

# You changed what?

## Designing with Altium

### Industry fact.

Engineering Change Orders (ECO) cost \$1,984 to implement during development. However, once that design has been released to manufacturing, the cost skyrockets 5.4 times to \$10,625.

*Aberdeen Group, 2011*

### Industry objective.

Whether it is Time to Market concerns or the hours to route a board, one of the most challenging pressures in organizations is all about time. The electronics design process has a direct result on your product cost targets. 26% of an Engineer's time is attributed to correcting or changing design data. The very nature of innovation means there will be design iterations and changes. The impact of late changes means new design work is interrupted. The further along the design...the more time it is to your organization!

“ We have a lot of difficulty around predictability - it is hard to declare and hit a commit date. The reason for this is constant engineering change. We are currently implementing a change control process to address this challenge. ”

*-PCB Department Manager,  
A&D Company*

### How this affects you.

In addition to the timing factors of the design process; the PCB change management process is complex due to:

- the speed of changes
- the number of files affected by any one change
- manual mark-ups to express change intent
- different processes and formats for each design tool (35% of companies state this being their number one challenge)

### If...

You have ever:

- found your PCB and Schematic out of sync
- had a mismatched schematic and BOM
- hand written an ECO
- wanted to release on production time or on budget

### Then...

You need to implement an automated and accountable Engineering Change Order (ECO) process with the ability to trace individual elements of the design.

### What if you could.

- Do away with manual mark-ups and hand written ECOs?
- Never again have to perform a post manufacturing design change due to mistakes?
- Ensure all design data is synchronized at every step of the process?

### What you can do.

Get back 26% of pure design time and do away with all the manual and error prone processes with change management. Best in class organizations who implement push button built-in ECO achieve:

- 90% of costs targets met
- 90% of products released on time

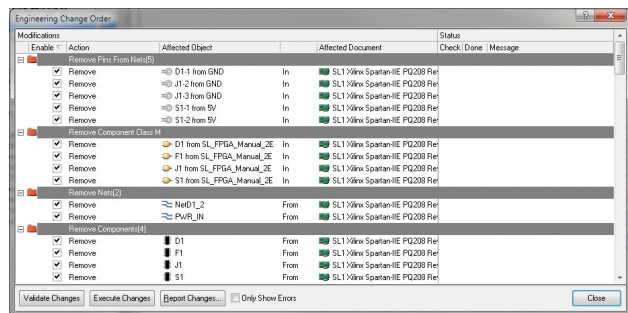
- 22% decrease in PCB development time over a two year cycle
- 89% of quality targets met at design release

## What it is?

Altium Designer allows these milestones to be met by unifying each design editor under one tool and also the entire ECO process within. The powerful differencing engine within Altium Designer can highlight the smallest of graphical changes between different versions of any editor.

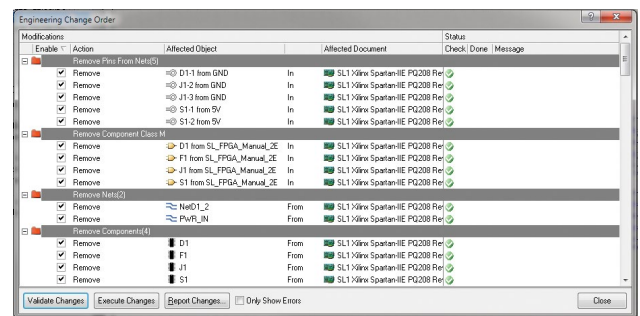
## Repeatability.

Every time you push or pull a change from one design domain to another, you will evoke the Engineering Change Order Box. One button, one interface, every time.



## Accountability.

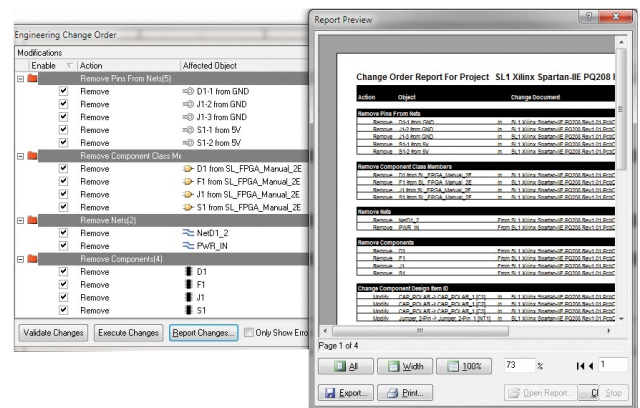
Validate the change BEFORE you make the change. No more throwing a netlist over the fence and hoping that all the design changes were pushed or reflected.



## Traceability.

Reporting the change to an electronic or paper format, ensures you have all the proper document and certification for the full change cycle of this design.

No more taking a netlist, throwing it over the fence to the Layout designer, and holding your breath that all the design changes happened at the right time, using the right components and mapped to right pins. Hope is not a design Strategy!



## About Altium

Altium Limited (ASX:ALU) provides world-leading unified design solutions that break down the barriers to innovation, and help organisations easily harness the latest devices and technologies, to create their next generation of electronic products. Founded in 1985, Altium has headquarters in Shanghai, China, sales offices in the United States, Europe, Australia, and resellers in all other major markets.

For more information, please visit [www.altium.com](http://www.altium.com)