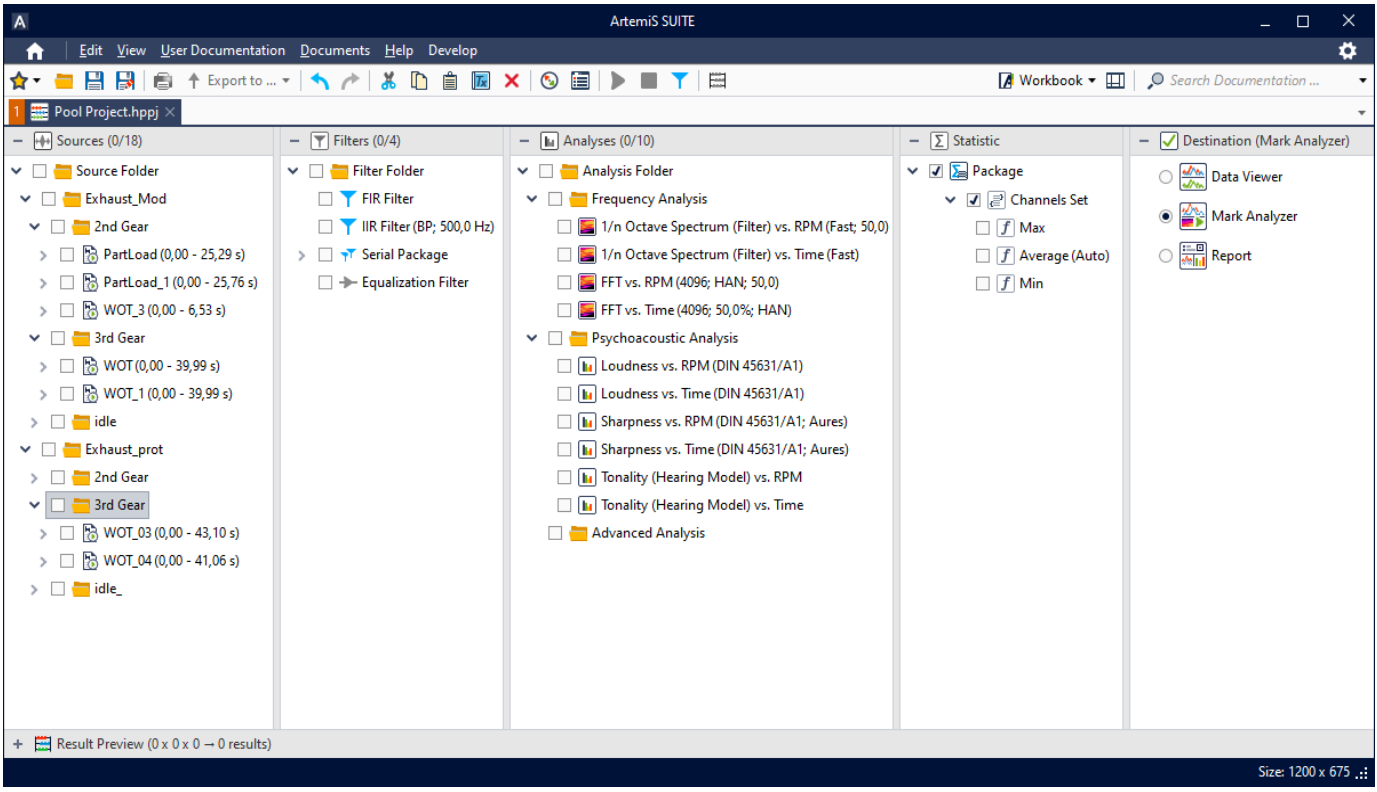
HEAD acoustics

DATA SHEET



ArtemiS SUITE
PRoject

Code 50010

APR 010
Pool Project

The Pool Project with its project-oriented structure based on the pool principle is a key feature of ArtemiS SUITE. The individual parts of a processing chain are represented in a clearly structured manner, making them easily operable by the user.

OVERVIEW

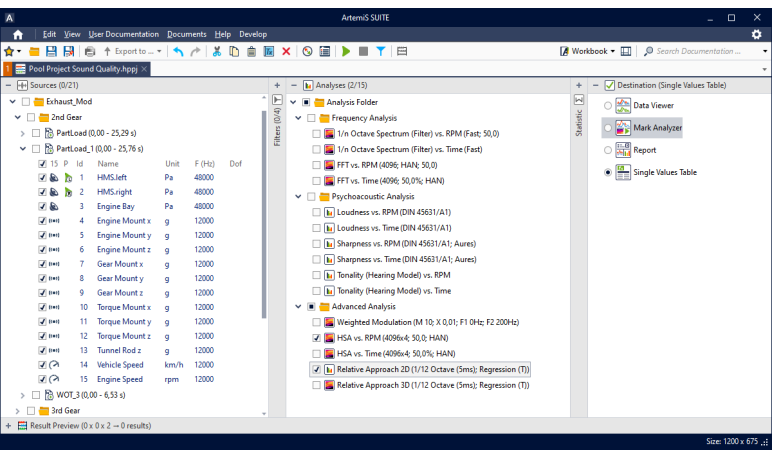
APR 010
Pool Project

Code 50010

A Pool Projects consist of five clearly structured pools. All time data and tools for analysis are compiled in these pools. Users configure their projects interactively and keep track of everything even with complex tasks.

