A Rockwell Automation Company

United Grain Growers (UGG)
Trochu Grain Management System

The Client:

United Grain Growers (UGG) is a Winnipeg-based business focused on agriculture, and is one of Canada's largest agribusiness firms. The company provides a wide range of goods and services to farmers, and markets agricultural commodities domestically and internationally.

UGG is diversified into four related businesses: grains merchandising, crop production services, livestock services, and farm business communications.

The Requirement:

A grain management system was required for an elevator in Trochu, Alberta, that was having its control system upgraded.

The system was to track grain in each bin, manage the bulk weigher, print tickets, and track client information on each ticket printed.

The new system would improve throughput and inventory management, and allow the client to track all grain transactions.

The Design Solution:

The system control was designed around an Allen -Bradley SLC-5/03 Programmable Logic Controller (PLC). The PLC controlled the gates allowing grain to be loaded from grain trucks, elevated to the bulk weigher, weighed, and stored in the designated bin through a motorized distributor. It also controlled the amount of load on the bucket elevators, preventing nuisance trips due to overloading. Grain could be transferred between bins or sent to the train or truck loadout areas. The FIX HMI was used to allow the operator to view system status and control the flow of grain within the system. It was also a troubleshooting aid for the operator, allowing him to readily locate faults as they occurred. All faults and alarms were logged and printed. Database functions that were not present in the FIX were added with Visual Basic. This allowed information for many customers waiting to unload their grain to be typed into a list. The design greatly speeded up the receiving process.

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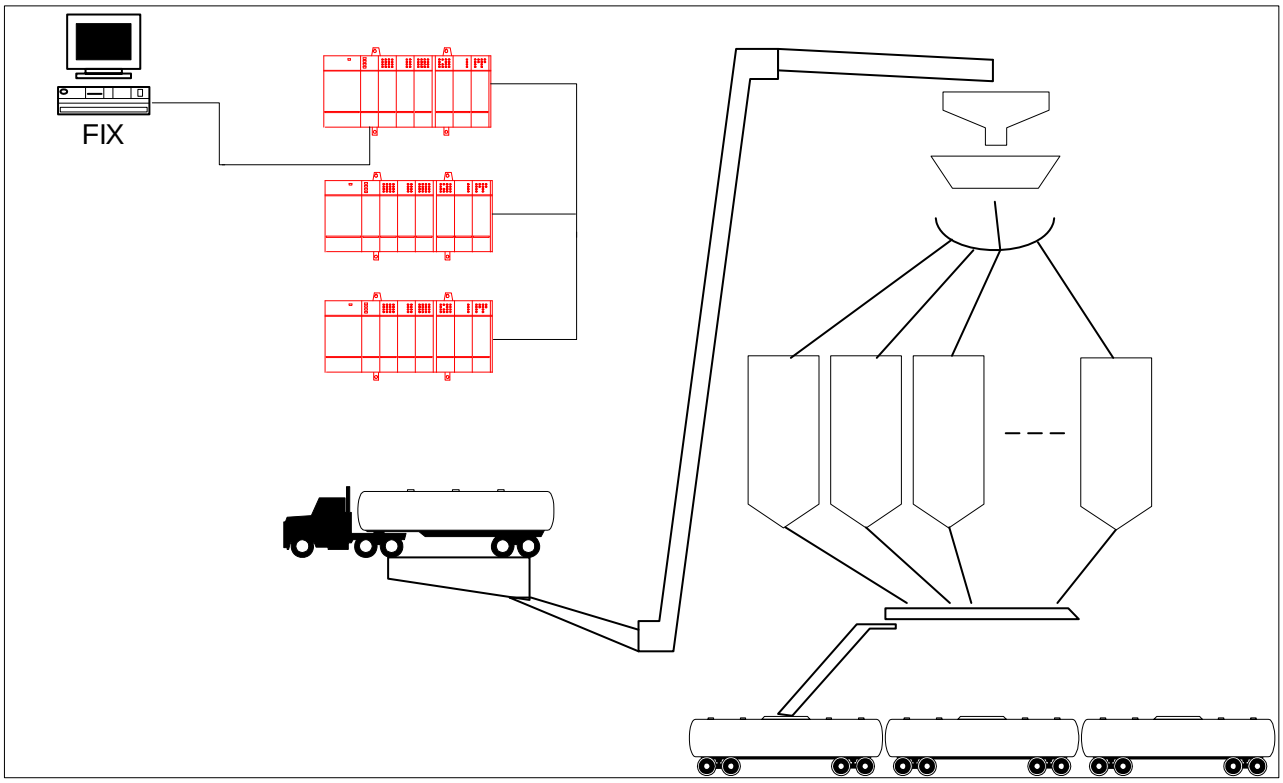

System Specifications:

- 486 PC with 32 MB Ram, dual display video card
- FIX HMI with 500 tags
- AB SLC5/03 PLC with 100 I/O points
- 2 metric ton bulk weigher
- Single bucket elevator
- Truck receiving gates
- Truck loadout leg
- Train loadout leg
- Loadout conveyor
- Motorized distributor
- 30 storage bins

For further information or to contact a Hinz office near you, please check our website at:

www.hinz.com