Introducing . . .

Electronic
Design
Solutions
From
ACCEL Technologies

Press Spacebar to move forward, Esc to exit.

Viewing this presentation

You can view this PowerPoint presentation on ACCEL EDA at your own pace.

To move forward, press Spacebar
To move backward, press Backspace, or

To move forward, click LeftMouse
To move backward, click RightMouse

To exit at any time, press Escape

For best results, view at 800x600 SVGA

The Tour Schedule

About ACCEL Technologies
Today's Design Concerns
The ACCEL EDA Series
ACCEL EDA Highlights

About ACCEL Technologies

Founded in 1983 in San Diego, California
Entered the EDA business in 1986
Introduced Tango Series II 1988
Shipped TangoPRO for Windows in 1993
Acquired Omation in 1994, P-CAD in 1995
Introduced ACCEL EDA in 1996

We develop and market design tools to meet the present and future needs of engineering professionals worldwide who share our passion for innovation, excellence and exceptional value.

ACCEL EDA

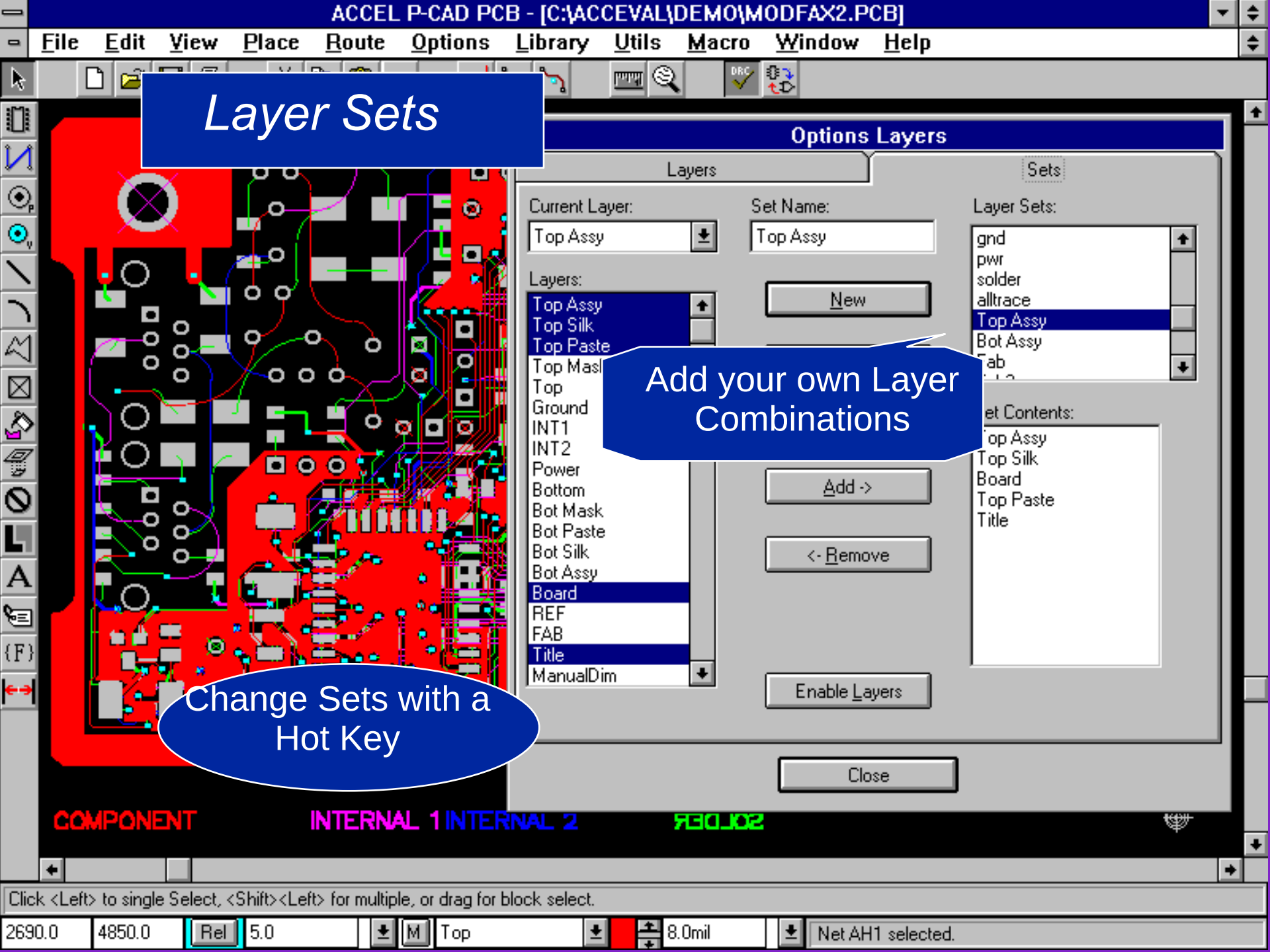
Today's Design Concerns

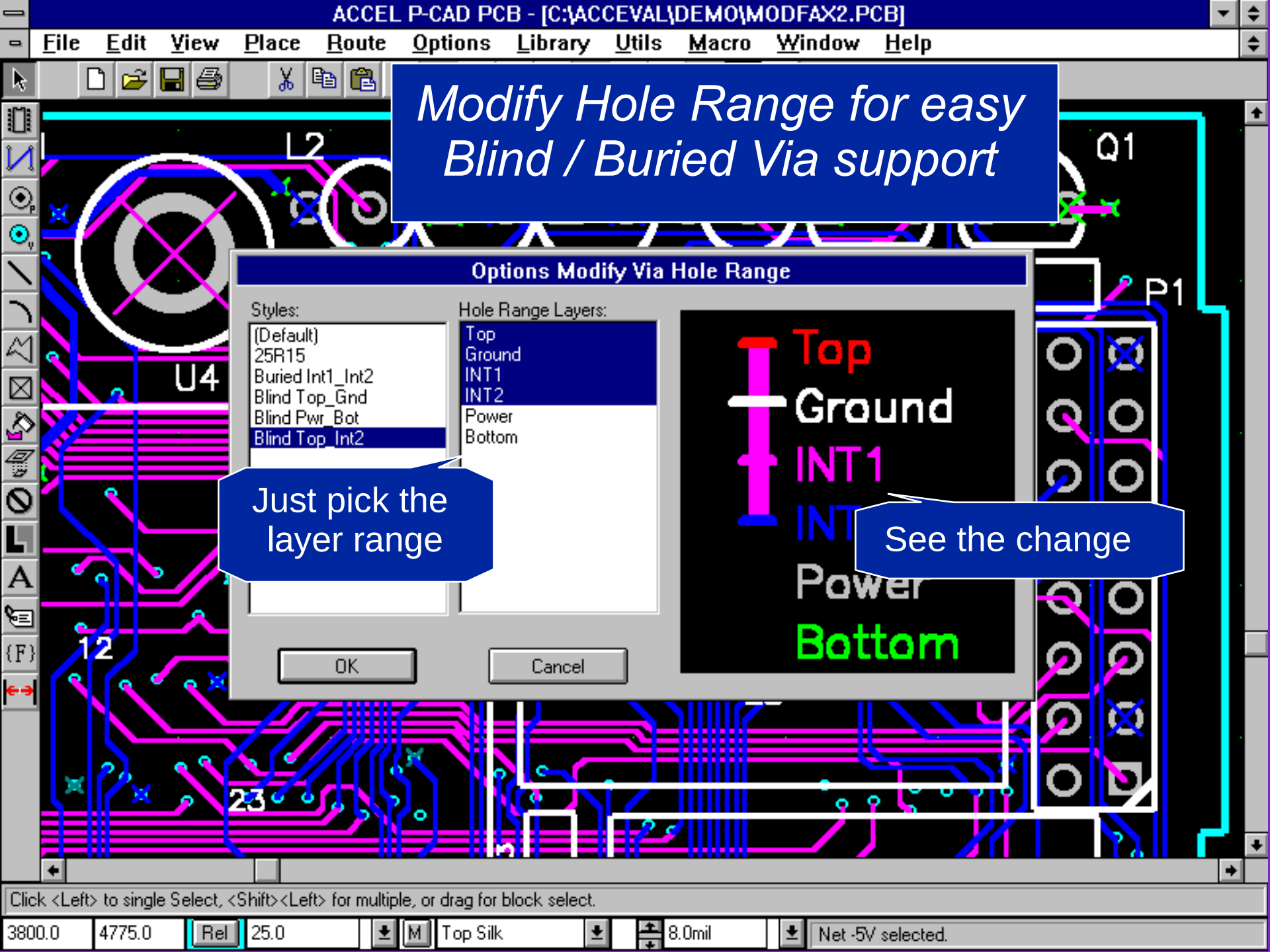
Software Usability
Power
Correct by Design
Manufacturability
Inter-operability

