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DTS Training: Essential knowledge for using Data Acquisition Systems

General

- Choosing the proper sampling rate
- How do anti-aliasing filters work?
- Hardware and software filtering – what are they used for?
- Sampling duration and triggering methods

Sensors

- Overview of sensor types commonly in use
- Making proper set-up decisions for each sensor type
- Calculating sensitivities from calibration sheets
- Knowing when and how to use shunt calibrations
- Empirical sensor calibration
- Real world checks for accuracy

Grounding, Shielding and Noise

- What is noise?
- Overview of EMI, RFI and ESD
- Choosing the proper cables for sensors and control circuits
- What does “grounding” really mean?
- Wire routing and its effect on noise
- That old black magic – the art of noise elimination

Data Analysis

- Choosing an appropriate post filter
- Creating calculated channels (i.e. Integrals, HICs, etc.)
- Viewing tools
- Overlaying and comparing data
- Using raw data as a diagnostic tool

Troubleshooting

- What diagnostic information is available?
- Understanding and using the diagnostic information
- Providing enough information to get quick help from DTS