CLAIMS

1. A control method comprising:

determining geometric information about respective geometries of respective housings of a plurality of light sources, wherein the geometric information comprises positions of one or more lighting elements on each of the plurality of light sources;

determining a photographic representation of an environment in which the plurality of light sources are provided;

determining spatial information about the plurality of light sources based on the geometric information and based on the photographic representation;

determining control information for the plurality of light sources based on the spatial information,

wherein determining the control information comprises mapping a lighting effect to the plurality of light sources based on the spatial information, and modulating timing and color space parameters of the plurality of light sources to smoothly span the lighting effect across the environment based on the spatial information; and

controlling the plurality of light sources based on the control information to operate sequentially, so as to create the lighting effect, wherein the lighting effect appears to travel across the plurality of light sources.

2. The control method of claim 1,

wherein the plurality of light sources are provided in at least one computer peripheral device.

3. The control method of claim 1,

wherein the geometric information is determined based on at least one of a database of geometries of housings or a user input identifying types of light sources provided in the environment.

4. The control method of claim 1,

wherein the spatial information comprises information indicating at least one of a relative position of each light source of the plurality of light sources with respect to at least

one other light source of the plurality of light sources, a relative orientation of each light source of the plurality of light sources with respect to at least one other light source of the plurality of light sources, an absolute position of each light source of the plurality of light sources, or an absolute orientation of each light source of the plurality of light sources.

5. The control method of claim 1,

wherein the photographic representation comprises at least one of a two-dimensional scan of an environment in which the plurality of light sources are located or a three-dimensional scan of an environment in which the plurality of light sources are located or a movie of an environment in which the plurality of light sources are located.

6. The control method of claim 1,

wherein the control information is determined further based on at least one of input from a user of the control method or a pre-defined animation sequence.

7. The control method of claim 1,

wherein the control information comprises:

timing information for each light source of the plurality of light sources for switching on or off the light source; or

color information for each light source of the plurality of light sources.

8. The control method of claim 1,

wherein controlling the plurality of light sources comprises controlling the plurality of light sources to obtain at least one of a synchronized lighting effect, a coordinated lighting effect, an animated lighting effect, a propagating wave lighting effect, a breathing lighting effect, or a spectrum lighting effect.

9. The control method of claim 1, wherein determining control information for the plurality of light sources further comprises compensating for dynamic constraints of any one light source of the plurality of light sources.

10. The control method of claim 1, further comprising:

detecting a new light source from the photographic representation;

determining spatial information about the new light source based on the geometric information and based on the photographic representation; and

updating control information for the plurality of light sources based on the spatial information of the new light source.

11. A non-transitory computer-readable medium comprising instructions which, when executed by a computer, make the computer perform a control method, the control method comprising:

determining geometric information about respective geometries of respective housings of a plurality of light sources, wherein the geometric information comprises positions of one or more lighting elements on each of the plurality of light sources;

determining a photographic representation of an environment in which the plurality of light sources are provided;

determining spatial information about the plurality of light sources based on the geometric information and based on the photographic representation;

determining control information for the plurality of light sources based on the spatial information;

wherein determining the control information comprises mapping a lighting effect to the plurality of light sources based on the spatial information, and modulating timing and color space parameters of the plurality of light sources to smoothly span the lighting effect across the environment based on the spatial information; and

controlling the plurality of light sources based on the control information to operate sequentially, so as to create the lighting effect, wherein the lighting effect appears to travel across the plurality of light sources.

12. The non-transitory computer-readable medium of claim 11, wherein the geometric information is determined based on at least one of a database of geometries of housings or a user input identifying types of light sources provided in the environment.

13. The non-transitory computer-readable medium of claim 11,

wherein the control information comprises:

timing information for each light source of the plurality of light sources for switching on or off the light source; or

color information for each light source of the plurality of light sources.

14. The non-transitory computer-readable medium of claim 11,

wherein controlling the plurality of light sources comprises controlling the plurality of light sources to obtain at least one of a synchronized lighting effect, a coordinated lighting effect, an animated lighting effect, a propagating wave lighting effect, a breathing lighting effect, or a spectrum lighting effect.

15. A controller comprising:

a geometry determination circuit configured to determine geometric information about respective geometries of respective housings of a plurality of light sources, wherein the geometric information comprises positions of one or more lighting elements on each of the plurality of light sources;

an imaging circuit configured to determine a photographic representation of an environment in which the plurality of light sources are provided;

a spatial information determination circuit configured to determine spatial information about the plurality of light sources based on the geometric information and based on the photographic representation;

a control information determination circuit configured to determine control information for the plurality of light sources based on the spatial information, wherein determining the control information comprises mapping a lighting effect to the plurality of light sources based on the spatial information, and modulating timing and color space parameters of the plurality of light sources to smoothly span the lighting effect across the environment based on the spatial information; and

a control circuit configured to control the plurality of light sources based on the control information to operate sequentially, so as to create the lighting effect, wherein the lighting effect appears to travel across the plurality of light sources.

16. The controller of claim 15,

wherein the plurality of light sources are provided in at least one computer peripheral device.

17. The controller of claim 15,

wherein the geometry determination circuit is configured to determine the geometric information based on at least one of a database of geometries of housings or a user input identifying types of light sources provided in the environment.

18. The controller of claim 15,

wherein the spatial information comprises information indicating at least one of a relative position of each light source of the plurality of light sources with respect to at least one other light source of the plurality of light sources, a relative orientation of each light source of the plurality of light sources with respect to at least one other light source of the plurality of light sources, an absolute position of each light source of the plurality of light sources, or an absolute orientation of each light source of the plurality of light sources.

19. The controller of claim 15,

wherein the photographic representation comprises at least one of a two-dimensional scan of an environment in which the plurality of light sources are located or a three-dimensional scan of an environment in which the plurality of light sources are located or a movie of an environment in which the plurality of light sources are located.

20. The controller of claim 15,

wherein the control information determination circuit is configured to determine the control information further based on at least one of input from a user of the control method or a pre-defined animation sequence.

21. The controller of claim 15,

wherein the control information comprises:

timing information for each light source of the plurality of light sources for switching on or off the light source; or

color information for each light source of the plurality of light sources.

22. The controller of claim 15,

wherein the control circuit is configured to control the plurality of light sources to obtain at least one of a synchronized lighting effect, a coordinated lighting effect, an

animated lighting effect, a propagating wave lighting effect, a breathing lighting effect, or a spectrum lighting effect.