Xpedition Routing Automation
Technologies That Drive Routing

Terri Kleekamp, C.I.D.
Application Engineer Manager
Vern Wnek, C.I.D.

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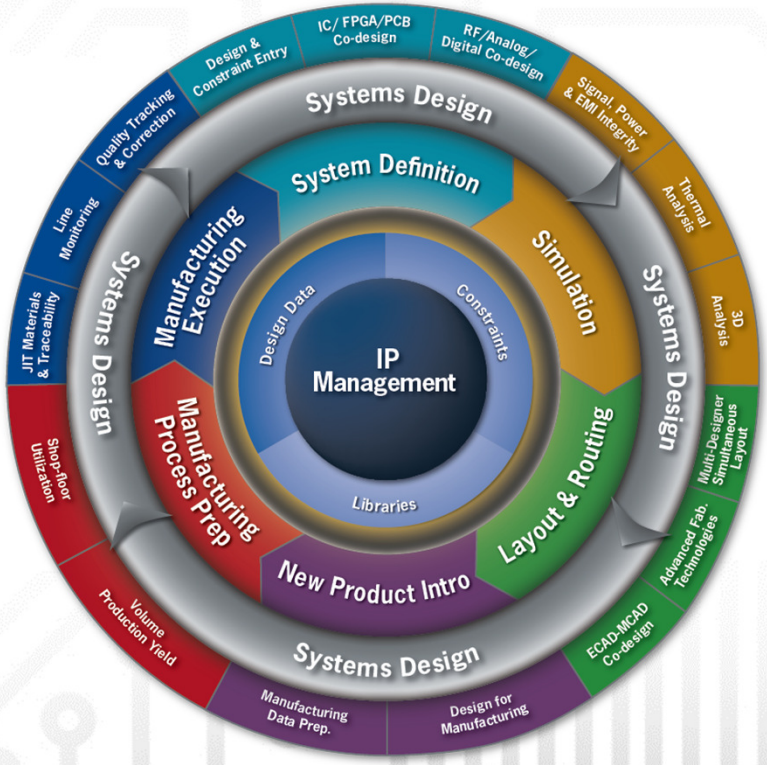
Change The Way You Develop With xpedition™

The Next Generation of PCB Systems Design



Full data integrity
Capturing the design intent once and manage design IP consistently throughout the flow. Improves project schedules, reduces risks and eliminates error-prone manual data manipulation and file based interfaces

Correct-by-design Methodology and Flow Automation
Can increase engineering productivity by 50% or more by reducing error rate and eliminating time consuming batch post-processes. Productivity increase through unprecedented layout automation

Flow-wide concurrent engineering
Reduction of 30-60% cycle time and up to 80% decrease in integration effort across disciplines. Enables multiple engineers to work in parallel at any stage of the design process—even from dispersed global locations

Virtual prototyping and 3D design
Cuts down costly and time-consuming physical prototypes, freeing up resources for cost and quality optimization by improving electrical, thermal and electromechanical design quality and reliability

Integrated design-through-manufacturing
Eliminate new product introduction risks by reducing design spins by 60% or more, and optimizing first pass yield by integrating the design chain with the extended supply chain

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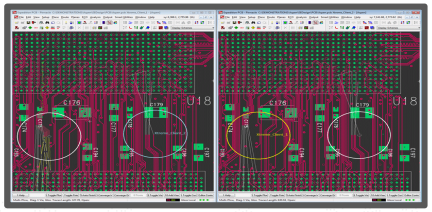
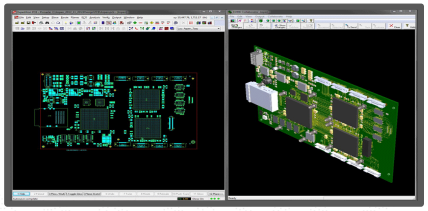
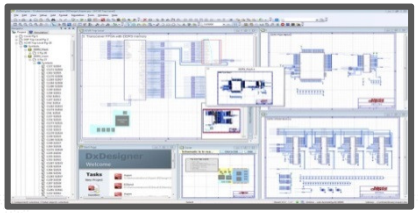
The Xpedition Evolution

