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## Sticker Shock

In the recent feature (Will Users Be Stuck for RFID Labels?), *RFID Journal* looked at some of the major providers of RFID labels and the challenges they are having in meeting the expected demand for “smart labels”—labels with an embedded RFID transponder. The story didn't address the all-important issue of cost,



because the label companies would not provide us with pricing information. The reason, they said, was there are too many variables; the cost depends on volume, type of antenna and other factors.

While that's all true, it's also true that some label makers and RFID transponder manufacturers are taking advantage of the fact that mandates from major retailers have created a seller's market for Electronic Product Code tags. Some are charging prices that make it difficult for end users to justify the cost of using smart labels. End users tell us they can buy a simple RFID tag for less than 20 cents. But if they want an RFID tag inside a thermal transfer label that they can print a bar code on and stick on a case or pallet, it costs at least 40 cents.

"All of the talk about 5-cent tags is immaterial if the price of smart labels is out of whack," wrote a reader who works at a very large household products company. "What this means is that manufacturers like us are going to have to employ a solution that doesn't include smart label printers."

Manufacturers like my e-mail correspondent are blaming the label makers for the high cost of smart labels. Some label companies are apparently taking advantage of the shortage of EPC labels to charge high prices. But some label makers blame the high costs they have to charge on transponder manufacturers. One told me that he not only has to pay 17 cents per RFID transponder, but one provider of RFID

transponders is requiring that he fork over \$3 million up front to guarantee a supply of EPC tags over the next three years. The label maker isn't sure what the demand will be for EPC smart labels and is understandably concerned about assuming this risk. "The transponder supplier either needs the funding to stay in business, or it is taking advantage of the fact that it is one of the few companies making EPC tags today," says the label manufacturer. "Either way, it makes it tough for us to do business."

Label makers also complain about the quality of the inlays they receive from RFID transponder makers. The inlay is an RFID microchip attached to an antenna mounted on a substrate. The label maker takes the inlay and sandwiches it between a printable label and another layer with adhesive to make the finished smart label. But label makers say that 3 percent to 5 percent of the RFID inlays they receive from the transponder makers don't work and must be thrown away. Inlays from one manufacturer have a defect rate of 20 percent. The cost of defective inlays inevitably gets factored into the price of functioning finished labels.

Label makers also have to absorb the cost of testing the inlays when they arrive and again when the label is made, to ensure that the RFID transponders were not damaged during the conversion process. One label maker says an inlay provider is charging 10 cents per unit to verify that its inlays are functioning. That's unbelievable. It's as if *RFID Journal* charged readers to verify that the facts in our articles were correct.

Part of the problem is that the RFID industry is immature. Most RFID vendors have not had to produce inlays or labels in large numbers, so they don't know how to do this efficiently. And the RFID supply chain is not integrated. One company makes the RFID chip, another makes the inlay and a third makes the label. Each company takes a profit, which drives up the cost of the finished smart label. Over time, the industry will

become more integrated and therefore more efficient.

Another problem is that some companies seem to be intent on taking advantage of the fact that it's a seller's market today. Of course, all companies are in business to make money. And those that have invested millions of dollars in equipment to make RFID inlays or finished smart labels want to get a return on that investment.

While that's a legitimate goal, it needs to be balanced with a longer-term objective: RFID vendors need to build the market for their products. Manufacturers are under pressure to meet mandates today. If they have to pay high prices for smart labels, they will drag their feet on adopting the technology.

As we move from a world where RFID is a technology used in specialized applications to one where it is ubiquitous in the supply chain, the vendors that will survive won't necessarily be the ones with the best technology. They will be the ones that can turn that technology into products that the market wants at a price the market will bear. Execution will be key. That's where RFID vendors should put their focus, instead of on maximizing short-term revenue.

*Mark Roberti is the founder and editor of RFID Journal. If you would like to comment on this article, click on the link below.*

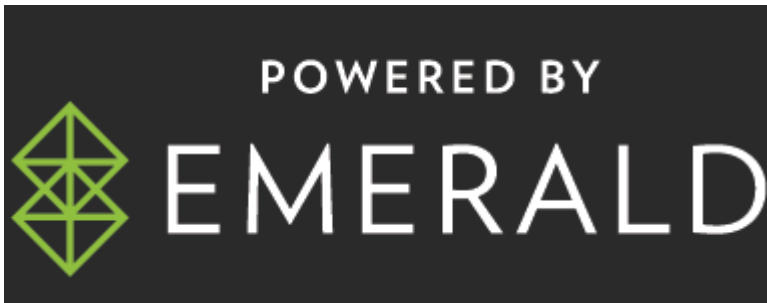
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