



## United Biscuits Glasgow, Scotland

Sample of the United Biscuits  
McVitie's Brand



Main Control Screen at UB - McVitie's

### About United Biscuits/McVitie's

Quality is a primary concern for McVitie's, part of United Biscuits (UB). At their plant in Tollcross, Glasgow, they have developed a control technology, which puts them in the front line on this point, as well as reinforcing the approach to innovative solutions encouraged across the business. The question was how to translate the intelligence of more than 30 years experience into an automatic, high-performance process control system, which is user friendly and could be retrofitted on the existing equipment.

### ICONICS Software Deployed

The software selected for this application is based on ICONICS GENESIS32™. On the production line, which makes their Rich Tea biscuits, they have a multi-

*"The ICONICS GENESIS32 software is so easy to use. DataWorX32 is a very understated component with a great deal of power. The graphics that can easily be created in GraphWorX are outstanding."*

**Senior Management Team**  
UB McVitie's Glasgow Plant

zone oven that produces thousands of biscuits per hour. Before automation was in place, an operator with many years of experience governed the control of this oven, and a great deal of skill and high-quality biscuits were produced. The knowledge of this operator was documented and formulated into a set of rules for adjusting the oven control based on the quality of the biscuits exiting the oven. ICONICS engineers from ICONICS - UK, working alongside McVitie's technical staff, developed a software system to execute the rules and automatically make the control adjustments within the oven.

### Key Features

The data acquisition module, DataWorX™32, acquires and manipulates these data, which are then accessed by the HMI, GraphWorX™32, and a rules-based module. The rules-based module built into GENESIS32 then applies the rules developed from more than 30 years experience of the operators and outputs the instructions, via the scripting module ScriptWorX™32, to the PLC, which controls the burners and temperatures in the oven zones. GraphWorX32 also performs the other more tradition-

al SCADA functions of graphical display of data and process elements. This includes the screens to select which one of the products is to be manufactured.

**Project Details**

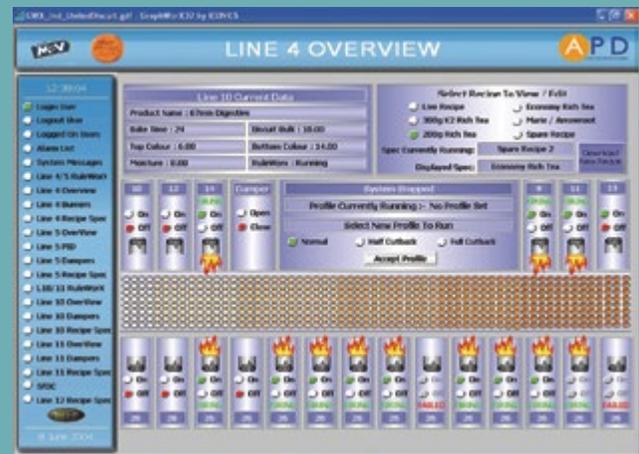
For each different product there is a different set of rules to apply to the oven control. However, GENESIS32 makes this adjustment automatically for which ever product is selected. It also displays the rules, which are being implemented at any particular time. All rule modifications are password-protected, online through the operator’s terminal.

**Conclusion**

United Biscuits is delighted with its success on controlling this line, and it has taken GENESIS32 as their standard HMI/SCADA software, with installations planned throughout the UK and Europe. The software was integrated by APD of Annan, Dumfriesshire UK. APD also provided on-site training for the operators and engineering personnel.



United Biscuits Production Line



Burner Control Screen

**Benefits of the System**

By utilizing these methods for control of the baking process. United Biscuits is now able to put into practice new ideas within the process itself to further improve their product and to provide a competitive advantage over their competitors. The actual recipe for the fine control of the oven is top-secret to McVitie’s, but now they make a higher-quality biscuit and line efficiency has improved by 2.5%.

**Solutions Highlighted**



**DataWorX**

OPC Data Aggregation, Bridging, Redundancy and Tunneling

**ScriptWorX32**

Creation of Visual Basic for Applications (VBA) 6.0 scripts.

**GraphWorX**

HMI Graphical Display Package

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