

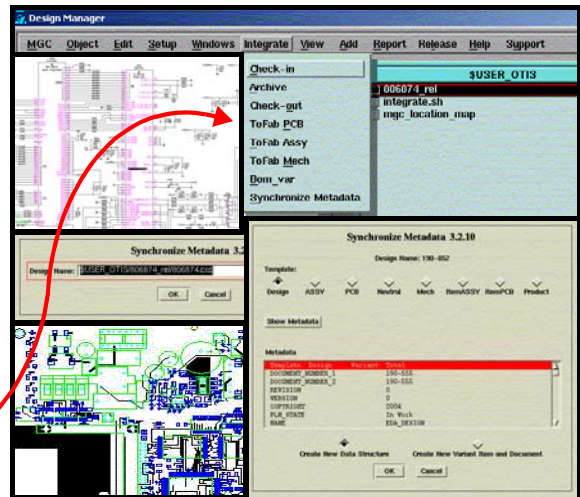
Mentor Graphics® with Product Lifecycle Management

You have invested all this knowledge into your Mentor design. Now you want to...

- associate it with the versioned data of enclosure, software, documentation, harness, cabinet...
- give data to other persons in manufacturing, service, qc, purchasing, test, materials control...

You want this process to be automatic, painless, easy and quick and you want to focus on design, not on databases and processes in the company.

→ You want Integrate



Operation

You operate an Integrate function from the pull down menu in Design Manager®. The integration establishes the communication between your Mentor design tools and the PLM system.

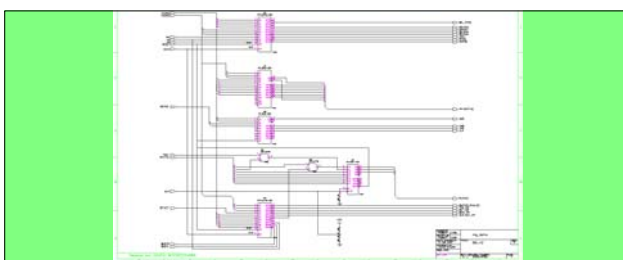
Synchronize Metadata

Build the data model of the electronic product automatically in PLM. In the same process, deposit metadata like part number and version from PLM once per project into the Mentor design structure.

Metadata	Metadata in Table Field	Field Type
Document No.	T_DOC_DAT_DOCUMENT_ID	S80
Revision	T_DOC_DAT_DOC_VERSION	S10
Version	T_DOC_DAT_DOC_REVISION	S10
Customer	T_DOC_DAT_SEC_CUSTOMER	S20

Check-in

Update drawing frame properties in schematics and text strings in PCB drawings with metadata. Check an innovation container with your design into PLM for ECO. Check-in schematic plots in the PDF or TIFF formats.



Redesign

Resolve the design for ECO or re-use from an innovation container in PLM into the Mentor Design environment for immediate use, with optional reservation of the design in PLM.

Get

Reuse a design or part of it in a new design.

BOM

Extract preliminary Bill-of-Materials data after Package into PLM for advance material disposition. Update the BOM in PLM after PCB Layout with associated accessory parts like sockets, heatsinks and firmware. The BOM includes relation attributes like reference designator, x, y, rot, and side.

1209301	340	1	R4	4.445	18.491	180
1209315	350	1	R5	6.985	15.216	180
1209347	360	1	R6	13.335	2.867	180
10721715	370	1	R14	6.985	40.640	90

Automatic support of your company's BOM structure including variant Bill-of-Materials from the Mentor job.

