CLAIMS

1. A three-dimensional display system comprising a display housing and a plurality of projectors for simultaneously projecting two-dimensional image components into a three dimensional display volume including a cloud of particles, each projector having means to adjust the distance of the projected image from the projector, and each projector being pivotally mounted to the display housing, for adjusting the horizontal and vertical position of the projected two-dimensional image component with respect to the projector, the two-dimensional image components combining to form an image of a three dimensional object having at least one outer surface, each image component forming an area of the outer surface.

2. A three-dimensional display system as claimed in claim 1**,** in which each projector is rotatable about its line of projection.

3. A three-dimensional display system as claimed in claim 1, in which each projector includes a light source, a display screen and a zoom lens.

4. A three-dimensional display system as claimed in claim 3, in which the zoom lens is a liquid zoom lens.

5. A three-dimensional display system as claimed in claim 3 or claim 4, in which each projector further comprises a wavefront modulator.

6. A three-dimensional display system as claimed in any of the preceding claims, in which each projector further includes a projector housing taking the shape of an elongate square prism.

7. A three-dimensional display system as claimed in any of claims 1 to 5, in which each projector further includes a projector housing taking the shape of a frustum of a cone, the display screen being disposed near the narrow end of the housing and the zoom lens being disposed near the wide end.

8. A three-dimensional display system as claimed in any of the preceding claims, further comprising at least one camera and a computer provided with image-processing software.

9. A three-dimensional display system as claimed in claim 8, in which a numeral or other symbol forms part of each projected two-dimensional image, and in which the image-processing software is configured to detect scattering of the numerals or other symbols from the video signal or signals from the camera or cameras.

10. A three-dimensional display system as claimed in claim 9, in which the numerals or other symbols are projected in a part of the electromagnetic spectrum which is invisible to the human eye.

11. A three-dimensional display system as claimed in claim 10, in which the numerals or other symbols are projected in ultraviolet light.

12. A three-dimensional display system as claimed in claim 10, in which the numerals or other symbols are projected in infrared light.

13. A method of operating a computer comprising the steps of:
    (a) providing a three-dimensional display system comprising a display housing and a plurality of projectors for simultaneously projecting two-dimensional image components into a three dimensional display volume including a cloud of particles, each projector having means to adjust the distance of the projected image from the projector, and each projector being pivotally mounted to the

display housing, for adjusting the horizontal and vertical position of the projected two-dimensional image component with respect to the projector, the two-dimensional image components combining to form an image of a three-dimensional object having at least one outer surface, each image component forming an area of the outer surface;

(b) displaying a three-dimensional object on the display;

(c) displaying symbols relating to programs, functions, data or devices on the surface of the object;

(d) detecting the presence and position of a user's hand or other appendage adjacent to the surface of the object; and

(e) depending on the symbol which is displayed close to the point where the user's hand is detected, launching the program, activating the function, loading the data or activating functions relating to the device represented by that symbol.

14. A method of operating a computer as claimed in claim 13, further comprising the steps of:

(f) reducing the size of the object displayed in step (a); and

(g) displaying a new object to represent the functions of the program launched, the elements of the data loaded, or the contents of the device represented by the symbol chosen by the user in step (c).

15. A method of browsing the world wide web comprising the steps of:

(a) providing a three-dimensional display system comprising a display housing and a plurality of projectors for simultaneously projecting two-dimensional image components into a three dimensional display volume including a cloud of particles, each projector having means to adjust the distance of the projected image from the projector, and each projector being pivotally mounted to the display housing, for adjusting the horizontal and vertical position of the projected two-dimensional image component with respect to the projector, the two-dimensional image components combining to form an image of a three-dimensional object having at least one outer surface, each image component forming an area of the outer surface; displaying a first web page on the three-dimensional display;

(b) detecting the presence and position of a user's hand or other appendage adjacent to the displayed web page;

(c) where the user's hand is detected close to a hyperlink on the first web page, reducing the size of the first web page and displaying at a larger size the web page which is the target of the hyperlink.

16. A method of browsing the world wide web as claimed in claim 15, in which at least one of the web pages is written in a markup language which defines the three dimensional location of each component.

17. A method of browsing the world wide web as claimed in claim 15, in which at least one of the web pages is an HTML or XHTML web page designed for standard two-dimensional display, and in which a three-dimensional style defining the three-dimensional location of each page component is applied.

18. A double-faced wristwatch comprising two watch faces and a watch strap, at least one of the watch faces including a three-dimensional display as claimed in claim 1.

19. A three-dimensional display system substantially as described herein with reference to and as illustrated in Figures 1 to 25 of the accompanying drawings.

20. A method of operating a computer substantially as described herein with reference to and as illustrated in Figures 26 to 28 of the accompanying drawings.

21. A method of browsing the world wide web substantially as described herein with reference to and as illustrated in Figures 29 to 30 of the accompanying drawings.

22. A double faced wristwatch substantially as described herein with reference to and as illustrated in Figures 31 to 32 of the accompanying drawings.