

CASE STUDY

# TopWorx AS-Interface is Sweet Success for NutraSweet July, 2005



The NutraSweet Company

## The NutraSweet Situation

NutraSweet, a manufacturer of food ingredients in Augusta, GA, was struggling with replacement parts for its legacy Emerson Provox process control system. Replacement cards for their discrete I/O were difficult to find and expensive to purchase.

After considering a flex-connect system, NutraSweet decided that an upgrade to bus technology was needed. They began seeking an economical and versatile system to retrofit 66 on/off valves in their recovery process.

Many manufacturers were considered, but eventually **NutraSweet chose TopWorx to provide AS-Interface masters, discrete valve controllers, and related connectivity components. TopWorx Distribution Partner, Control Southern (CSI), was chosen to bring together the necessary labor and material resources and coordinate the entire retrofit project.**

## The TopWorx Solution

An engineering consultant recommended TopWorx after having been impressed with their performance at a local pharmaceutical manufacturer. NutraSweet was also impressed. NutraSweet loved the versatility and ease of use of the TopWorx DVC-ASi valve controllers, as well as the smooth interface of the ASi to Profibus dual gateways with the new Emerson DeltaV control system.

In addition to the AS-Interface system, TopWorx provided conceptual design expertise to optimize the AS-i configuration for NutraSweet. Using their wealth of knowledge and experience in bus networking installations, TopWorx Fieldbus Solutions Engineers offered a number of practical tips that NutraSweet implemented.

## Sweet Success

John Fain, Process Control Engineering Specialist at NutraSweet, noted;

**“TopWorx provided us with some very helpful conceptual design information that led us to what I feel is an excellent bus design. Our design offers better potential for reliability and is actually cheaper than conventional bus designs.”**

The new design consisted of retrofitting 66 existing valve assemblies with TopWorx DVC-ASi discrete valve controllers with AS-Interface. This product attracted NutraSweet because it was rich in features yet compact and affordable. Fain stated, **“The TopWorx DVC-ASi was attractive for us on this project for several reasons. It offered a competitive price, bracketless installation for Namur actuators, an integrated and compact pilot valve, and LEDs, which were visible without opening the housing. It also had adjustable limit switches, pneumatic override on the pilot and robust materials of construction.”**

The bus is designed around reactors, which have to be physically removed periodically and replaced with new ones. This entailed electrical isolation, determination of wiring in each valve, and removal of flexible conduit.



**Prior to the DVC-ASi installation, it took four man-days to disconnect 25 valves on a reactor. With the new design, reactors can be electrically isolated in a matter of seconds, and one man can disconnect all the valves in less than one day.**

Control Southern ensured that all labor and material resources were available at project commencement. TopWorx was on location for technical support and installation review during the removal of old units, installation of new units, and calibration and commissioning of all devices. The job was completed in 2 1/2 days and has been successfully operating since May 2004. Fain commented, **“The TopWorx valve controllers are performing well and we are pleased with the overall package provided. The decision to choose TopWorx was a good one. Many thanks for a well executed project!”**

## About TopWorx

TopWorx is the leading supplier of field networking, valve control and process sensing solutions for the process industries. TopWorx valve networking and control solutions support multiple bus protocols, carry a variety of global approvals and operate in the most demanding plant environments. Whether rotary or linear, bus or conventional, hazardous or general purpose, TopWorx has a suitable solution.

For more information about TopWorx visit [www.topworx.com](http://www.topworx.com).

## About Control Southern

Control Southern provides engineered product, automation and control system services, and asset management solutions to the process industries in the Southeast. Strong technical capabilities, product breadth, and outstanding customer service have positioned CSI as an industry leader for nearly 50 years.

For more information about Control Southern visit [www.controlsouthern.com](http://www.controlsouthern.com).