

TeamPCB drastically reduces layout design time by facilitating parallel design processes on previously serial tasks. Here, a design has been split into three partitions that can each be edited independently.

Major product benefits:

- Drastically reduce design times
- Eliminate errors through automation
- Enable design team specialization
- Collaborate across geographies
- Efficiently utilize outsourcing services

TeamPCB™ allows multiple designers to simultaneously work on the same PCB layout design. For PCB designs that are too large or complex to complete in the desired time frame, TeamPCB enables collaboration across geographically dispersed or functionally organized PCB design groups, to maximize productivity and dramatically shorten design times. TeamPCB is available as an option with Mentor Graphics Expedition™ PCB, Board Station® RE and SFX RE tools. It is designed for immediate deployment and does not require time-consuming training or changes to a company's infrastructure or library to implement.

Revolutionary Methodology Improvements

Through a process of partitioning a board in the layout design phase, today's design teams can "divide and conquer" projects in a fraction of traditional schedules. Traditional team design and concurrent design methods relied on logical partitioning or design reuse blocks, which often involved the error prone manual editing of ASCII files and databases. TeamPCB eliminates many problems associated with other

team design processes, through an automated design methodology that manages all edits and keeps design files synchronized.

Before the design is partitioned, any number of reserved areas may be drawn on the board. Each reserved area must be given a name (for example, design functionality or a designer's name) before sub-directories are created in a master design database. The board is then "split" into the various partitions. Each partition includes the data from the entire master design prior to the split, but only elements within each partition may be edited from that partition.

Editing Capabilities

TeamPCB allows both initial placement and placement modifications within partitions. Additionally, interactive and automatic route editing capabilities are available in TeamPCB, allowing designers to complete their partitions independently and gain the full time-savings of the parallel design process. Each designer is able to edit within their assigned partition and up to the edge of the adjoining partitions. When the partitions are re-joined, the automatic router

may be used to complete the traces according to the design rules established within the master design database. Guide pins (virtual points in space that the nets will route through) may be added in the master design prior to a split, to guide and optimize routing up to the edge of, and between, partitions.

Viewing Edits

While designing in a TeamPCB partition, a designer can view edits from other partitions in two ways. First, all design partitions can be re-joined to the master design database. When the master design is then re-split into partitions, each designer can see all edits from the updated master design. Second, designers can communicate changes between the partitions (without re-joining and re-splitting) through a process of “peer-to-peer” updates. Designers can select any, or all, partitions in which they wish to see updates. They can then view edits up to the last save of the selected partitions.

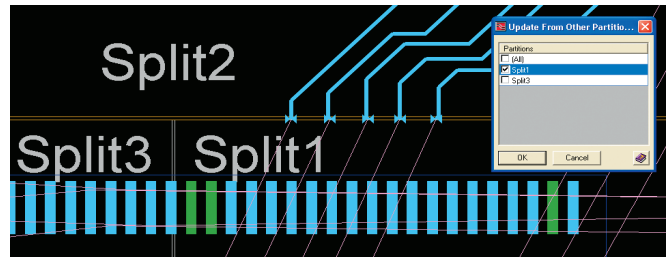
Benefits

Drastic reduction in layout design time—TeamPCB reduces layout design time by facilitating parallel design processes on previously serial tasks. For example, on a board that has been split into four partitions, TeamPCB has the capability to reduce total layout design time by as much as a factor of four.

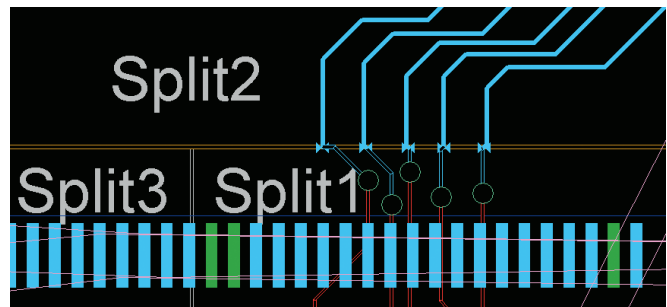
Functional specialization—Through its parallel design methodology, TeamPCB provides specialists with the ability to concentrate on their functional areas of expertise, without causing schedule delays to the overall design.

Collaboration across geographically dispersed teams—TeamPCB’s methodology enables effective resource management and workload distribution that reduces the need for overtime and greatly increases design throughput.

Ideal for outsourcing—TeamPCB facilitates optimal utilization of service bureaus, as design partitions can be shared beyond networked team members.



Before Update: Guide pins enable designers to efficiently route up to the edge of, and between, partitions. In this photo the designer in Split 2 has chosen to view a “peer-to-peer” update of edits in Split 1.



After Update: The designer in Split 2 can now view edits from Split 1. Notice that the guide pins on the border between Split 1 and Split 2 have effectively guided the routing of nets that are shared between partitions.

Minimum Hardware/Software Requirements

Pentium Processor

- Minimum: 512MB RAM (1024 recommended)
- Windows NT 4.0 or higher, Windows 2000 and XP Professional

Sun

- 512 RAM (1024 recommended)
- Solaris 2.6, 7 and 8

HP

- 512 RAM (1024 recommended)
- HP-UX 10.2, 11.0 and 11.11

To learn more about how TeamPCB can help improve your PCB design process, call Mentor Graphics to schedule a complete product demonstration, or visit our website at www.mentor.com/teampcb for the latest product news.

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Corporate Headquarters
Mentor Graphics Corporation
8005 SW Boeckman Road
Wilsonville, OR 97070-7777
Phone: 503.685.7000
Fax: 503.685.1204
Sales and Product Information
Phone: 800.547.3000

Silicon Valley
Mentor Graphics Corporation
1001 Ridder Park Drive
San Jose, California 95131 USA
Phone: 408.436.1500
Fax: 408.436.1501
North American Support Center
Phone: 800.547.4303

Europe
Mentor Graphics
Deutschland GmbH
Arnulfstrasse 201
80634 Munich
Germany
Phone: +49.89.57096.0
Fax: +49.89.57096.400

Pacific Rim
Mentor Graphics (Taiwan)
Room 1603, 16F
International Trade Building
No. 333, Section 1, Keelung Road
Taipei, Taiwan, ROC
Phone: 886.2.87252000
Fax: 886.2.27576027

Japan
Mentor Graphics Japan Co., Ltd.
Gotenyama Hills
7-35, Kita-Shinagawa 4-chome
Shinagawa-Ku, Tokyo 140
Japan
Phone: 81.3.5488.3033
Fax: 81.3.5488.3021

Mentor Graphics

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