FORM 2

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COMPLETE SPECIFICATION

[See section 10; Rule 13]

TITLE: "AN ELECTRONIC DEVICE FOR ERASING CONTENTS ON A WRITING BOARD AND A METHOD THEREOF"

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The following specification particularly describes the invention and the manner in which it is to be performed.

TECHNICAL FIELD

The present subject matter is related, in general to erasing device, and more particularly, but not exclusively to an electronic device and a method for erasing contents on a writing board.

BACKGROUND

Generally, numerous activities in our day to day life are expressed through writings. Despite the tremendous usage of computing systems and mobiles, in many scenarios using a pen or pencil for writing on a paper or a black board is greatly convenient. In an interactive discussion, such as a meeting, a classroom session etc. a combination of board and a chalk is mostly used for capturing and expressing the views and ideas of the participants.

With advancements, the black boards now have been replaced with glass or laminate boards, and the chalks have been replaced with ink markers, which are much easier for use and reuse and maintenance, in terms of, wiping and cleaning. These new types of boards negated the use of chalks while writing and hence reduced the generation of chalk dust which was causing inconvenience. However, with the ease of use the user has started using a variety of colored markers to differentiate and/or highlight content or object that are written on the board. Given that a board needs to be reused because it has limited space, once the space on the board is full the writer has to clean the board to reuse. In many practical scenarios, a user may inadvertently wipe or erase the whole or a portion of the content written on the board which the user didn't intend to.

One of the conventional techniques discloses an eraser for electronic whiteboard which is generally used to erase a portion of the content on the electronic whiteboard or wherever the user has moved the eraser on the surface of the electronic white board. The problem with the aforementioned technique is that the eraser erases the contents only on an electronic whiteboard i.e the writing board was limited to the electronic whiteboard and the priority of the content present on the board was not considered for erasing.

The issues mainly faced in the existing erasing techniques are there is a probability that high priority contents may get erased inadvertently and cause loss of important data.

SUMMARY

Disclosed herein is an electronic device for erasing contents on a writing board. The electronic device receives selection of one or more colours for selectively erasing or retaining the content based on the colours selected by the user.

Accordingly, the present disclosure relates to an electronic device for erasing contents on a writing board. The electronic device comprises a motion detecting unit, a proximity sensor, a user interface and a processing unit. The motion detecting unit detects movement of the electronic device from a resting position. The motion detecting unit transmits an activation signal to activate the processing unit and the proximity sensor upon detecting the movement of electronic device. Upon activation, the proximity sensor identifies proximity of the electronic device with the writing board. The processing unit receives a signal from the proximity sensor when the electronic device is proximal to the writing board. Further, the processing unit receives selection of one or more colours for identifying at least one of erasable or retainable contents on the writing board through the user interface. Further, the processing unit transmits a control signal to a motion control system wherein the motion control system controls moveable cleaning surface of the electronic device to perform at least one of pushing the moveable cleaning surface forward and pulling the moveable cleaning surface backward.

Further, the present disclosure relates to a method for erasing contents on a writing board using an electronic device. The method comprises detecting, by a motion detecting unit configured in the electronic device, movement of the electronic device from a resting position. Upon detecting the movement of the electronic device, the motion detecting unit transmits an activation signal to activate a processing unit and a proximity sensor. Further, the method comprises identifying, by a proximity sensor, proximity of the electronic device with the writing board. The method further comprises displaying on a user interface one or more colours to enable selection of one or more colours by a user. Thereafter, the processing unit receives signals from the proximity sensor when the electronic device is proximal to the writing board. The processing unit also receives selection of one or more colours for identifying at least one of erasable and retainable contents on the writing board through the user interface. The method further comprises transmitting a control signal by the processing unit to the motion control system controls moveable cleaning surface of the electronic device

to perform at least one of pushing the moveable cleaning surface forward and pulling the moveable cleaning surface backward.

