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(54) METHOD AND SYSTEM FOR PROVIDING ANIMATED FONT FOR CHARACTER AND COMMAND INPUT TO A COMPUTER

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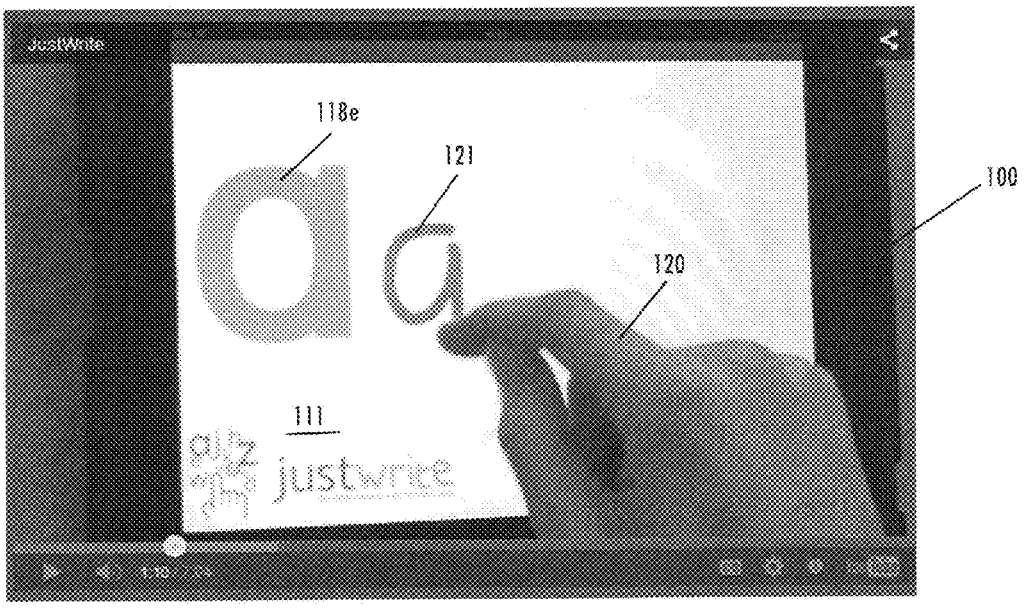
CPC *G06F 3/017* (2013.01)
USPC **345/467**

(57) **ABSTRACT**

A method includes receiving from a user a gesture input and correlating the gesture input with a first animated font character in an animated font character library. As the gesture input continues, the first animated font character morphs into a second animated font character to give a visual appearance to the user of a character forming on the display device. In this regard, the first animated font character and the second animated font character can be component animated font characters that are each segments of a completed animated font character that is formed in step with the gesture input.



