

Analyzing Your Data for Maximum Insight With DIAdem

Mark Ridgley

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About the Speaker

Mark Ridgley

- Owner, Radius Technologies, LLC
- Premiere Instructor
- NIWeek Speaker
- F-15 Radar Technician
- Space Station Processing Technician
- Test Engineer



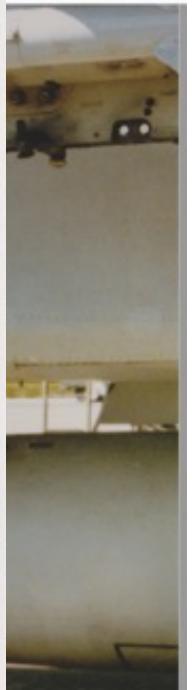
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The MDS&DS payload processing team readies Spacelab-Mir for launch on STS-71.



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Raytheon



BAE SYSTEMS

What's in it for me?

You'll learn:

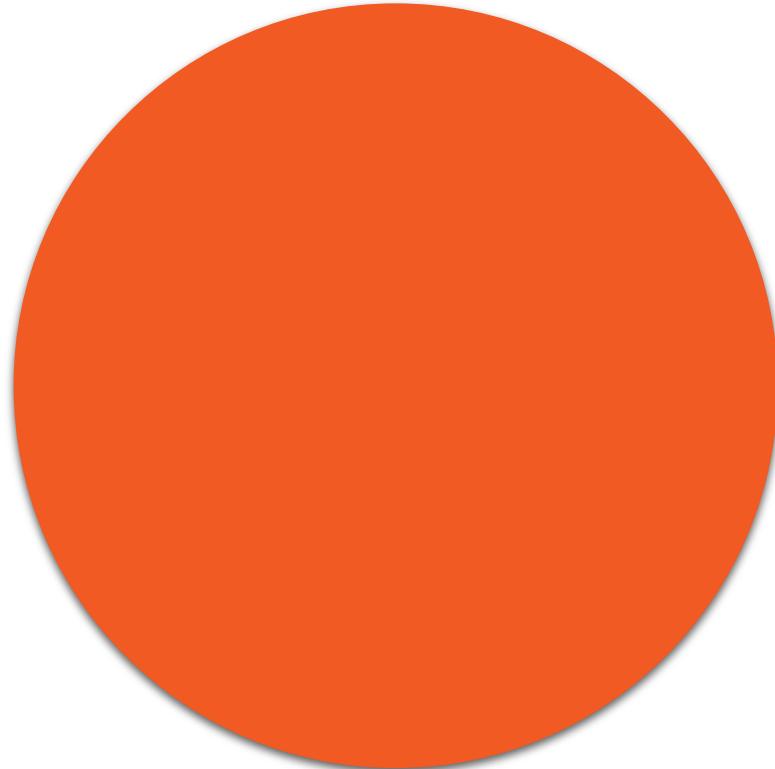
- Why data analysis is important
- How to increase your level of insight
- Definition of data management software
- Key features of data management software
- What DIAdem is
- Advantages of DIAdem
- Main Components of DIAdem
- How DIAdem works
- Tools for data management



The amount of digital data in the universe is growing at an exponential rate, doubling every two years.

*Lauren Browning
Business Insider*

The Data We Collect





We can create and collect complex data at tremendous rates, but unless we can manage and analyze that data, it's useless.

National Instruments

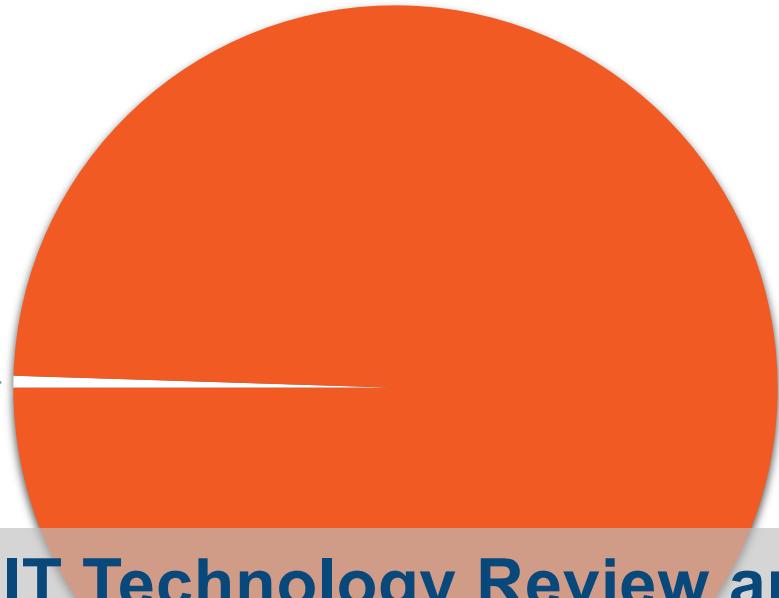
NI Data Visualization Conference



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The Data We Analyze

Level of Insight →



In a 2013 MIT Technology Review article, Senior Editor Antonio Regalado noted that only 0.5 percent of all data is ever analyzed.