Further, the present disclosure relates to a non-transitory computer readable medium including instructions stored thereon that when processed by at least one processor cause an electronic device to perform receiving an activation signal from a motion detecting unit when the movement of the electronic device from the resting position is detected. The instructions further cause the processor to receive a signal from a proximity sensor when the electronic device is detected proximal to the writing board. Further, the instructions cause receiving selection of one or more colours displayed on a user interface of the electronic device for identifying at least one of erasable and retainable contents on the writing board based on the selected one or more colours. Thereafter, instructions causes the processing unit to transmit a control signal to a motion control system wherein the motion control system, controls moveable cleaning surface of the electronic device to perform at least one of pushing the moveable cleaning surface forward and pulling the moveable cleaning surface backward.

The foregoing summary is illustrative only and is not intended to be in any way limiting. In addition to the illustrative aspects, embodiments, and features described above, further aspects, embodiments, and features will become apparent by reference to the drawings and the following detailed description.

BRIEF DESCRIPTION OF THE ACCOMPANYING DRAWINGS

The accompanying drawings, which are incorporated in and constitute a part of this disclosure, illustrate exemplary embodiments and, together with the description, serve to explain the disclosed principles. In the figures, the left-most digit(s) of a reference number identifies the figure in which the reference number first appears. The same numbers are used throughout the figures to reference like features and components. Some embodiments of system and/or methods in accordance with embodiments of the present subject matter are now described, by way of example only, and with reference to the accompanying figures, in which:

Fig.1a shows a detailed block diagram representing an electronic device for erasing contents on a writing board in accordance with some embodiments of the present disclosure;

Figs.1b-1e show exemplary representations of an electronic device for erasing contents on a writing board in accordance with some embodiments of the present disclosure;

Fig.2 illustrates a flowchart showing method for erasing contents on a writing board using an electronic device in accordance with some embodiments of the present disclosure; and

Fig.3 shows an exemplary method illustrating a process of erasing contents based on selection of colours on the writing board implementing embodiments consistent with the present disclosure.

It should be appreciated by those skilled in the art that any block diagrams herein represent conceptual views of illustrative systems embodying the principles of the present subject matter. Similarly, it will be appreciated that any flow charts, flow diagrams, state transition diagrams, pseudo code, and the like represent various processes which may be substantially represented in computer readable medium and executed by a computer or processor, whether or not such computer or processor is explicitly shown.

DETAILED DESCRIPTION

In the present document, the word "exemplary" is used herein to mean "serving as an example, instance, or illustration." Any embodiment or implementation of the present subject matter described herein as "exemplary" is not necessarily to be construed as preferred or advantageous over other embodiments.

While the disclosure is susceptible to various modifications and alternative forms, specific embodiment thereof has been shown by way of example in the drawings and will be described in detail below. It should be understood, however that it is not intended to limit the disclosure to the particular forms disclosed, but on the contrary, the disclosure is to cover all modifications, equivalents, and alternative falling within the scope of the disclosure.

The terms “comprises”, “comprising”, or any other variations thereof, are intended to cover a non-exclusive inclusion, such that a setup, device or method that comprises a list of components or steps does not include only those components or steps but may include other components or steps not expressly listed or inherent to such setup or device or method. In other words, one or more elements in a system or apparatus proceeded by “comprises… a”

does not, without more constraints, preclude the existence of other elements or additional elements in the system or method.

The present disclosure relates to an electronic device and a method to erase contents present on a writing board. The writing board may include, but not limited to, a laminated board, a glass board and a black board. The electronic device comprises a motion detecting unit, a processing unit, a proximity sensor, a user interface, a vibration motor, a storage unit and a motion control system. The motion detecting unit detects movement of the electronic device from resting position and upon detecting the movement activates the processing unit and the proximity sensor. The proximity sensor upon detecting the electronic device to be proximal to the writing board transmits a signal to the processing unit. Thereafter, the processing unit receives selection of one or more colours through the user interface from a user. The selected colours may be configured for either erasing the content or retaining the content on the writing board. Upon receiving the selection of the one or more colours, the processing unit transmits a control signal to a motion control system for controlling moveable cleaning surface of the electronic device. The moveable cleaning surface performs at least one of pushing the moveable cleaning surface forward and pulling the moveable cleaning surface backward based on the colour selected by the user.