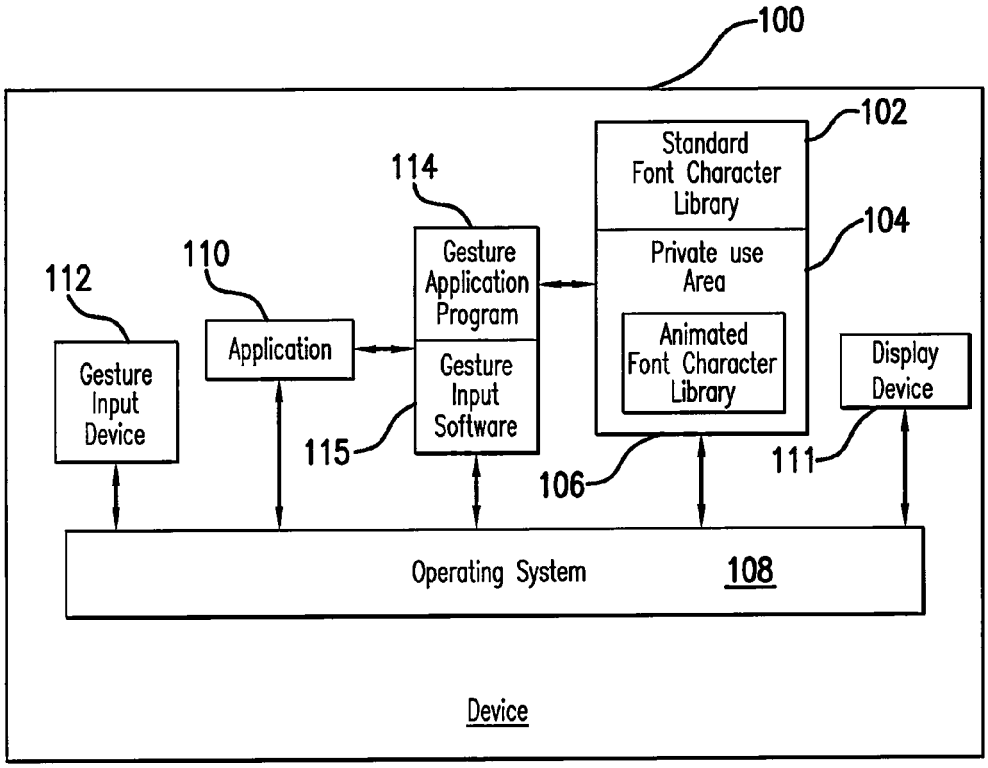

100
102
Standard Font Character Library
104
Private use Area
Animated Font Character Library
114
Gesture Application Program
110
112
Application
Gesture Input Device
Gesture Input Software
115
106
111
Display Device
Operating System
108
Device

