EdasWin Plus

Data Acquistion
Realtime Display
Offline Analysis

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Company

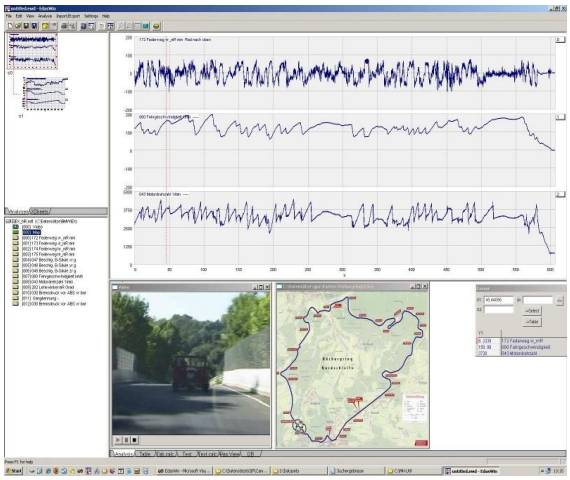
MH is in the field of data acquisition for industrial and academic use with user friendly software and known for its quality. The company is having history of more than 20 years and has supplied many innovative products.

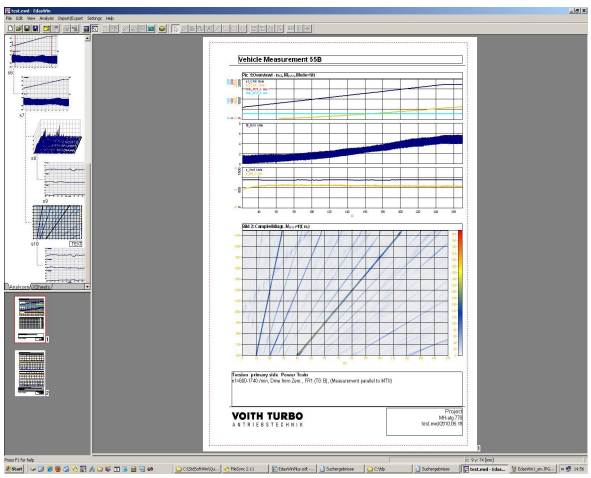
MH has gained a name for and set standards with excellent support for the Customers.

Customers include well known national and international companies and are spread across various sectors of industry, like machinery and equipment manufacturers, automotive testing, aeronautics, medical, steel industries and educational institutions. The customers are benefitted with the expertise of MH and have used MH systems to efficiently acquire and analysis data and speed up their data based decisions.

Overview

EdasWin Plus is a complete software package for data acquisition, real time display and offline analysis with DATaRec4 modules from ZODIA DATA SYSTEM, Germany (formerly HEIM DATA SYSTEMS). The software has three main Modules - **EdWin** for data acquisition and storing on media. **EWinView** for realtime display and calculation. **EdasWin** for offline analysis and report.





This software package is based on more than 25 years experience in data acquisition and analysis. It is easy to use, quick and gives all information for data acquisition, analysis and documentation.

