



electrical engineering streamlined

High-performance electrical engineering

ELECTRE is the core of ELSYS's PLM suite of electrical engineering solutions. It is developed by industry professionals for industry professionals in sectors that design products combining mechanical and electrical technologies and require special applications for electrical schematics, bundle and harness design, and wiring.

From the schematics to the complete harness production file, ELECTRE offers a broad range of applications that cover the entire electrical design process in its mechanical environment and automatically generate manufacturing and wiring documents.

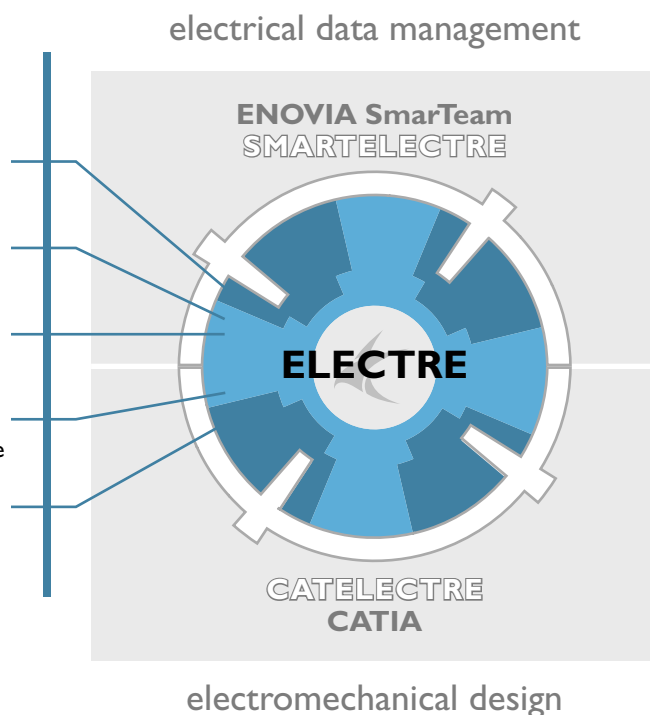
Combined with the CATIA V5 electrical engineering modules for companies that use them, ELECTRE handles the collaborative work between electrical and mechanical engineers, and provides a productive, user-friendly response to the requirements of onboard electrical systems (automotive, aeronautics, etc.) and other systems (machines, equipment, etc.).

In all cases, ELECTRE solutions allow effective integration with existing CAD/CAM configurations, and preserve the company's industry-specific data through their data recovery capability.

ELECTRE

specialized electrical engineering applications

- **Electrical diagrams**
Intuitive user interface – Libraries – Industry specific functions
- **Electrical engineering applications**
Diagrams – Cabinets – Terminal strips
- **Harness application**
Design – Wiring – Aeronautics and space standards
- **Bundle application**
Schematic diagrams and bundle drawings – Manufacturing bundle
- **Collaborative tools**
Manufacturing documentation – Data exchange
Report generator – Project management



Impact

- Quick gains in productivity, lead times and quality of electromechanical products.
- High return on investment through simple, economical and efficient implementation.
- Guaranteed efficacy of solutions for each industrial branch through special handling of individual sector approaches.

**from electrical engineering
to PLM integration**

From diagrams to harness design and manufacturing, a powerful set of dedicated industrial applications



Through its sustained close collaboration with large manufacturers, ELECTRE has acquired a thorough grasp of the specialized know-how of electromechanical engineers and can help companies achieve major productivity gains quickly through its professional handling of industry needs in each electrical sector.

This comprehensive approach to electrical issues allows companies to design and manufacture high-quality harnesses and cables more quickly, more safely and at a lower cost. These reasons, plus added reliability, mean that the automotive and transportation industries – and especially the aerospace industries – have most to gain from the ELECTRE approach.

Highlights

Full product-cycle coverage.

Applications specifically designed for the needs of onboard electrical systems and electrical wiring.

User-friendly interface designed for electrical engineers, effective for studies, process engineering and manufacturing.

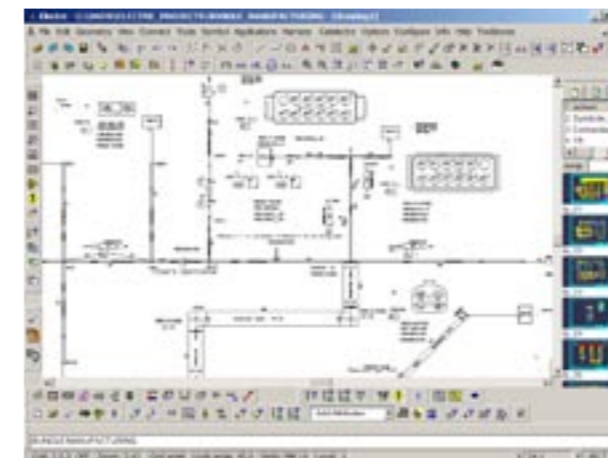
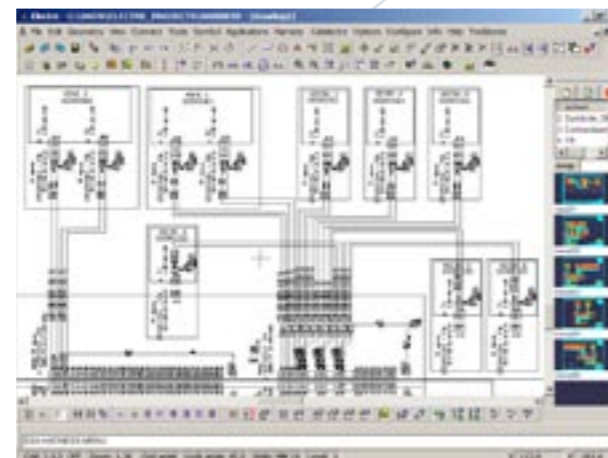
Many specialized features to facilitate the user's work, enabling extremely safe design and optimal productivity.