FIG. 1

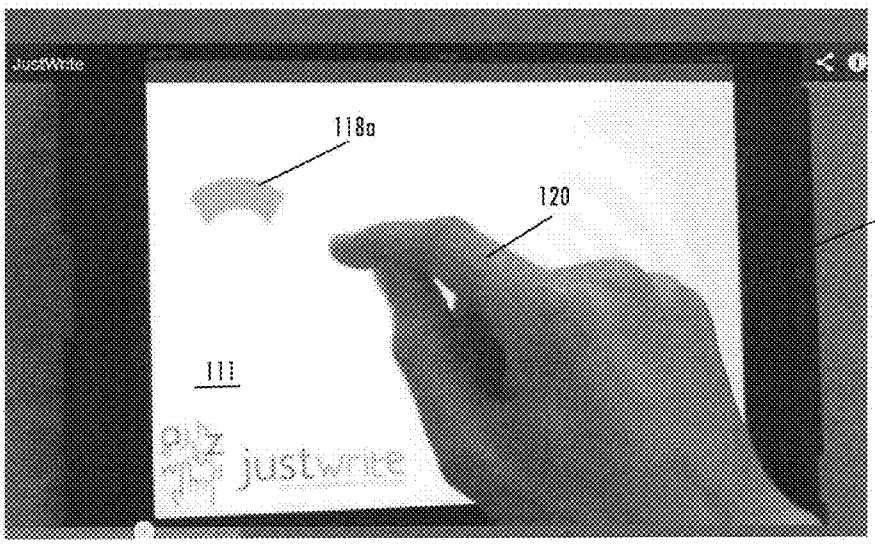

118a
120
100
111
justwrite

FIG. 2A

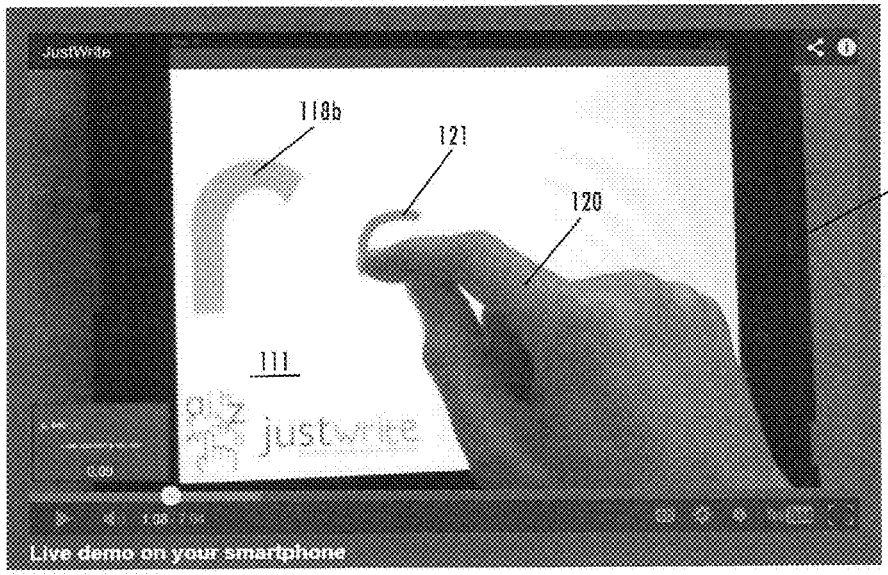

118b
121
120
100
111
justwrite
Live demo on your smartphone

FIG. 2B

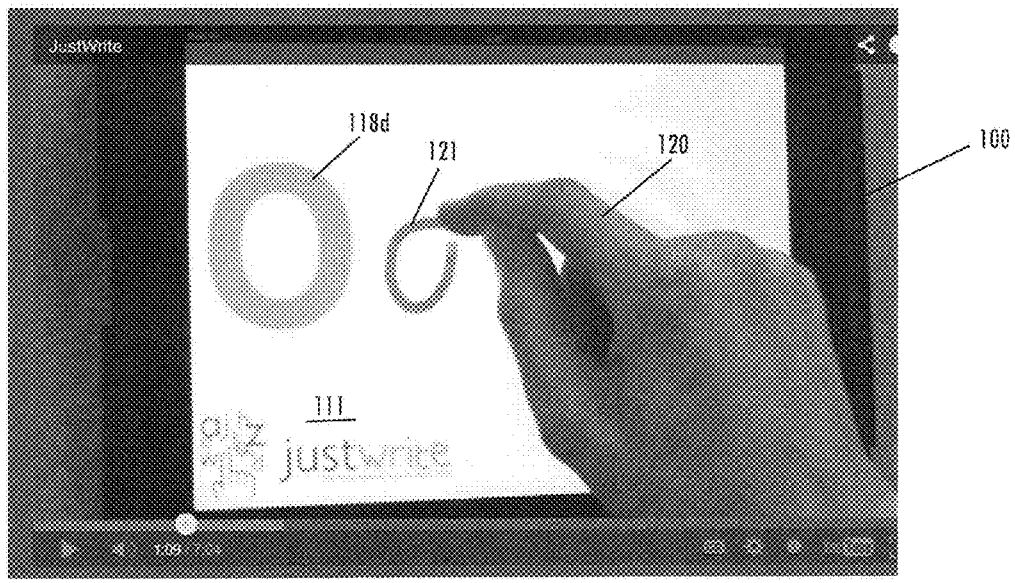

JustWrite
118d
121
120
100
111
justwrite

FIG. 2C

