of an electronic display. Broadly, the device comprises at least one refractive element that alters the vergence of light emitted from a pixel of an electronic display. The refractive element being located directly adjacent or on the electronic display. This change in vergence is received at the pupil of the wearer. The altered light effectively recreates the rays emitted by a pixel such that they reach a presbyopic eye as though they were being viewed at a distance (i.e., the rays are substantially parallel). As such, the emmetropic presbyopic eye produces a sharp image of the electronic display.

[0044] Embodiments of the present invention provide a simpler solution than prior art systems through the use of a refractive element corresponding to each pixel of an electronic display.

[0045] Turning to FIG. 1, there is illustrated parallel rays 11 from a distant object (not shown) focused on the retina 19 of an emmetropic presbyopic eye. It will be appreciated that for an emmetropic presbyopic eye, the rays arriving from a distant object (parallel rays) are focused/converged by lens 15 of the eye onto the retina 19 and produces a sharp image.

[0046] Referring to FIG. 2, there is illustrated lens 24 of a spectacle placed in front of an eye. The rays 2 1 emitted from a pixel 22 of an electronic display, in this embodiment a mobile phone 23 placed approximately 35 cm away from the eye, diverge away from the pixel 22. The lens 24 alters the vergence of these diverging rays 2 1 to substantially parallel rays 26 so that they are converged by lens 25 of the eye onto the retina 29 to produce a sharp image. It will be appreciated that the absence of the lens ~~25~~ 24 will lead to the diverging rays arriving at the lens 25 at an angle and thus focus the image behind the retina 29, leading to a blurry image.

[0047] The inventors have found that altering the vergence of the rays emitted from a pixel of an electronic display by a predetermined vergence to substantially parallel rays allows the presbyopic eye to produce a sharp image of near objects.

[0048] It will be appreciated that the production of parallel rays only corrects vision of emmetropic presbyopic eyes and that the refractive elements may be