WHAT IS CLAIMED IS:

1. A utility tool comprising:

a design-for-manufacturing (DFM) checker configured to check layout patterns of an integrated circuit; and

a layout change instruction generator configured to generate a layout change instruction based on a result generated by the DFM checker, wherein the DFM checker and the layout change instruction generator are embodied on a non-transitory storage media, and wherein the layout change instruction specifies an identifier of a layout pattern among the layout patterns, and a respective layout change to be performed on the layout pattern.

2. The utility tool of claim 1, wherein the layout change instruction further specifies a magnitude of the layout change.

3. The utility tool of claim 1, wherein the layout change instruction generator is further configured to generate a location marker for marking a location corresponding to the layout change.

4. The utility tool of claim 1, wherein the layout change instruction comprises a plurality of instructions for changing layout patterns, and wherein the plurality of instructions are grouped using logical relationships selected from the group consisting essentially of "AND," "OR," "NOT," and combinations thereof.

5. The utility tool of claim 1, wherein the layout change instruction comprises changing a spacing between the layout pattern and a neighboring layout pattern.

6. The utility tool of claim 1, wherein the layout change instruction comprises moving the layout pattern.

7. The utility tool of claim 1, wherein the layout change instruction comprises reshaping the layout pattern.

8. The utility tool of claim 1, wherein the layout change instruction comprises resizing of the layout pattern.

9. The utility tool of claim 1, wherein the layout change instruction comprises changing a relationship between patterns on different layers, wherein the relationship comprises an enclosure of the layout patterns.

10. The utility tool of claim 1 further comprising a layout editor configured to receive the layout change instruction, and execute the layout change instruction on the layout pattern.

11. A utility tool comprising:

a computer program product having a non-transitory computer-readable medium with a computer program embodied thereon, the computer program comprising:

a design-for-manufacturing (DFM) checker program code for checking layout patterns of an integrated circuit; and

a layout-change-instruction generating program code for generating a layout change instruction based on a result provided by the DFM checker program code, wherein the layout change instruction comprises:

an identifier of a layout pattern among the layout patterns of an integrated circuit;

a type of a layout change to be performed on the layout pattern; and

a magnitude of the layout change.

12. The utility tool of claim 11, wherein the type of layout change is selected from the group consisting essentially of a change in a spacing between the layout pattern and an additional layout pattern, a movement of the layout pattern, a reshape of the layout pattern, a resize of the layout pattern, a change in a relationship between patterns on different layers, and combinations thereof.

13. The utility tool of claim 11, wherein the layout change instruction is related to a plurality of patterns, and wherein the layout change instruction comprises no designation of a specific one of the plurality of the patterns.

14. The utility tool of claim 11, wherein the layout change instruction comprises the instruction comprises a change of the relationship between patterns in different layers.

15. The utility tool of claim 11, wherein the layout-change-instruction generating program code is further for generating a location marker of the layout pattern.

16. The utility tool of claim 11, wherein the layout change instruction comprises a plurality of instructions for changing layout patterns comprising the layout pattern, and wherein the plurality of instructions are grouped using logical relationships selected from the group consisting essentially of "AND," "OR," "NOT," and combinations thereof.

17. The utility tool of claim 11 further comprising a layout editor configured to receive the layout change instruction, and perform the layout change instruction on the layout pattern.

18. A method comprising:

receiving a layout of an integrated circuit from a database;

performing a design-for-manufacturing (DFM) check on layout patterns of the layout; and

generating a layout change instruction based on a result obtained from the DFM check, wherein the layout change instruction comprises:

an identifier of a layout pattern among the layout patterns of an integrated circuit; and

a type of a layout change to be performed on the layout pattern.

19. The method of claim 18, wherein the layout change instruction further comprises a magnitude of the layout change.

20. The method of claim 18, wherein the type of the layout change is selected from the group consisting essentially of a change in a spacing between the layout pattern and a neighboring layout pattern, a movement of the layout pattern, a reshape of the layout pattern, a resize of the layout pattern, a relationship between patterns in different layers, and combinations thereof.

21. The method of claim 18 further comprising automatically executing the layout change instruction using a layout editor.