2005	2007	2009	2013
Expedition Enterprise 2005	Expedition Enterprise 2007	Expedition Enterprise 7.9.x	Xpedition Enterprise VX
Integrated flow for schematic & layout	Migrating to a full concurrent architecture	Mainstream deployment	Meeting the demands of modern development organizations


Capturing and Managing Design Intent Throughout the Entire Flow

- Single & Integrated Constraint System
- Scalable, Easy To Use
- Integrated with SI/PI Analysis Tools
- Concurrent

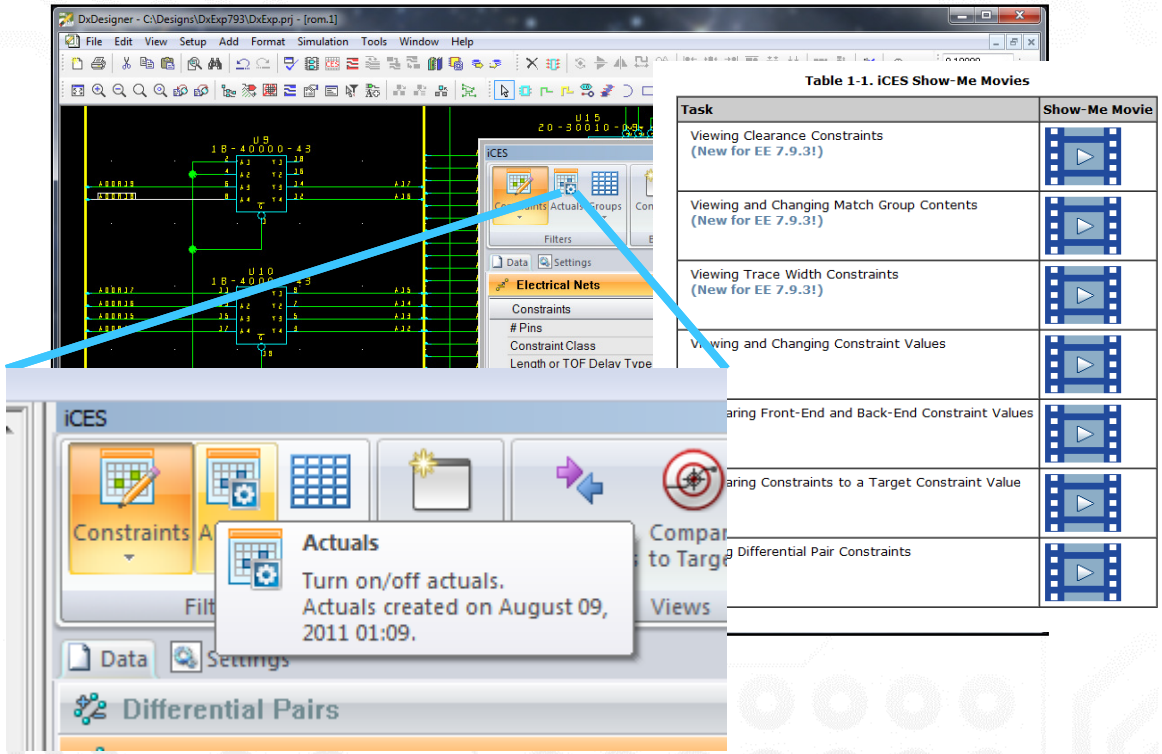


Table 1-1. iCES Show-Me Movies

Task	Show-Me Movie
Viewing Clearance Constraints (New for EE 7.9.3!)	
Viewing and Changing Match Group Contents (New for EE 7.9.3!)	
Viewing Trace Width Constraints (New for EE 7.9.3!)	
Viewing and Changing Constraint Values	
aring Front-End and Back-End Constraint Values	
aring Constraints to a Target Constraint Value	
g Differential Pair Constraints	