Usability

ACCEL EDA's user interface includes productivity enhancing shortcuts & features, and is configurable to your particular needs.

- Status Line Editing
- Speedy Query/Edit
- Sub-selection
- Shortcuts
- Part and Component Browse
- Hierarchical Design Rules
- True Type Fonts
- Layer Sets
- Pad/Layer Ordering
- Network licensing

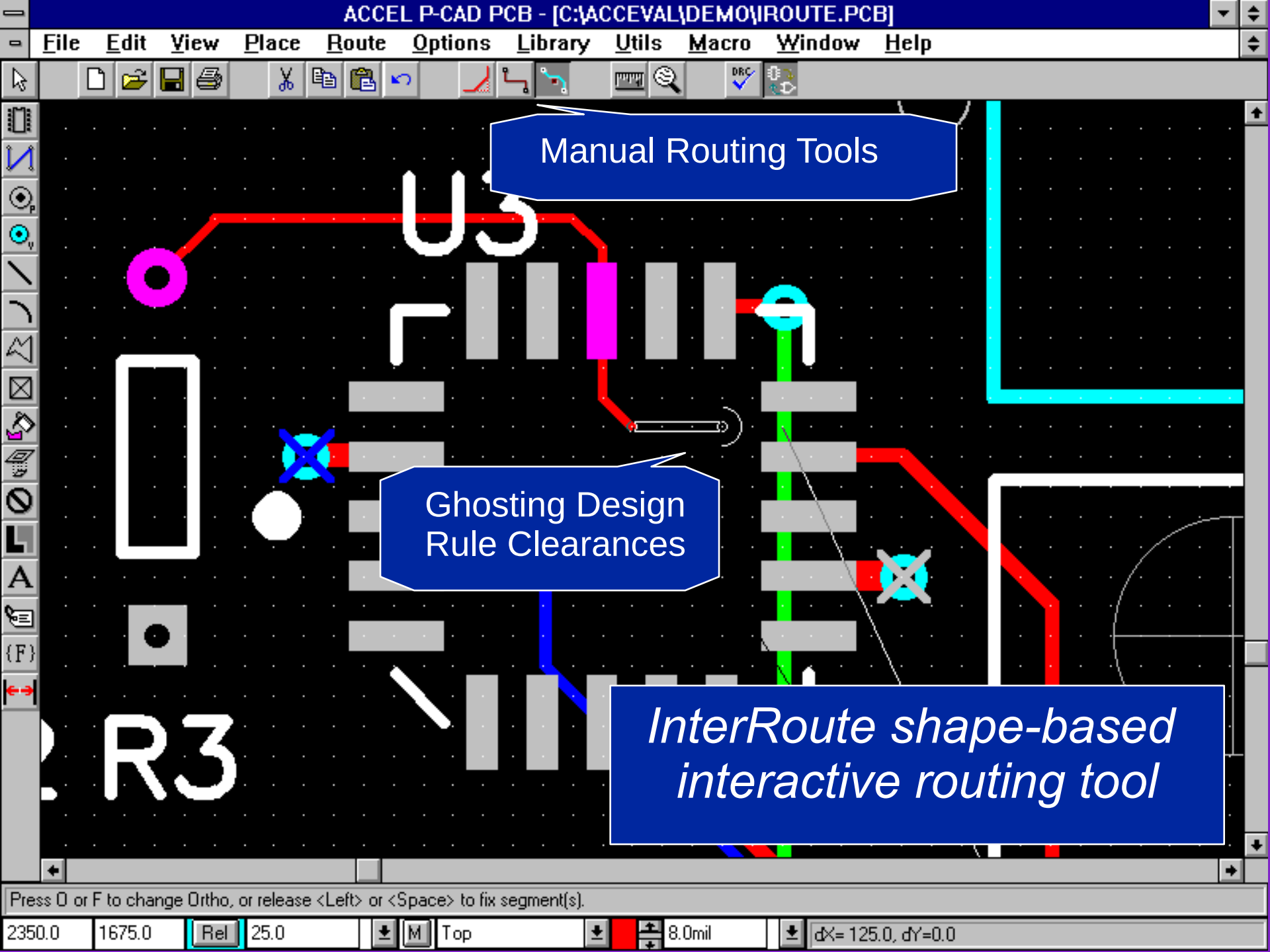

ACCEL P-CAD PCB - [C:\ACCEVAL\DEMO\MODFAX2.PCB]
File Edit View Place Route Options Library Utils Macro Window Help
Layer Sets
Options Layers
Layers
Sets
Current Layer:
Top Assy
Set Name:
Top Assy
Layer Sets:
gnd
pwr
solder
alltrace
Top Assy
Bot Assy
Tab
Layers:
Top Assy
Top Silk
Top Paste
Top Mask
Top
Ground
INT1
INT2
Power
Bottom
Bot Mask
Bot Paste
Bot Silk
Bot Assy
Board
REF
FAB
Title
ManualDim
New
Add ->
<- Remove
Enable Layers
Close
Add your own Layer Combinations
Change Sets with a Hot Key
et Contents:
op Assy
Top Silk
Board
Top Paste
Title
COMPONENT
INTERNAL 1
INTERNAL 2
Click <Left> to single Select, <Shift><Left> for multiple, or drag for block select.
2690.0
4850.0
Rel
5.0
M
Top
8.0mil
Net AH1 selected.

