resize_respace_dp

The Resize/Respace Diff Pairs command is to modify existing diff-pair routing, where the user can specify new line-widths and/or gaps. For gap changes, diff-pairs must meet existing diff-pair gap coupling constraints. This command may be useful when diff-pair constraint changes are required after diff-pair routing has occurred.
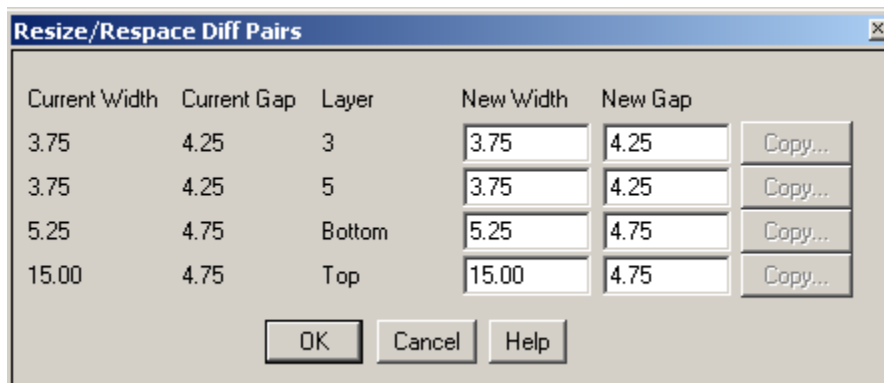
Gap changes are typically accomplished by maintaining the existing (imaginary) center-line between coupled segments. When modifying any diff-pairs, neighboring elements are ignored; so DRCs are likely to appear after the command is run. Constraints are not modified, and will need to be changed to match the Resize/Respace values applied.

Note: An important process step is to run Resize/Respace Diff Pairs command before (and not after) changing the constraints. User should not run this command again on the same diff-pairs, until after having updated the constraints to match the Resize/Respace values applied, otherwise the command won't recognize the modified diff-pair clines properly.

Procedure

1. To enable the command: Setup > User Preferences, Unsupported_utilities, check button Show Route Unsupported Utils Menu.   Restart Allegro.

2. In Etch Edit app-mode, hover over, or preselect the desired diff-pair nets, then RMB Resize/Respace DP. Or, without preselecting any nets, invoke: Route > Unsupported Utilities > Resize/Respace Diff Pairs, and then select the desired nets (only unfixed nets can be selected).

   A form will appear, eg:

Current Width	Current Gap	Layer	New Width	New Gap	
3.75	4.25	3	3.75	4.25	Copy...
3.75	4.25	5	3.75	4.25	Copy...
5.25	4.75	Bottom	5.25	4.75	Copy...
15.00	4.75	Top	15.00	4.75	Copy...

OK   Cancel   Help

- **Current Width**: Actual line width (not necessarily Min or Neck constraint)
- **Current Gap**: Diffpair primary or neck gap constraint (may differ from the actual gap)

- **Layer**: conductor layer name
- **New Width**: new physical line width to be applied to all selected segments matching Current Width, Current Gap constraint, and Layer.
- **New Gap**: the new gap will be applied to all selected segments that meet the Current Width, Current Gap (constraint and actual), and Layer.
- **Copy**: The Copy button allows new width and new gap values to be copied to other layers having the same Current Width and Current Gap.

3. Enter desired values for New Width and New Gap for each row as needed. Press OK to apply changes and close form.