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Flow Wide Concurrent Design

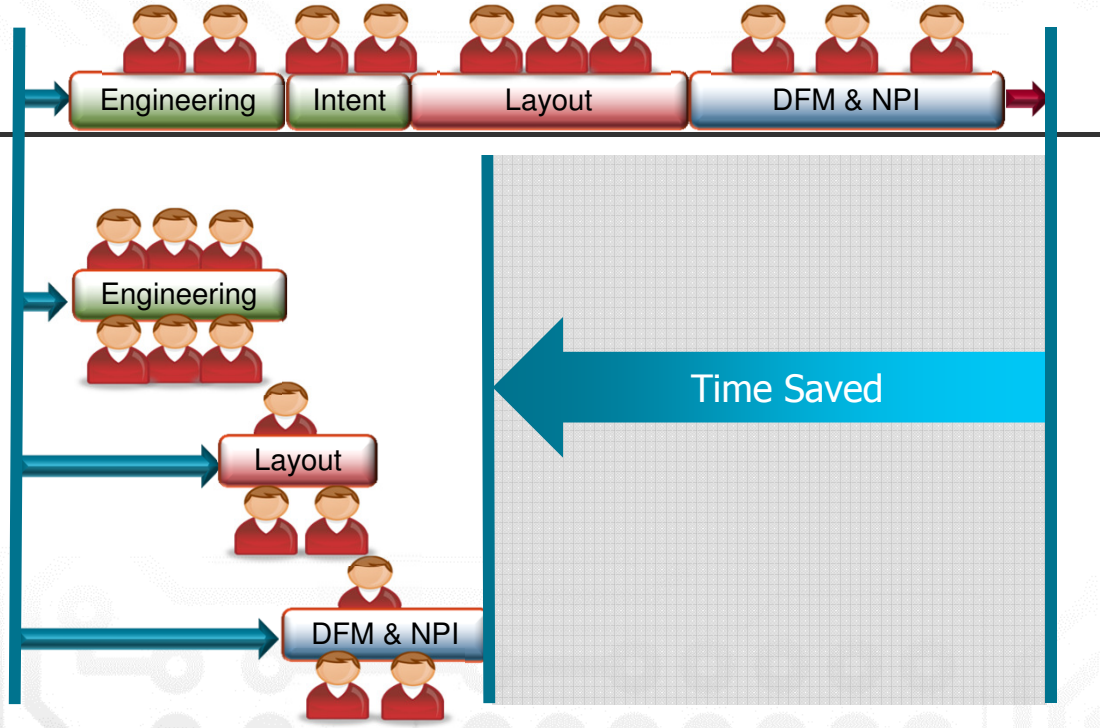
Shorten Design Cycles, Reduce Spins

Traditional process

- Serial engineering

Xpedition concurrent design flow

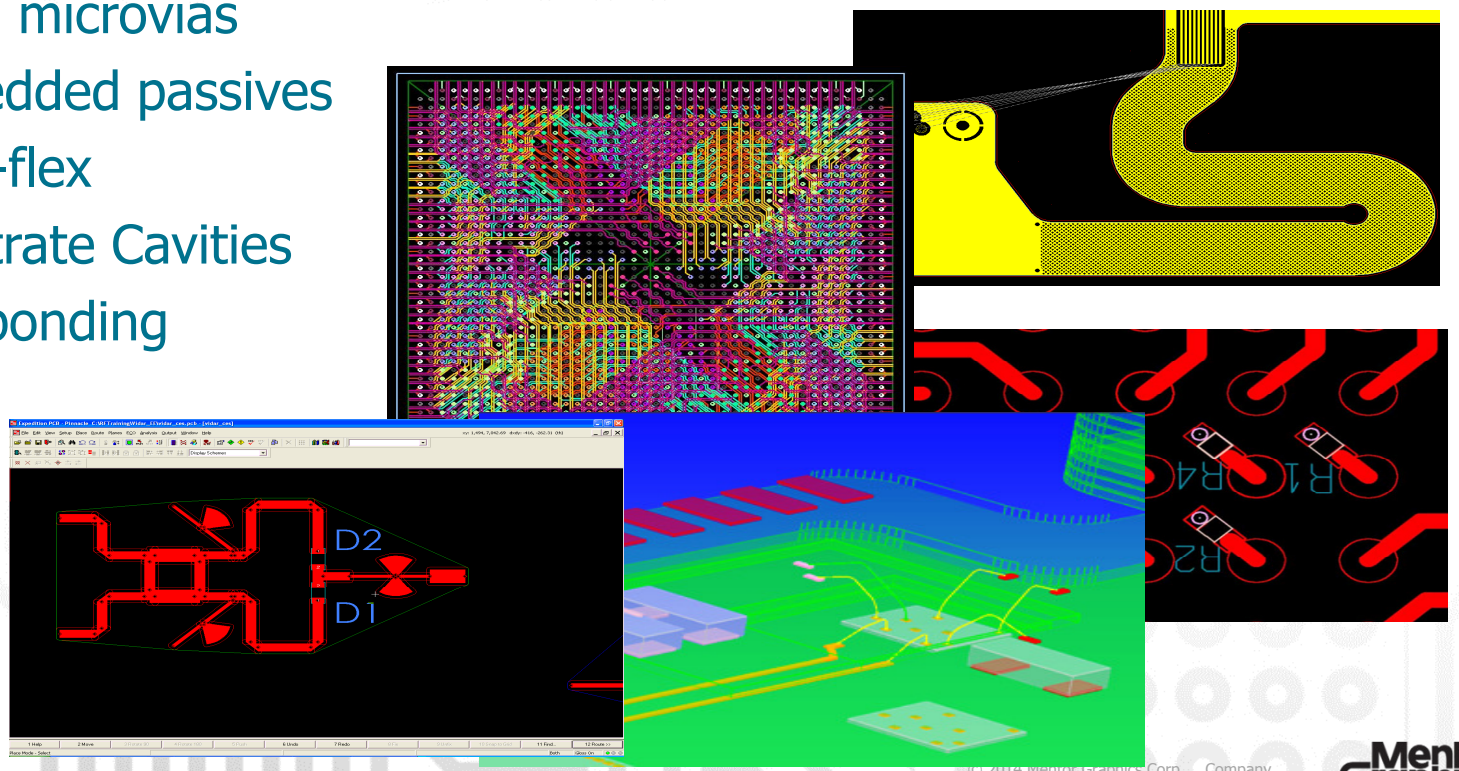
- Concurrent tasks
- Concurrent designers in each task



