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Information Device for Controlling a Display of Information

Abstract

An information device for controlling a display of information includes a LED film having a surface with a first area and a second area, a configurable LED panel, wherein the LED panel is part of the first area; and a control interface, wherein the control interface is part of the second area of the LED film and is configured to receive a control command from a control device to adapt the display of information on the first area of the LED panel of the information device.

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Background/Summary

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] The instant application claims priority to European Patent Application No. 24156605.8, filed Feb. 8, 2024, which is incorporated herein in its entirety by reference.

FIELD OF THE DISCLOSURE

[0002] The present disclosure generally relates to an information device for controlling a display of information.

BACKGROUND OF THE INVENTION

[0003] Existing signage products in prior art use often a rigid and fixed pictogram that needs to be changed due to installation constraints, e.g. right, left, up, down etc., in terms of a position of said product that is no longer suitable.

[0004] The installation of such a signage product is mainly on a ceiling, a wall or recessed and such an installation is most often obtrusive.

[0005] Further, in case the layout of the signage product needs to be changed to due to adapt the product to another application scenario, installation and removal of the signage product needs to be performed by qualified personal which leadings to increasing operation costs of such a signage product.

BRIEF SUMMARY OF THE INVENTION

[0006] Therefore, it would be advantageous to provide an improved concept for an information device that can be configured due to varying application scenarios in an efficient and cost-saving manner.

[0007] In a first aspect, the present disclosure describes an information device for controlling a display of information, comprising: a LED film having a surface with a first area and a second area, a configurable LED panel, wherein the LED panel is part of the first area; and a control interface, wherein the control interface is part of the second area of the LED film and is configured to receive a control command from a control device to adapt the display of information on the first area of the LED panel of the information device.

[0008] In other words, a core idea is to use a flexible and configurable LED film that includes a LED panel to display at least one information object such as text, pictures, e.g. in form of pictograms, in a static and/or dynamic manner. The information device is configurable and can be easily controlled to adapt the displayed object information when an application or use-case scenario changes. The LED film can be installed on any surface of an object and can be easily re-positioned without extensive knowledge of qualified staff.

[0009] The present information device has further advantages: Tool-less installation in an easy manner. There is no need to prepare a surface of an object for installation of the information device, e.g. wiring, drilling etc. Easy refurbishment. Transparent property, even if the picture displayed in enlightened.

Description

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S)

[0010] FIG. 1 illustrates a schematic information device according to an embodiment of the present disclosure.

DETAILED DESCRIPTION OF THE INVENTION

[0011] FIG. 1 illustrates a schematic information device **100** for controlling a display of information on said information device according to an embodiment of the present invention.

[0012] The information device **100** for controlling or configuring/adapting a display of information, comprises a LED film **10** having a surface **12** with at least one area **14** or with a first area **14** and a second area **15**, as depicted in FIG. 1.

[0013] The LED film **10** may be a transparent LED film that is known in prior art and which can be

used as a basis component to be adapted for the information device **100** of the present invention. Therefore, it is not necessary to provide further details of the LED film **10** herein.

[0014] The information device **100** further comprises a configurable LED panel component **16**, wherein the LED panel **16** is part of the first area **14**. However, the LED panel **16** may be arranged in any other position or area within the LED film **10**.

[0015] Further, the LED panel **16** may be connected to a power supply that may be installed inside the information device **100** or externally of the information device **100**.

[0016] The information device **100** further comprises a control interface **20**. Preferably, the control interface **20** is part of the second area **15** of the LED film **10**. However, the control interface **20** may also be positioned on any other suitable part of the information device **100** or the LED film **10**, if the application scenario requires so.

[0017] The control interface **20** is configured to receive a control command **35** from a control device **30** to adapt the display of information on the first area **14** of the LED panel **16** of the information device **100**.

[0018] Optionally, at least some part of the control device **30** is part of the information device **100** and connectable to the control interface **20** of the information device **100**, e.g. by a wireless or wired connection. The control device **30** may, however, be embodied as an electronic device, e.g. a computer, a smartphone, a tablet, and the like, which is able to generate a corresponding control command **35** to control the information device **100** based on input provided by a user and/or an automated control system.