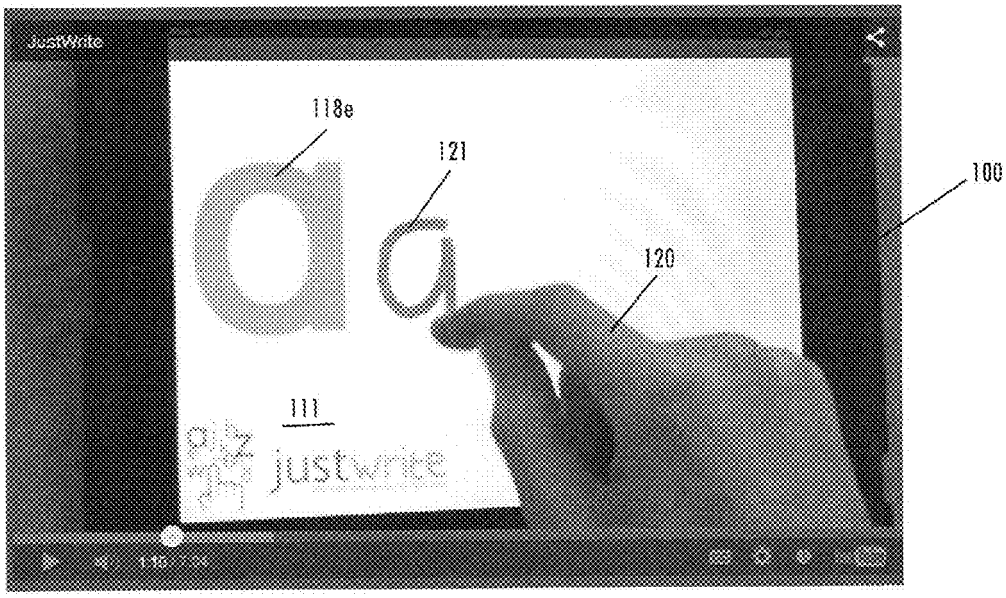

JustWrite
118e
121
120
100
111
justwrite

FIG. 2D

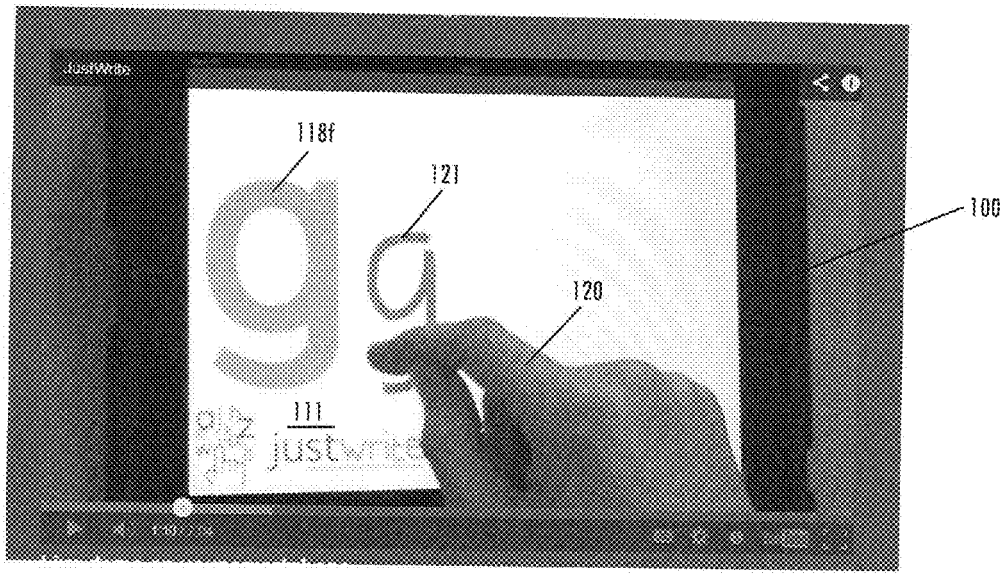


FIG. 2E

FIG. 2F

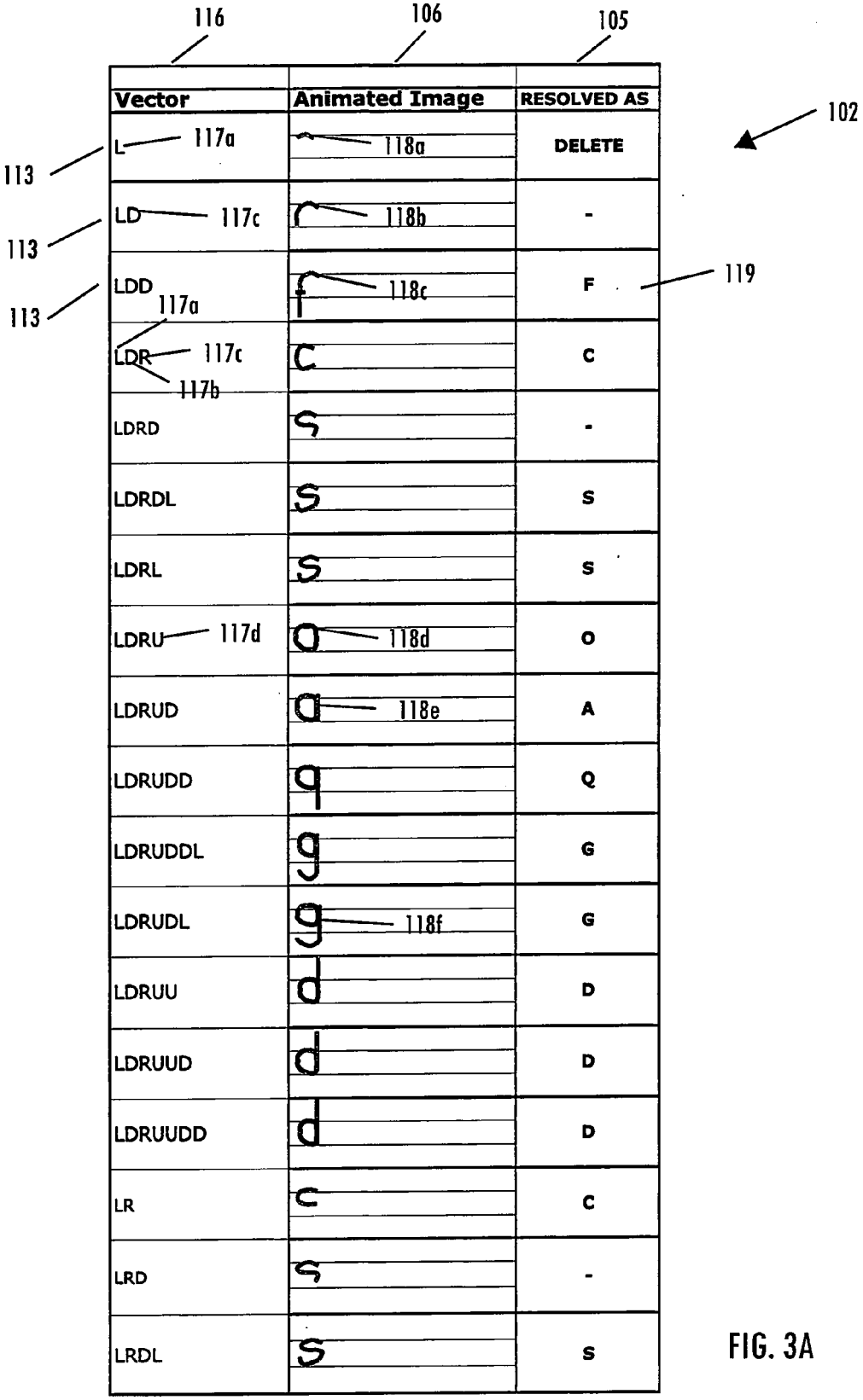

116
106
105
Vector
Animated Image
RESOLVED AS
102
113
L
117a
118a
DELETE
113
LD
117c
118b
-
113
LDD
117a
118c
F
119
LDR
117c
117b
C
LDRD
-
LDRDL
S
LDRL
S
LDRU
117d
118d
O
LDRUD
118e
A
LDRUDD
Q
LDRUDDL
G
LDRUDL
118f
G
LDRUU
D
LDRUUD
D
LDRUUDD
D
LR
C
LRD
-
LRDL
S

FIG. 3A

LRL	S	S
R	–	SPACE
RU	⌐	-
RUL	⌐	-
RULD	⌐	-
RULDR	⌐	E
RULDD	⌐	P
RL	7	-
RLR	Z	Z
RD	7	-
RDR	Z	Z
D	ı	I
DD	l	L
DDH	k	K
DDL	j	J
DDLD	⌐	-
	⌐	

