```
icc2_shell> man set_floorplan_length_rules
2.  Synopsys Commands                                   Command Reference
                          set_floorplan_length_rules

NAME
       set_floorplan_length_rules
              Defines a length floorplan rule in the design.

SYNTAX
       set_floorplan_length_rules
              -from_object_types from_type_list
              -to_object_types to_type_list
              -from_lib_cells lib_cells
              -to_lib_cells lib_cells
              -type parallel_run | projection_difference
              -direction direction_list
              -name rule_name
              [-max_spacing distance]
              [-min_parallel_run_length distance]
              [-identical]
              [-mirror]
              [-asymmetric]
              [-from_layers layer_list]
              [-to_layers layer_list]
              [-max distance]
              [-min distance]

   Data Types
       from_type_list   list
       to_type_list     list
       lib_cells        collection
       direction_list   list
       rule_name        string
       distance         float
       layer_list       list

ARGUMENTS
       -from_object_types from_type_list
              Specifies the list of "from" object types for the length floor-
              plan rule. Length between these type of objects and other
              objects specified with -to_object_types or library cells speci-
              fied with -to_lib_cells will be checked. Valid values for this
              option are hard_macro, routing_blockage, shape, soft_macro,
              std_cell_area and boundary_cell_region. This option is mutually
              exclusive with -from_lib_cells and you must specify one or the
              other.

       -to_object_types to_type_list
              Specifies the list of "to" object types for the length floorplan
              rule. Length between these type of objects and other objects
              specified with -from_object_types or library cells specified
              with -from_lib_cells will be checked. Valid values for this
              option are hard_macro, routing_blockage, shape, soft_macro,
              std_cell_area and boundary_cell_region. This option is mutually
              exclusive with -to_lib_cells and you must specify one or the
              other.

       -from_lib_cells lib_cells
              Specifies the collection of library cells for the length floor-
              plan rule. Length between these library cells and other objects
              specified with -to_object_types or library cells specified with
              -to_lib_cells will be checked. This option is mutually exclusive
              with -from_object_types and you must specify one or the other.

       -to_lib_cells lib_cells
              Specifies the collection of library cells for the length floor-
              plan rule. Length between these library cells and other objects
              specified with -from_object_types or library cells specified
              with -from_lib_cells will be checked. This option is mutually
```

exclusive with -to_object_types and you must specify one or the other.

-type parallel_run | projection_difference
Specifies the length type of the length check. Valid values are parallel_run and projection_difference. This is a mandatory option.

-direction direction_list
Specifies the sides or directions in which length of object or library cells needs to be checked. Valid values are horizontal and vertical. The horizontal argument includes both left and right. Similarly, the vertical argument includes both bottom and top. This is a mandatory option.

-name rule_name
Specifies the name of the length floorplan rule. This is a mandatory option.

-max_spacing distance
Specifies the maximum spacing between "from" and "to" objects for this rule to be applied. The specified value cannot be negative. This is an optional option.

-min_parallel_run_length distance
Specifies the minimum overlap length between "from" and "to" objects for this rule to be applied. This is an optional option.

-identical
Specifies whether this rule applies to hard macros of same reference. This is an optional option.

-mirror
Specifies whether this rule applies when hard macros face each other mirrored. This is an optional option.

-asymmetric
Specifies whether this rule applies asymmetric or not. If specified, need to measure the difference only from object specified in -from_object_types. This option must be used along with -type projection_difference. This is an optional option.

-from_layers layer_list
Specifies the routing layers to be considered for routing_blockage or shape object types. This option must be used along with -from_object_types routing_blockage or -from_object_types shape. This is an optional option.

-to_layers layer_list
Specifies the routing layers to be considered for routing_blockage or shape object types. This option must be used along with -to_object_types routing_blockage or -to_object_types shape. This is an optional option.

-max distance
Specifies the maximum value of length type between "from" object or "from" library cell and "to" object or "to" library cell. The distance cannot be greater than this value. The specified value cannot be negative. If -min is also specified then this value must be greater than the min value. This is an optional option.

-min distance
Specifies the minimum value of length type between "from" object or "from" library cell and "to" object or "to" library cell. The distance cannot be less than this value. The specified value cannot be negative. If -max is also specified then this value must be lesser than the max value. This is an optional option.

DESCRIPTION

The set_floorplan_length_rules command defines a named length floorplan rule in the current design. The defined rule is persistent. If another floorplan rule by the same name exists then the command errors out.

There is a difference between the object type core_area and std_cell_area. The core_area object type means core boundary region without cutting out any blockages and is typically applicable for top level whereas std_cell_area object type means core boundary region after cutting out all blockages and is typically applicable for block level.

If a length rule is defined for a library cell and another length rule is defined for a hard macro then the length rule defined for the library cell will take precedence over the length rule defined for hard macro when checks are done for that library cell.

EXAMPLES

The following example creates a length rule named le1 to check length between the standard cell area and the hard macro in the vertical direction, both top and bottom. The length must be at least 5.

```
prompt> set_floorplan_length_rules -name le1 \
   -from_object_types std_cell_area -to_object_types hard_macro \
   -direction vertical -min 5
```

SEE ALSO

set_floorplan_area_rules(2)
set_floorplan_enclosure_rules(2)
set_floorplan_extension_rules(2)
set_floorplan_exception_rules(2)
set_floorplan_halo_rules(2)
set_floorplan_forbidden_rules(2)
set_floorplan_spacing_rules(2)
set_floorplan_width_rules(2)
remove_floorplan_rules(2)
report_floorplan_rules(2)

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