



A Rockwell Automation Company

## PG&E National Energy Group Data Transfer Between Pipelines

### The Client:

National Energy & Gas Transmission (NEGT) is a US-based gas transmission pipeline company partnered with Sempra Energy International on the 220-mile North Baja pipeline. The pipeline begins near Ehrenberg, Arizona, with an 80-mile US segment (NEGT) and extends across Baja California for 140

miles (Sempra International), terminating at the Presidente Juarez power plant in the town of Rosarito, south of Tijuana. The pipeline capacity is 500 million cubic feet per day.

### The Requirement:

The pipeline partners needed to maintain full independence of their respective SCADA systems, but still share a restricted amount of data from the NEGT pipeline to Mexico and from the Sempra pipeline to the US. Both pipelines use Citect for Windows® as their SCADA software. NEGT's gas control personnel are contracted by Sempra International to maintain the custody transfer nominations of three power plants

located in Mexicali. Baja California must have continuous, reliable data from the Sempra pipeline as well as the ability to control the gas flows to the power plants from their location in Portland, Oregon. Initially, a virtual Modbus slave device was used to transfer data, but this proved unreliable and a replacement was sought.

### The Design Solution:

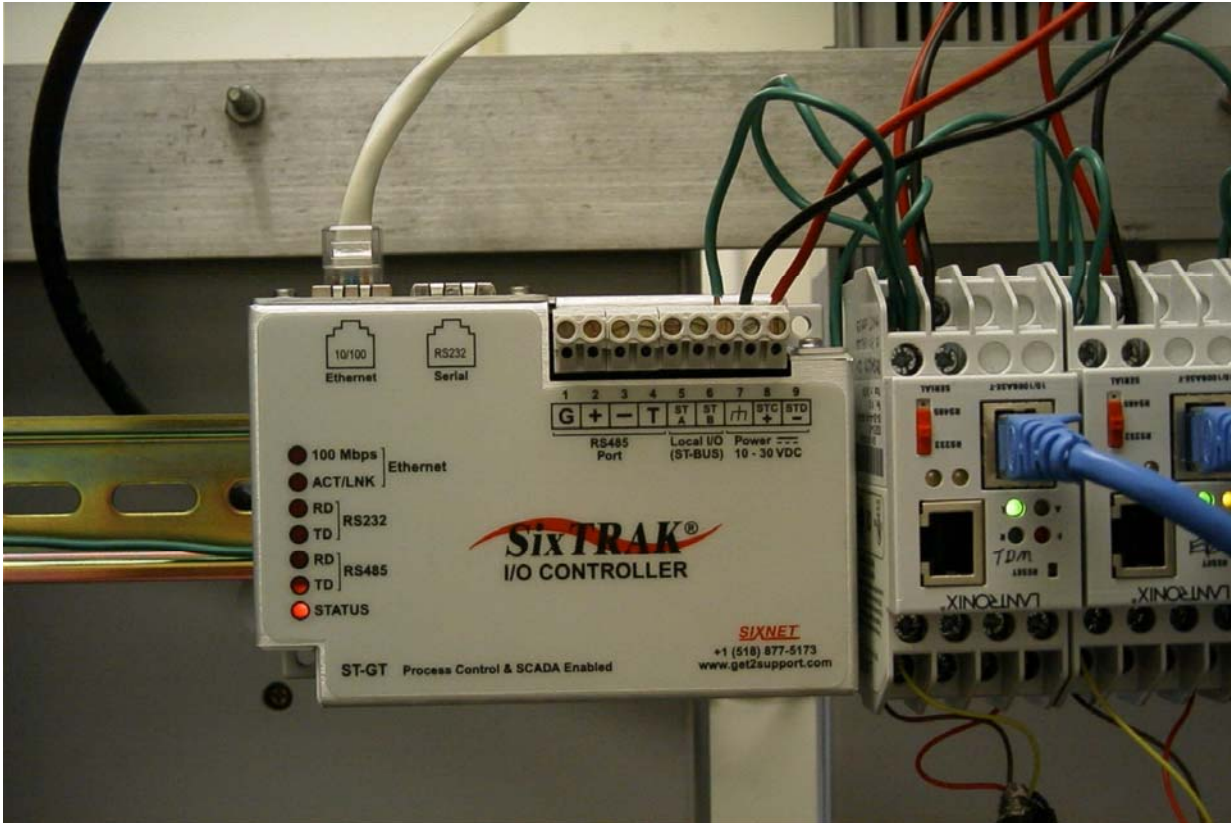
Because of single master limitations, the initial software-based solution proved unreliable and cumbersome and a hardware solution was proposed. The rugged Sixnet ST-GT SixTrak was selected for its standard Ethernet capability, multiple protocol support, and excellent feature/cost ratio. While the Sixnet RTU supports standard Modbus protocols, a multiple master situation was required, so the well-proven Sixnet protocol was used for communications. Placed on the Sempra International network in the Rosarito control room with a single TCP port opened between the US and Mexican network, the RTU can

be accessed independently by both partners' SCADA systems. Data from the Mexican system is moved at regular intervals into a set of registers read by the US system, and vice versa. Using this hardware solution also removed any necessity for the partners to utilize the same version of SCADA software, guaranteeing independent operation.



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### System Specifications:

- Sixnet ST-GT SixTrak
- Citect SCADA Host

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

[www.hinz.com](http://www.hinz.com)