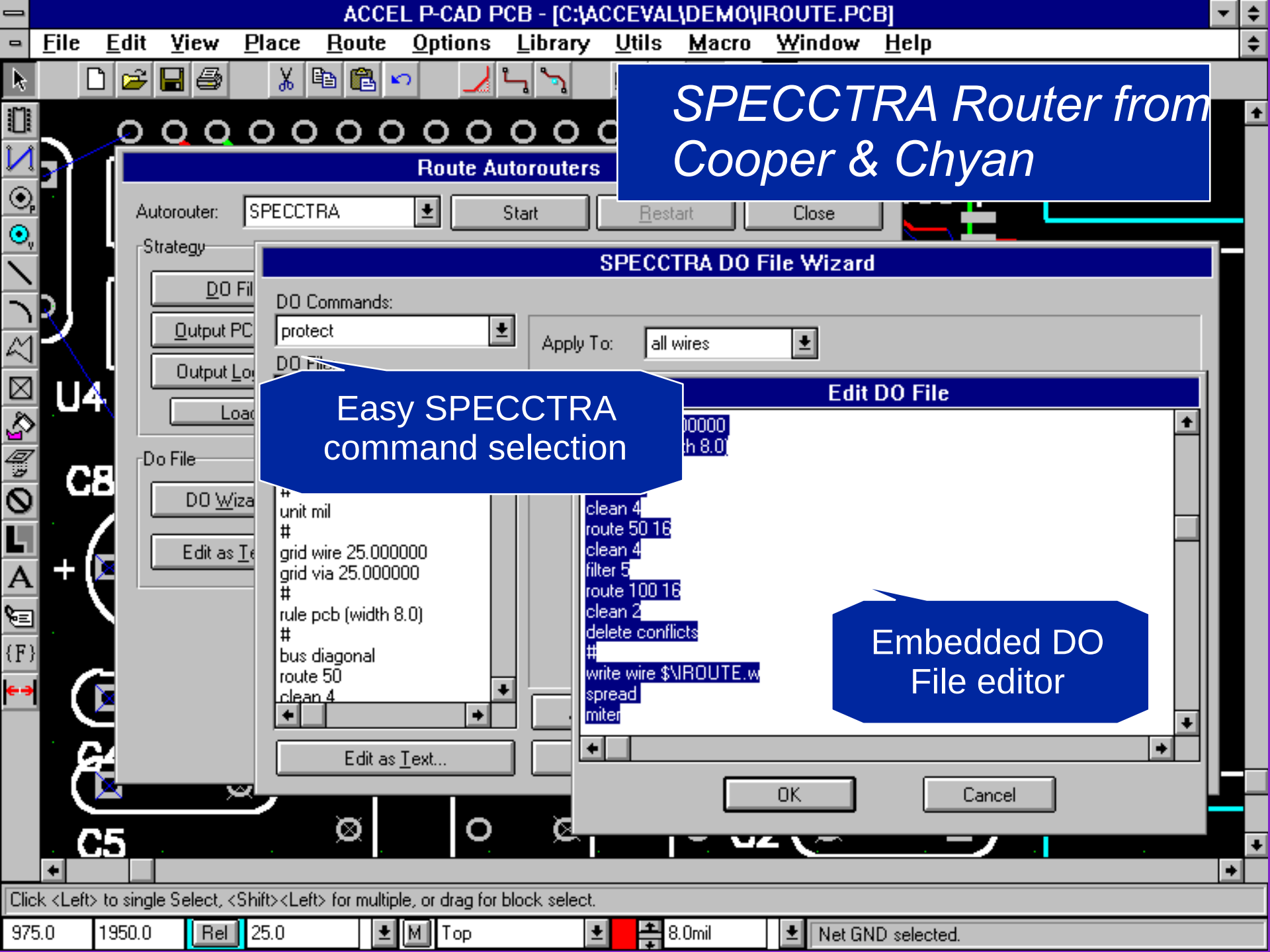

ACCEL P-CAD PCB - [C:\ACCEVAL\DEMO\MODFAX2.PCB]
File Edit View Place Route Options Library Utils Macro Window Help
Modify Hole Range for easy Blind / Buried Via support
Options Modify Via Hole Range
Styles:
(Default)
25R15
Buried Int1_Int2
Blind Top_Gnd
Blind Pwr_Bot
Blind Top_Int2
Hole Range Layers:
Top
Ground
INT1
INT2
Power
Bottom
OK
Cancel
Just pick the layer range
See the change
Top
Ground
INT1
Power
Bottom
L2
Q1
P1
U4
12
23
Click <Left> to single Select, <Shift><Left> for multiple, or drag for block select.
3800.0
4775.0
Rel
25.0
M
Top Silk
8.0mil
Net -5V selected.

