Flint Sets Up Conductive Ink Unit

The new division will develop printed RFID antennas, smart packaging and printed electronics.

June 17, 2003 - At last week's RFID Journal Live! conference in Chicago, Flint Ink, the world's second largest producer of commercial inks, announced that it has created a separate business unit to commercialize conductive inks.
Conductive inks are critical to the use of RFID to track individual products because they enable antennas to be printed right onto packages, as part of the normal commercial printing process. Printed antennas are recyclable and cost less than solid copper antennas. Gillette, for example, says it expects to reduce the cost of RFID tags by 20 to 40 percent by using printed antennas on its packages.

Flint announced back in January that it was investing in a new facility to develop the inks (see Flint Bets on Printed RFID Antennas). The new business unit, which has not been named yet, will be developing inks for customers at a 16,740 sq.-ft. resource center that will open by the end of the year.

Jim Rohrkemper, VP of Flint's emerging business segments, will head the new unit. Dan Lawrence, director of technology and commercialization, and Robert Thompson, a consulting partner at Flint, will work closely with Rohrkemper.

Lawrence told *RFID Journal* that the new unit will be a standalone subsidiary. The resource center, which is 15 minutes from Flint's headquarters in Ann Arbor, Michigan, will have ink formulation labs and facilities for doing small-, medium- and large-scale proofing of new products. "Once a new conductive ink is formulated, we will be able to get it on a press quickly and conduct experiments," Lawrence said. "That will really drive the technology forward."

The one drawback of printed antennas is that the performance has not been as good as solid copper antennas, particularly for 13.56 MHz RFID tags, which require highly conductive antennas. But Lawrence said performance is improving for UHF tags. "If a solid copper antenna yields, let's say, a read range of four meters (12 feet) in open space, a printed antenna -- which can arguably be produced much more quickly -- can deliver maybe three to three and a half meters (nine to 10 feet)," he says.

In addition to conductive inks for RFID antennas, Flint plans to develop inks used to create electronics for smart packaging. Lawrence pointed to blister packs that automatically record when someone takes a pill during a drug trial (see RFID Tracks Drug Trial Compliance) as an example of the kinds of applications where conductive inks can be applied.

Flint's new division will also look at printing integrated circuits and other electronics to reduce the cost of electronic devices. In other words, instead of using a silicon microchip, the circuits would be printed to save money. "That's a bit far out," said Lawrence, "but it's probably closer than most people think."

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