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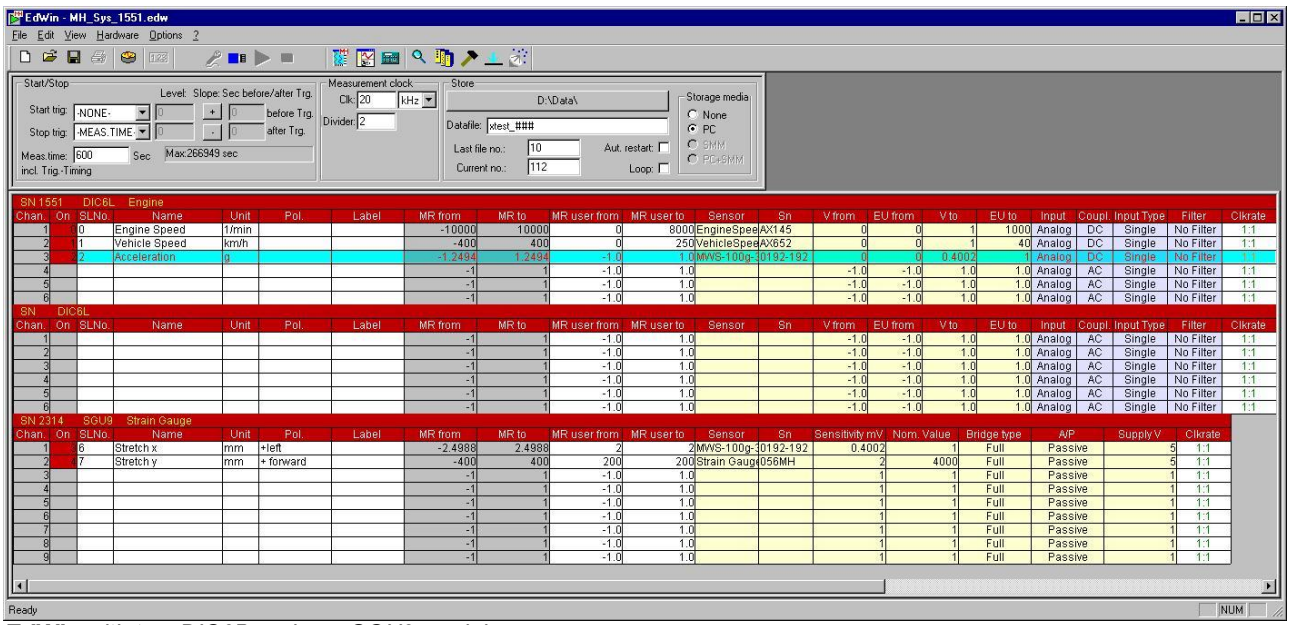
Data acquisition with EdWin

Connection:
EdWin is a simple to use front end for DATaRec4 modules. It connects to the modules with USB, Firewire or Ethernet if you are using a Link Module (LMF), or with USB if you are using a single data acquisition module.

Setting:
You can scan the connected modules and make your settings, or you can predefine a module set without connected modules and prepare a measurement in your office. Later if you connect the modules, you assign the real existing modules per drag & drop to the offline defined modules. The setting can be done manually, or with help of predefined sensor locations and sensor lists. For measurement of CAN or FlexRay you can use DBC or Fibex files. So you can define a measurement simple and quick per drag & drop, which reduces errors and save you much time.

Trigger:
EdWin supports trigger features like pre trigger and post trigger with definable trigger level and slope.

Storing:
The data is stored on PC in our own well documented data format, which stores not only the data in their physical unit but also all channel relevant settings. Instead of storing one big file, you can also store the data in small files without data loss. This helps to save data if you are testing in an unsafe area.
Parallel raw data can be stored using external storage SMM Module which is connected to the Link Module (LMF). This can be done with or without PC connected. The data stored is in chapter10 Format. **EdasWin** can read chapter10 format directly.



***EdWin** with two DIC6B and one SGU9 module*

SignalDB:

The **SignalDB** software module which is part of **EdWin**, allows you to edit and manage sensor parameters and sensor locations. It also reads DBC files for CAN and Fibex files for CAN and FlexRay. Sensor lists and sensor location lists are simple ASCII files, which can also be generated by other applications like excel.