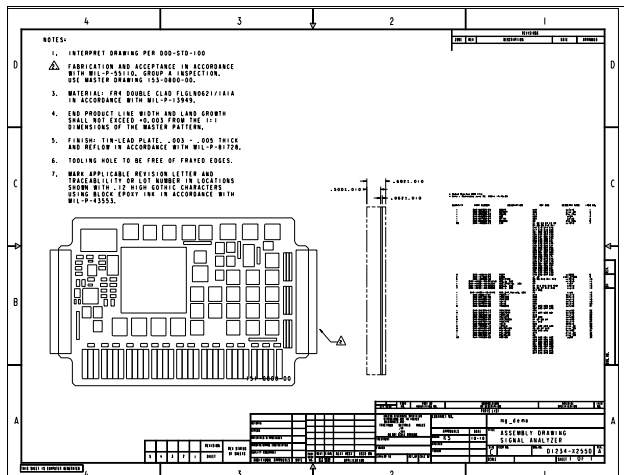
Board Fabrication

Build and check-in a versioned container of Gerber and Excellon data for the manufacture of the bare PCB. The data then might be accessed via a password-protected web client by your PCB manufacturer. Automatically create a drill drawing, an IPC netlist, and mechanical CAD data. Optionally create panel data.

Integrate

Board Assembly

Deposit versioned data for the assembly of the board in PLM such as variant schematics and top and bottom assembly plots.



Create a source file with data for the assembly machines.

Publish Parts

Capture classified electronic component descriptions in PLM including the release state and then synchronize the items with the corresponding [LMS] catalogs in the Mentor system. Include data sheets for viewing from Design or Board Architect. Create a reference list to see all designs which are affected by the parts change.

bom_back

Review and back annotate legal Bill-of-Material changes from PLM into the Mentor design.

Adaptable

There is a host of features which distinguish your company processes from other companies, ranging from fundamental topics like part number format and BOM sorting sequence to the automatic extraction of variant assembly plots.

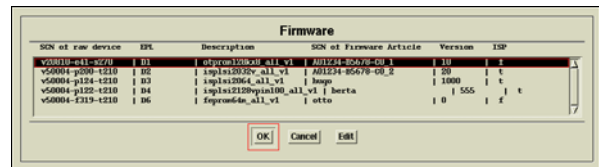
So Integrate modules have editable configuration files. These are adapted in the introduction phase to your companies' processes.

Spotlights on some Features

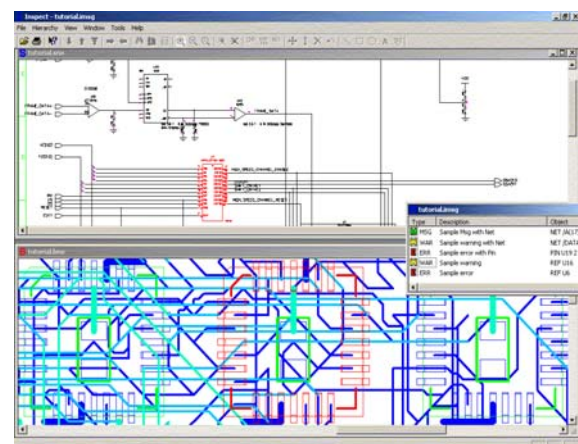
- Interactive selectable variant Bill-of-Materials, schematic plots and assembly plots.
- **BOM:** supporting accessory part



association with in-circuit programs as pre-programmed devices, multi_level definition of sequence of parts, and optional creation of manufacturing BOMs which include assembly line management data



- **meta4plot:** update of metadata in drawing frames of plots triggered by a state change in PLM. E.g.: authorized/date and released/date.
- **Publish Parts:** electronic item synchronisation from PLM into the Mentor parts database with optional display of associated data sheets. Optional function **Import Parts** to create preliminary classified electronic items in PLM from the EDA library.
- Support of Workflow, History, designer-group based access control, data reservation, ECO process and concurrent engineering.
- Interdepartmental cooperation synchronized in PLM: mechanical design data, programmable logic association, electrical and harness design data, software design.
- Optionally integrated operation with an advanced viewing and analysis tool for schematics and PCB data.



- Optional support of part and design re-use in distributed engineering organisations.
- Monitor the design progress by grading the design process for cost, MTBF, or multi-suppliers.