

I've been thinking...



How to increase IQ of a bar code

July 2007

I've been thinking...about alcohol, chicken, drugs, and rising intelligence quotients—more specifically about beer labels, meat packaging, medication labels, and how bar codes are getting smarter.

As seen on TV, Coors Lite bottles now come wrapped with temperature-sensitive labels. The silver image of the Rocky Mountains changes to blue when the chilled beer dips to what Coors believes is the idyllic drinking temperature. Then the label retreats to silver as it migrates back toward lukewarm.

It's a pretty cool idea. But, if you ask me, simple touch/taste tests have served us pretty well over the years. Not to mention that people argue over the ideal temperature of beer. Just ask a German.

If we are lucky, however, it won't be long before meat packers and drug manufacturers begin printing product labels with temperature-sensitive ink. In these instances, ink properties will be slightly different than what we are seeing on beer shelves at 7-Eleven.

Beer labels are printed with reversible temperature-sensitive ink that changes color back and forth as temperatures rise and fall. Those packages of chicken tenders we pick up to go with the beer will be printed with irreversible temperature-sensitive ink. If at any point in the supply chain the temperature rises above the predetermined point-of-perishability, the color changes permanently. This will be noticed at checkout and help prevent shoppers from taking salmonella home. Pretty smart, huh? Chalk one up for consumer safety.

The same technology offers promise for improving patient safety. It's not far fetched to anticipate the application of smart bar codes on medication labels. The ink with which they are printed will be sensitive to temperatures outside predetermined parameters. If at any point in the supply chain the product gets too cold or too hot, the bar code will change color and never revert to its original state. This will be noticed at or before the point of care and prevent caregivers from administering compromised medications. Brilliant, huh?

Another (perhaps sexier) solution being proposed for perpetual temperature tracking involves RFID chips. The one advantage they have over temperature-sensitive bar codes is not only that they register the temperature, but RFID chips also are capable of recording how long the

product was above or below the acceptable range.

While smart bar codes don't have as much brain power as RFID chips, they boast a number of impressive advantages—not the least of which is that bar codes can be read by existing scanners and require no change in IT infrastructure as would RFID. Additionally, these otherwise familiar bar codes are dramatically less expensive and significantly more stable than RFID chips.

Recently I bumped into a company called POP! Technology, whose Web site (<http://www.pop-technology.com>) is really cool and pretty hot. I bet a beer you will get a kick out of the way it explains how temperature-sensitive barcodes work. Clicking through it helped raise my bar-code IQ. POP, by the way, stands for point-of-prevention and their company's mission is "Saving the world one bar code at a time." I'll drink to that.

What do you think?



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