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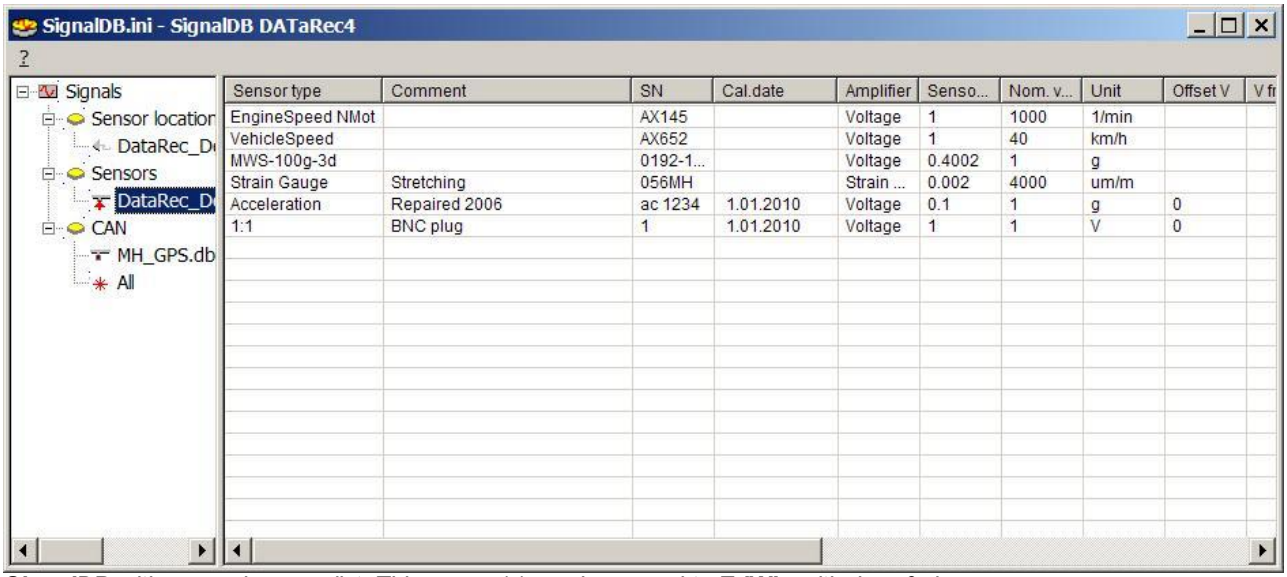


SignalDB *with opened sensor list. This sensor(s) can be moved to* ***EdWin*** *with drag & drop.*

Features of EdWin:

- Supported modules:
  LMF, DIC6, DIC24, DIC24Plus, ANH100, CAN4, CAN4F, SGU9, CHG6, SMM
- Data rates up to 600 M Bits/sec
- Automatic scan of hardware modules
- Measurement setup without modules connected
- Setting with sensor location lists and sensor lists with drag & drop feature
- Setting CAN and FlexRay with DBC or Fibex files with drag & drop feature
- Pre- and Post trigger with definable trigger levels and slope
- Automatic re-triggering with loop function
- Sound acquisition with PC sound input device
- GPS acquisition with GPS receivers supporting the NMEA protocol
- Storing small sequential files instead of one big file.
- Files > 4Gbytes
- Load and store settings.
- All channel parameters are stored in our data files.
- Up to 1024 channels
- Free MATLAB reader for our data format is available as open source.

