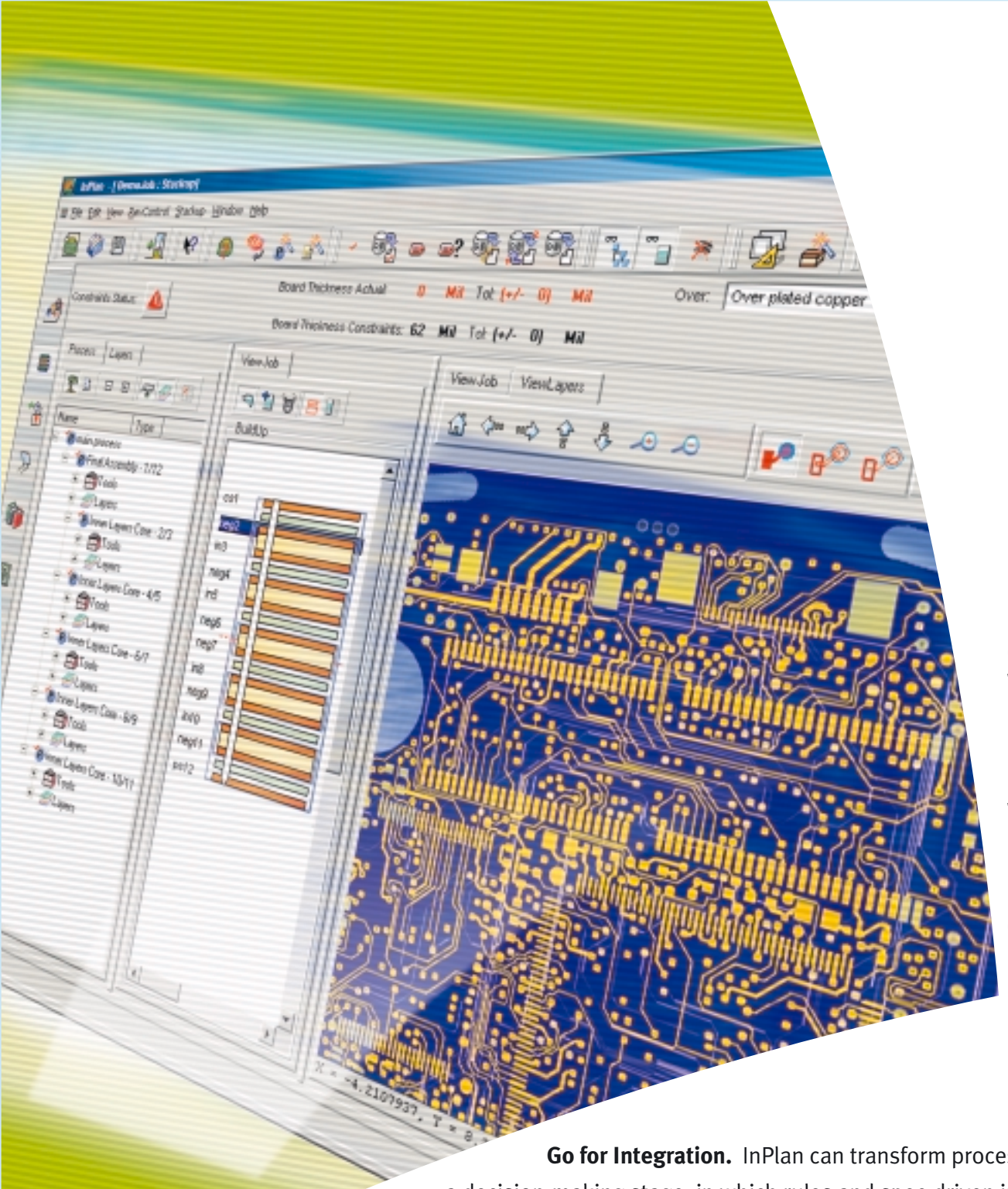
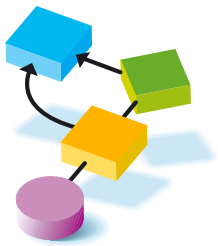
InPlan

Rules-driven manufacturing process planning





Go for Integration. InPlan can transform process planning into a decision-making stage, in which rules and spec-driven information help to automate time-consuming and error-prone tasks. Integrate InPlan with CAM and ERP, and speed up your time to market.