FIG. 3B

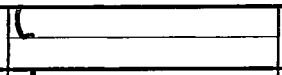
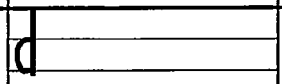
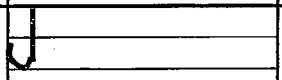
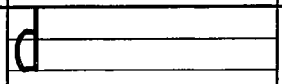
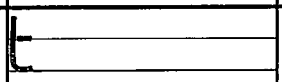
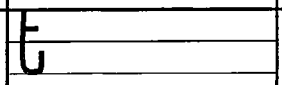
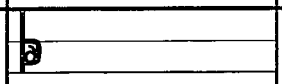
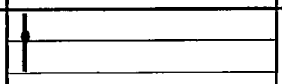
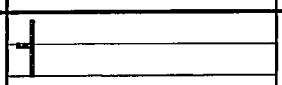
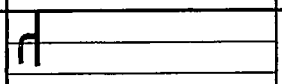
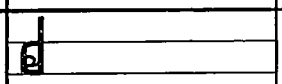
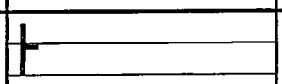
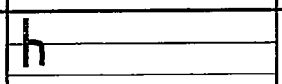
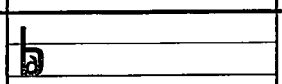
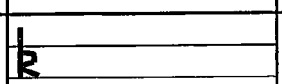
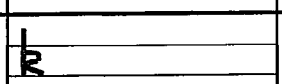
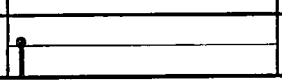
DDLDR		-
DDLDRU		D
DDLU		-
DDLUR		D
DDR		T
DDRU		T
DDRUL		B
DDU		-
DDUL		-
DDULD		-
DDULDR		D
DDUR		-
DDURD		H
DDURDL		B
DDURDLR		K
DDURDLD		K
DDUU		-

FIG. 3C

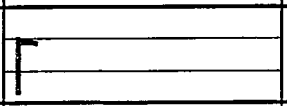
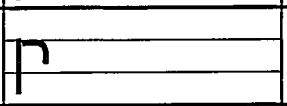
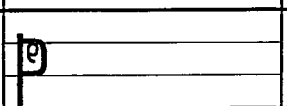
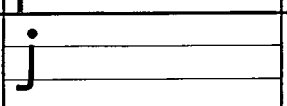
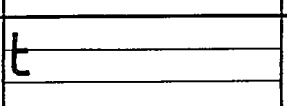
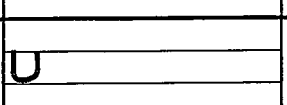
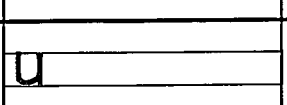
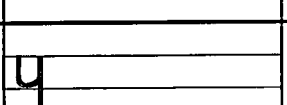
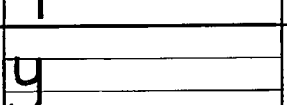
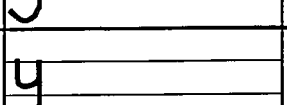
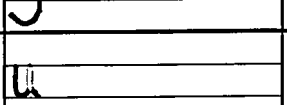
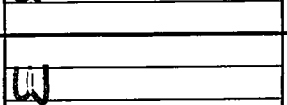
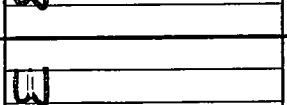
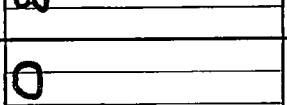
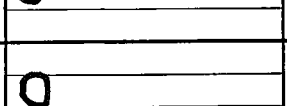
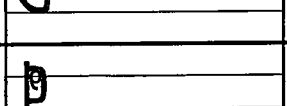
DDUUR		-
DDUURD		-
DDUURDL		P
DL		J
DR		T
DRU		U
DRUD		U
DRUDD		Y
DRUDDL		Y
DRUDL		Y
DRUDR		-
DRUDRU		W
DRUDU		W
DRUL		O
DRULD		O
DRULDD		P

