E N G I N E E R I N G

DataXpress

DXL400 Mentor Graphics Schematic Translator

The DXL400™ Mentor Graphics Schematic Translator is one of a series of optimized data links that is part of the DataXpress Integrator™ product line. The DataXpress Integrator was developed as a solution to the problem of moving design data from one step in the design process to another. This usually involves going from one EDA vendor's tools to another's. These tools are fundamentally different in terms of function and data formats.

Engineering DataXpress works closely with the various EDA vendors to obtain proprietary information about their database formats and structures. This information is then used to develop optimized data links into and out of their proprietary databases.

The DXL400 Schematic Translator allows Mentor Graphics IDEA Series™ workstation users to translate their schematic design data to and from the Engineering DataXpress database called EDI. The EDI database acts as an integration hub for the direct transfer of data between Mentor Graphics and other EDA vendors.
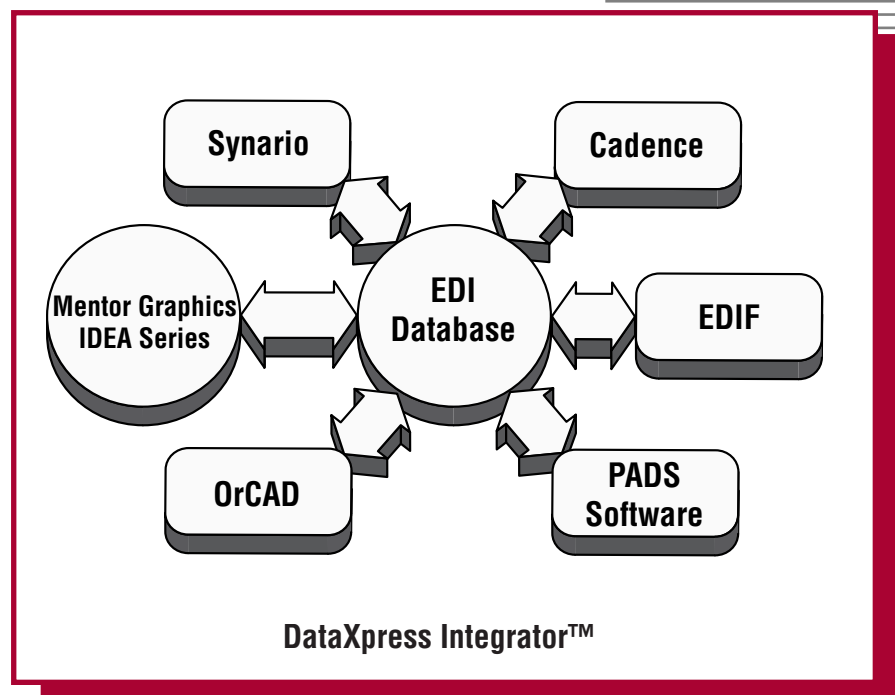
In addition, it is possible to output Mentor Graphics data from the EDI database as an EDIF data file. EDIF schematic files can also be read into the EDI database and translated into the Mentor Graphics database.

Schematics and cell libraries can be transferred independently, or a schematic and its library of subcomponents can be transferred at the same time. The full design hierarchy can be transferred or it can be limited in various ways. Also, when reading an EDIF file, schematics are allowed to reference symbols which are defined externally. Options for the Translator are specified in a set of commands located in a configuration file.

The DXL400 Schematic Translator is fully supported by Engineering DataXpress, a worldwide leader in data translation technology. This ensures that the translator will continue to be enhanced with new features and options. It will also remain current with each new release of Mentor Graphics software.

Features

■ Bidirectional translation of Mentor Graphics NETED™ sheets and SYMED™ symbols.

■ Provides access to other EDA vendors from the DataXpress database, (EDI DB).

■ User control over whether components are translated or referenced in external libraries.

■ Translates most EDIF Level 0 constructs.

■ Handles hierarchy in Mentor Graphics sheets, symbols, and in EDIF cells.

DataXpress Integrator™

Product Description

The DXL400 SchematicTranslator transfers schematic information both into and out of a Mentor Graphics IDEA Series workstation. All data into and out of the IDEA Series workstation pass through the EDI database. It can then be transferred either directly to other EDA vendors who are also linked to the EDI database or to any EDA vendor that has an EDIF schematic interface.

The DXL400 Translator is comprised of two modules. The mgc2edi module takes as its input schematics created with NETED and SYMED and creates as its output either an EDI database or an EDIF file describing the schematics. Any schematic design data contained in the ".nrel", ".srel", and associated ".pic" files can be translated into an EDIF file.The edi2mgc module takes an EDIF input file or EDI database, and creates Mentor Graphics schematics. The schematics can then be edited with NETED or SYMED, or EXPAND'ed for simulation. The reader can read and translate any correct EDIF level 0 schematic representation into ".srel", ".nrel", and ".pic" structures.

Mentor Graphics specific elements such as connectivity objects, properties, and graphics are all translated to the equivalent EDIF representations. The translator uses configuration files to determine user options and to locate files in a design hierarchy. Using a configuration file, the user can specify globally for the entire translation what properties should be named after translation and units of numerical quantities, e. g., time in nanoseconds. The user can also specify which property values in a design will be translated and the data type into which property values will be translated, such as character strings or real numbers. In addition, it is possible to define libraries, map EDIF cell declarations to a Mentor Graphics component, specify which properties map to EDIF attributes, filter certain properties out of an EDIF file, and store component definitions into a library.

The following can be specified for different libraries within one EDIF file:

- On a write, how cells are mapped to EDIF cells and libraries.

- For a read, how cells declared in EDIF are mapped to existing components.

- What properties are written to the EDIF file or EDI database.

- How properties map to EDIF properties.

- How properties map to EDIF attributes.

- What data type, i. e., string, integer, etc., a property should be translated into.

Supported Platforms

- HP/Apollo 68K systems with Domain OS version SR10 or later.

- HP 9000/400 systems with Domain OS version SR10.3.5 or later.

Software Requirements

- IDEA Series workstation software Release 7.0 or later.

- EDIF version 2 0 0.

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