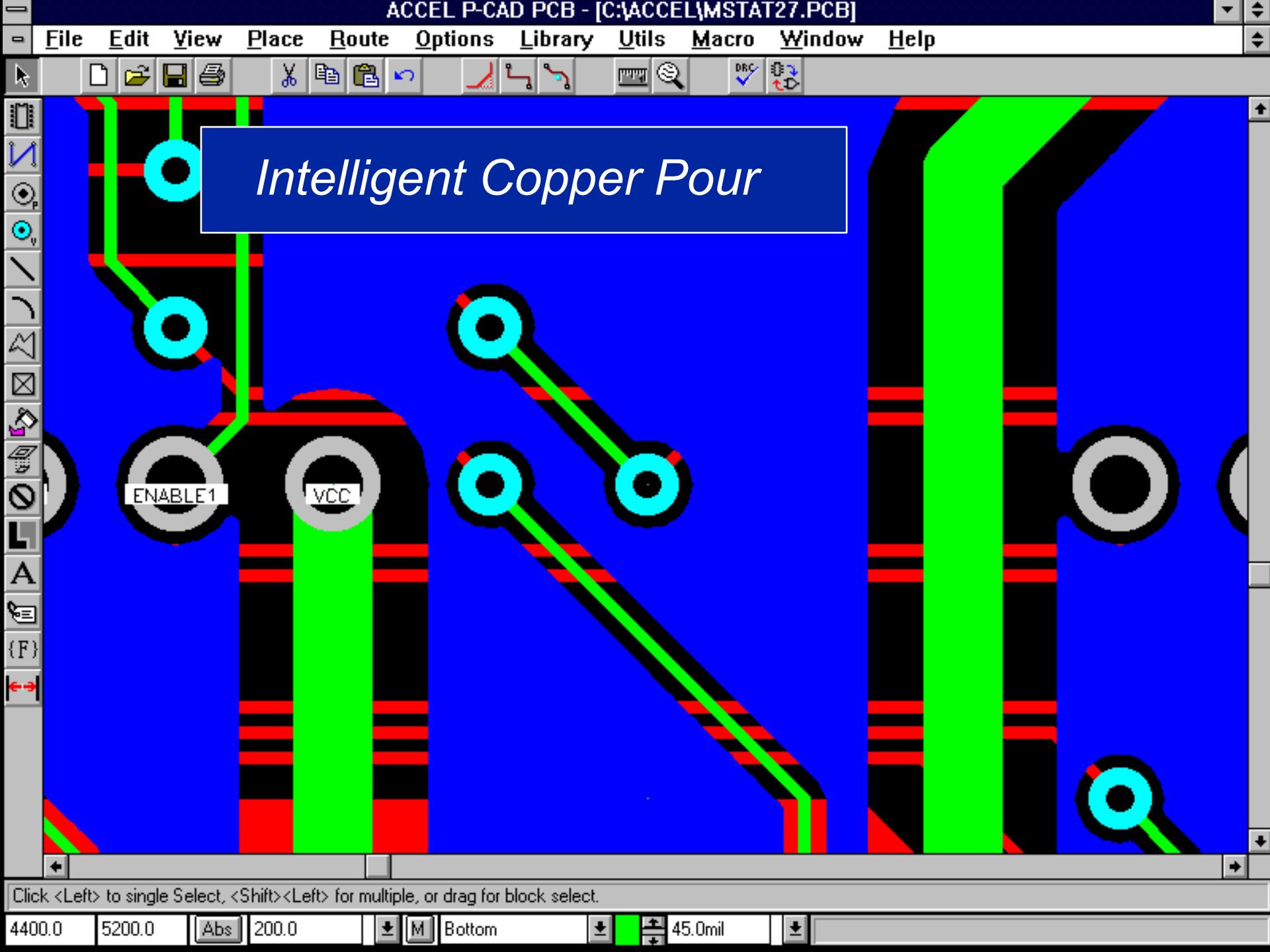
Power

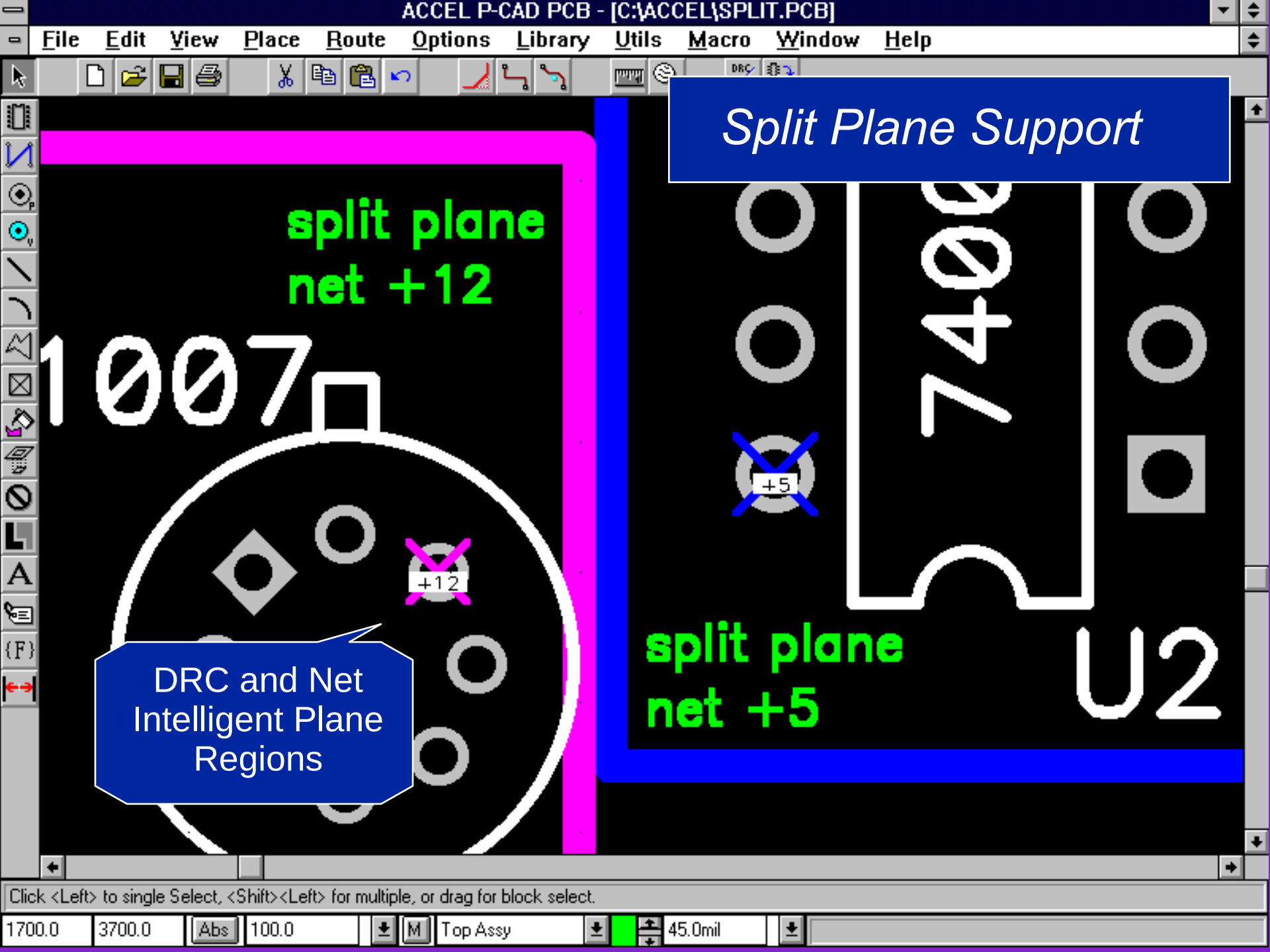
ACCEL EDA is packed with features to tackle the most demanding designs.

- Copper Pour
- Split Plane Support
- Shape-based Interactive Routing
- QuickRoute
- Blind & Buried Vias
- Orthogonal Modes
- Abutment Routing
- Pin and Gate Swapping


ACCEL P-CAD PCB - [C:\ACCEVAL\DEMO\IROUTE.PCB]
File Edit View Place Route Options Library Utils Macro Window Help
Manual Routing Tools
U3
Ghosting Design Rule Clearances
R3
InterRoute shape-based interactive routing tool
Press O or F to change Ortho, or release <Left> or <Space> to fix segment(s).
2350.0
1675.0
Rel
25.0
M
Top
8.0mil
dX= 125.0, dY=0.0


ACCEL P-CAD PCB - [C:\ACCEVAL\DEMO\IROUTE.PCB]
File Edit View Place Route Options Library Utils Macro Window Help
SPECCTRA Router from Cooper & Chyan
Route Autorouters
Autorouter: SPECCTRA
Start
Restart
Close
Strategy
SPECCTRA DO File Wizard
DO Commands:
protect
Apply To:
all wires
Easy SPECCTRA command selection
Edit DO File
unit mil
#
grid wire 25.000000
grid via 25.000000
#
rule pcb (width 8.0)
#
bus diagonal
route 50
clean 4
clean 4
route 50 16
clean 4
filter 5
route 100 16
clean 2
delete conflicts
#
write wire $\IROUTE.w
spread
miter
Embedded DO File editor
Edit as Text...
OK
Cancel
Click <Left> to single Select, <Shift><Left> for multiple, or drag for block select.
975.0
1950.0
Rel
25.0
M
Top
8.0mil
Net GND selected.

