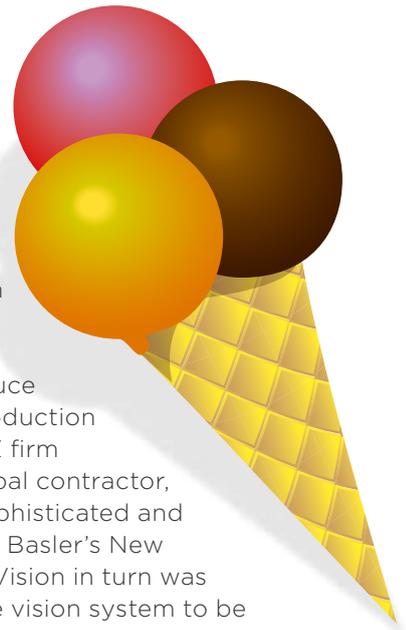


SUCCESS STORY

Icy, Iconic, Innovative: Basler scout on Yummy Mission



Customer

- TipTop Ice Cream (Fonterra Brands Ltd)
- Location: Auckland, New Zealand
- Industry: Food & Beverage
- Implementation: 2011

Application

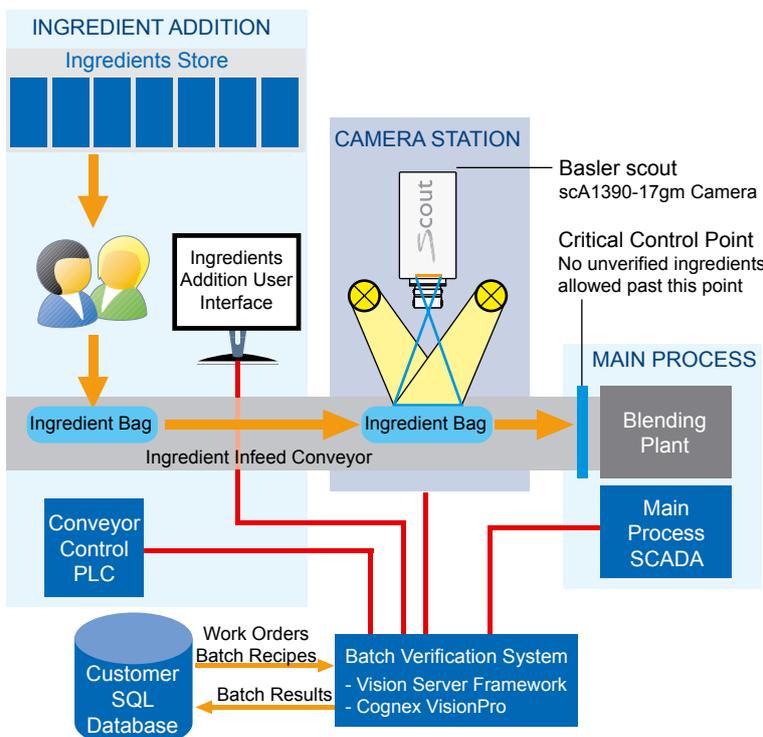
Tip Top is New Zealand's largest supplier of frozen confectionery. The factory produces around 120,000 to 150,000 litres of product each day and is constantly looking to improve processes to boost efficiencies.

In ice cream production, dry powder is mixed with wet ingredients in exact quantities to ensure consistent flavour and texture. If both components become intermingled prior to the mixing process, or if the

ingredients are added inconsistently due to human error, quality problems and potential delays can be a direct consequence. To reduce its susceptibility to such production errors, Tip Top turned to NZ firm Powder Projects as a principal contractor, with the task to design a sophisticated and reliable production process. Basler's New Zealand distributor ControlVision in turn was commissioned to design the vision system to be integrated into Powder Projects' overall solution.

Solution and Benefits

In the newly designed process, dry and wet ingredient areas are separated. The dry area was elevated to a higher level, while wet ingredients were kept at a lower level. From above the dry ingredient conveyor a Basler scout camera captures images of the powder bags. Two banks of white fluorescent lights were mounted above the camera to provide adequate illumination.