For the calculation, marks can be sorted and activated in the Source Pool. The required filters, analysis and processing functions, and statistical methods are specified in the Filter, Analysis, and Statistics Pools. The display and export options for the output of the results are configured in the Destination Pool.

In addition, the Mark Editor for the time or reference quantity based setting of mark limits and the Mark Analyzer for interactive analysis of filtered input signals are included.



KEY FEATURES

A Pool Project is used for an easy and interactive configuration of filter, processing, and analysis tasks, as well as statistical and export operations

All analyses (more than 150 are available), filters, processing functions, statistics and export functions used in a Pool Project require the corresponding ASP licenses

The Pool Project is subdivided into five pools:

- The Source Pool for collecting time data for the subsequent processing
- The Filter Pool for filtering the input signals
- The Analysis Pool for the analysis and processing of the input signals
- The Statistic Pool for selecting different elements for the statistical processing of the input signals
- The Destination Pool for selecting one out of a multitude of individually configurable elements for the display or export of the data
- Result Preview

Included functions

- Mark Analyzer
- Mark Editor

APPLICATIONS

- Individual compilation of dynamic, flexible, and easy-to-use analysis and processing solutions thanks to the project-oriented structure for a wide variety of analysis tasks
- Using data processing based on the principle of cross product logic

OPTIONS

ALL OPTIONS NOT INCLUDED IN APR 010 OR APR 000 MUST BE LICENSED SEPARATELY

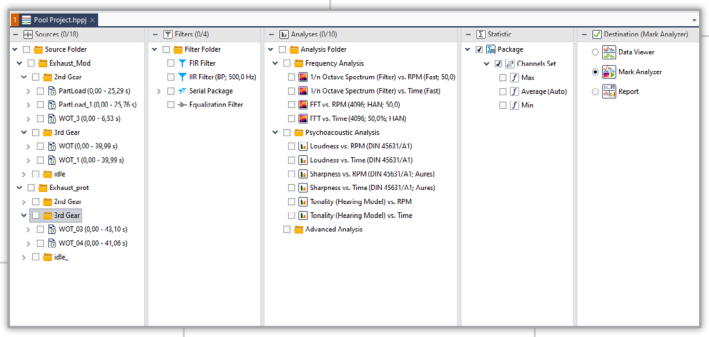
ANALYSIS POOL

- Basic Analysis (ASP 001)
  - FFT vs. Time, ...
  - 1/n Octave Spectrum (FFT), ...
  - Level vs. Time, ...
  - Power Spectral Density, ...
  - Single Value: Level
  - ...
- Basic Analysis vs. Control Ch. (ASP 002)
  - Analyses from ASP 001 vs. Control Ch.
- Advanced Analysis (ASP 003)
  - VFR, ...
  - HSA, ...
  - Gated DFT, ...
  - Wavelet
  - ...
- Advanced Analysis vs. Control Ch. (ASP 004)
  - Analyses from ASP 003 vs. Control Ch.
- Modulation Analysis (ASP 005)
  - Modulation analyses vs. Time, vs. RPM, vs. Band, ...
- Order Analysis (ASP 006)
  - Order Spectrum vs. Time, vs. RPM, ...
  - Time Signal vs. Rotation
- Octave Analysis (ASP 007)
  - 1/n Octave Spectrum (Filter) vs. Time, vs. RPM, ...
- Psychoacoustics - Basic Analysis (ASP 101)
  - (Specific) Loudness, ...
  - (Specific) Sharpness, ...
  - Tonality DIN 45681, ...
  - Specific Fluctuation Strength, ...
  - ...
- Psychoacoustics - Basic Analysis vs. Control Ch. (ASP 102)
  - Analyses from ASP 101 vs. Control Ch.
- Psychoacoustics - Adv. Analysis (ASP 103)
  - (Specific) Loudness (Hearing Model)
  - (Specific) Roughness (Hearing Model), ...
  - (Specific) Tonality (Hearing Model), ...
  - (Specific) Impulsiveness (Hearing Model), ...
  - Spectrum (Hearing Model)
  - Relative Approach, ...
  - ...
- Psychoacoustics - Adv. Analysis vs. Control Ch. (ASP 104)
  - Analyses from ASP 103 vs. Control Ch.
- Speech Intelligibility Analysis (ASP 106)
  - Speech Intelligibility Index vs. Time, ...
  - ...
- System Analysis (ASP 201)
  - Transfer Function, ...
  - Impulse Response, ...
  - (Multiple, Partial) Coherence, ...
  - (Cross, Auto) Correlation, ...
  - Harmonic Distortion, ...
  - ...
- System Analysis vs. Control Ch. (ASP 202)
  - Analyses from ASP 201 vs. Control Ch.
- Sound Power Analysis (ASP 203)
  - Sound Power vs. Time, ...
  - Sound Power Spectrum vs. Time, ...
  - Sound Power K1 Background Noise Spectrum
  - Sound Power K2 Environmental Correction Spectrum
- Data Preparation (ASP 302)
  - Single Value from Documentation
- Framework (APR 000)
  - Tolerance Check
- ASX 06 (Data Processing Add-In API)
  - Post-Analysis Add-In 2D
  - Post-Analysis Add-In 3D