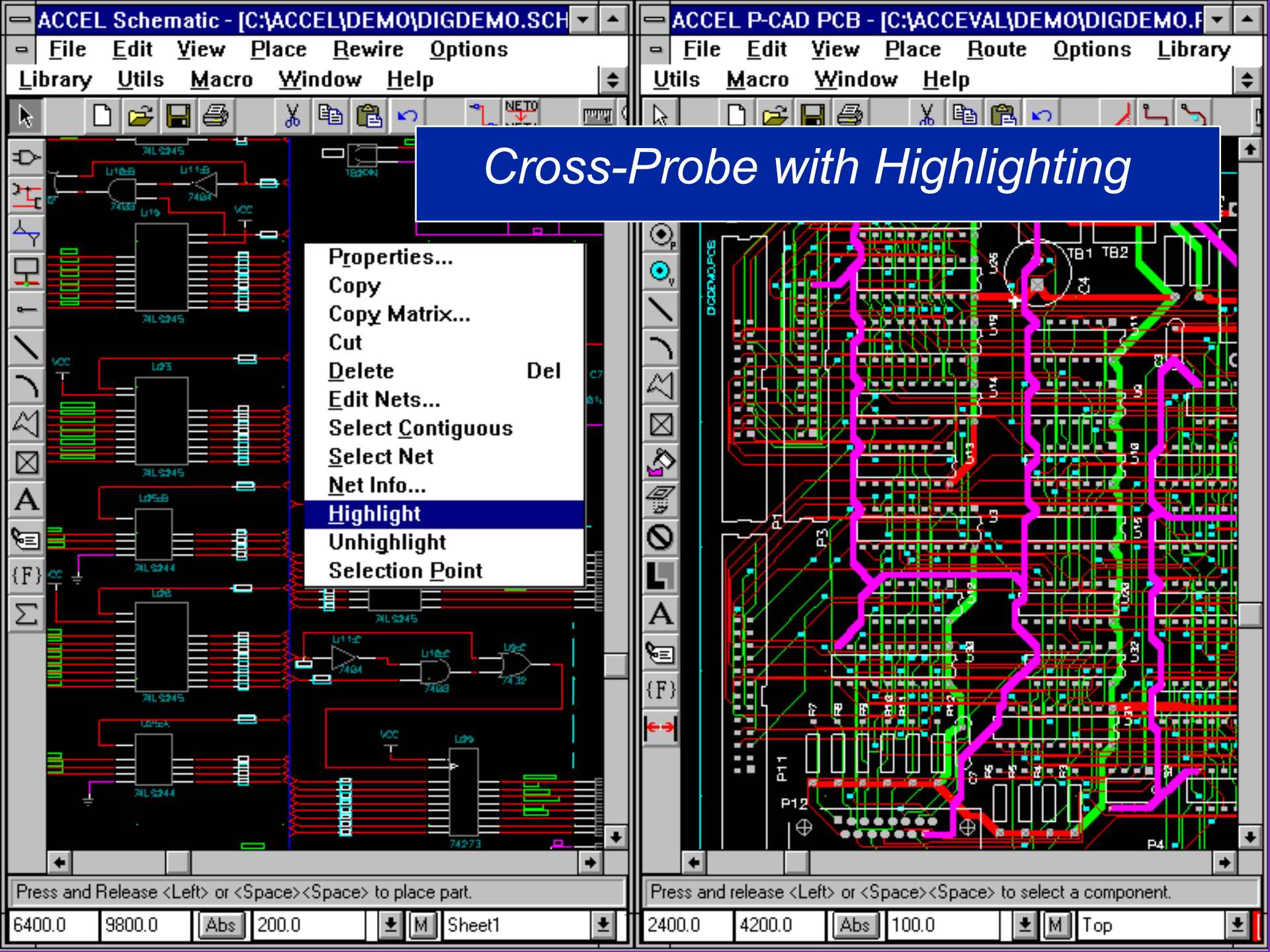

ACCEL P-CAD PCB - [C:\ACCEL\MSTAT27.PCB]
File Edit View Place Route Options Library Utils Macro Window Help
Intelligent Copper Pour
ENABLE1
VCC
Click <Left> to single Select, <Shift><Left> for multiple, or drag for block select.
4400.0
5200.0
Abs
200.0
M
Bottom
45.0mil

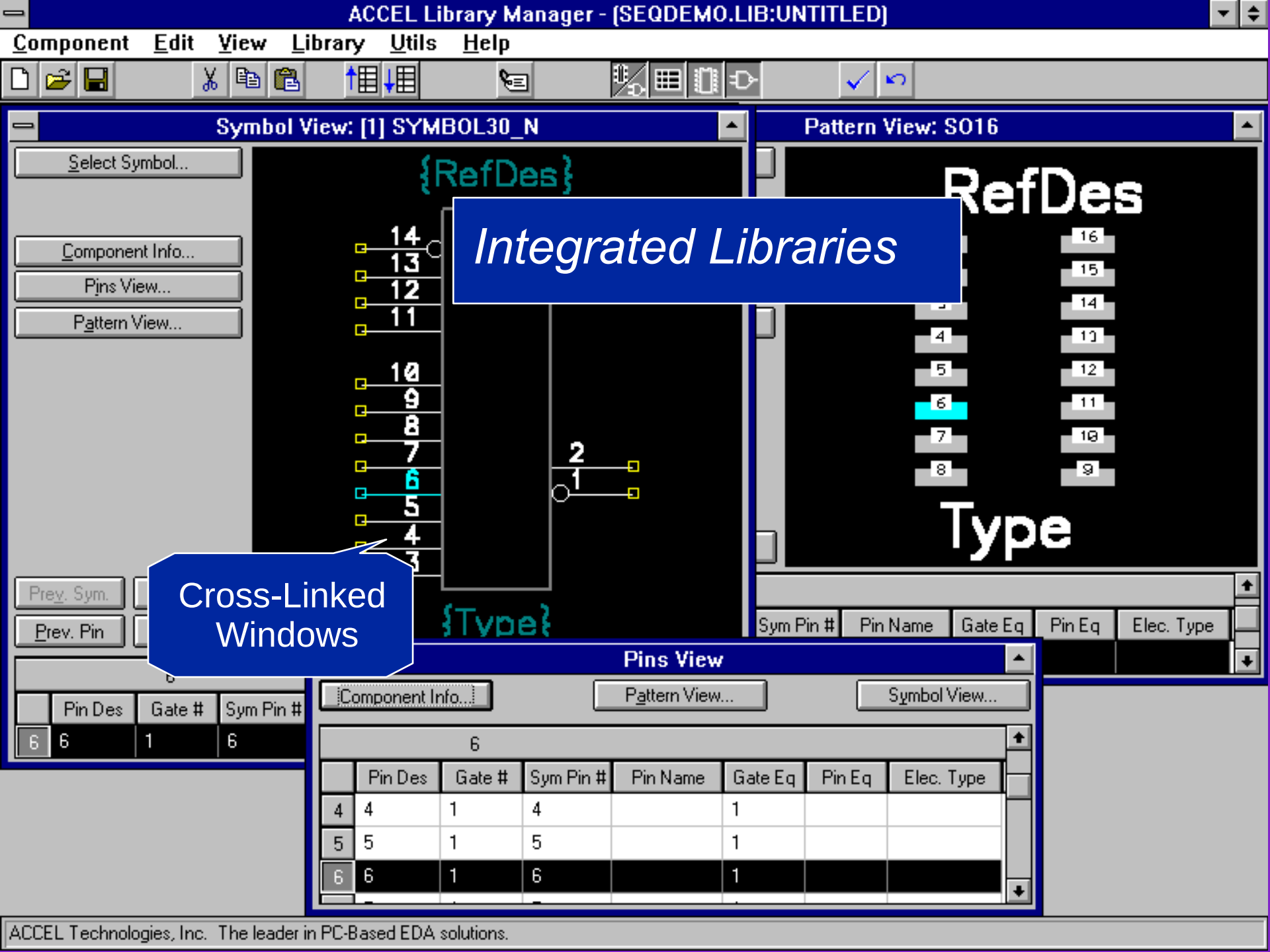

ACCEL P-CAD PCB - [C:\ACCEL\SPLIT.PCB]
File Edit View Place Route Options Library Utils Macro Window Help
Split Plane Support
split plane
net +12
1007
+12
+5
split plane
net +5
U2
DRC and Net Intelligent Plane Regions
Click <Left> to single Select, <Shift><Left> for multiple, or drag for block select.
1700.0
3700.0
Abs
100.0
M
Top Assy
45.0mil

