TLA Entry Tips

Have you wondered why the design you submitted last year didn't make the cut? Your design could be the most complex on the planet, but the data you submit may not effectively distinguish it. This guide is intended to answer frequently asked questions and improve your entry.

The entry process

1. Start by creating a profile. You can have multiple entries attached to the single profile – by default, they will all use your profile name, but that can be changed if you want to submit entries for different team members. Once you've created a profile, you can return to the site using your email address and password.
2. Once an entry has been started (you've made it past the Contact Information page), you have two choices:
    a. Continue on filling out the forms by yourself
    b. Send us your design database (under Mentor/customer NDA). We'll extract as much info from the design as possible, and pre-populate the web form for you. You will still have final sign-off on what goes into the entry.
3. Once you select Save-and-Finalize on the last entry page, the entry will go to us for review. Your entries will have three states: Incomplete, Pending Approval, and Complete. The Pending state is for the program administrators to do a review for missing info before passing to the judges as Complete entries.
4. You will receive an email notification when your design is reviewed and complete.

The following highlights key fields in the entry form, with recommendations…

1. Comment/essay fields

Write clear, concise descriptions of your design. This narrative will set your design apart from the otherwise bland numerical data. Don't assume that the numerical data speaks for itself! Highlight the "cool" stuff for us. Comments are weighed heavily in the judging.

For example, comments like "a lot of high speed nets" or even "73% high speed nets" does not impress the judges as much as a more detailed description of those net classes ("64 SERDES differential pairs matched to 25 thou") and a description of how you overcame the challenge of pre-analysis, routing, post verification and correction of those nets.

To better understand What you built, and How you did it, the judges requested additional detail about the significance of your design, the team that built it, and the process you used.

2. Design challenges

Talk about some of the business challenges you faced (e.g. time to market, product cost, development cost, functional differentiation, design cycle time). Discuss how these impacted the design team (e.g. round-the-clock designs due to time pressure; limited resources; extra prototype iterations due to performance goals or manufacturability issues; design partitioning; performance vs. manufacturing tradeoffs; RF circuit design/verification; minimizing noise in the power supply; design had to completely routed by hand). Give a few quantitative examples.

Talk about some of the advanced PCB fabrication technologies you had to use (e.g. first-time implementation of HDI/microvias; embedded passives; stacked die).

Think of images or documents that would illustrate these challenges (e.g. a screen shot of breakout patterns out of a complex BGA).

3. Attachments

Upload images and/or documents that effectively illustrate the complexity of your design.

Do include:

- The preferred format for images is an ODB++ or CCZ file of your design. If you send us your design database, we can assist with creation of these outputs.
- Send at least one full-board image and one close-up highlighting an interesting section of the layout. If you have a multi-layer board, don't turn on all layers in all your screen shots. The judges will be more impressed if they can distinguish details in your design rather than a shot that just shows a mash of interconnects. Capture the images with the layout tool in full-screen mode using the highest monitor resolution possible.
- An alternative to screenshots is a PDF output from the tool – these are high resolution, scalable, and show individual layers.
- A photo of the manufactured board with/without enclosure.
- A high-resolution, full-board image to be used for your plaque if you win.
- An image of fabrication notes and drill table.
- Short documents that describe the products functional specifications.

Don't include:

- Your actual design database. The judges do not have the products needed to view these files (and you're probably exposing more IP than your management is comfortable with).

If you have difficulties uploading images, or have more data than the web form will allow, please let us know at pcb_tla@mentor.com and we will provide an FTP option.

Comments from the judges:

- "I advise all participants to thoroughly fill in all the blanks. Although we can determine many things about the design from your screen shots, a significant portion of the grade is based on the information you provide in writing. Mentor has gone to great lengths to give you an opportunity to get some of the recognition you deserve. So show us that you are more than a "hook up artist" and that your design truly deserves to be among the ones chosen for recognition. Good luck to you all."
  Pete Waddell President,
  UP Media Group
- "All judges for the Technology Leadership Awards (TLA) have previously designed printed circuits, so we appreciate your work. However, in order to accurately assess your submission, we need clear descriptions of the design challenges you faced (the WHAT) and your ultimate solution for these challenges (the HOW). Unless you tell us the specifics, we may not see the "genius" in how you faced your design challenge—regardless if it's simple or complex. I appreciate a good picture or illustration, so I encourage you to provide screen captures of layouts, simulations, stack-ups, etc."
  Happy Holden

If you have questions or problems with the design entry process, please contact us at pcb_tla@mentor.com.