluation, the city of Seoül chose to install the TagMaster RFID system. TagMaster MarkTags (factory coded and read-only) were permanently mounted inside the windscreens of the garbage trucks, to avoid "tagswapping" between the trucks. Each ID-tag's ID-number was stored in a central database for verification of each truck upon arrival at the plant. A TagMaster reader, mounted by each of the 12 entry gates, identifies each truck as it approaches the gate. Thanks to the long reading range the system is truly hands-free. The readers are also connected to the scales to link each truck with its load weight. Any attempts to manipulate the weighing are prevented by



photo-sensors checking that all wheels of the garbage trucks are on the scale simultaneously.

All 12 entry gates are fully automatic, allowing for convenient access, efficient debiting and elimination of fraud.

Conclusion

This large-scale implementation of TagMaster's RFID system at Seoül's enormous waste handling site has resulted in increased throughput, faster revenues, improved debiting accuracy and a possibility to collect data for planning purposes. Future extensions aim for electronic recording of recycled waste as well as to further improve the administration of heat and electricity yield from waste combustion.

Products used:

S1503 Reader
S1255 MarkTag