SOURCES POOL

- Time data for the subsequent processing
  - HDF
  - ATFX

  suitable ATFX data sets are created automatically



DESTINATION POOL

- Framework (APR 000)
  - Data Viewer, Calculation Project, Single Values Table, HDF, HSVX, HDFX
- Included in APR 010
  - Mark Analyzer
- Report (APR 020)
  - Report
- Automation Project (APR 050)
  - Automation Project
- MDF4 Export (ASP 703)
  - ASAM Measurement Data Format
- MTS-RPC Conversion (ASP 704)
  - MTS-RPC (RSP)
- UFF Conversion (ASP 705)
  - Universal File Format (UFF)
- Free (no license required)
  - ATFX, MP3, WAV, XLSX, ASC

FILTER POOL

- Basic Analysis (ASP 001)
  - Frequency Weighting
- Offline Filters (ASP 301)
  - IIR Filter, FIR Filter
  - Differentiate, Integrate, Resample
  - Unit Conversion
  - ...

STATISTIC POOL

- Statistics (ASP 303)
  - Min, Max
  - Sum
  - Average Complex Average
  - Median
  - Difference, Sum
  - Quantile
  - ...

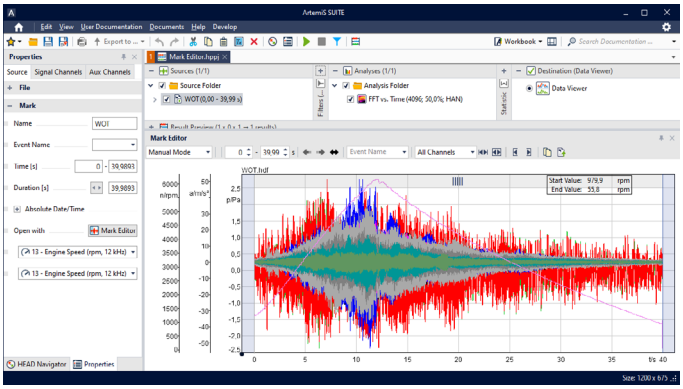
INCLUDED IN APR 010

Mark Editor

The Mark Editor enables marks to be cut based on time or another reference (analog or digital channel). The mark limits can be conveniently adjusted with the mouse or entered numerically. The Mark Editor automatically finds the correct mark limits matching the desired RPM values and enables the user to switch easily between different RPM ramps within a signal.

For simultaneous cutting of multiple marks based on the selected control channel, a table view shows the respective limits by means of a bar graph display.

It is possible to play back not only airborne signals but also other signals with comparable levels.

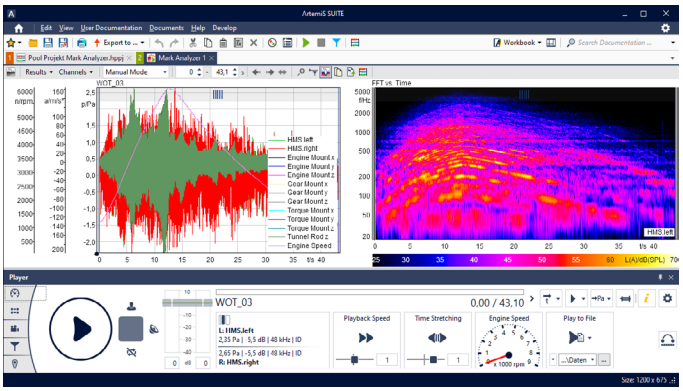


Mark Editor, an easy-to-use tool for time-based or reference-based definition of mark limits, can be opened via the context menu of a time-domain signal in a Pool Project.

Mark Analyzer

The Mark Analyzer is used for interactive analysis and playback of time-domain data from within a Pool Project. The Mark Analyzer enables signals to be played back and analyzed at the same time, thus enabling a combined analysis with user's eyes and ears.

The Properties tool window can be used to access all parameters of the Mark Analyzer, as well as all mark, filter, and analysis parameters of the underlying analysis result. These can be read as well as edited.



Mark Analyzer: All selected analyses are displayed one below the other respectively side by side.

Required: APR Framework (Code 50000)

and/or: HEAD System Integration and Extension (ASX) programming interfaces

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