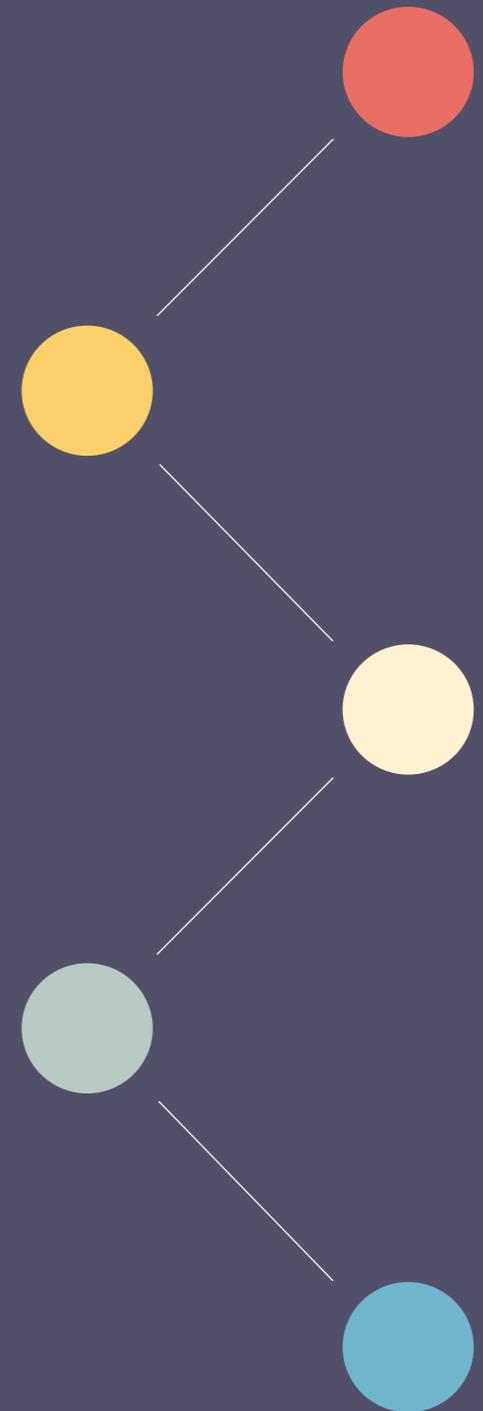


Relying On Traditional PCB Routing Techniques Can Delay Projects...



Did you know that there are new interactive routing technologies that accelerate design time and improve product quality?



1

Why Manual Routing Methods Fall Short

FACT:

The demand for high-quality products is increasing, even for simple products. If your product is of poor quality or is unreliable, your customers and your competition will make sure the world knows about it!

FACT:

PCB & systems design complexity is constantly increasing.

FACT:

Time-to-market schedules are getting tighter and more difficult to achieve.

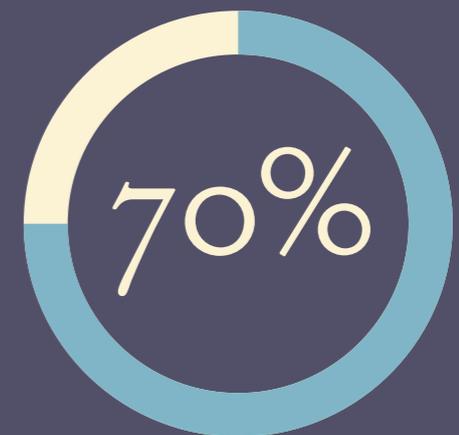
FACT:

Manual routing takes a lot of time and can delay projects.

**To Stay Ahead Of Your Competition,
Consider Alternative Routing Methods.**

DID YOU KNOW?

Antiquated routing techniques & a lack of automation can cause schedule delays of up to



2

How Much Does Automation Really Help?

Did you know #1?

Teams that implement automated, intelligent placement and routing **accelerate cycle times by 25 to 50 percent** while eliminating design issues caused by collision and space constraints.

Did you know #2?

With the use of modern routing methodologies, designers are **3X more likely** to complete their board designs on time and at a higher quality compared to others.

3

If Automation is So Great, Why Don't Designers Rely Solely on Autorouters?

Full Automation isn't Always the Perfect Solution:

- **The look of a hand-drawn design** – automation can't always replace human experience and intelligence. Some things, you just prefer to do manually.
- **Clean up** – cleaning up after an autorouter takes time, causing some designers to stick to manual routing.
- **Simple designs** – an autorouter is most efficient on PCBs with many layers and lots of digital signals; not all boards are like that.

