

Food Engineering Article about Visual Talking January 2013



► John McMill (left) and Tim Duvant stand in front of a 20 kW vacuum microwave dryer in the EnWave pilot plant. Resistance to electrically powered processing equipment is fading, causing the transition to technologies such as vacuum microwaves. Source: EnWave Corp.

If companies are going to develop the workers necessary to maintain production, they not only must redefine the worker-management relationship but also communicate differently with people who weren't around before the World Wide Web existed and are more comfortable with a smart phone than a user's manual (see related story below).

The change will be most visible with plant floor HMIs, suggests John Kozal, business development

manager at Atlanta's B&B Industrial Automation. His firm debuted a "multi-touch tablet" that bears a stronger resemblance to an iPad than a conventional HMI at November's PACK EXPO in Chicago. New panel technology is not driven by manufacturers' needs but by the expectations of their workers, he says. Multi-touch screens deliver more functions, from recipe management to instructional videos, in a format familiar to say Gen Yers. "It won't be enough to have buttons" on a standard HMI, Kozal believes.

The work environment will be a lot less hazardous, as well, thanks to improvements in machine safety. The dedicated safety PLC is being rendered obsolete, replaced by a single controller that manages motion, logic and safety functions. "Societal expectations are such that safety is permeating all aspects of automation," says Tim Roback, marketing manager-safety systems for Rockwell Automation. Globalization is spurring higher standards and expectations. "It is very difficult for manufacturers to explain why one expectation for safety is not applied in another region," Roback adds. Conse-

Images that talk the talk

The visual factory is an old concept that's gaining new life, thanks to the capabilities and availability of personal electronic devices. But to get the most from them, food companies need to render the principles of "visual talking," suggests Mark Grace, founder and president of Beyond Vis.

In recent years, Grace has veered from plant floor intelligence to sales and marketing consulting, though effective communication consistently lies at the core of his message. Before Beyond Vis, he developed Thinkage, a service that put real-time production information into the hands of operators and supervisors who could take corrective actions when food processing started to drift from optimal outcomes. Thinkage staffers worked onsite at client facilities, such as poultry processor Gold Kist Inc.'s Sumter, SC plant. Rather than gather sensor readings and other data and presenting a course of action, they wrote them to train line workers to react to the information they were receiving, explains Grace.

Production goals, performance rates and KPIs are routinely posted or displayed, "but when it comes to how-to

information, that's a little harder" to communicate effectively, he says. Visual communication through "sequenced imagery" can deliver need-to-know information and overcome any language barriers much more easily than text messages or written instructions. Putting those images in the palm of an operator's hand with a mobile device or tablet would produce the best outcomes, though for security reasons, the information should reside on a local server and not be accessible from beyond the factory's four walls.

"Images available on the web are a virtual dictionary for visual talking," Grace says. "If you want to show someone how to operate a piece of equipment on the floor, it's easy to create sequenced imagery that explains it without text." Armed with a typical library of 8,000 images, many of his clients are communicating effectively with their customers and others. An example of communicating with sequenced imagery resides on the site, www.visualtalking.com.