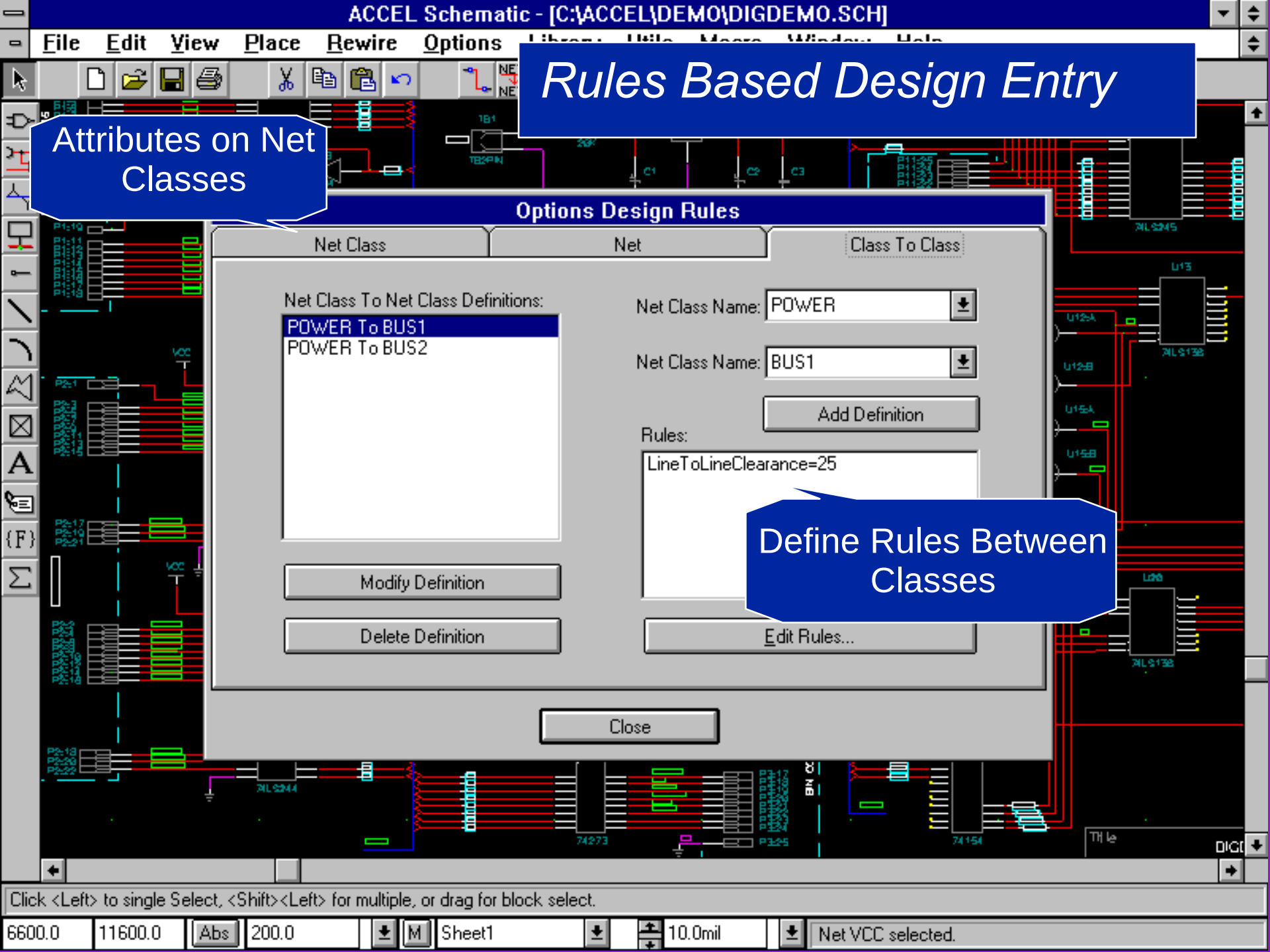
Correct by Design

Rules and built-in checking help eliminate errors during the design.

- Resolution
- Rules Checking
- Plane Connections (Thermal ties)
- Apertures and Drill Assignments
- Packaging
- WYSIWYG Output
- On-line DRC
- Net Attributes
- Integrated Libraries
- Library Management
- Pattern & Symbol Creation
- ECOs
- Cross-probing
- Router Integration


ACCEL Schematic - [C:\ACCEL\DEMO\DIGDEMO.SCH
File Edit View Place Rewire Options
Library Utils Macro Window Help
Properties...
Copy
Copy Matrix...
Cut
Delete Del
Edit Nets...
Select Contiguous
Select Net
Net Info...
Highlight
Unhighlight
Selection Point
Press and Release <Left> or <Space><Space> to place part.
6400.0 9800.0 Abs 200.0 M Sheet1
ACCEL P-CAD PCB - [C:\ACCEVAL\DEMO\DIGDEMO.P
File Edit View Place Route Options Library
Utils Macro Window Help
Press and release <Left> or <Space><Space> to select a component.
2400.0 4200.0 Abs 100.0 M Top
Cross-Probe with Highlighting

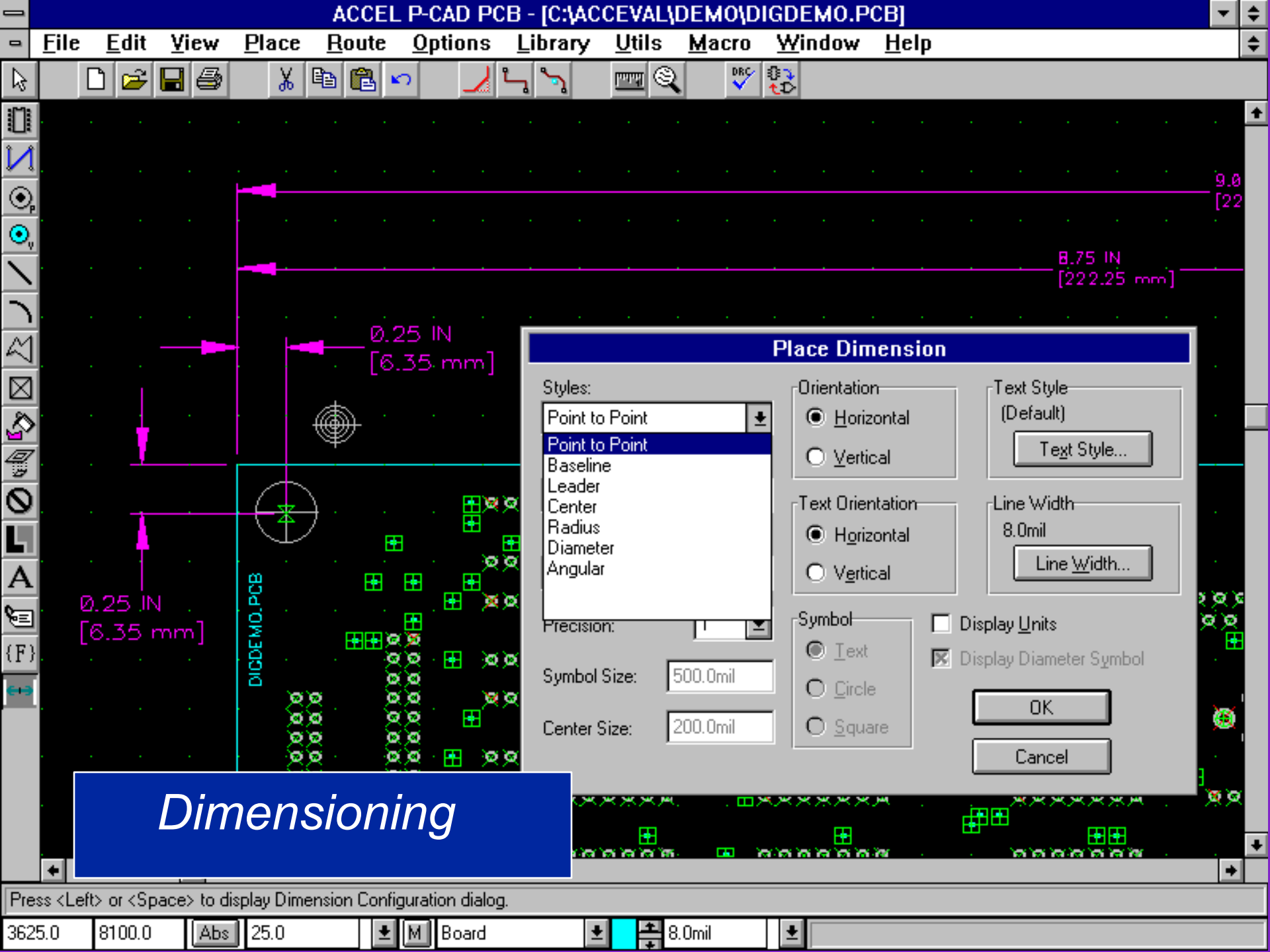

ACCEL Library Manager - (SEQDEMO.LIB:UNTITLED)
Component Edit View Library Utils Help
Symbol View: [1] SYMBOL30_N
Select Symbol...
Component Info...
Pins View...
Pattern View...
{RefDes}
{Type}
Pattern View: SO16
RefDes
Type
Integrated Libraries
Cross-Linked Windows
Prev. Sym.
Prev. Pin
Pin Des Gate # Sym Pin #
Sym Pin # Pin Name Gate Eq Pin Eq Elec. Type
Pins View
Component Info...
Pattern View...
Symbol View...
Pin Des Gate # Sym Pin # Pin Name Gate Eq Pin Eq Elec. Type
4 4 1 4 1
5 5 1 5 1
6 6 1 6 1
ACCEL Technologies, Inc. The leader in PC-Based EDA solutions.