Frontline

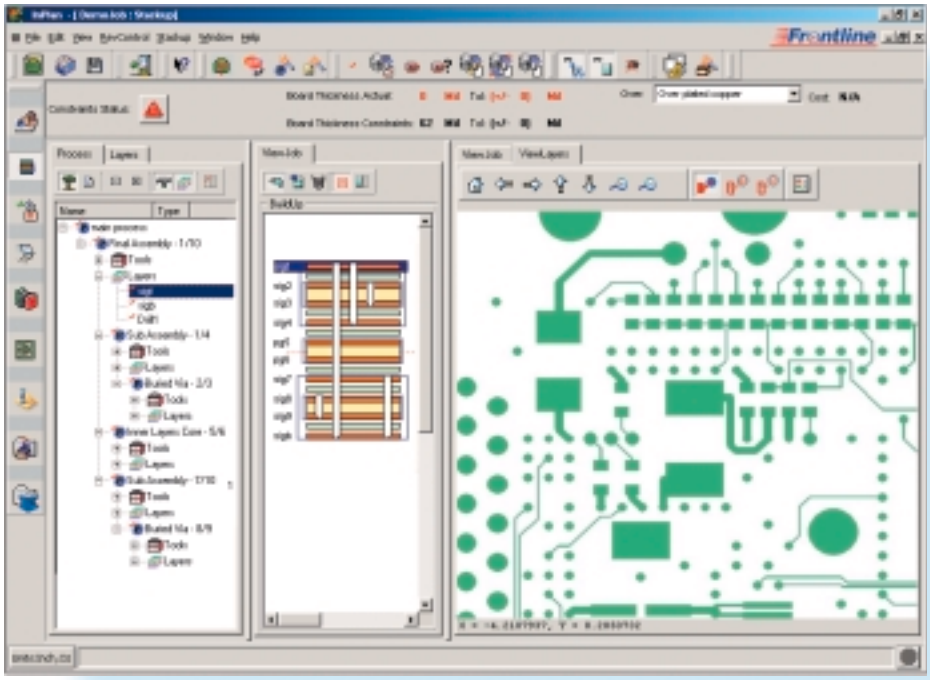
PCB SOLUTIONS

An Orbotech Valor Company

InPlan

Rules-driven process planning application

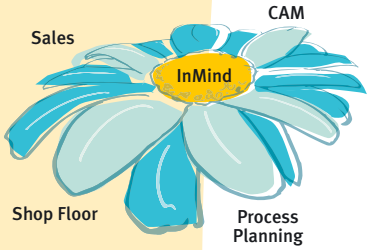
- *Standardizes your process planning*
- *Fully integrates with the InGineering front end solution suite*
- *Integrates with InMind database and CAM*
- *Maintains an electronic knowledge base, based on rules and electronic specs*
- *Enables engineering concurrency and multi-site operations*
- *Outputs BOM, traveler, and CAM instructions*
- *Allows revision control for effective change management*
- *Reduces engineering cycle time*



The InPlan Engineering Desktop

InGineering

A complete solution - from the quoting stage, through process planning and CAM, all the way to the production floor. InGineering is composed of the central InMind database and a line of state of the art rule-based engineering applications, all revision controlled.



Plan Anywhere, Build Anyplace
In less time than you ever imagined possible, your engineers are generating Bills of Material (BOM), traveler and instructions to CAM. Distribute the output to the geographic sites you prefer, creating centers of excellence for maximum efficiency.

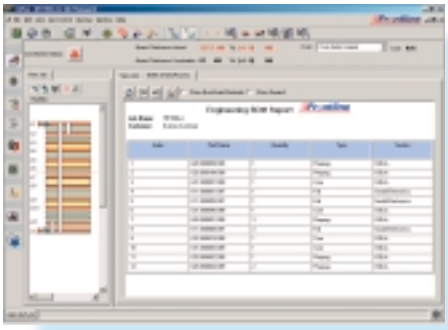
Securely Manage Changes in Product Data
Changes between different revisions of the same product are fully controlled, traced and comparable. A change order, whether generated by a customer, an internal request or other source, is swiftly handled. Best of all, once a change has been made, it is there for life.

Go for Customer Satisfaction
Storing customer specs electronically for rapid, simple updates, helps ensure that you follow the requested specs. Built-in revision control for change management eliminates unpleasant surprises down the line.

Every Function is Contributing to Your Success

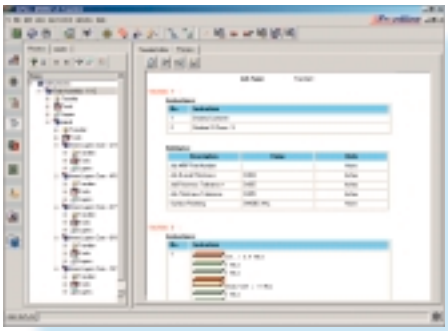
Job Editor
Automatically synchronizes job data with CAM. Utilizes rules to generate a build for each board and a hierarchal manufacturing processes tree. Use manual editing tools to refine the suggested solution, if needed. You may graphically view layers, drill programs and production panels in order to take immediate decisions on production issues. In addition you can update job processes and tools, thus maintaining complete concurrency and trace changes introduced into the job in earlier stages.

