



Zebra's new OPC Server saves Cadbury Schweppes from a sticky problem

Leading chocolate and soft drinks manufacturer Cadbury Schweppes has been using barcode label printers at its Rathmore ingredients factory in County Kerry, Ireland for many years

Zebra printers are used to print barcode labels containing product code, batch number, production date, moisture and fat content information, which are attached to each product before it leaves the factory. This information is used at the products' destination – Cadbury's main production centre in Dublin, Ireland.

Several years ago the Rathmore site switched to Zebra 140XiIII™ label printers, and while they have performed perfectly, there was always something missing.

Jim Ely, production manager at the Rathmore facility explains: "We use a SCADA system called Rockwell RS View to control and monitor our production processes. The data that prints out on the Zebra 140XiIII's is actually collected by and stored in the RS View software. Historically, there was no way of getting the data directly from the SCADA system to the label printers, so my operators had to type it in manually on keyboards. Whenever people are required to type complex data on keyboards, there is the potential for errors and typing mistakes. These mistakes can cause major problems further down the supply chain."

Modern SCADA systems such as Rockwell RS View use an industry standard software protocol called OPC (for more information visit www.opcfoundation.org). Barcode label printers traditionally use their own proprietary programming language – Zebra printers use ZPL (Zebra Programming Language). The result is that the two are not compatible and the devices cannot communicate with each other.

Jim Ely continues: "The ideal solution for us would be to effectively "plug" the Zebra printers straight into the Rockwell RS View software so that the operator selects the required barcode information at the MMI on the factory floor. This information would then be processed and stored in the SCADA system and then sent automatically to the Zebra printer. Capturing and storing such information for future retrieval could give us huge benefits from a product traceability point of view. However, my impression was that this would be difficult, if not impossible, to achieve, and involve lots of expensive and time consuming specialist programming.

Specialist SCADA programmers can cost in the region of £450 to £500 per day (€630 to €700), and the amount of programming time required could easily run into 4 or 5 days.

Recognising that there was a market need for SCADA connectable label printers, Zebra developed and launched its own OPC Server in 2003. The Zebra OPC Server is designed to deliver plug and play connectivity for all latest generation ZebraLink-enabled label printers and OPC-based SCADA systems. The connection is designed to be 2-way; to allow SCADA systems to send data to printers, and for printers to report status and downtime events to SCADA systems.



Solution Technology

140XiIII™
SCADA
RS View Software
Zebra OPC Server



ADC Barcode Systems, the local Zebra reseller, informed Cadbury Schweppes that there was a potential solution to the problem, and an action plan was drawn up. The Zebra OPC Server was installed on the Cadbury Rockwell RS View system, and within 30 minutes, OPC data generated by the SCADA system was printing out on the barcode labels. After some fine-tuning and minor amendments, the job was done – in a total of 4 hours.

Jim Ely sums things up: “The Zebra OPC Server really was plug and play. I saw my SCADA data printing out from Zebra printers within half an hour. This connectivity saved me weeks of programming time and thousands of pounds of cost. We got the best of both worlds – the Zebra OPC Server has eliminated my operator typing errors without costing a fortune or taking weeks to implement.”

A future plan is for Cadbury Schweppes to use the other main function of the Zebra OPC Server – its alarm and event capability to display printer downtime and faults on the Rockwell RS View screens. Like the label data transmission, this feature will only take a short time to set up.

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