In the following detailed description of the embodiments of the disclosure, reference is made to the accompanying drawings that form a part hereof, and in which are shown by way of illustration specific embodiments in which the disclosure may be practiced. These embodiments are described in sufficient detail to enable those skilled in the art to practice the disclosure, and it is to be understood that other embodiments may be utilized and that changes may be made without departing from the scope of the present disclosure. The following description is, therefore, not to be taken in a limiting sense.

Fig.1a shows a detailed block diagram representing an electronic device for erasing contents on a writing board in accordance with some embodiments of the present disclosure.

The electronic device **100** comprises a motion detecting unit **103**, a proximity sensor **105**, a user interface **109**, a processing unit **107,** a storage unit **111,** a motion control system **113** and a vibration motor **115**. The motion detecting unit **103** is configured to detect the movement of the electronic device **100** from a resting position. As an example, the motion detecting unit **103** may include, but not limited to, an accelerometer. In one embodiment, the resting

position of the electronic device **100** may be any horizontal surface for example a table, chair etc. on which the electronic device **100** is placed. In another embodiment, the electronic device **100** may be attached to a vertical surface provided the electronic device **100** is equipped with one or more magnets. Alternatively, a suitable holder is provided in a vertical surface or a horizontal surface for holding the electronic device **100** in a resting position**.**

In an embodiment, during resting position of the electronic device **100**, the processing unit **107** is in sleep mode. When the electronic device **100** is moved from the resting position i.e when the electronic device **100** is picked up, the motion detecting unit **103** transmits an activation signal to the processing unit **107** and the proximity sensor **105** to activate the processing unit **107** and the proximity sensor **105**. Upon activation of the processing unit **107** and the proximity sensor **105**, the proximity sensor **105** detects whether the electronic device **100** is proximal to the writing board or not. If the electronic device **100** is detected proximal to the writing board, then the proximity sensor **105** transmits a signal to the processing unit **107**. In one implementation, the processing unit **107** comprises one or more modules which may include, for example, a receiving module **123**, a detecting module **125**, a transmitting module **127** and other modules **129**. The processing unit **107** further comprises of other modules **129** which may be used to perform various miscellaneous functionalities of the electronic device **100**. It will be appreciated that such aforementioned modules may be represented as a single module or a combination of different modules.

The receiving module **123** of the processing unit **107** receives the signal from the proximity sensor **105**. The receiving module **123** is further configured to receive selection of one or more colours from a user through the user interface **109**. In an embodiment, the user interface **109** is configured to display one or more colours. In one embodiment, the one or more colours may be preconfigured in the electronic device **100**. As an example, the user may preconfigure the colours based on the colour pens the user may be using or present in the discussion room before initiating the erasing operation**.** The user may dynamically configure the colours for selection based on the colour pens available with the user. In another embodiment, the processing unit **107** activates one or more cameras **112** configured in the electronic device **100** to capture contents on the writing board in real-time. The processing unit **107** detects one or more colours present in the captured content and these colours are displayed on the user interface **109** in real time for user selection. The one or more colours are stored in the storage unit **111**.

In an embodiment, the storage unit **111** includes colour data **117**, content data **119** and other data **121**. In one embodiment, the data may be stored in the form of various data structures. The colour data **117** comprises information of the colours being detected by the processing unit **107**. The one or more camera configured in the electronic device **100** captures the content on the writing board. The processing unit **107** detects one or more colours using the detecting module **125** from the captured content and is stored in the storage unit **111**. In an embodiment, the content data **119** comprises information of the content on the writing board. The camera captures the content on the writing board and the content is stored in the storage unit **111**. Additionally, the aforementioned data can be organized using data models, such as relational or hierarchical data models. The other data **121** may store data, including temporary data and temporary files, generated by modules for performing the various functions of the processing unit **107**. In an embodiment, the data stored in the storage unit **111** are processed by the modules of the processing unit **107**. The modules may be stored within the storage unit **111** as shown in **Fig.1a**. In one example, the modules, communicatively coupled to the processing unit **107**, may also be present inside the storage unit **111**.