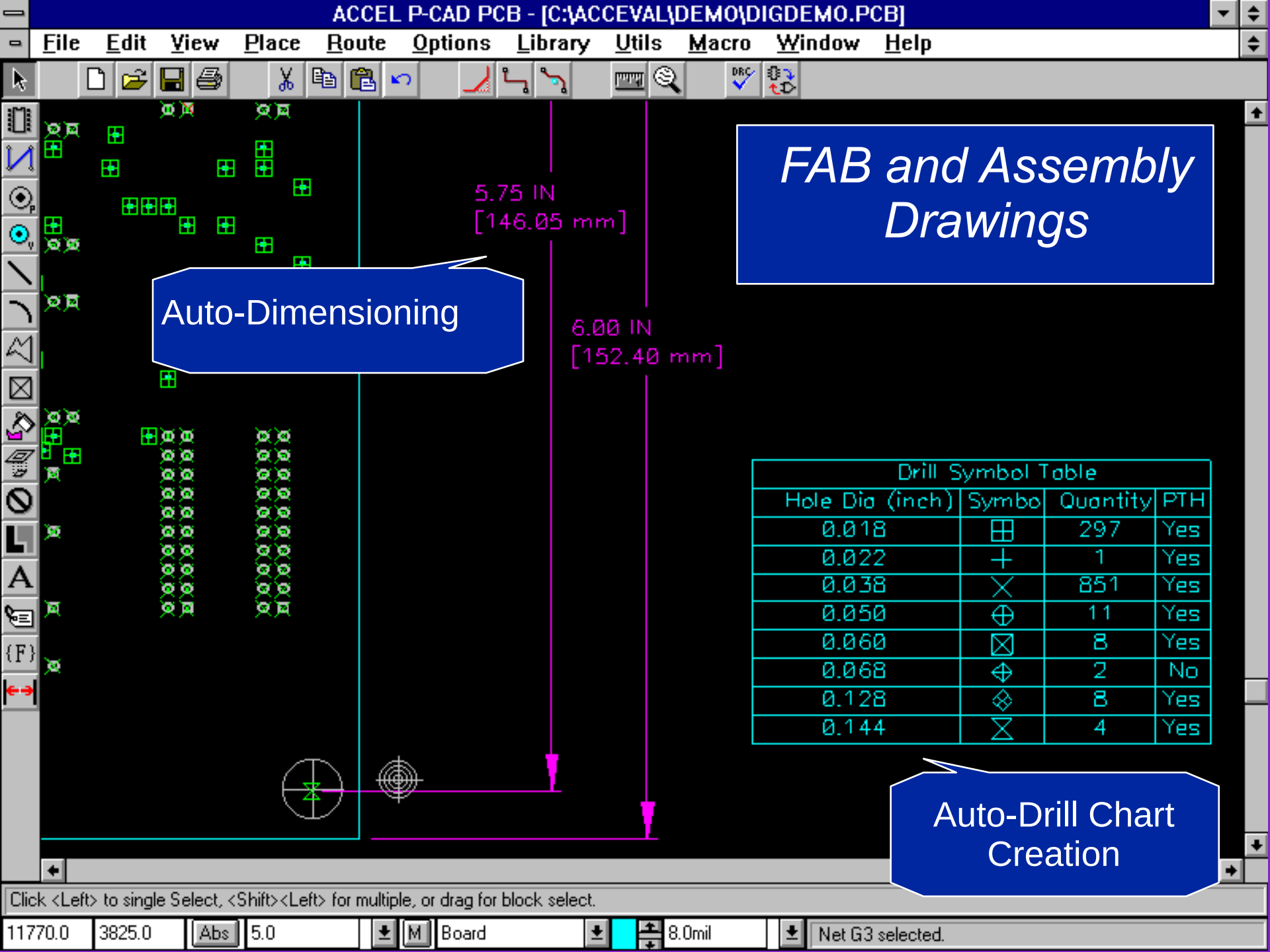

ACCEL Schematic - [C:\ACCEL\DEMO\DIGDEMO.SCH]
File Edit View Place Rewire Options
Rules Based Design Entry
Attributes on Net Classes
Options Design Rules
Net Class
Net
Class To Class
Net Class To Net Class Definitions:
POWER To BUS1
POWER To BUS2
Net Class Name: POWER
Net Class Name: BUS1
Add Definition
Rules:
LineToLineClearance=25
Define Rules Between Classes
Modify Definition
Delete Definition
Edit Rules...
Close
Click <Left> to single Select, <Shift><Left> for multiple, or drag for block select.
6600.0
11600.0
Abs
200.0
M
Sheet1
10.0mil
Net VCC selected.

Manufacturability

Speed design and reduce costs with accurate and usable output.

- Report Generation
- Gerber Viewer
- NC Drill and Insertion
- Dimensioning
- DXF
- Assembly and Paste Layer Artwork