What is claimed is:

1. A utility tool comprising:

a design-for-manufacturing (DFM) checker configured to check layout patterns of an integrated circuit; and

a layout change instruction generator configured to generate a layout change instruction automatically in response to a result generated by the DFM checker, wherein the DFM checker and the layout change instruction generator are embodied on a non-transitory storage media, and wherein the layout change instruction specifies:

an identifier of a layout pattern among the layout patterns; a type of a layout change to be performed on the layout patterns;

a respective layout change to be performed on the layout pattern; and

a magnitude of the layout change, and wherein the layout change instruction is configured to change an enclosure of the layout patterns, with the enclosure specifies distances a metal line extends beyond edges of a respective via that is underlying and physically connected to the metal line.

2. The utility tool of claim 1, wherein the layout change instruction generator is further configured to generate a location marker for marking a location corresponding to the layout change.

3. The utility tool of claim 1, wherein the layout change instruction generator is further configured to generate an additional layout change instruction comprising a plurality of instructions for changing layout patterns, and wherein the plurality of instructions are grouped using logical relationships selected from the group consisting essentially of "AND," "OR," "NOT," and combinations thereof.

4. The utility tool of claim 1, wherein the layout change instruction generator is further configured to generate an additional layout change instruction for changing a spacing between the layout pattern and a neighboring layout pattern.

5. The utility tool of claim 1, wherein the layout change instruction generator is further configured to generate an additional layout change instruction for moving the layout pattern.

6. The utility tool of claim 1, wherein the layout change instruction generator is further configured to generate an additional layout change instruction for reshaping the layout pattern.

7. The utility tool of claim 1, wherein the layout change instruction generator is further configured to generate an additional layout change instruction for resizing of the layout pattern.

8. The utility tool of claim 1 further comprising a layout editor configured to receive the layout change instruction, and execute the layout change instruction on the layout pattern.

9. A utility tool comprising:

a computer program product having a non-transitory computer-readable medium with a computer program embodied thereon, the computer program comprising:

a design-for-manufacturing (DFM) checker program code for checking layout patterns of an integrated circuit; and

a layout-change-instruction generating program code for generating a layout change instruction automatically in response to a result provided by the DFM checker program code, wherein the layout change instruction is related to a plurality of patterns, wherein the layout change instruction comprises no designation of a specific one of the plurality of the patterns, and wherein the layout change instruction comprises:

a type of a layout change to be performed on the layout pattern, wherein the type of the layout

change comprises a relationship between patterns in different layers; and

a magnitude of the layout change.

10. The utility tool of claim **9**, wherein the type of layout change is selected from the group consisting essentially of a change in a spacing between the layout pattern and an additional layout pattern, a movement of the layout pattern, a reshape of the layout pattern, a resize of the layout pattern, a change in a relationship between patterns on different layers, and combinations thereof.

11. The utility tool of claim **9**, wherein the layout change instruction comprises the instruction comprises a change of the relationship between patterns in different layers.

12. The utility tool of claim **9**, wherein the layout-change-instruction generating program code is further for generating a location marker of the layout pattern.

13. The utility tool of claim **9**, wherein the layout change instruction comprises a plurality of instructions for changing layout patterns comprising the layout pattern, and wherein the plurality of instructions are grouped using logical relationships selected from the group consisting essentially of "AND," "OR," "NOT," and combinations thereof.

14. The utility tool of claim **9** further comprising a layout editor configured to receive the layout change instruction, and perform the layout change instruction on the layout pattern.

15. A method comprising:

receiving a layout of an integrated circuit from a database;

performing a design-for-manufacturing (DFM) check on layout patterns of the layout; and

generating a layout change instruction based on a result obtained from the DFM check, wherein the step of generating the layout change instruction is performed automatically by a computer in response to results of the DFM check, and wherein the layout change instruction comprises:

an identifier of a layout pattern among the layout patterns of an integrated circuit;

a type of a layout change to be performed on the layout pattern, wherein the type of the layout change comprises a relationship between patterns in different layers; a magnitude of the layout change, and wherein the layout change instruction is configured to change an enclosure of the layout patterns, with the enclosure specifies distances a metal line extends beyond edges of a respective via that is underlying and physically connected to the metal line.

16. The method of claim **15** further comprising automatically executing the layout change instruction using a layout editor.