

# Analyzing Your Data for Maximum Insight With DIAdem

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# About the Speaker

Mark Ridgley

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

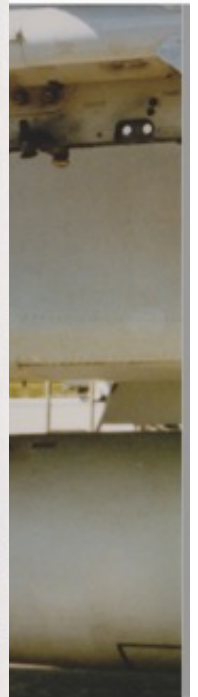
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The MDS&DS payload processing team readies Spacelab-Mir for launch on STS-71.



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**Raytheon**



**BAE SYSTEMS**

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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



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

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*Lauren Browning*  
*Business Insider*

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# 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.”

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National Instruments

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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.**

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## 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.

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*Professor Patrick Wolfe*

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

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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.



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## Key Features of Data Management Software

Data  
Search

Data  
Loading

Data  
Viewing

Data  
Visualization

Data  
Analysis

Data  
Presentation

Workflow  
Automation

Technical  
Support

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## About DIAdem

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

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## What Is DIAdem?



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



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## 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



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# Main Components in DIAdem



NAVIGATOR

Data organization and data search



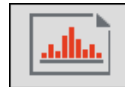
VIEW

Data inspection



ANALYSIS

Data analysis



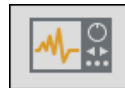
REPORT

Data presentation



SCRIPT

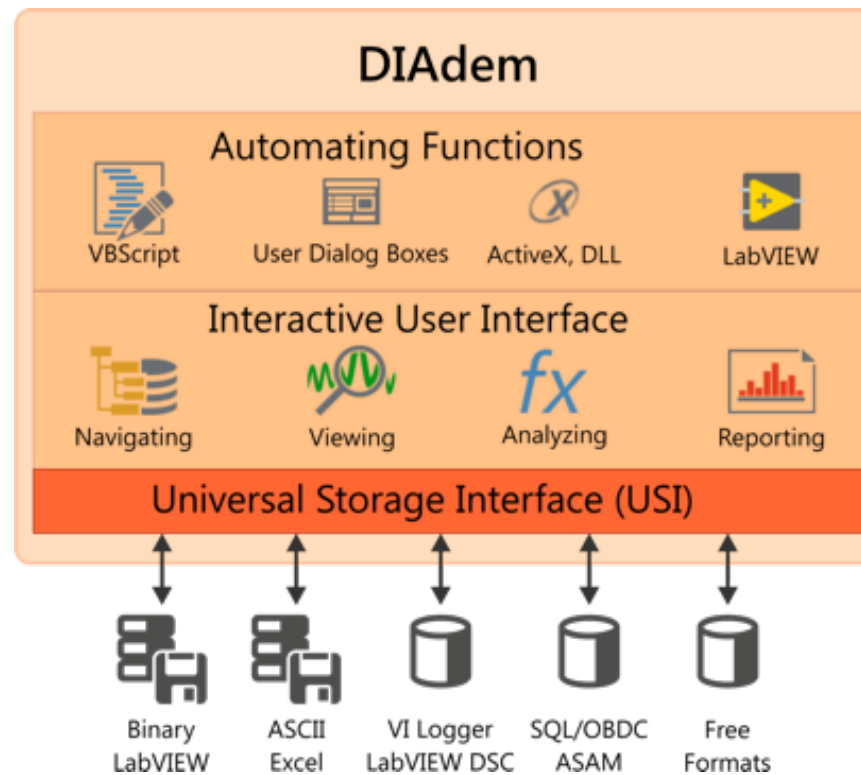
Customizing



VISUAL

Visualization

# DIAdem Overview



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# 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



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## 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

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# Tools For Data Management

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

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## Topics Covered

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- How to increase your level of insight
- Definition of data analysis software
- Key features of data management software
- Introduction to DIAdem
- Advantages of DIAdem
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- DIAdem demonstration
- Tools for data management

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## Next Steps

- Learn more about DIAdem
  - [ni.com/diadem](http://ni.com/diadem)

# Questions / Comments



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Thank You!  
Share your experiences at #HWGSEC 