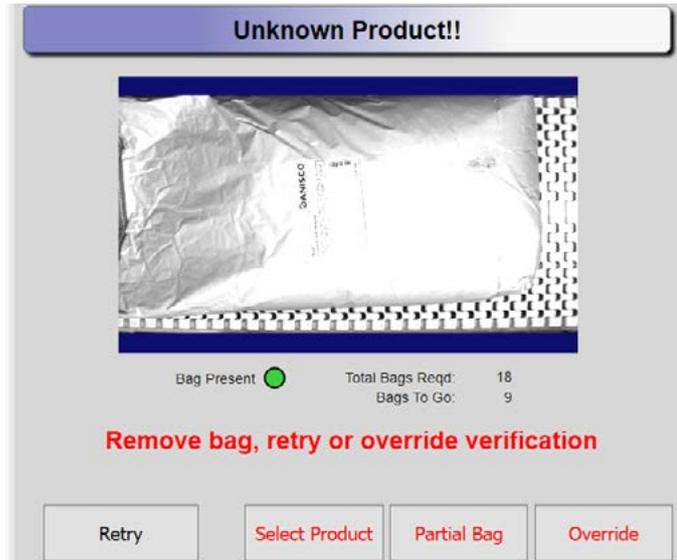


Tip Top's new ice cream production process at a glance.



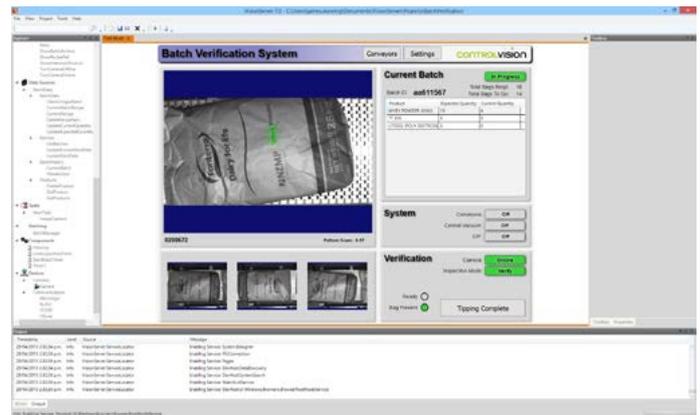
Basler's scout GigE camera is installed below a light source above the conveyor and captures the artwork on the powder bags.

The camera's GigE interface transfers all image data to the VisionServer framework. The software analyzes the images and checks them against the recipe database within the system. If an incorrect ingredient is added, or if an incorrect number of bags of a required ingredient is loaded on to the conveyor, the system triggers an acoustic and visual alarm, so that the operators can quickly identify the error cause and correct it accordingly.



When the VisionServer framework detects an incorrect ingredient, it triggers an alarm.

The camera is also used to recognize a range of different artwork on the various powder bags. Not all of the products carry an ID or barcode. As component suppliers change from time to time, the same ingredient may suddenly come in a different bag. To produce all the various varieties of ice cream, Tip Top requires around 100 different bags of ingredients. The Human-Machine Interface (HMI) provided by VisionServer allows the operators to train the system quickly and easily to learn any such new bag artwork, so that the camera can identify the different ingredients by correctly recognizing that specific artwork.



Cognex' PatMax geometric pattern matching tool allows the system to recognize the individual artwork on over 100 different bags of ingredients.

Tip Top Project Manager Brett Dockery confirms that mixing accuracy has improved significantly since the new system has been installed. "Because the camera captures exactly what has gone into the mix, it is much easier to correct any mistakes than in the past, when we had difficulty determining which ingredient was missing or wrongly added."

Technologies Used

- Basler scout scA1390-17gm with 9mm Fujinon lens
- VisionServer framework with HMI by ControlVision
- Cognex VisionPro software with embedded Pat-Max geometric pattern matching tool

More Information

www.controlvision.co.nz

www.tiptop.co.nz

www.cognex.com



Basler scout scA1390-17gm



For information on Disclaimer of Liability & Privacy Statement please see www.baslerweb.com/disclaimer

©Basler AG, 02/2014

Basler AG
Germany, Headquarters
Tel. +49 4102 463 500
Fax +49 4102 463 599
sales.europe@baslerweb.com
www.baslerweb.com



507 Kelsey Street • Delano, MN 55328
Phone 763-972-1040 Fax 763-972-1041
Toll Free 888-920-0939
Sensorsintegration.com

Asia
Tel. +65 6367 1355
Fax +65 6367 1255
sales.asia@baslerweb.com