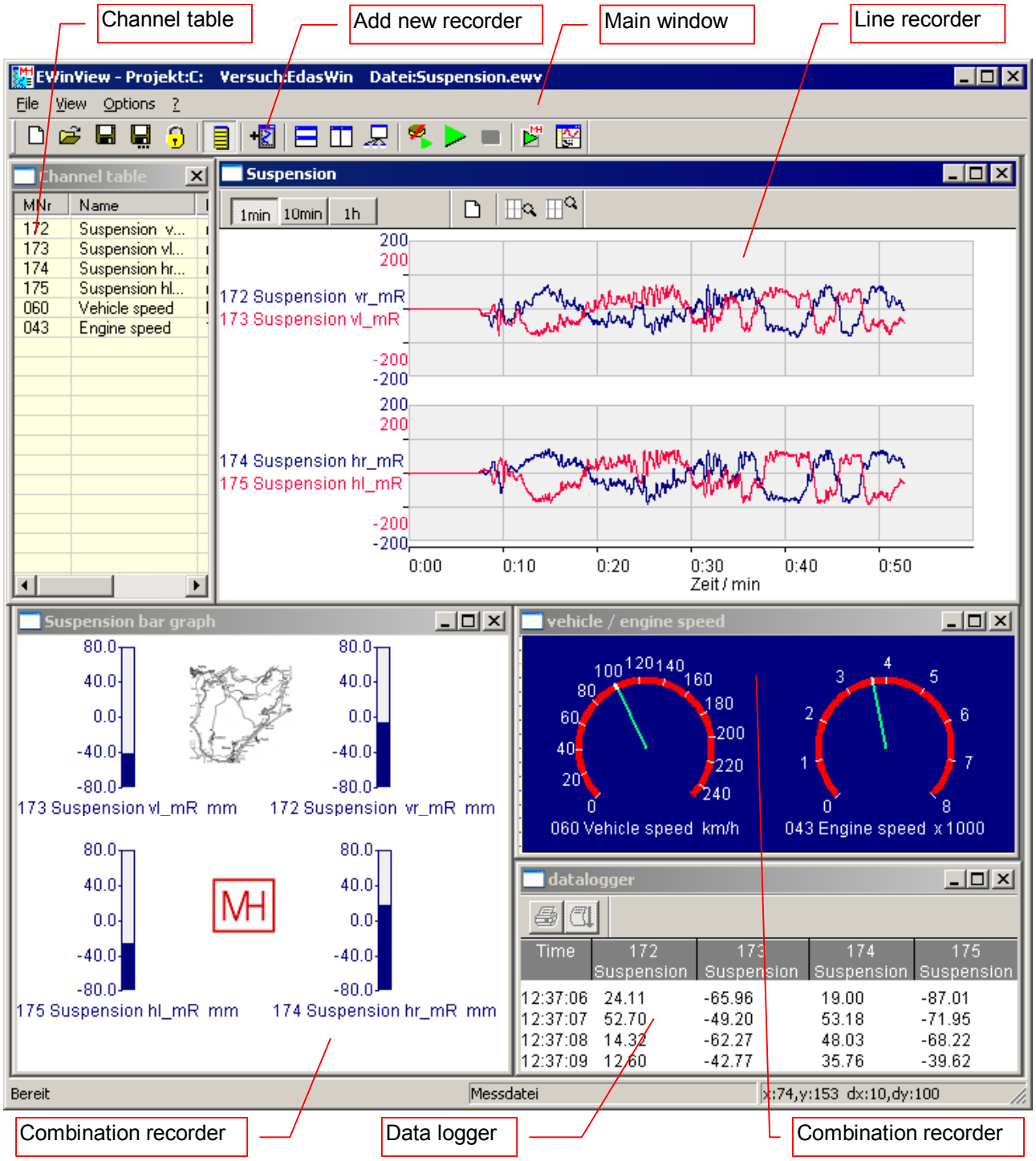
Additional data sources, included in the data acquisition stream:

EdWin can acquire the sound channels from the PC soundcard. **EdWin** can acquire GPS data like position, grounds peed, altitude, direction and quality using a simple GPS mouse like a Hollux Sirfstar III or other GPS receivers supporting the NMEA protocol and PC interface.

Online Visualization with EWinView

While data is stored with **EdWin**, **EWinView** shows the data in realtime. **EWinView** supports different recorders (client windows).

You can define an unlimited number of recorders. The recorders can be filled by drag & drop from a channel table. Different settings can be stored. If you work with **EdWin**, the setting is managed together with the **Edwin** settings.



Line recorder:
This is a simple graphic display with three user definable time axis. Channels can be added or removed while measurement is running. The whole history for every channel is always present.

Combination recorder:
A recorder with free definable displays. Diagram types are Time Display, Round Display, Bar Display, Numeric Display and Power Spectrum Display. You can make simple calculations with the incoming signals like arithmetic addition, subtraction, multiplication, division, change sign, constant.

Data logger:
Simulates a linewriter. Current data values with time are displayed

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MinMax Recorder:
Numeric display which shows current, min and max value.

Level recorder:
Numeric display with a horizontal bar with good/bad range.

