

CATIA Systems Generative 3D Electrical

Today electrical systems designers and 3D electrical designers need to optimize the way they share information, interact together, often within disconnected environments. The lack of continuity and efficient collaboration in the electrical process can cause various difficulties and can compromise the product global design.

CATIA Systems Generative 3D Wire Harness Design unifies in a single workflow the logical definition of wire harnesses and its physical mockup. 3D physical wire harness and placement can be automatically generated from its 2D schematic logical and 3D space reservation definition. Overall design change management cost is dramatically reduced thanks to the tight coupling of both logical and physical aspect and quality is improved. Reusing logical information to build physical data will save time to the user, by avoiding him to do the work twice, one in the logical design, and the second time in the 3D design.

Key capabilities

Capture Electrical Systems logical Architecture & Connectivity

The logical model enables to perform the early design of Electrical systems and Logical Wire Harness prior to the physical structure definition with the flexibility to investigate easily different harness solutions. The product brings the electrical semantic to the logical data model, in order to define equipments with their electrical interfaces, logical connectivity and logical harness wiring content. It enables the creation of logical data including equipment, equipment connectors, pin, ports, Logical conductors (net and net group), logical harness, harness connector, splice (etc.), and wiring conductors (wire & cable).

Choose the data you want to synchronize

The purpose of the command Logical to Physical synchronization is to generate and synchronize physical data with the logical data, in a flexible way. At the launch of the logical to physical synchronization command you need to select the physical data that need to be synchronized (equipment and wire harness), as well as the logical data.

Run the analysis

This will proceed to a comparison between the logical and physical models. You get the list of modifications on the selected objects. This can be filtered by object type or status.

Customer benefits

- Enhanced productivity with generative 3D electrical design
- Improved collaboration between electrical systems and electrical 3D designers
- Reduced costs for managing design changes between systems and 3D electrical design
- Increased design quality with full consistency between Logical and Physical electrical systems
- Benefit from the Logical to physical approach also if you are working with an external ECAD application

Select design modifications you want to proceed

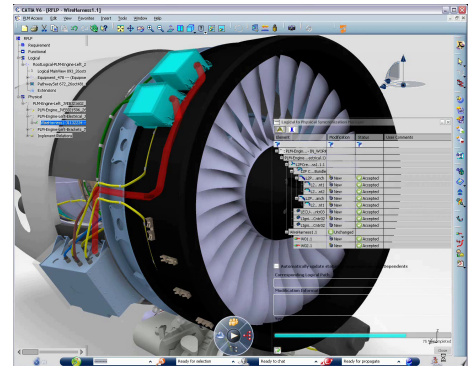
You have the possibility to select individual design changes, and for each of them you have the possibility to accept or reject it. When you select one in the list, a 3D preview is displayed, along with some textual information on the modification. The modification will be done only after getting acceptance from user, to avoid undesired modifications.

Synchronization: generation of physical data based on logical data

The data can be synchronized by clicking on the Synchronize button to apply the accepted modifications. During synchronization process, a progress bar will be displayed in the dialog box, to inform you about the progress of the Synchronize step. That step will generate all the physical devices (equipment connectors, harness connector, splices, wires, wire groups), as well as the harness bundle with branches based on logical pathway segments. More details

Reporting

The Report will be displayed after completion of Synchronization. The report page takes the form of a table, with information updated for each element. You can also generate an html report of the logical to physical synchronization.



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