In an embodiment, the user may use the selected one or more colours to either erase or retain the contents on the writing board. As an example, the user may select the one or more colours through the user interface **109** and the contents of the selected colours may be retained on the writing board or the contents of the selected colours may be erased on the writing board. Decision of retaining or erasing the contents based on the colours is taken before erasing operation or may be preconfigured in the electronic device **100.** After identifying the erasable and retainable content on the writing board, the processing unit **107** transmits a control signal to the motion control system **113** through the transmitting module **127.** The motion control system **113** is configured to control movement of moveable cleaning surface **110** of the electronic device **100**. As an example, when the electronic device **100** is close to the writing board then the motion control system **113** pushes the moveable cleaning surface **110** forward to erase the content if the colour selected by the user is for erasing as shown in **Fig.1d**. As another example, when the electronic device **100** is close to the writing board to erase the content which is supposed to be retained, then the moveable cleaning surface **110** is pulled backward to restrict the electronic device **100** from erasing the retainable content as shown in **Fig.1e**. In an embodiment, when the electronic device **100** is kept in resting position, then the

processing unit **107** is put under sleep mode to save the battery in the electronic device **100**. In an embodiment, the battery may include a rechargeable or non-rechargeable type. Alternatively, the electronic device **100** may be directly connected to an external power source.

In an embodiment, the vibration motor **115** is configured to provide a feedback in the form of vibration to the user when the electronic device **100** is detected proximal to the writing board for erasing the content on the writing board which is not selected by the user.

Fig.1b shows an exemplary representation of an electronic device **100** to erase the contents on a writing board in accordance with some embodiments of the present disclosure. As shown in **Fig.1b**, the electronic device **100** comprises two or more cameras **112** configured with record/capture feature and proximity sensors as shown in **Fig.1c**. In an embodiment, position of the cameras **112** in the electronic device **100** is reconfigurable as per the requirement. The cameras **112** capture the contents on the writing board and store the image in the storage unit **111**. Thereafter, the processing unit **107** detects the colours present in the content of the writing board using known techniques and provides it for display on the user interface **109**. The user interface **109** is configured to display the colours for enabling selection by the user. The selection icons **118** include but not limited to a touch screen and buttons. As an example, the user interface **109** comprises three selection icons **118** for selecting four colours namely “RED” “GREEN”, “BLACK” and “BLUE”. The colours may be either preconfigured or may be based on the contents captured in real-time by the cameras **112**. The user interface **109** also includes one or more buttons namely “ALL” “NONE”, “ACTIVE” and “RESET”. When the user activates the “ALL” button, all the contents on the writing board are selected for erasing. When the user activates the “NONE” button, none of the contents present on the writing board are erased. When the user selects the “ACTIVE” button it activates the user selected colours for either erasing or retaining. When the “RESET” button is activated, it discards the previous selection of the colours and allows the user to make a new selection of the colours. The user interface **109** further comprises of a LED indicator **120** to display the status of the selection of colours i.e whether the colours has been selected or not, indicate movement of the eraser i.e whether the eraser is in movement or not and to indicate error conditions and battery low conditions. The user interface **109** is also configured with image capturing icon **116**. When the user selects the image capturing icon **116**, the cameras **112** are activated for capturing the contents on the writing board. The user interface **109** also includes “timer” icon to set the time for the selection of colours. As an

example, the user may select the colour “RED” for erasing the contents on the writing board and the user may also set 30 minutes through the “timer” icon. In this scenario, the selected colour “RED” is applicable for the selected time period.