[0019] The information display **100** may be part of a display system **200**. The display system **200** may comprise a computer that is connectable or connected to the information device **100** in a cable-mounted and/or wireless manner.

[0020] Optionally, the information device **100** comprises a fixing component **18** that can be applied to at least a part of the surface **12** of the LED film **10**. In this way, the information device **100** can be applied on a second surface **42** of an object **40**, e.g. a window, a door etc. The second surface **42** of the object **40** may be a flat surface or a surface of any dimension or shape. The fixing component **18** may be any suitable means to fast or fix the information device **100** onto the second surface of the object **40**. The fixing component **18** may involve for example mechanical, adhesive, magnetic or any other suitable means.

[0021] Optionally, the at least first or that at least one area **14** of the LED film **10** has a transparent property that is configurable by the control device **30**.

[0022] Optionally, a luminance value or a luminance property (value) of the LED film **10** is configurable between a security mode and maintained mode, wherein in the security mode the LED film **10** has a luminance value of at least 2 cd/m.sup.2 and wherein in the maintained mode the LED film **10** has a luminance value of about 500 cd/m.sup.2.

[0023] Optionally, a contrast property of the LED film **10** between a green reference color and a white reference color is configurable between an x-coordinate-value of about 5 and a y-coordinate-value of about 15 in a chromaticity diagram as defined by the ISO 3864-4 standard.

[0024] According to an example, the control device is part of the information device and connectable to the control interface of the information device. In this way, the information device can be controlled and handled in an efficient manner.

[0025] According to an example, the control interface is part of the LED film. In this way, the information device can be controlled and handled in an efficient manner.

[0026] According to an example, the information device comprises a fixing component applied to at least a part of the surface of the LED film to be able to apply the information device on a second surface of an object. In this manner, the information device can be installed in an efficient and cost-saving manner on any object component.

[0027] According to an example, at least the first area of the LED film has a transparent property that is configurable by the control device. In this way, a display property of the information device

can be easily adapted to a changed application scenario.

[0028] According to an example, a luminance value of the LED film is configurable between a security mode and maintained mode, wherein in the security mode the LED film has a luminance value of at least 2 cd/m.^{sup.2} and wherein in the maintained mode the LED film has a luminance value of about 500 cd/m.^{sup.2}. In this way, the information device can be flexibly operated in different operation modes suitable to a required application scenario.

[0029] According to an example, a contrast property of the LED film between a green reference color and a white reference color is configurable between a x-coordinate-value 5 and a y-coordinate-value 15 in a chromaticity diagram as defined in the ISO 3864-4 standard. In this manner, the information device can be flexibly adapted and operated in different operation modes suitable to a required application scenario.

[0030] In a second aspect of the present invention, a display system is provided comprising an information device according to any of the previous examples and/or according to the first aspect for configuring the information device.

[0031] In a third aspect of the present invention, a computer is provided comprising a processor configured to control the information device according to the first aspect and/or according to any of the previous examples.

[0032] In a fourth aspect of the present invention, a computer program product is provided comprising instructions which, when the computer program is executed by a processor of a computer, causes the computer to control the information device of the first aspect.

[0033] In a fifth aspect, a machine-readable data medium and/or download product is provided containing the computer program according to the third aspect.

[0034] All references, including publications, patent applications, and patents, cited herein are hereby incorporated by reference to the same extent as if each reference were individually and specifically indicated to be incorporated by reference and were set forth in its entirety herein.

