SPECIAL FUNCTIONALITY IN E³.HarnessAnalyzer

- Optimize the process chain and collaborate more efficiently with suppliers
- Easily share detailed harness data created by a range of authoring tools for viewing, browsing, analysis, validation and commenting
- Read KBL and HCV design data
- Manage configurations based on modules for customer-specific harnesses (KSK-support)
- Quickly and automatically compare two versions of same design document
- Powerful search functionality
- High-performance for XXL-drawing
- All technical objects can be filtered, sorted and exported to Microsoft Excel for post-processing.

# E³.HarnessAnalyzer - Smart collaboration for the automotive harness industry

Introduction

E³.HarnessAnalyzer is a powerful tool for viewing and analyzing harness drawings in the standard HCV container data format, which combines KBL (physical data model) and SVG (vector graphics) data. The tool supports efficient collaboration through powerful analysis, redlining, and version compare functionality. A key benefit is the ability to manage configurations based on modules for customer-specific harnesses (KSK). These features provide a new level of ease-of-use when sharing the comprehensive harness design model and documents with internal or external project teams. All technical objects can be filtered, sorted and exported to Microsoft Excel® for post-processing.

Supported industries

E³.HarnessAnalyzer paves the way for harness design collaboration in the demanding automotive, special vehicles and wider transportation industries. It is easy to use and allows efficient viewing, browsing, analyzing, validating and commenting on the design model and related drawings generated by today's growing number of authoring tools.

The tool enables OEMs to optimize their process chain and collaborate with their suppliers. It allows detailed harness data to be made available to all stakeholders, such as release engineers, quality inspectors and production planners.
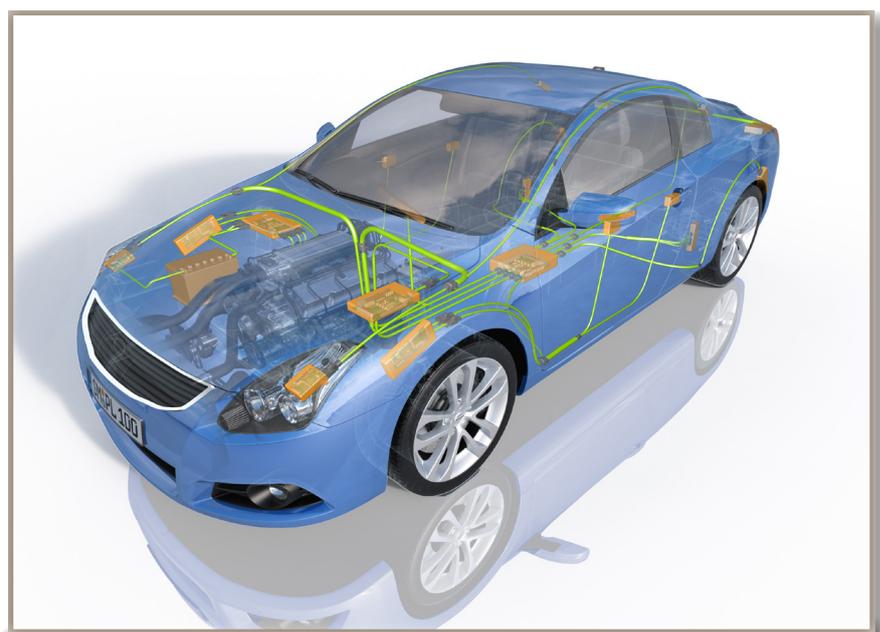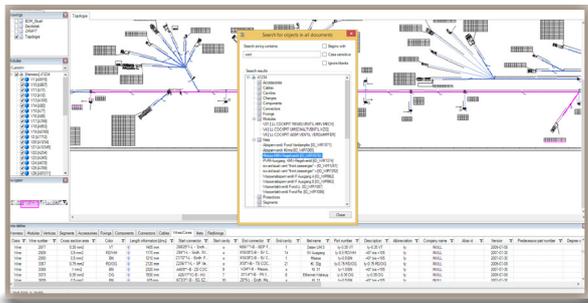
Analyze

Investigate aspects of the design using analysis functions that can, for example, show all connectors with gold plated terminals, or indicate splice or eyelet positions for validation purposes. Harness drawings are displayed in high resolution and XXL-scale formats (e.g. 1m x 60m) are supported. Standard functions such as zooming, panning, printing and graphics export to other formats are available. Technical information (physical harness model) is displayed in a grid structure with highlighted links to the graphical representation in the drawing, and vice versa.

Search

With today's large designs and drawings, the search function has become a major day-to-day requirement. E³.HarnessAnalyzer supports this with a Google®-like search functionality across all technical objects of a design.

Compare

Design collaboration typically involves fast manual detection of changes made by other designers when a new harness drawing version is released. E³.HarnessAnalyzer quickly and automatically compares two versions of same document and cross-highlights the drawing to show differences. Results may be exported to Microsoft Excel.

Redlining

With E³.HarnessAnalyzer users can mark-up documents with textual comments structured by classes such as "error" or "confirmation", which are displayed as flags in the drawing. All annotations can be exported for further processing, such as design review in the original authoring system or archiving for change management.

Supported formats

E³.HarnessAnalyzer imports HCV format data, which includes complete drawing information. This container format is supported by several harness design authoring tools and enables a vendor-independent combination of best-in-class tools in the different phases of the design and engineering processes.
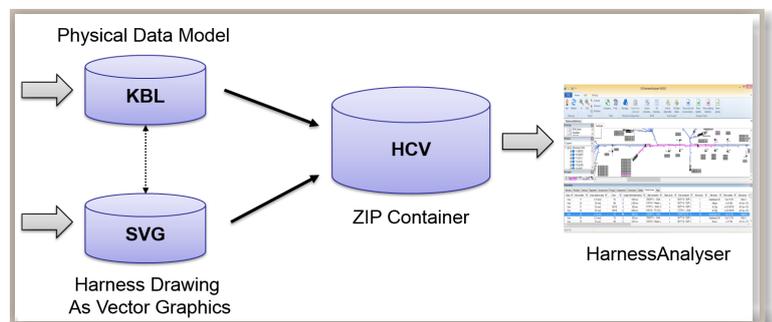
The tool also reads pure STEP AP212 KBL data. In this case the missing drawing is replaced by an auto-generated harness sketch.

Module structure

Master harness drawings may contain module families along with their modules. E³.HarnessAnalyzer displays the related information on module families and modules according to STEP AP212 KBL data structure – module history information included. The module structure can be used to filter the information in views and lists for the content of a single module or an arbitrary combination of modules. Module-specific plots can be created, as well as module-specific exports to Microsoft Excel. The user may define their own configurations and store them in the HCV container for later use.

Additional E³.series options

E³.schematic
The core module of the E³.series suite enables the creation of fault-free schematic diagrams. Also available also as multiuser edition.

E³.topology
Supports the architecture design by portioning off complex vehicle wiring systems into harnesses, and allocating devices and connectors to installation spaces.

E³.formboard
Enables creation of rich harness drawings that can be used as contract documents as well as production drawings.

E³.cable
Enables the design of cable assemblies and wiring harnesses. Its multi-view functionality allows alternate documentation of devices such as single-line diagrams, wiring diagram and cable plans to be created for production and service.

E³.3DRoutingBridge
Used when collaborating with 3D MCAD systems. Transfers electro-logical data to 3D, then after routing, transfers length information back into E³.series.