

1) Enhancements to Dimension feature

When an item that is dimensioned is moved the dimension should change automatically. For example, if you move a corner of the board outline the dimension associated with it should change to reflect the new dimension. In addition, the measuring feature should be enhanced to allow a user to snap to midpoints, endpoints, vertices, centers and intersections of any chosen feature in the filter setup. This can be done by adding options to the display measure dialog box. Also “lines” should be added to the filter. Complex designs require detailed dimensioning and detailed accuracy that can only be verified by measuring.

Response from Cadence:

- Under consideration for a future release, beyond 15.5

2) Dual Processor Support and Multi-Threading

Please introduce multi-threading technology into the Allegro code to take advantage of technological improvements in multi-processor and hyper threading single processor hardware platforms. As multi-processor machines are becoming the "norm" for many users, having allegro modify all routing and DRC tools be multi-threaded to improve performance. Users would definitely benefit from dual processor support.

Response from Cadence:

- Not in the current plan of record however there is on-going development to improve database performance.
- New products will be architected to take advantage of multi-threading

3) Interactive Routing Enhancements

During interactive routing when we start by selecting a net add the possibility to swap to the other end of the net. In addition, when sliding vias and clines have a priority switch so that you can select which element gets picked up first with vias and clines selected in the find filter.

With the increasing amount of BGA style packages, it would be handy if Allegro had a fanout function. This function would allow you to add fanout traces and vias and these items would retain fanout attributes. You could then fix or protect this attribute separate from the other wires. This function would allow you to copy fanouts from symbol to symbol or from symbol pin to symbol pin just by selecting the symbol or symbol pin. This function would also include the ability to rotate and/or mirror the fanout being copied. This function would also include the ability to copy from one symbol type to all other like symbol types for fast copying ability.

Response from Cadence:

a. Swap Ends when routing a net

- Available now in 15.2 (ISR download)

b. Fanout feature in PCB Editor

- Automated fanout in Allegro PCB Editor available from Route > Fanout by Pick Menu. Fast/Improved copy support is under consideration for a future release.

4) Enhancements to Manufacturing Outputs

Please add a post processing utility to Allegro which would eliminate all home grown user tools and provide all users with the same type of output including some customization functionality. Things that always get created are artwork, drill info, netlists and drawings. Why not have a UI supported by Cadence that generates all this. Something like File->Export->Deliverables'. Artwork or ncd drill parameters could be controlled in the users env file or the allegro.ini file for example. As an alternative to the interactive Film Control setup it would be useful to have the ability in the artwork program to drive it using an external file (XML?) that specifies the various films to output. (Like the art_param.txt but for film control). This would make it much easier to create and maintain automated routines for generation of the required set of Gerber. The routine we use today have to create Allegro scripts for setting up the film control part and this is a rather cumbersome way to go and also subject to changes with new Allegro releases since menus in Allegro change etc.

Response from Cadence:

- a. Post Processing utility that outputs all deliverables
 - An investigation of user environments was conducted by the workbench team over the last 2 years. It was determined based on varying user requirements that a generic user interface would not satisfy 40% of our customers. Although this is not currently planned for the PCB Editor, it is worthy of a continued investigation. We have committed resources to the improvement of manufacturing related features since 14.0 and will continue to do so. Product Engineering will follow-up by contacting customers for additional input.
- b. Externally driven film record control
 - Under investigation and being considered for a future release

5) More Colors

High layer counts many busses and separate groups within those busses can easily use up the available colors. Please add more colors.

Response from Cadence:

- Planned for next major release