[0035] The use of the terms “a” and “an” and “the” and “at least one” and similar referents in the context of describing the invention (especially in the context of the following claims) are to be construed to cover both the singular and the plural, unless otherwise indicated herein or clearly contradicted by context. The use of the term “at least one” followed by a list of one or more items (for example, “at least one of A and B”) is to be construed to mean one item selected from the listed items (A or B) or any combination of two or more of the listed items (A and B), unless otherwise indicated herein or clearly contradicted by context. The terms “comprising,” “having,” “including,” and “containing” are to be construed as open-ended terms (i.e., meaning “including, but not limited to,”) unless otherwise noted. Recitation of ranges of values herein are merely intended to serve as a shorthand method of referring individually to each separate value falling within the range, unless otherwise indicated herein, and each separate value is incorporated into the specification as if it were individually recited herein. All methods described herein can be performed in any suitable order unless otherwise indicated herein or otherwise clearly contradicted by context. The use of any and all examples, or exemplary language (e.g., “such as”) provided herein, is intended merely to better illuminate the invention and does not pose a limitation on the scope of the invention unless otherwise claimed. No language in the specification should be construed as indicating any non-claimed element as essential to the practice of the invention.

[0036] Preferred embodiments of this invention are described herein, including the best mode known to the inventors for carrying out the invention. Variations of those preferred embodiments may become apparent to those of ordinary skill in the art upon reading the foregoing description. The inventors expect skilled artisans to employ such variations as appropriate, and the inventors intend for the invention to be practiced otherwise than as specifically described herein.

Accordingly, this invention includes all modifications and equivalents of the subject matter recited in the claims appended hereto as permitted by applicable law. Moreover, any combination of the above-described elements in all possible variations thereof is encompassed by the invention unless

otherwise indicated herein or otherwise clearly contradicted by context.

REFERENCE SIGNS

[0037] **10** LED film [0038] **12** Surface [0039] **14** First area [0040] **15** Second area [0041] **16** LED panel [0042] **18** Fixing component [0043] **20** Control interface [0044] **30** Control device [0045] **35** Control command [0046] **40** Object [0047] **42** Second surface [0048] **100** Information display [0049] **200** Display system

Claims

1. An information device for controlling a display of information, comprising: a LED film having a surface with a first area and a second area; a LED panel, wherein the LED panel is configurable and a part of the first area; a control interface, wherein the control interface is part of the second area of the LED film and is configured to receive a control command from a control device to adapt the display of information on the first area of the LED panel of the information device.
2. The information device according to claim 1, wherein the control device is part of the information device and connectable to the control interface of the information device.
3. The information device according to claim 1, wherein the control interface is part of the LED film.
4. The information device according to claim 1, further comprising a fixing component applied to at least a part of the surface of the LED film, the fixing component being configured to apply the information device on a second surface of an object.
5. The information device according to claim 1, wherein at least the first area of the LED film has a transparent property that is configurable by the control device.
6. The information device according to claim 1, wherein a luminance value of the LED film is configurable between a security mode and maintained mode, wherein in the security mode the LED film has a luminance value of at least 2 cd/m^2 and wherein in the maintained mode the LED film has a luminance value of about 500 cd/m^2 .
7. The information device according to claim 1, wherein a contrast property of the LED film between a green reference color and a white reference color is configurable between an x-coordinate-value and a y-coordinate-value in a chromaticity diagram as defined in the ISO 3864-4 standard.
8. A display system comprising an information device, the information device comprising: a LED film having a surface with a first area and a second area; a LED panel, wherein the LED panel is configurable and a part of the first area; a control interface, wherein the control interface is part of the second area of the LED film and is configured to receive a control command from a control device to adapt the display of information on the first area of the LED panel of the information device.
9. The display system according to claim 8, wherein the control device is part of the information device and connectable to the control interface of the information device.
10. The display system according to claim 8, wherein the control interface is part of the LED film.
11. The display system according to claim 8, further comprising a fixing component applied to at least a part of the surface of the LED film, the fixing component being configured to apply the information device on a second surface of an object.
12. The display system according to claim 8, wherein at least the first area of the LED film has a transparent property that is configurable by the control device.
13. The display system according to claim 8, wherein a luminance value of the LED film is configurable between a security mode and maintained mode, wherein in the security mode the LED film has a luminance value of at least 2 cd/m^2 and wherein in the maintained mode the LED film has a luminance value of about 500 cd/m^2 .
14. The display system according to claim 8, wherein a contrast property of the LED film between

a green reference color and a white reference color is configurable between an x-coordinate-value and a y-coordinate-value in a chromaticity diagram as defined in the ISO 3864-4 standard.
