

WHAT IS CLAIMED IS:

1. An apparatus for controlling a three-dimensional optical field, comprising:
 - a light-emission device emitting a light; and
 - a set of zoom elements disposed in front of the light-emission device, and focusing the light from the light-emission device.
2. An apparatus as claimed in Claim 1, wherein the set of zoom elements comprise a plurality of first zoom elements.
3. An apparatus as claimed in Claim 1, further comprising a second zoom element disposed in front of the set of zoom elements.
4. An apparatus as claimed in Claim 1, wherein the light-emission device is one of a plane light source and a set of light-emission units.
5. An apparatus as claimed in Claim 4, wherein each of the light-emission units comprises one selected from a group consisting of an LED, an incandescent lamp, a mercury lamp, a halogen lamp and a tritium light.
6. An apparatus as claimed in Claim 4, wherein the set of zoom elements have a portion corresponding to a single one of the set of light-emission units.
7. An apparatus as claimed in Claim 4, wherein the set of light-emission units have a portion corresponding to a single one of the set of zoom elements.
8. An apparatus as claimed in Claim 1, wherein each of the set of zoom elements includes one selected from a group consisting of a liquid lens, a solid lens and a combination thereof.
9. An apparatus for controlling a three-dimensional optical field, the apparatus comprising a set of zoom light sources, wherein the set of zoom light sources include a plurality of zoom light units, each of which includes a light-emission unit and a first zoom element disposed in front of the light-emission unit.
10. An apparatus as claimed in Claim 9, wherein the first zoom element includes one selected from a group consisting of a liquid lens, a solid lens and a combination thereof.

11. An apparatus as claimed in Claim 9, wherein the light-emission unit comprises one selected from a group consisting of an LED, an incandescent lamp, a mercury lamp, a halogen lamp and a tritium light.

12. An apparatus as claimed in Claim 9, wherein each of the zoom light units comprises a plurality of light-emission units, and the first zoom element is a single zoom element.

13. An apparatus as claimed in Claim 9, wherein the first zoom element further comprises a plurality of zoom elements, and the light-emission unit is a single unit.

14. An apparatus as claimed in Claim 9, further comprising a second zoom element disposed in front of the first zoom element.

15. A method of controlling a three-dimensional optical field, comprising steps of:

 providing a plurality of zoom light units, each of which has a respective light intensity and a respective focal length; and

 controlling the three-dimensional optical field by adjusting the respective light intensity and the respective focal length.

16. A method as claimed in Claim 15, wherein a two-dimensional light shape is controlled by a variation of an intensity of the plurality of zoom light units, and a focal plane at a light axis is controlled by a zooming action of the zoom light units, so as to control the three-dimension optical field.

17. A method as claimed in Claim 15, wherein the zoom light units includes one selected from a group consisting a liquid lens, a solid lens and a combination thereof.

18. A method of as claimed in Claim 15, further comprising a step of providing a second zoom light unit in front of the plurality of zoom light units.

19. A method as claimed in Claim 15, wherein the zoom light units comprise a plurality of light-emission units.

20. A method of as claimed in Claim 15, wherein each of the zoom light units comprises a light source, and the light source is a single light-emission unit.