

Solution Story

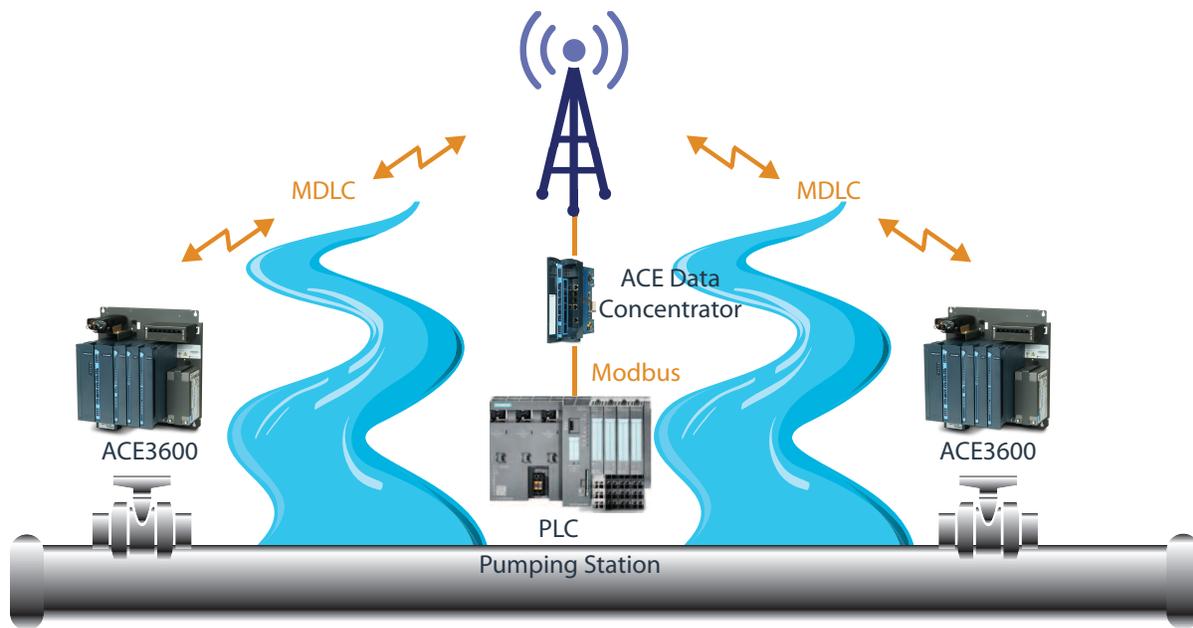
Motorola Block Valve Control

Ensure reliable remote communications

Challenge

When operating a pipeline spanning great distances, over vast and varied terrain, there are many environmental and technical challenges. One of the technical challenges is ensuring that remote communications are secure and reliable over the entire pipeline for block valve at river crossings.

There are many environmental regulations to address potential lakes, The financial impact of a failure can be huge, in addition to public perception.



Solution - Motorola ACE RTUs

The first step is to divide the pipeline into small sections that make up the whole pipeline. We analyze where the pump stations are located and where the pipeline crosses any body of water. Once this has been broken down we can look at how to communicate from the pump station to the block valve sites. In most cases the pump station will have to communicate with multiple water crossings.

The approach is then to use a Radio Frequency (RF) approach; relaying the data through a set of RF frequencies on a per station basis. A radio path study is performed at each station to determine



relay data through RF frequencies
on a per station basis

the best approach communication network as Analog VHF / UHF radio, digital or Analog trunking radio, wide band spread spectrum data network, GSM / GPRS, iDEN / Nextel, or CDMA.

The Motorola ACE RTU comes into play with its robust, over the air protocol, that is optimized for remote communications. This protocol handles all of the errors, retries, rerouting, and remote application downloads / uploads. online without complicated setup or programming. The seven layer MDLC protocol takes care of this, a true multi-session protocol for RF. The other advantage to the protocol is that it has built-in encryption at no additional cost, which keeps the application safe and secure.

An ACE RTU is installed at each block valve site and an ACE Data Concentrator at the pump station that communicates with a PLC.

Benefit

- » RF solutions fits well because you own the infrastructure and are not dependent on public network
- » Initial costs are low because it is a bite size approach to sectioning the pipeline
- » You own the RF network which means you can use the existing system when you expand the pipeline
- » the robust protocol saves you on-site travel costs plus protects you with encryption