The goal: Increase our level of insight

Two ways to achieve this:

- Analyze the same amount of data, but collect less overall
- Analyze more of the data we collect



The rate at which we're generating data is rapidly outpacing our ability to analyze it. The trick here is to turn these massive data streams from a liability into a strength.

Professor Patrick Wolfe

Executive Director of the University College of London's Big Data Institute

Question:

How can we transform these massive data streams from a liability into a strength?

Answer:

Data management software.



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Data management software is...



...software designed to
help you quickly locate,
inspect, analyze, and
report on your data.

Key Features of Data Management Software

Data
Search

Data
Loading

Data
Viewing

Data
Visualization

Data
Analysis

Data
Presentation

Workflow
Automation

Technical
Support

About DIAdem

- Introduction to DIAdem
- Advantages of DIAdem
- Main components of DIAdem
- DIAdem demonstration
- Tools for data management

What Is DIAdem?



Software designed to help users quickly locate, inspect, analyze, and report on their data using one software tool.

The DIAdem Advantage

- Single, unified software environment
- Optimized for large data sets
- Includes tools to quickly search for the data you need
- Includes tools to inspect your data using tables, curves or surfaces
- Includes built-in analysis functions
- Powerful drag-and-drop report editor
- Scripting functionality helps you automate repetitive data analysis tasks so you can quickly transform your data into valuable insights
- Use it in a broad range of industries and application areas
- Leverage the National Instruments ecosystem

Main Components in DIAdem



NAVIGATOR

Data organization and data search

VIEW

Data inspection

ANALYSIS

Data analysis

REPORT

Data presentation

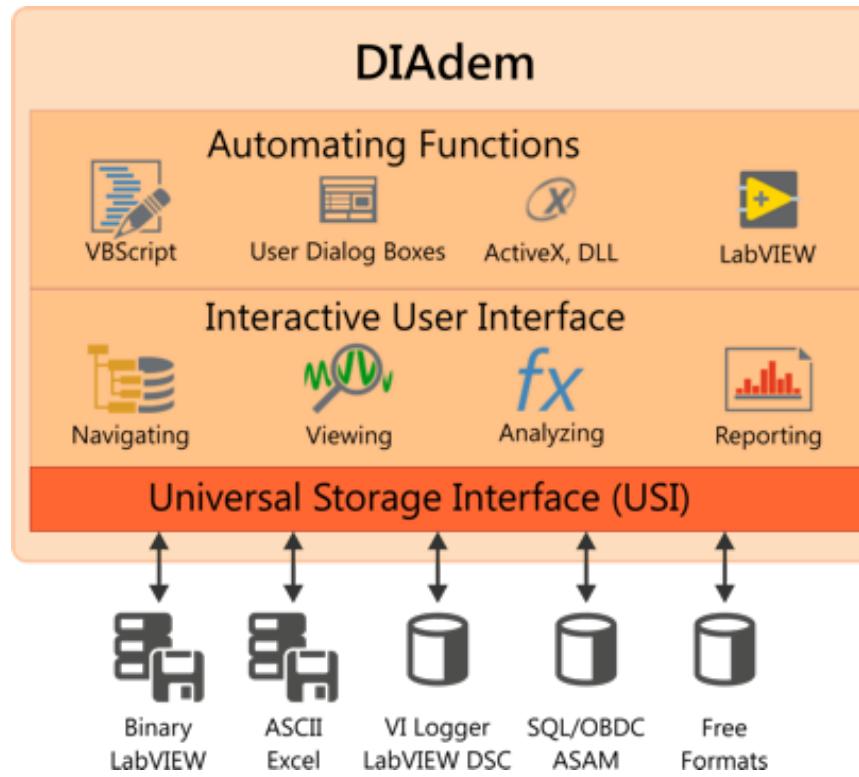
SCRIPT

Customizing

VISUAL

Visualization

DIAdem Overview



Demonstration

Medical Device Lifespan Analysis Using DIAdem



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Other Industries and Application Areas

- Industry: Automotive
 - Company: Autoliv
 - Automotive safety systems manufacturer
 - Tests may contain up to several hundred sensors that record crash test event data
 - Benefits:
 - Improved data management capabilities and turnaround time
 - Reduced test data analysis time from several hours to minutes

Other Industries and Application Areas

- Industry: Ballistic missile testing
 - Company: Raytheon
 - Build exoatmospheric ballistic missile interceptors
 - Testing covers all engineering disciplines, including cryogenics, thermal, and propulsion
 - Benefits:
 - Reduced reporting and analysis time by 95 percent
 - Replaced multi-step workflow with a one-button DIAdem solution

Tools For Data Management

- DIAdem – National Instruments
- What tool(s) does your organization use?
 - Spotfire – TIBCO
 - Others?

Topics Covered

- Importance of data analysis
- How to increase your level of insight
- Definition of data analysis software
- Key features of data management software
- Introduction to DIAdem
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- Main components of DIAdem
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Next Steps

- Learn more about DIAdem
 - ni.com/diadem

Questions / Comments



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Thank You!
Share your experiences at #HWGSEC 