4

Some Design Aspects Cannot be Replaced by Automation

- ...> Arranging components
- ...> Determining optimal fan-out patterns that ensure component pins and vias are accessible
- ...> Optimization of routing channels
- ...> Prioritizing nets
- ...> Deciding which nets to route manually



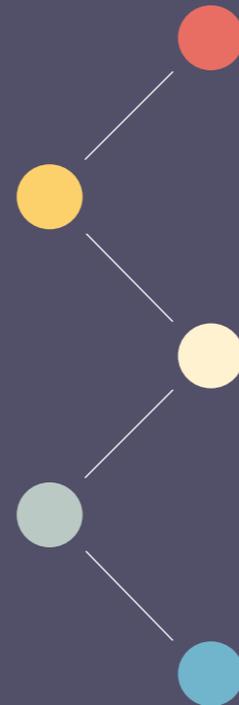
**But You Can Have Your Cake, And Eat it too.
There is a Better Way!**

5

Sometimes, Technology Can Save You A LOT Of Time And Effort

Gain Higher Quality, Greater User Control, And Exceptional Performance With Sketch Routing in PADS Professional –
The Perfect Combination Of Automation, Human Experience, And Intelligence!

1. Draw sketch paths to determine the trace routing of selected net lines
2. Achieve high design quality and high completion rates more quickly than with manual routing
3. Route individual traces or hundreds of single-ended/differential pairs
4. Automatically optimize pin escapes for enhanced routing without adding unnecessary vias



Sketch Routing in PADS Professional

Dynamic Push-and-shove

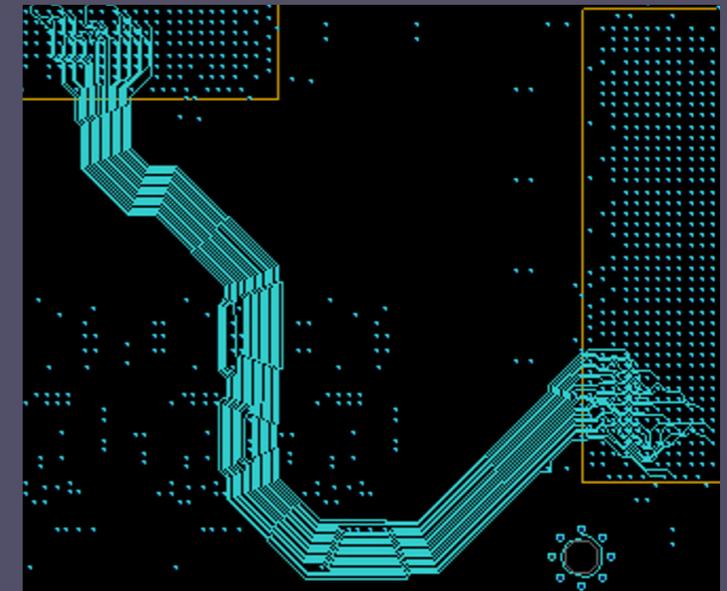
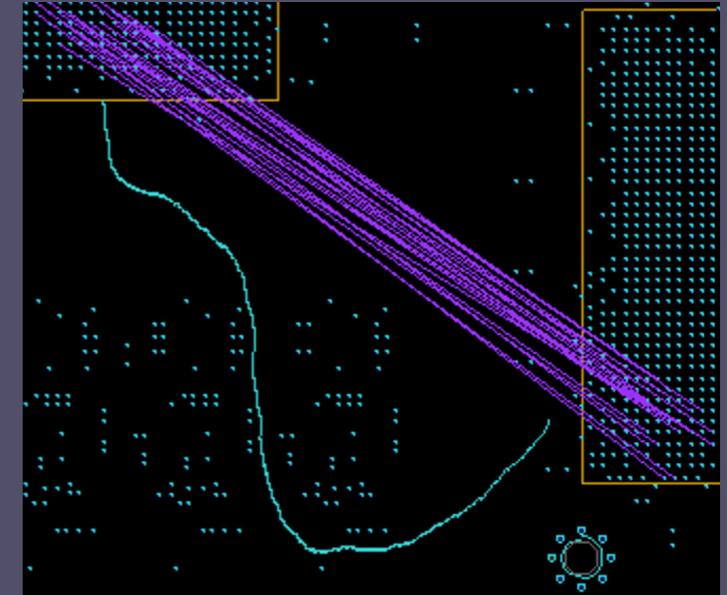
Sketch Router

Real TraceRouting

6

How Does Sketch Routing In Pads Professional Work?

