ferred embodiments thereof, are apparent from the discussion hereinabove with reference to the proposed vehicle arrangement.

[0016] According to a further aspect of the invention the object is achieved by a computer program product directly loadable into the internal memory of a computer, comprising software for controlling the above proposed method when said program is run on a computer.

[0017] According to another aspect of the invention the object is achieved by a computer readable medium, having a program recorded thereon, where the program is to make a computer control the above proposed method.

[0018] Further advantages, advantageous features and applications of the present invention will be apparent from the following description and the dependent claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0019] The present invention is now to be explained more closely by means of preferred embodiments, which are disclosed as examples, and with reference to the attached drawings.

[0020] FIG. **1** shows a block diagram over an interface arrangement according to one embodiment of the invention;

[0021] FIG. **2** shows schematic circuit diagrams over a light source and a light detector respectively according to one embodiment of the invention;

[0022] FIGS. **3***a-d* show diagrams illustrating examples of the timing relationship between a set of key signals in the circuit diagrams of FIG. **2**;

[0023] FIG. **4** illustrates a mobile terminal including the proposed interface arrangement; and

[0024] FIG. **5** shows a flow diagram illustrating the general method of generating input commands to a mobile terminal according to the invention.

DESCRIPTION OF PREFERRED EMBODIMENTS OF THE INVENTION

[0025] We refer initially to FIG. **1**, which shows a block diagram over an interface arrangement for receiving input commands in a mobile terminal according to one embodiment of the invention.

[0026] The arrangement includes a display device D, at least one array of light sources **131** and **132** respectively, at least one array of light detectors **141** and **142** respectively and a processing unit **110**.

[0027] The display device D, e.g. including an LCD (Liquid Crystal Display) screen, is adapted to present visual information to a user. The arrays of light sources **131** and **132** are arranged along a respective side of the display device D. Preferably; the display device D has a rectangular outline with four separate sides. In such a case, a first array of light sources **131** may be arranged along a lowermost side of the display device D, and a second array of light sources **132** may be arranged along a rightmost side of the display device D as illustrated in FIG. **1**. However, depending on the outline of the display device D and the design of software which controls the user interface, numerous alternative arrangements of the arrays of light sources **131** and **132** are likewise conceivable according to the invention. For example the light sources may exclusively be arranged along a single side of the display device D, and be configured to emit light rays at different angles across the display device D.

[0028] The arrays of light detectors **141** and **142** are arranged along a respective side of the display device D where no light sources are arranged. Thus, provided that the display device D has a rectangular outline with four separate sides as illustrated in FIG. **1**, a first array of light detectors **141** may be arranged opposite to the first array of light sources **131**, and a second array of light detectors **142** may be arranged opposite to the second array of light sources **132**. However, technically, the arrays of light sources and detectors **131**, **132**, **141** and **142** can be arranged so that the arrays of light sources **131** and **132** are instead arranged along adjoining sides, and analogously, the arrays of light detectors **141** and **142** likewise are arranged along adjoining sides of the display device D.

[0029] In any case, each array of light sources is configured to transmit light pulses, here exemplified by Λ_{emX} and Λ_{emY}, over the display device D. Moreover, each array of light detectors **141** and **142** is configured to receive a part Λ_{inX} and Λ_{inY} of the energy in the transmitted light pulses Λ_{emX} and Λ_{emY} respectively. Each light source, in turn, may either be configured to emit light in a relatively narrow lobe, such that its emitted light can be registered by one detector only; or in a comparatively wide lobe, such that its emitted light can be registered by two or more detectors.

[0030] The processing unit **110** is adapted to control the arrays of light sources **131** and **132**, such that a respective light pulse Λ_{emX} and Λ_{emY} is repeatedly transmitted from each source LX**1**, . . . , LXn and LY**1**, . . . , LYm respectively in the arrays **131** and **132** according to a predefined sequence. The processing unit **110** is also adapted to receive information pertaining to light energy registered by the detectors PX**1**, . . . , PXn; PY**1**, . . . , PYm in the arrays of light detectors **141** and **142**. Based thereon, the processing unit **110** is adapted to determine whether or not a light-obstructive object (e.g. represented by a fingertip) is present on the display device D between a given light source and at least one light detector in the arrays of light detectors **141** and **142**. Naturally, the numbers n and m of light sources and light detectors in the arrays **131**, **132**, **141** and **142** depend on the desired accuracy/resolution at which a position of the light-obstructive element is to be determined. Moreover, as touched upon above, the number light sources may be different from the light detectors. Nevertheless, for a typical implementation, the numbers n and m normally range from 4 to 20.

[0031] Specifically, according to the invention, the processing unit **110** is adapted to record an initial measurement value V_1, which is registered by at least one detector in the arrays of light detectors **141** and **142** prior to transmitting the light pulse Λ_{emX} and Λ_{emY}. Hence, the initial measurement value V_1 represents an ambience light intensity. Then, based on the initial measurement value V_1 and a secondary measurement value V_2 is registered by at least one light detector during emission of light from the light source, the processing unit **110** is adapted to determine whether or not a light-obstructive object is present on the display device D at such a position that this object intersects a path of the emitted light. Here, a light-obstructive object may be deemed to be present if the difference between the initial measurement value V_1 and the secondary measurement value V_2 exceeds a threshold value.

[0032] According to one preferred embodiment of the invention, the interface arrangement further includes a digitizing unit **150**, which is configured to receive measurement values V_X and V_y from the arrays of light detectors **141** and **142** respectively, and in response thereto deliver corresponding digital data D_{FB} to the processing unit **110**. Thereby, any