[0025] **FIGS. 9A and 9B** illustrate a schematic layout of an interactive video display system having a scattering polarizer screen, in accordance with an embodiment of the present invention.

[0026] **FIG. 10A** illustrate a cross-section of a screen with microscopic scattering ridges or bumps, in accordance with an embodiment of the present invention.

[0027] **FIG. 10B** illustrate a cross-section of a screen with microscopic scattering pits or grooves, in accordance with an embodiment of the present invention.

[0028] **FIG. 11** illustrates a sample configuration for edge lighting, in accordance with an embodiment of the present invention.

[0029] **FIG. 12A** illustrates a flat-panel display cross-section, in accordance with an embodiment of the present invention.

[0030] **FIG. 12B** illustrates a flat-panel display cross-section, in accordance with another embodiment of the present invention.

[0031] **FIG. 13** illustrates a camera and illumination subsystem, in accordance with an embodiment of the present invention.

[0032] **FIG. 14** illustrates an illumination subsystem for camera utilizing tilted scattering polarizer, in accordance with an embodiment of the present invention.

[0033] **FIG. 15** illustrates a camera and illumination subsystem for time-of-flight cameras, in accordance with an embodiment of the present invention.

[0034] **FIG. 16** shows a first configuration for capturing 3D data, in accordance with an embodiment of the present invention.

[0035] **FIG. 17** shows a second configuration for capturing 3D data, in accordance with an embodiment of the present invention.

[0036] **FIG. 18A** shows two additional configurations for capturing 3D data, in accordance with an embodiment of the present invention.

[0037] **FIG. 18B** shows another configuration for capturing 3D data, in accordance with an embodiment of the present invention.

[0038] **FIGS. 19A and 19B** are schematic diagrams illustrating light scattering, in accordance with an embodiment of the present invention.

[0039] **FIG. 20A** illustrates high distortion, in accordance with an embodiment of the present invention.

[0040] **FIG. 20B** illustrates reduced distortion by distancing camera from display screen, in accordance with an embodiment of the present invention.

[0041] **FIG. 21A** illustrates distortion reduction using Fresnel lens, in accordance with an embodiment of the present invention.

[0042] **FIG. 21B** illustrates distortion elimination using Fresnel lens, in accordance with an embodiment of the present invention.

[0043] **FIG. 21C** shows the use of Fresnel lenses to eliminate distortion in a two-camera system, in accordance with an embodiment of the present invention.

[0044] **FIG. 22** is a schematic diagram illustrating a window display, in accordance with one embodiment of the present invention.

[0045] **FIGS. 23A, 23B**, and **23**C are schematic diagrams respectively illustrating various techniques for reducing glare, in accordance with different embodiments of the present invention.

[0046] **FIGS. 24A and 24B** are schematic diagrams illustrating a technique for reducing glare using view control film, in accordance with embodiments of the present invention.

[0047] **FIG. 25** illustrates a cross-section of one configuration of window display using scattering polarizer, in accordance with an embodiment of the present invention.

[0048] **FIG. 26** illustrates a cross-section of one configuration of window display using scattering polarizer and a micro-prism material, in accordance with an embodiment of the present invention.

[0049] **FIG. 27** illustrates a cross-section of one configuration of window display using a mirror for compaction purposes, in accordance with an embodiment of the present invention.

[0050] **FIG. 28** illustrates a side view of an interactive display including multiple time-of-flight cameras, in accordance with an embodiment of the present invention.

[0051] **FIG. 29** illustrates a top view of an interactive display including multiple time-of-flight cameras, in accordance with an embodiment of the present invention.

DETAILED DESCRIPTION

[0052] Reference will now be made in detail to various embodiments of the invention, an electronic device for monitoring the presence of objects around a second electronic device, examples of which are illustrated in the accompanying drawings. While the invention will be described in conjunction with these embodiments, it is understood that they are not intended to limit the invention to these embodiments. On the contrary, the invention is intended to cover alternatives, modifications and equivalents, which may be included within the spirit and scope of the invention as defined by the appended claims. Furthermore, in the following detailed description of the invention, numerous specific details are set forth in order to provide a thorough understanding of the invention. However, it will be recognized by one of ordinary skill in the art that the invention may be practiced without these specific details. In other instances, well known methods, procedures, components, and circuits have not been described in detail as not to unnecessarily obscure aspects of the invention.

[0053] Some portions of the detailed descriptions, which follow, are presented in terms of procedures, steps, logic blocks, processing, and other symbolic representations of operations on data bits that can be performed on computer memory. These descriptions and representations are the means used by those skilled in the data processing arts to most effectively convey the substance of their work to others