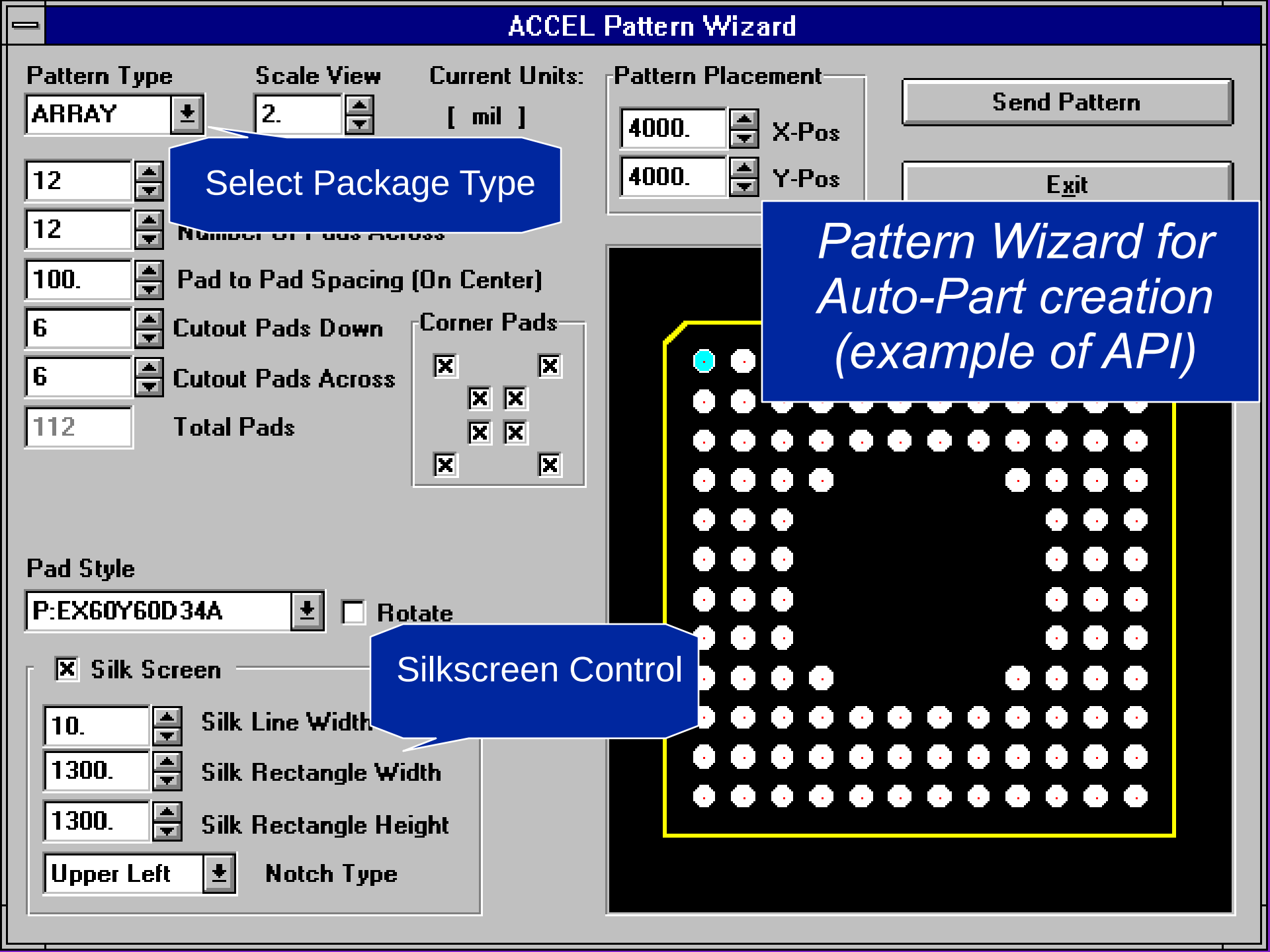

ACCEL P-CAD PCB - [C:\ACCEVAL\DEMO\DIGDEMO.PCB]
File Edit View Place Route Options Library Utils Macro Window Help
9.0
[22
8.75 IN
[222.25 mm]
0.25 IN
[6.35 mm]
0.25 IN
[6.35 mm]
DIGDEMO.PCB
Place Dimension
Styles:
Point to Point
Point to Point
Baseline
Leader
Center
Radius
Diameter
Angular
Orientation
Horizontal
Vertical
Text Style
(Default)
Text Style...
Text Orientation
Horizontal
Vertical
Line Width
8.0mil
Line Width...
Precision:
Symbol
Text
Circle
Square
Display Units
Display Diameter Symbol
Symbol Size:
500.0mil
Center Size:
200.0mil
OK
Cancel
Dimensioning
Press <Left> or <Space> to display Dimension Configuration dialog.
3625.0
8100.0
Abs
25.0
M
Board
8.0mil


ACCEL P-CAD PCB - [C:\ACCEVAL\DEMO\DIGDEMO.PCB]
File Edit View Place Route Options Library Utils Macro Window Help
5.75 IN
[146.05 mm]
6.00 IN
[152.40 mm]
FAB and Assembly Drawings
Auto-Dimensioning
Drill Symbol Table
Hole Dia (inch) Symbo Quantity PTH
0.018 297 Yes
0.022 1 Yes
0.038 851 Yes
0.050 11 Yes
0.060 8 Yes
0.068 2 No
0.128 8 Yes
0.144 4 Yes
Auto-Drill Chart Creation
Click <Left> to single Select, <Shift><Left> for multiple, or drag for block select.
11770.0 3825.0 Abs 5.0 M Board 8.0mil Net G3 selected.

Inter-operability

Many ways to interface to other programs in your design environment.

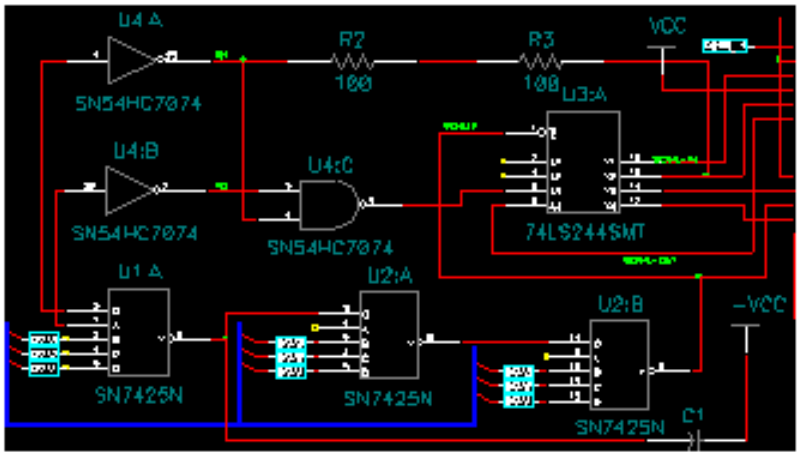
- Cut/Copy
- Printing
- Multiple Document Interface (MDI)
- ASCII Files
- Application Programming Interface (API)
- Third Party Interfaces

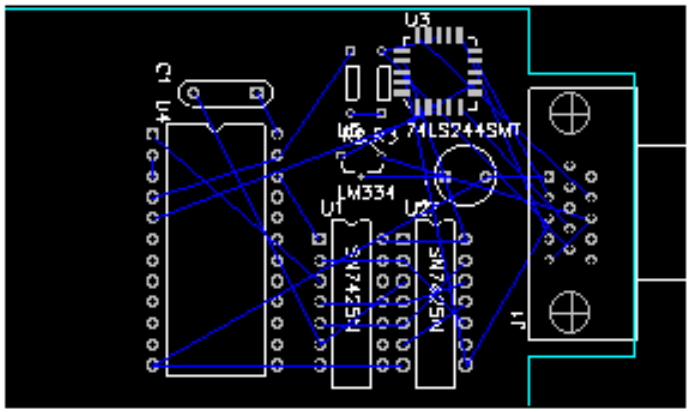

ACCEL Pattern Wizard
Pattern Type
ARRAY
Scale View
2.
Current Units:
[mil]
Pattern Placement
4000.
X-Pos
4000.
Y-Pos
Send Pattern
Exit
Select Package Type
12
12
100.
Pad to Pad Spacing (On Center)
6
Cutout Pads Down
6
Cutout Pads Across
112
Total Pads
Corner Pads
Pattern Wizard for Auto-Part creation (example of API)
Pad Style
P:EX60Y60D34A
Rotate
Silk Screen
Silkscreen Control
10.
Silk Line Width
1300.
Silk Rectangle Width
1300.
Silk Rectangle Height
Upper Left
Notch Type

Microsoft Word - Document2

File Edit View Insert Format Tools Table Window Help

Normal | Times New Roman | 10 | B I U | 100% | Clear





; ACCEL P-CAD PCB Version 12.00 [C:\ACCEVAL\DEMO\WORD.PCB]--Mon Apr 08 13:14:10 1996
; Engineering change order #2
NetNodeDelete "NET00000" "R2-B"
NetNodeDelete "IN1" "R2-A"
CompDelete "R2"
NetNodeDelete "NET00000" "R3-A"
NetDelete "NET00000"
CompAdd "CAP300" "C2" " "
NetNodeAdd "SIGNAL1" "C2-B"
NetNodeAdd "-VCC" "C2-A"
NetAttrModify "VCC" "Width" "25"
NetAttrModify "_12" "Width" "25"
RefdesChange "U4" "U100"
RefdesChange "U5" "U101"
CompAttrAdd "U101" "ComponentHeight" "15"

Cut and Paste Graphics into Windows Programs

Page 1 Sec 1 1/1 At 3.1" Ln 3 Col 30 1:20 PM REC MRK EXT OVR WPH

ACCEL EDA Highlights

- Multi-function selection tool
- User programmable hot keys
- Rules based design entry
- Layer sets
- Cut and paste into Windows application
- DBX - ACCEL's Application Programming Interface
- Modify Hole Range - supports blind/buried vias
- Advanced copper pour
- Intelligent split planes
- Dimensioning
- InterRoute - shape-based interactive routing tool
- Library Manager - linked views of data

The ACCEL EDA Series

Powerful design software, and more . . .

ACCEL EDA Software
- ACCEL Schematic
- ACCEL P-CAD PCB
- ACCEL Tango PCB
- ACCEL PRO Route
- ACCEL PRO Route 2/4
- ACCEL Library Manager

Service & Support

Printed and On-line Documentation

Training

Active User Groups

from the root of your ideas

towering products grow...

ACCEL EDA

Thank You