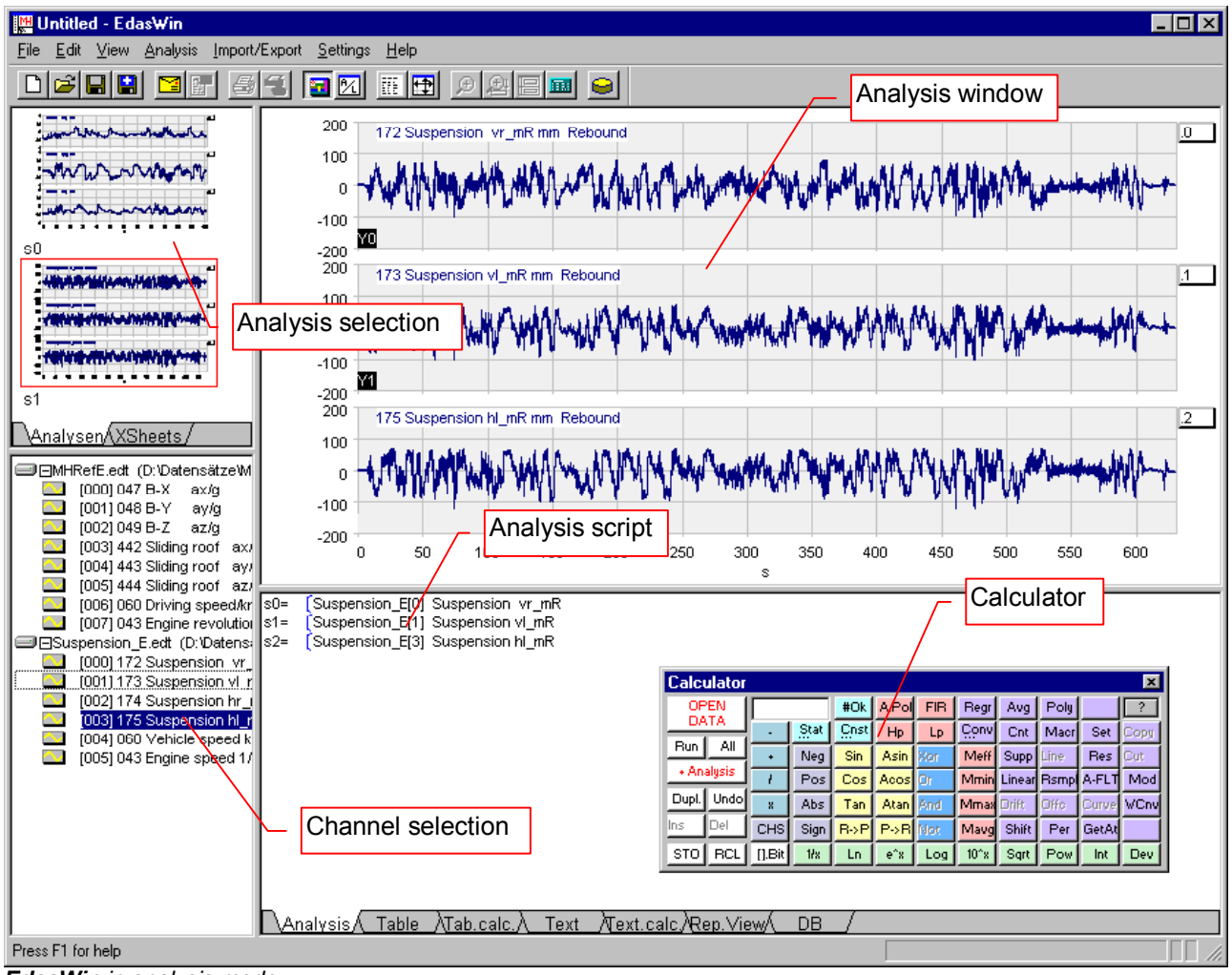
Scope Recorder:
Functionality like a scope, with trigger functions and auto ranging.

