What we Do!

- Design & Manufacture Landing Gears
- Test Engineering
  - Boeing 787 Fatigue Test
  - SJ100 Strength Test
  - Dassault Falcon F7X LG System Test
  - Drop Tests
    - SJ100, 787
Agenda

- Multi Channel, High Speed, High Accuracy data acquisition
- Synchronization of Data
- Labview Drivers for an Intuitive User Interface
- Simplify Hardware Setup
- Modernize Data Acquisition systems
Extend Retract System Test
Data Acquisition Requirements

- Large Channel Count
- High Speed Acquisition
- Excellent Resolution
- Easy to Install
  - Connectors
  - Wiring
- Synchronization of Data
- Labview Drivers
EX1629 Remote Strain Gauge Measurement Unit

- 48 Channels per Chassis
  - Data synchronization
  - Internal and external shunt calibration
  - Easy to use web page for configuration
- 24 Bit A/D
- Greater than 5000 Sample per Second
- RJ-45 Connectors
- Data Synchronization capabilities
Fatigue Test

- 6 EX1629 Chassis required
- Greater than 250 Strain gauges installed
- Shunt Calibration
- Easy to use Web Page to change EX1629 Settings
  - IP Address
  - Reset EX1629
  - Reboot EX1629
EX1629 Web Page Interface

EX1629 Strain Gage Measurement Unit
Index

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Firmware Version 1.2.2
LXI Trigger Bus

- Tight synchronization of Data
  - Easier to define events
  - Analysis has become more dependent on time stamp
- Several units can be daisy chained
- More channels for high sample rates
Drop Test
MDAQ-T – User Interface
User Interface

- UI must be intuitive!
  - Minimizes training of personnel
  - Reduces error when operating equipment
  - Setup and data reduction will not consume time
- Allows us flexibility to change UI
- Removes possibilities of licensing issues
- Continued use of Legacy equipment
System Calibration Page
Data Acquisition Page
Conclusion

- Easily handled 250 plus channels of data acquisition
- Accurate High speed acquisition
- Trigger bus ensured the integrity of our data
- Custom User Interface will drive cost of retraining down
- Use of legacy equipment