

The Challenge

Raytheon BBN is a high-technology company that developed the Boomerang shooter detection system.

As part of the ongoing improvements to Boomerang, Raytheon BBN decided to replace its older DAQ system to acquire more time-synchronized data on a firing range and in other environments.

The Solution

Using an array of seven microphones, Boomerang detects the direction of incoming small-arms fire from the shock wave and muzzle blast, indicating the azimuth, range, and elevation of the shooter in less than one second. A clock face display shows the direction of fire and a recorded voice announces the direction and range. Azimuth, range and elevation are displayed on an LED screen display.

While considering other solutions, Raytheon favored the National Instruments PXI platform and wanted an out-of-the-box solution. PVI Systems recommended the Chameleon DAQ system to measure over 32 channels of pressure data.

System Features

The Chameleon System –

- 32 Synchronized Channels
- PXIe-1082 Chassis
- PXIe-8133 Controller
- PXI-4498 DAQ Modules (2)
- PXI-6682H Synchronization Module



"Using Chameleon turnkey software, the NI PXI hardware platform, and source control based on NI LabVIEW and DAQ software, we can measure more than 32 channels of pressure data from our sensors with expansion capabilities while maintaining time-synchronized data from transient shot events on the firing range."

- Jeff Mazurek,
Raytheon BBN



State-of-the-Art Shooter Detection System



Benefits of Using Chameleon

- Flexible, Scalable, Turnkey
- Time and Frequency Acquisition
- Live Signal Monitoring
- Data Display and Processing
- Data Export to .mat or CSV
- Easily Re-Configured
- Multiple Repeated Acquisitions
- Pre-Triggered Acquisition
- Rugged and Reliable

www.ChameleonDAQ.com

Contact us for more information about Data Acquisition, Machine Vision, Process & Motion Control, or Automated Test & Measurement systems.