Concurrent design is an indispensable tool for faster design cycle time – we successfully reduced it by as much as 65%.

Addressing Advanced Packaging & Design Complexity

- Support for advanced fabrication & assembly technologies
  - HDI / microvias
  - Embedded passives
  - Rigid-flex
  - Substrate Cavities
  - Wirebonding
  - RF



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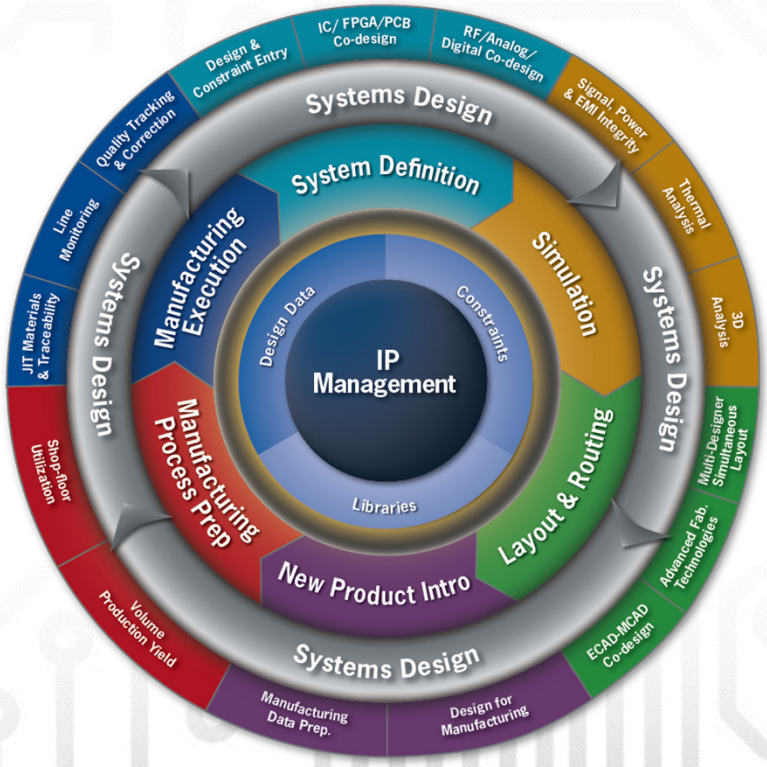
Key Differentiators