Stackup Designer
Stackup Designer is in sync with the materials library of your ERP. Under the control of various build constraints, Stackup designer will swiftly calculate the exact required list of materials. Constraints such as impedance, thickness, tolerances, symmetry and material consistency are easily defined in order to allow you to smoothly generate the optimal Bill Of Materials for each job.



Bill of Materials

Traveler (Batch Card) Editor
Use this package to generate a rules-driven manufacturing work instructions set (Traveler). View the instructions electronically or print them as hard copies. Fully integrated with your ERP system, the operations list is transferred to the site manufacturing system. Product attributes, specific notes and graphic attachments are an integral part of the instructions.

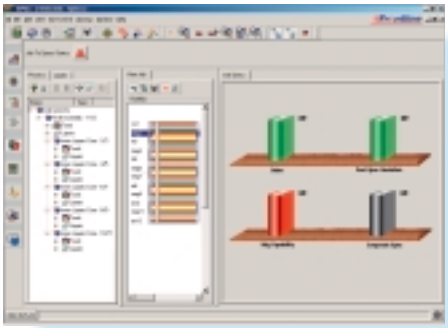


Traveler Editor

CAM Instructions Editor
Add a dimension of automation to your Engineering -to- CAM interface. Engineering CAM instructions may be automatically created based on manufacturing knowledge stored in rules. One may interactively add specific instructions to solve specific production issues. CAM instructions are an excellent baseline for CAM automation.

Panel Designer
Choose your optimal production panel while considering the specific manufacturing process involved as well as your customer's special preferences. Special coupons, machine- dependent alignment features, tab gold plating and more can all be considered. You have a solid infrastructure for CAM panelization tasks.

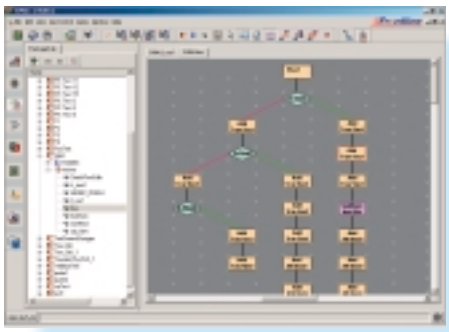
Specs Manager
Manage customer specs electronically with back tracing and revision control. Compare a job to one spec or more and receive color-coded comparison results. Drill down to the details of discrepancies and generate corrective tooling instructions accordingly. The content of specs is user configurable, and you can have as many specs as you wish. In addition to customer specs and manufacturing capability specs, you may add more spec types to fit operational needs.



The Specs Manager

NC Tools Manager
Be aware of your NC resources and capabilities. Using rules, select the most suitable drill machine – and it does not always have to be the most accurate or the fastest one! Plan your panel stack per each drill operation – it does not always have to be the same for all jobs. Finally, make sure in advance that your finish hole sizes will meet your customer's specifications no matter what the tolerances or finishing methods are.

Rules Editor
Create and modify the rules used in CAM instructions, process steps, operations list and in the specs used by InPlan.



The Rules Editor

InMind
Central Engineering Database

InMind - Central Engineering Database

- *Central repository of all the engineering data*
- *Synchronization, with all users sharing the same data version*
- *Engineering concurrency supported at multiple sites*
- *Prevention of data duplication and double data entry*
- *Revision-controlled mechanism for archiving*

InMind is based on an industry standard relational database, and serves as the repository for all InGineering data.
InMind is tightly integrated with InGineering client applications, from Process Planning, through sales, CAM and other information systems.

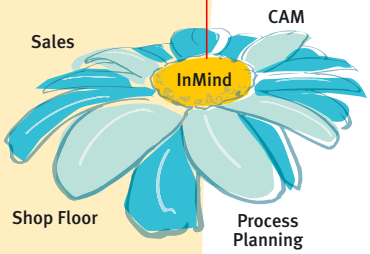
InMind supports archiving, revision control, hold/release management and multi-user access. InMind seamlessly supports every aspect of the front end, linking easily to CAM and the shop floor.

InMind is implemented on an SQL relational database enabling easy, secured and controlled access to data and maintenance.

When you build an InMind repository, you benefit from a unified database that computerizes many time-consuming tasks, such as managing job revisions, customers and manufacturing specs and more.
Now all the information you need to process a job is instantly accessible and fully updated: no more mix-ups between versions and users.

Complete, convenient and coherent. That is what InMind is all about.

Database
Rule Based Automation
Knowledge Base
Archive
Revision Control
ODB++



InPlan Minimum System Requirements

Prerequisite InMind Server
Platforms Windows NT, Windows 2000, Windows Xp, Linux, Solaris 2.7, HP-UX 11
Memory 128 MB
CPU 500Mhz

Integrated Engineering. What you want the front end to be.

Frontline
PCB SOLUTIONS
An Orbotech Valor Company

www.frontline-pcb.com

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