In an embodiment, if there is more than one camera in the electronic device **100**, the images captured by the cameras **112** are stitched together to provide complete image under one view. Further **Fig.1b** shows proximity sensors **105** for detecting whether the electronic device **100** is proximal to the writing board or not. As shown in **Fig.1b** there are two small elements called ballpoint pips **114** which are configured at diagonally opposite corners of the moveable cleaning surface **110**. When the moveable cleaning surface **110** is drawn or pulled back to avoid the erasure of retainable content, the whole body of the electronic device **100** can collapse on to the writing board, due to the pressure exerted by the user and this might erase the portion which was not intended to. The ballpoint pips **114** at the diagonally opposite corners of the electronic device **100** provide the necessary support for the electronic device **100** in such a scenario.

In an embodiment, the electronic device **100** may be configured with USB port or memory card reader slot to transmit the content data **119** to one or more other electronic devices. Alternatively, the electronic device **100** may be provide wireless communication interface, for example, Bluetooth and Wi-Fi.

In an embodiment, the electronic device **100** may detect two colours in the field of view of the electronic device **100**. In this scenario, the electronic device provides a vibration feedback to the user to decide on erasing any of the two colours or if the detected colours are found to be very close to each other, and if the electronic device **100** cannot handle the granularity, then the movable cleaning surface is pulled back to avoid accidental erasure of the retainable content. In such a case, the user shall have to select “ALL” option to be able to erase the content.

Fig.2 illustrates a flowchart showing method for erasing the contents on a writing board using an electronic device in accordance with some embodiments of the present disclosure.

As illustrated in **Fig.2**, the method **200** comprises one or more blocks for representing the electronic device **100** for erasing the contents on a writing board. The method **200** may be described in the general context of computer executable instructions. Generally, computer

executable instructions can include routines, programs, objects, components, data structures, procedures, modules, and functions, which perform particular functions or implement particular abstract data types.

The order in which the method **200** is described is not intended to be construed as a limitation, and any number of the described method blocks can be combined in any order to implement the method. Additionally, individual blocks may be deleted from the methods without departing from the spirit and scope of the subject matter described herein. Furthermore, the method can be implemented in any suitable hardware, software, firmware, or combination thereof.

At **block 201,** movement of the electronic device **100** is detected. In an embodiment, the motion detecting unit **103** detects movement of the electronic device **100** from its resting position. The resting position can be either a horizontal surface or attached to a vertical surface if the electronic device **100** is equipped with one or more magnets.

At **block 203**, processing unit **107** and proximity sensor **105** are activated. In an embodiment, the motion detecting unit **103** transmits an activation signal to the processing unit **107** and proximity sensor **105** upon detecting the movement of the electronic device **100**. Upon receipt of the activation signal, the processing unit **107** and proximity sensor **105** are activated**.**

At **block 205**, the proximity of the electronic device **100** with respect to the writing board is identified. In an embodiment, when the proximity sensor **105** is activated, it identifies whether the electronic device **100** is proximal to the writing board or not. If the electronic device **100** is proximal to the writing board then a signal is transmitted to the processing unit **107**.

At **block 207,** one or more colours are displayed on the user interface **109**. The colours displayed may either be preconfigured colours or the colours of the content captured in real-time by the cameras **112**.

At **block 209,** the processing unit **107** receives signal from the proximity sensor **105**. In an embodiment, the receiving module **123** of the processing unit **107** receives a signal from the proximity sensor **105** when the electronic device **100** is detected proximal or close to the writing board.

At **block 211**, the processing unit **107** receives selection of one or more colours from a user. In an embodiment, the receiving module **123** of the processing unit **107** receives selection of the one or more colours from the user. In an embodiment, the user selects the colours displayed on the user interface **109**. The selected colours may be used for either erasing or retaining the contents. The user may configure the selected colours for either erasing or retaining the contents on the writing board.

At block **213**, the processing unit **107** transmits a control signal to motion control system **113.** In an embodiment, the transmitting module **127** of the processing unit **107** upon receiving the selection of one or more colours, transmits a control signal to the motion control system **113** Upon receiving the control signal from the processing unit **107**, the motion control system **113** performs at least one of pushing the moveable cleaning surface **110** forward to erase the user selected content on the writing board and pulling the moveable cleaning surface **110** to retain the user selected content on the writing board.