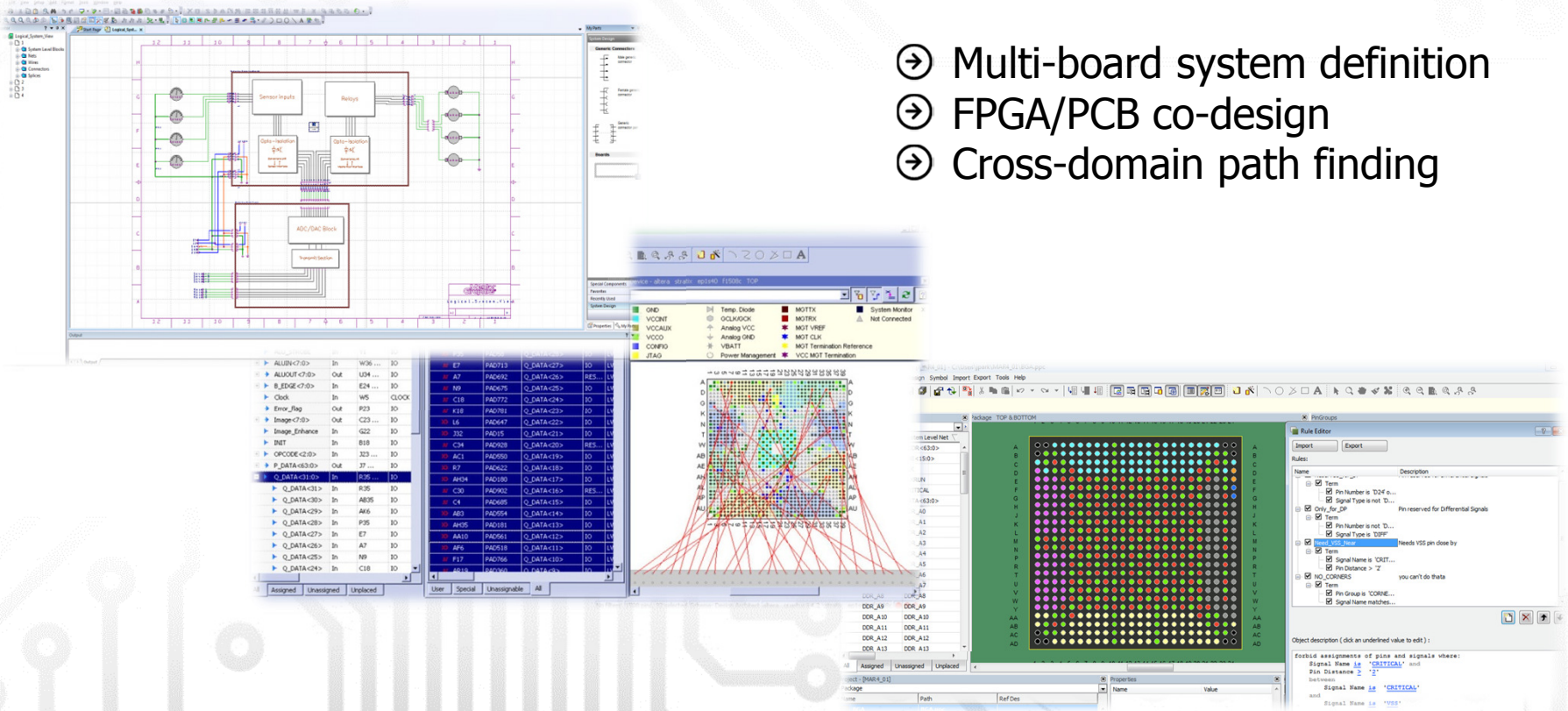
The Next Generation of PCB Systems Design



