



## [RFID Gazette](#)

### ***Radio Frequency Identification news and commentary.***

#### **Got Milk Crates? Tracking With RFID**

Way back in my college years, one of my floormates once showed me his vinyl record collection of over 1000 discs. All of them were stored in "borrowed" milk crates. That was a lot of crates. Back then, milk crates were still wide enough for LPs, and nicking them for shelving was a popular pastime.

But even though milk crates have long since changed in shape and size, according to a recent report on CNBC TV, dairies in the US still lost up to \$100 million worth of empty milk crates last year. Except it wasn't college students stealing them.

Much of the theft is actually done by companies who grind the plastic down to sell to toy companies and other buyers. Dairies know this because milk crates use a special type of plastic not used elsewhere.

Part of the problem is that crates are left outside, making them easy targets for theft. One dairy official interviewed on the CNBC TV segment said he couldn't believe his eyes when one day, in broad daylight, a large flatbed truck drove by that was stacked many crates high and completely full of his company's crates.

Obviously, this is a huge problem, and since tracking objects is something that RFID technology does well, I wondered if it might benefit the dairy industry.

There are a number of ways to implement the solution, but because milk tends to be a low-margin product, any solution requires that milk sellers not have to pay for any RFID readers. Here's my idea; feel free to pick it apart or make improvement suggestions:

(1) Apply RFID tags to all milk crates.

(2) When a driver makes a delivery, s/he scans all the crates delivered, and that information is recorded on the handheld scanner.

(3) When the driver returns for the crates on the next delivery, they scan all the returned crates. Apparently UHF (Ultra High Frequency) RFID tags can be scanned at a great distance, so the crates do not even have to be sitting together.

(4) If any crate is missing, the handheld reader signals this and the vendor is levied a charge. (Crates used to be \$1.60, now they are \$3.60 because of petroleum costs.)

The onus still lies with store owners to safeguard crates by either leaving them in the store or creating a safe-shed outside, possibly subsidized by the dairies. Considering they are collectively losing \$100 million/year, it might just be worth it.

The above method minimizes technology costs to both dairies and their resellers. Store owners need no RFID readers themselves, unless there is some way that customers (or employees) can steal crates unseen.

Of course, if store employees are apathetic and leave crates outside, all that technology is not going to make a whit of difference, short of RFID readers being installed out in the parking lot. Not sure that that is a dystopic society I want to be part of.

So while RFID technology may be appropriate for numerous applications, what is more important is how logistics and data flow issues are resolved. For some RFID applications, that may be the most difficult part of a project.

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