Fig.3 shows an exemplary method illustrating a process of erasing contents based on selection of colours on the writing board implementing embodiments consistent with the present disclosure.

At block **301**, the processing unit **107** receives selection of one or more colours through the user interface **109**. As an example, the colour selected by the user may be “Red” from the one or more colours displayed on the user interface **109**. The processing unit **107** receives the selection of the user. As an example, the user makes the selection of colour in order to erase or retain the contents on the writing board.

At block **303**, the condition is checked to see if the selected colour is for retaining the content on the writing board. If the selected colour is for retaining the content on the writing board, then the method proceeds to block **311** via “Yes”. If the selected colour is for erasing the content then the method proceeds to block **305** via “No”. At block **311**, the condition is checked to see if the retainable content is being deleted from the writing board. If the retainable content is being deleted from the writing board, then the method proceeds to block **315** via “Yes”. As an example, the colour “RED” is selected for retaining the content. The electronic device **100** may be detected proximal to the writing board for erasing the content in the colour “RED”. In this scenario, the processing unit **107** provides a signal to the motion

control system **113** which in turn pulls back the moveable cleaning surface **110** and provides a vibration feedback to the user. If the retainable content is not being deleted from the writing board, then the method proceeds to block **309** via "No". As an example, the electronic device **100** may be detected proximal to the writing board for deleting the content which is in colour "BLUE". In this scenario, the processing unit **107** provides a signal to the motion control system **113** which in turn pushes the moveable cleaning surface **110** forward for deleting the content.

At block **305**, the condition is checked to see if erasable content is being deleted from the writing board. If the erasable content is being deleted from the writing board, then the method proceeds to block **313** via "Yes". As an example, the selected colour may be "BLUE". The electronic device **100** is detected proximal to the writing board for erasing the content in the colour "BLUE". In this scenario, the processing unit **107** provides a control signal to the motion control system **113** which in turn controls the moveable cleaning surface **110** of the electronic device **100** such that the moveable cleaning surface **110** is pushed forward for deleting the erasable content on the writing board. If the erasable content is not being deleted from the writing board, then the method proceeds to block **307** via "No". As an example, the content in the colour "BLUE" is not being deleted on the writing board. The electronic device **100** may be detected proximal to the writing board for erasing the contents is some other colour for example "RED". In this scenario, the processing unit **107** provides a control signal to the motion control system **113** which in turn controls the moveable cleaning surface **110** of the electronic device **100** such that the moveable cleaning surface **110** is pulled back for retaining the non-erasable content on the writing board and additionally provides a vibration feedback to the user.

Advantages of the embodiment of the present disclosure are illustrated herein.

In an embodiment, the present disclosure provides an electronic device to erase the contents of the writing board based on selection of one or more colours.

The present disclosure also provides a feature wherein the moveable cleaning surface of the electronic device is retracted thereby restricting the electronic device from erasing the content on the writing board which is not intended by the user.

The present disclosure also provides a vibration feedback to the user when the electronic device is proximal to the writing board for erasing the contents which is not intended by the user.

The present disclosure also discloses the aspect of configuring elements namely Ballpoint pips for avoiding mishandling or misbehaving of the electronic device such that the unintended content on the writing board is not erased.

A description of an embodiment with several components in communication with each other does not imply that all such components are required. On the contrary a variety of optional components are described to illustrate the wide variety of possible embodiments of the invention.

When a single device or article is described herein, it will be readily apparent that more than one device/article (whether or not they cooperate) may be used in place of a single device/article. Similarly, where more than one device or article is described herein (whether or not they cooperate), it will be readily apparent that a single device/article may be used in place of the more than one device or article or a different number of devices/articles may be used instead of the shown number of devices or programs. The functionality and/or the features of a device may be alternatively embodied by one or more other devices which are not explicitly described as having such functionality/features. Thus, other embodiments of the invention need not include the device itself.

