Specialized Testing and Analysis System for Global Warming and Hydrocarbon Testing by Geotek

The Challenge

Specialists in high-resolution, non-destructive analysis of geological cores, Geotek has supplied a range of multi-sensor core logger (MSCL) systems to science and industries for more than 20 years. Geotek not only designs and builds instruments; the company offers core analysis consultancy field services both onshore and offshore.

Some of the sensors used in the core logging systems include are developed by Geotek. Some are provided in collaboration with third party manufacturers. The MSCL systems collect a wide range of multi-parameter data, and applications vary from climate research to industrial applications in the mining, hydrocarbon and offshore geotechnical sectors. The equipment is rugged enough to be used in either onshore laboratory/repository environments or on survey and drilling vessels.

Using the standard MSCL configurations, individual core sections between 50 and 150 mm in diameter and up to 1.55m long can be logged at spatial intervals as low as a few millimeters. Users can control the spatial intervals and decide which sensors will be active. The controlling software operates in a Windows environment. Data processing is under the user's control, and processed data can be displayed and edited in real time or saved in formats suitable for further data manipulation.

The wide variety of equipment and sensors used by Geotek, some of it developed by third parties, created a connectivity challenge. The communication ports on the equipment included RS232, RS485 and Ethernet. The goal was to establish rugged reliable Ethernet for every device, and to enable the proprietary Geotek software to control it all.

The Solution

Geotek chose B&B Electronics' serial to Ethernet device servers. B&B's device servers convert RS-232, RS-422 and RS-485 to Ethernet, and they were compatible with Geotek's PC system and software. And the device servers are designed to function effectively and reliably in the toughest industrial environments.