Features of EWinView:

- Unlimited number of Recorders.
- Recorders can be used while measurement is running
- Recorder can be arranged while measurement is running
- Online calculation in the Combination Recorder

Offline Analysis with EdasWin

EdasWin is a comprehensive offline analysis package. In Addition to all common mathematical and statistical features, **EdasWin** offers auto-analysis, data browser, native reader for many foreign data formats, synchronous display of measured signals and video streams, automatic noise suppression, damage calculation, GPS-interpolation, course and map display. Extensive layout functions are available for documentation. The high speed of data processing and the sophisticated operating concept allows efficient working with **EdasWin**.



***EdasWin** in analysis mode*

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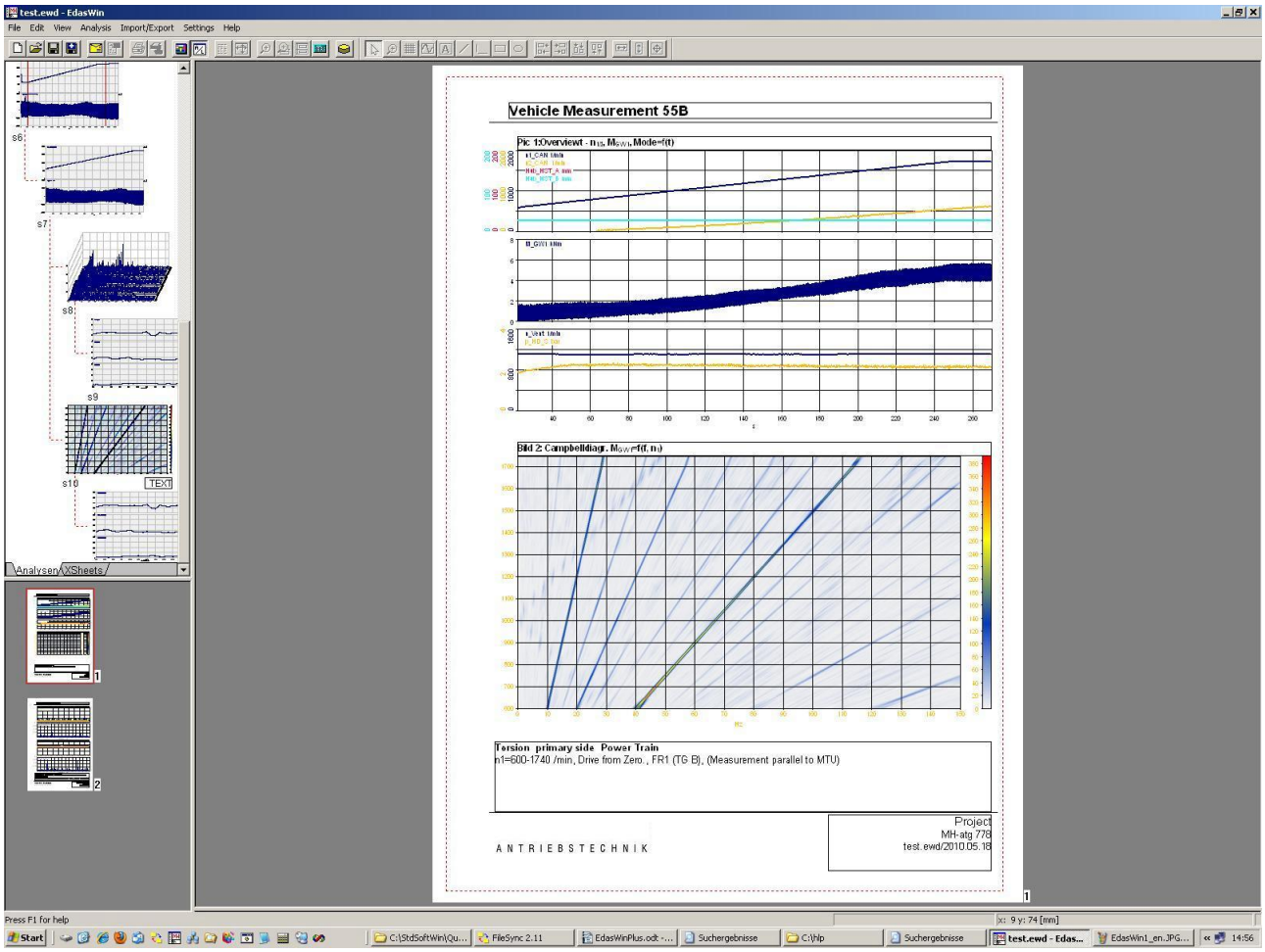
Principle of operation:
EdasWin works in two modes - Analysis mode or Layout Mode.