The specification has described a method and an electronic device for erasing contents on a writing board. The illustrated steps are set out to explain the exemplary embodiments shown, and it should be anticipated that ongoing technological development will change the manner in which particular functions are performed. These examples are presented herein for purposes of illustration, and not limitation. Further, the boundaries of the functional building blocks have been arbitrarily defined herein for the convenience of the description. Alternative boundaries can be defined so long as the specified functions and relationships thereof are appropriately performed. Alternatives (including equivalents, extensions, variations, deviations, etc., of those described herein) will be apparent to persons skilled in the relevant art(s) based on the teachings contained herein. Such alternatives fall within the scope and spirit of the disclosed embodiments. Also, the words "comprising," "having," "containing," and "including," and other similar forms are intended to be equivalent in meaning and be open ended in that an item or items following any one of these words is not meant to be an

exhaustive listing of such item or items, or meant to be limited to only the listed item or items. It must also be noted that as used herein and in the appended claims, the singular forms “a,” “an,” and “the” include plural references unless the context clearly dictates otherwise.

Furthermore, one or more processor-readable storage media may be utilized in implementing embodiments consistent with the present disclosure. A processor-readable storage medium refers to any type of physical memory on which information or data readable by a processor may be stored. Thus, a processor-readable storage medium may store instructions for execution by one or more processors, including instructions for causing the processor(s) to perform steps or stages consistent with the embodiments described herein. The term “processor-readable storage medium” should be understood to include tangible items and exclude carrier waves and transient signals, i.e., are non-transitory. Examples include random access memory (RAM), read-only memory (ROM), volatile memory, nonvolatile memory, hard drives, CD ROMs, DVDs, flash drives, disks, and any other known physical storage media.

Finally, the language used in the specification has been principally selected for readability and instructional purposes, and it may not have been selected to delineate or circumscribe the inventive subject matter. It is therefore intended that the scope of the invention be limited not by this detailed description, but rather by any claims that issue on an application based here on. Accordingly, the embodiments of the present invention are intended to be illustrative, but not limiting, of the scope of the invention, which is set forth in the following claims.

Referral Numerals:

Reference Number	Description
100	Electronic device
103	Motion detecting unit
105	Proximity sensor
107	Processing unit
109	User interface
110	Moveable cleaning surface
111	Storage unit
112	Cameras
113	Motion control system
114	Ballpoint pips
115	Vibration motor
116	Image capturing icon
117	Colour data
118	Selection icons
119	Content data
120	LED indicator
121	Other Data
123	Receiving module
125	Detecting module
127	Transmitting module
129	Other Modules

We claim:

1. An electronic device for erasing contents on a writing board, the electronic device comprising:

a motion detecting unit configured to:

detect movement of the electronic device from a resting position;

transmit an activation signal to activate a processing unit and a proximity sensor upon detecting the movement of the electronic device;

the proximity sensor configured to identify proximity of the electronic device with the writing board;

a user interface configured to display one or more colours to enable selection of the one or more colours by a user;

the processing unit configured to:

receive a signal from the proximity sensor when the electronic device is proximal to the writing board;

receive, from the user, selection of the one or more colours for identifying at least one of erasable or retainable contents on the writing board through the user interface; and

transmit a control signal to a motion control system, wherein the motion control system upon receipt of the control signal, controls moveable cleaning surface of the electronic device to perform at least one of pushing the moveable cleaning surface forward and pulling the moveable cleaning surface backward.

2. The electronic device as claimed in claim 1, wherein the one or more colours displayed on the user interface are based on preconfigured colours in the electronic device.

3. The electronic device as claimed in claim 1, wherein the one or more colours displayed on the user interface are based on one or more colours of the content on the writing board captured in real-time by one or more cameras configured in the electronic device.

4. The electronic device as claimed in claim 1 further comprises a storage unit configured to store the one or more colours.

5. The electronic device as claimed in claim 1, wherein the user interface comprises of one or more selection icons, wherein each of the one or more selection icons are associated to at least one operation related to managing of colours and content on the writing board.

6. The electronic device as claimed in claim 1, wherein the motion control system provides an indication to pull the moveable cleaning surface backward when the selected one or more colours is for retaining the contents on the writing board.