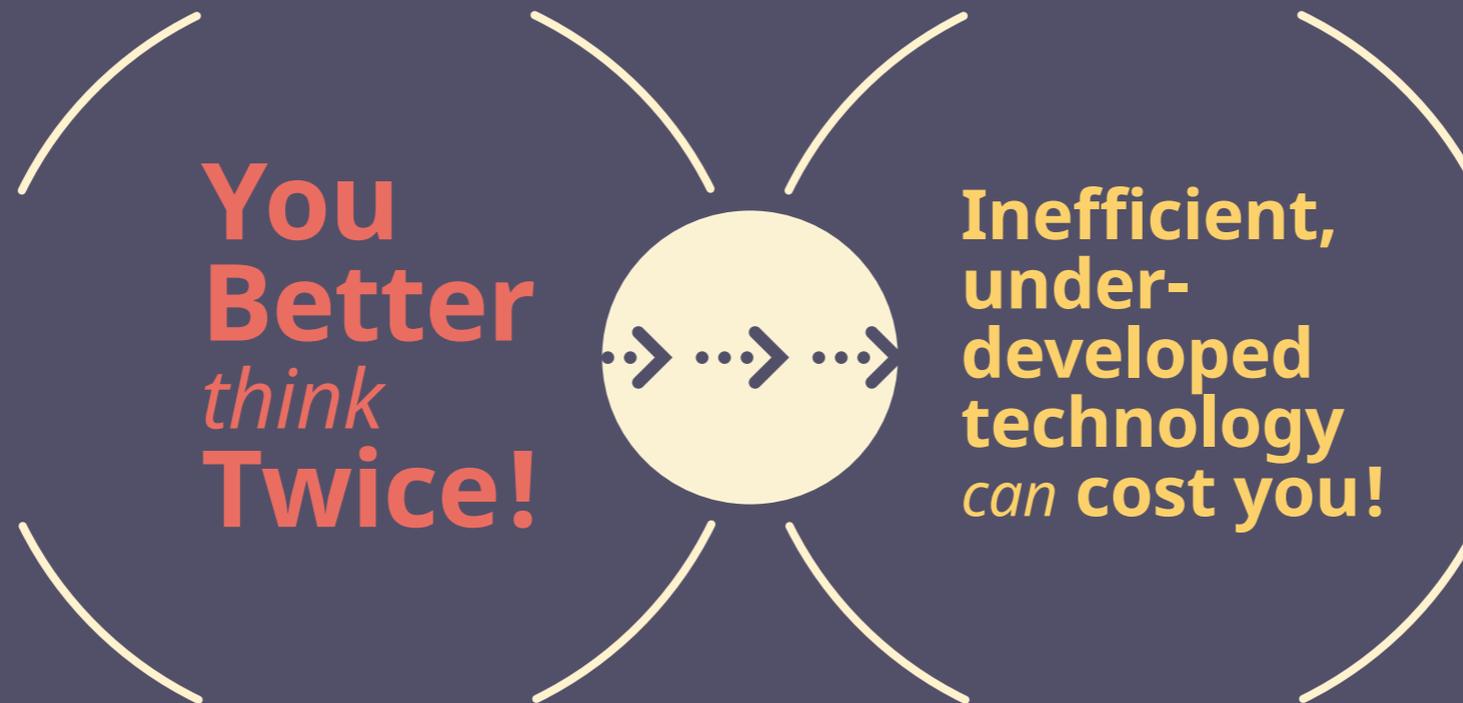
- Viewing your design intent and routing strategies in the form of a super-efficient sketch, PADS Professional automatically fans out, untangles, and routes the associated nets with the quality of an experienced PCB designer.
- Sketch routing reduces complex routing times by orders of magnitude. A designer simply sketches where the routing should go. The Sketch Router will route individual, dozens, or even hundreds of netlines many times faster than manual routing.
- Sketch routing focuses on quality; little cleanup is needed, often none at all.
- Sketch routing automatically optimizes the escapes from components like BGAs so that they can be routed without additional vias. Completion rates are generally greater than 90%.



7

Not All “Sketch Routing” is SKETCH ROUTING

Are you using another design tool that claims to have sketch routing technology?????



PADS Professional Sketch Routing technology has proven, in-depth functionality that you can rely on. With PADS sketch routing you can combine automatic routing power with interactive user control for high-quality results and exceptional performance.