Analysis mode: Here you select the signals, and calculate them with help of the analysis calculator. Additional analysis is possible from the main menu. If your analysis is ready you store the data in one of the supported formats, or repeat the calculation with another data set.

Layout mode: In this mode you can define the pages for print output. You can store the calculation as document and use it as template for later use.



***EdasWin** in layout mode, ready to print*

Features of Software Package EdasWin

General:

- On-line help
- Menu controlled, no programming is necessary
- Automatic generation of repeatable analysis and documentation
- Softwareinterface (COM)
- License is linked to PC or hardware dongle

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Analysis:

- Unlimited number of tags can be displayed in each plot
- Unlimited number of plots can be created
- 10 000 000 values will be displayed in a sec (Standard PC)
- Signal can be computed with each other and/or with constants
- Cursor Function with Peak Detection.
- X-Y zoom with selectable boundaries.
- Cascade display, Campbell display, Spectrogram
- Play-back sound files
- Time-synchronously presentation off up to four video streams
- Course representation on the basis of measured GPS data

Algebraic functions:

- + - / *
- Logarithms – (base 10 log & natural)
- Exponent, Power, Square root, Inverse
- 1/x, Change of sign (+ / -).

Trigonometric functions:

- Sine, Cosine, Tangent
- Arcsine, Arccosine, and Arctangent.

Calculation functions:

- Differential & Integral Calculus.
- Absolute value.
- Positive and negative signal isolation.
- High and Low pass digital filters with selectable order and corner frequency.
- FIR Filter with programmable filter function, no phase angle
- Cycle duration.
- Counter.
- Conversion between Cartesian and Polar Coordinates.
- Boolean Algebra.
- Floating average: mean, max, min
- A, B, C weighting filter
- Polynom calculation
- Linearization

Signal processing:

- Graphical drift correction, Line and Offset correction
- Automatic spike detection and suppression.
- Signal recalculation with selectable clockrate
- Signal shift along time axis

Signal analysis:

- Power Spectral Density
- Cross Spectral Density
- Coherence
- Order analysis
- Terz- / Octave analysis
- Transfer function
- Y Sampling across any selectable signal
- X -Y Plot
- Regression
- Cross correlation
- Dynamic signal movement from cross correlation

Statistical analysis:

- Time at Level.
- Levelcrossing.
- Rain Flow
- Range Pair
- Rotational analysis
- Damage

Other functions:

- Plausibility check from measured data records
- Batch Analysis
- GPS interpolation
- Macro function for recurrent calculation specification

Layout Editor for Report Generation:

- Create standard templates for printing plots
- Commentary editor for enter and display from text information
- Voluminously layout creation with any pages

Data Import:

- Import from different data formats, with direct reader functionality
- ASCII
- Binary
- B&S
- µ Musics
- Diadago, DIADEM
- E.d.a.s.
- MAUSY
- RPC3 / RSP
- TurboLab
- MDF
- DCF
- UFF58
- Ist/Rigsys
- Chapter10

Data Export to multiple data formats:

- ASCII
- Binary
- Diadago
- E.d.a.s.Win
- E.d.a.s.
- MatLab
- RPC3 / RSP
- TurboLab
- UFF58

Update and Support

Software updates are ready for download at our internet page. On our tutorial page www.mh-gmbh.de/tutorial.php is a quick users manual for **EdWin / EWinView** and **EdasWin** as well as some examples videos in (.wmv) or (.flv) format