Open, interactive solution that is readily adapted to different industrial environments and types of project.

ELECTRICAL DIAGRAMS

This ELECTRE workshop contains all libraries and functions common to the various electrical sectors and provides a user-friendly interface specially designed for electrical engineers.

- Electrical-oriented graphic editor, wire or net mode,
- IEC libraries,
- Databases for components, wires, etc,
- Specialized utilities: cross-references, folio generator, material assistant, folio comparison tool, etc,
- Error manager and diagnostic tools.



ELECTRICAL ENGINEERING APPLICATIONS

This workshop provides a specialized response to the various needs of onboard and other electrical systems.

- Bill of material generator,
- Cabinet generator,
- Terminal strips and wiring lists,
- Programmable logic controllers,
- Block diagrams,
- Cable drawings generator (Autocable).

HARNESS APPLICATION

Specially developed for the design and manufacture of wiring and harnesses for the aerospace industries, this application provides powerful computing and editing features to ensure harness compliance with the various ATA standards.

- Menus, libraries and specialized MMIs,
- Parameterized design of connectors and cables,
- Wiring list and contact calculations,
- Bill of material generator,
- Checking and consistency tools,
- ATA conformers: symbols, dedicated rules and lists by manufacturer (AIRBUS, BOEING, etc.).

BUNDLE APPLICATION

From electrical diagrams to the generation of manufacturing documents, this application provides optimal coverage of industry needs for the design and production of wiring and bundles for the automotive and transportation industries and their manufacturing subcontractors.

- Menus, libraries and specialized MMIs,
- Assisted design of bundle drawings (connectors, figurines, sheaths and accessories),
- Analysis and checking of bundle drawing,
- Wire and sheath cutting sheets and calculation of actual lengths,
- Bundle parts list, options and variants,
- Synchronization with schematics,
- I/I scaling for production.

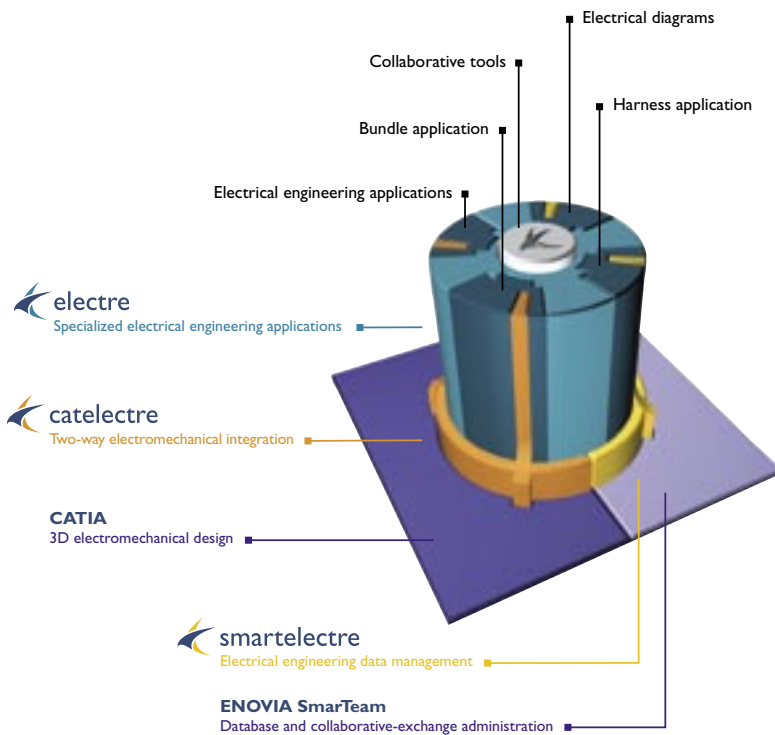
COLLABORATIVE TOOLS

The standard ELECTRE package includes advanced editing, exchange, project-management and customization features to meet collaboration and communication needs, for both import and export.

- Manufacturing documentation,
- Project manager,
- Customized report generator,
- CAD/CAM interfaces: DXF, DWG, IGES, etc,
- Documentation interfaces: PDF, TIFF, HPGL, JPG, BMP, EMF, etc,
- e-ELECTRE interactive internet viewer (SVG),
- Special interfaces and recovery of existing data,
- System customization tools, preferences, etc.

Electrical PLM integration

Through CATELECTRE and SMARTELECTRE, the ELSYS solutions are closely integrated into the Dassault Systèmes products CATIA and ENOVIA SmarTeam, thereby allowing companies to handle Electrical PLM issues globally through the complementarity of approaches and features.



- CATELECTRE performs integration between ELECTRE and the CATIA 3D wiring products. This full two-way integration allows electrical diagrams to be synchronized with the 3D mechanical environment supporting them, and makes it possible to build a single digital model that combines the electrical and mechanical models.
- SMARTELECTRE performs integration of ELECTRE data into ENOVIA SmarTeam and provides a first-rate collaborative environment in which to manage and couple the electrical with the mechanical design models and the production data with the manufacturing documents.

Renault Trucks

"We chose ELECTRE because of the ability of ELSYS's software and teams to adapt flexibly to our constraints and our configuration. Thanks to data continuity, the Wiring Department can manufacture harnesses knowing that they will be right, and productivity is substantially improved."

- C.LEGRAND, HARNESS PRODUCTION MANAGER, RENAULT TRUCKS