- Ease-of-use throughout the flow
- Integration from System to Board to Chip
- Design-through-manufacturing
- Higher Productivity through Routing Automation
- Complete 3D Design Environment
- Flow Wide Concurrent Design
- Advanced virtual prototyping

Integration from System to Board to Chip

Automating Board and Multi-Board Design Optimization



- Multi-board system definition
- FPGA/PCB co-design
- Cross-domain path finding

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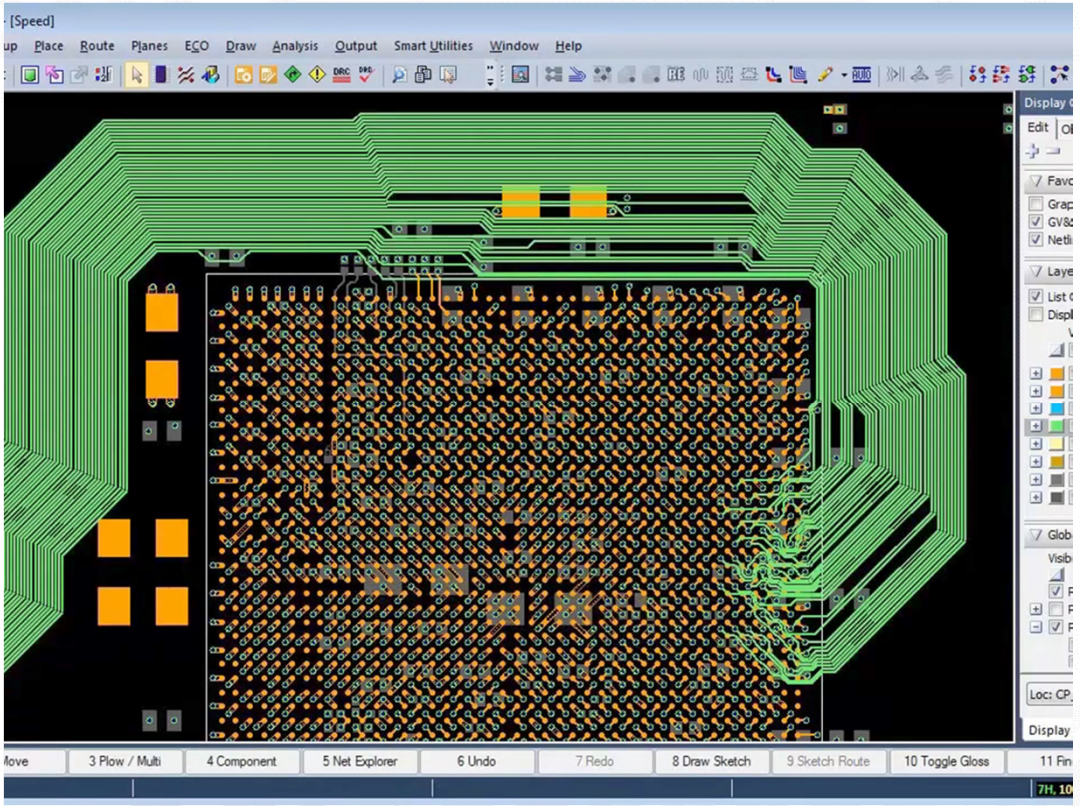
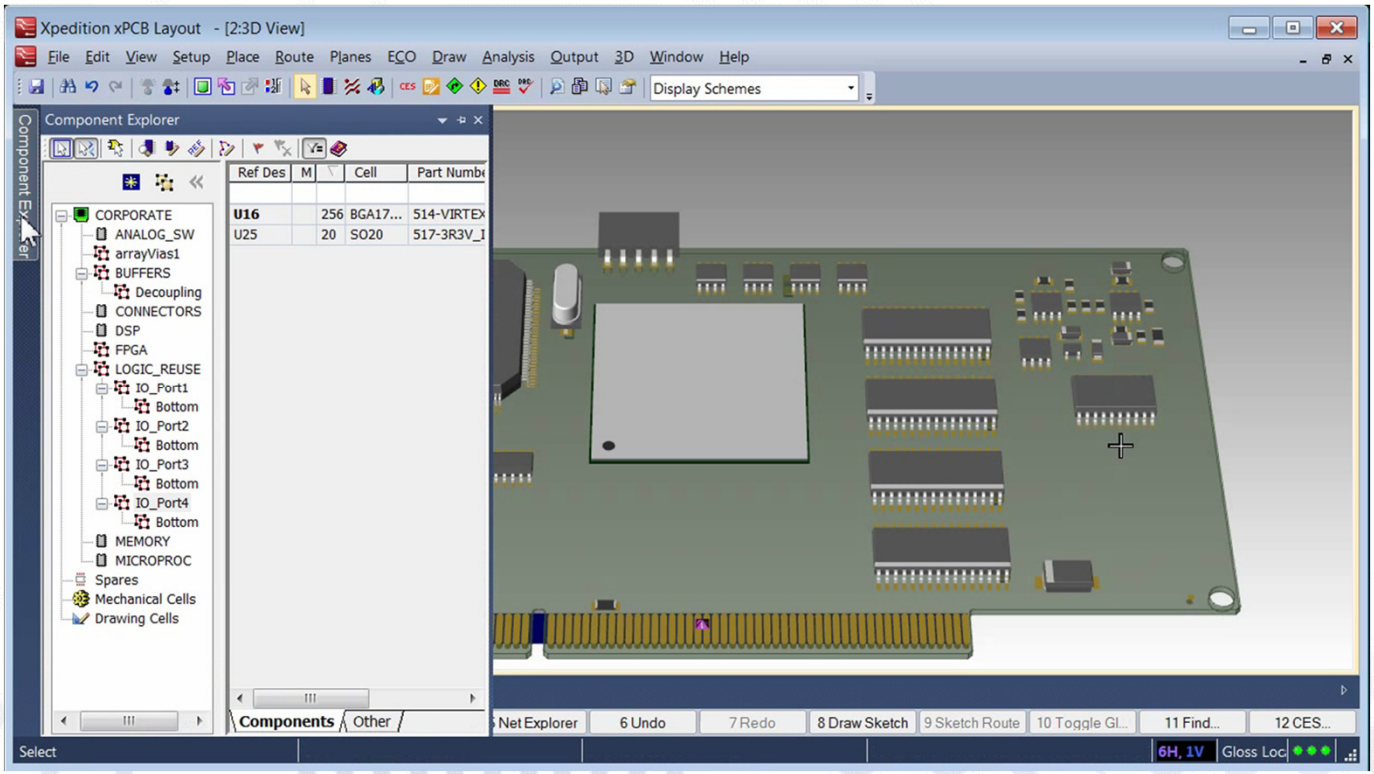
Xpedition Routing Automation – Sketch Router

- User control
  - Manage location of traces
  - Options for route styles
  - Choose via patterns
- Route quality
  - Matches quality of manual routing
  - Rarely needs clean-up
- High performance
  - Unbelievably fast



New Hierarchical Planning and Placement
Complete 3D Design Environment



Xpedition Enterprise – The Forefront of Innovation and Productivity in Electronics Design and Manufacturing

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Demo


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