7. The electronic device as claimed in claim 1, wherein the motion control system provides an indication to push the moveable cleaning surface forward when the selected one or more colours is for erasing the contents on the writing board.

8. The electronic device as claimed in claim 1 further comprises a vibration motor configured to provide a feedback in a form of vibration to the user upon detecting the electronic device proximal to the retainable content on the writing board.

9. A method for erasing contents on a writing board using an electronic device, the method comprising:

detecting, by a motion detecting unit configured in the electronic device, movement of the electronic device from a resting position;

transmitting, by the motion detecting unit, an activation signal to activate a processing unit and a proximity sensor upon detecting the movement of the electronic device;

identifying, by the proximity sensor, proximity of the electronic device with the writing board;

displaying, by a user interface, one or more colours to enable selection of the one or more colours by a user;

receiving, by the processing unit, a signal from the proximity sensor when the electronic device is proximal to the writing board;

receiving, by the processing unit, selection of the one or more colours for identifying at least one of erasable and retainable contents on the writing board through the user interface; and

transmitting, by the processing unit, a control signal to a motion control system wherein the motion control system upon receipt of the control signal, controls

moveable cleaning surface of the electronic device to perform at least one of pushing the moveable cleaning surface forward and pulling the moveable cleaning surface backward.

10. The method as claimed in claim 9, wherein the one or more colours displayed on the user interface are based on preconfigured colours in the electronic device.

11. The method as claimed in claim 9, wherein the one or more colours displayed on the user interface are based on one or more colours of the content on the writing board captured in real-time by one or more cameras configured in the electronic device.

12. The method as claimed in claim 9, wherein the one or more colours are stored in a storage unit configured in the electronic device.

13. The method as claimed in claim 9, wherein the user interface comprises one or more selection icons, wherein each of the one or more selection icons are associated to at least one operation related to managing of colours and content on the writing board.

14. The method as claimed in claim 9, wherein the indication to pull the moveable cleaning surface backward is provided by the motion control system when the selected one or more colours is for retaining the contents on the writing board.

15. The method as claimed in claim 9, wherein the indication to push the moveable cleaning surface forward is provided by the motion control system when the selected one or more colours is for erasing the contents on the writing board.

16. The method as claimed in claim 9 further comprises providing a feedback in the form of a vibration to the user by a vibration motor configured in the electronic device upon detecting the electronic device proximal to the retainable content on the writing board.

17. A non-transitory storage readable medium including instructions stored thereon that when processed by at least one processor cause an electronic device to perform operations comprising:

receiving an activation signal from a motion detecting unit when the movement of the electronic device from the resting position is detected by the motion detecting unit;

receiving a signal from a proximity sensor when the electronic device is proximal to the writing board;

receiving selection of one or more colours displayed on a user interface of the electronic device for identifying at least one of erasable and retainable contents on the writing board; and

transmitting a control signal to a motion control system wherein the motion control system upon receipt of the control signal, controls moveable cleaning surface of the electronic device to perform at least one of pushing the moveable cleaning surface forward and pulling the moveable cleaning surface backward.

Dated this 31st day of July 2015

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AN ELECTRONIC DEVICE FOR ERASING CONTENTS ON A WRITING BOARD AND A METHOD THEREOF

ABSTRACT

The present disclosure relates to an electronic device for erasing contents on a writing board. The electronic device comprises a motion detecting unit for detecting movement of the electronic device from resting position which then transmits an activation signal to activate a processing unit and a proximity sensor. The proximity sensor identifies proximity of the electronic device with the writing board. The processing unit receives a signal from the proximity sensor when the electronic device is proximal to the writing board. Further, the processing unit receives selection of colours through user interface on the electronic device for identifying erasable or retainable contents on the writing board. The processing unit transmits a control signal to motion control system to control moveable cleaning surface of the electronic device to perform either pulling or pushing the moveable cleaning surface backward or forward respectively based on the selection of colours.

Fig.1a