FIG.3D

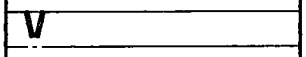
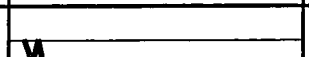
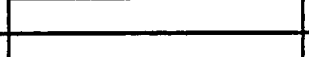
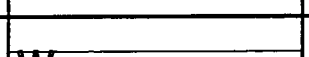
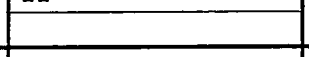
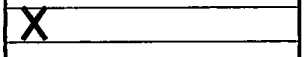
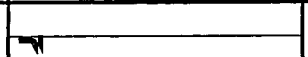
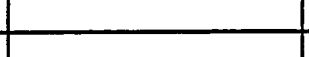
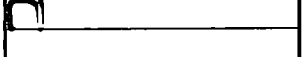
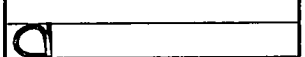
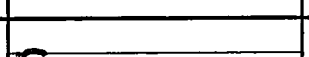
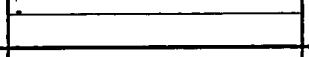
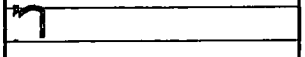
DU		V
DUD		-
DUDR		-
DUDRU		W
DUDU		W
DUH		X
DUL		-
DULD		-
DULDR		A
DUR		R
DURD		N
DURDU		-
DURDUD		M
DURDUR		-
DURDURD		M

FIG. 3E

METHOD AND SYSTEM FOR PROVIDING ANIMATED FONT FOR CHARACTER AND COMMAND INPUT TO A COMPUTER

[0001] This application claims priority to Provisional Patent Application 61/704,896 filed Sep. 24, 2012 and Provisional Patent Application No. 61/704,892 filed Sep. 24, 2012 the entirety of which are incorporated by reference herein. This application is being filed concurrently with Non-provisional patent application Ser. No. 13/974,272 filed Aug. 23, 2013 titled HANDWRITING RECOGNITION SERVER, by Gay et al. the entirety of which is incorporated by reference herein.

BACKGROUND

[0002] This disclosure is directed to visual feedback, and more specifically to, correlating a private use area of a character encoding method with animated font characters for successive display as visual feedback from an input.

[0003] Text input to a small form-factor computer, especially a mobile device such as a smart-phone or personal digital assistant (PDA), equipped with a touch-sensitive screen has historically been via an on-screen keyboard. Because of the small form-factor of mobile devices, the screen is necessarily also small, for example, 50 mm wide by 35 mm high, and the on-screen buttons for the letters of the alphabet are similarly small and require concentration and learned skill to accurately target with the fingers. In addition, the space occupied by the on-screen keyboard is not available for the display of other information, and thus the useful size of the display is further reduced.

[0004] To solve this problem, computer algorithms have been developed to allow finger movements over the touch-sensitive screen to input hand-written characters. Such handwriting recognition products take the complex finger movements made during hand-written input and analyze their shape and sequence to interpret the intended characters. These algorithms are complex, have inherent processing delays, are subject to errors of recognition and have not displaced on-screen keyboards in the majority of mobile devices.

SUMMARY

[0005] A method for providing visual feedback on a display device of a gesture input is disclosed. The method includes receiving from a user a gesture input and correlating the gesture input with a first animated font character in an animated font character library. As the gesture input continues, the first animated font character morphs to a second animated font character to give a visual appearance to the user of a character forming on the display device. In this regard, the first animated font character and the second animated font character can be component animated font characters that are each segments of a completed animated font character that is formed in step with the gesture input.

[0006] In another embodiment, a system for providing visual feedback on a display device of a gesture input is disclosed. The system includes a gesture input device, display device, a standard font character library with a private use area, and an animated font character library for storing a plurality of animated font characters. The animated font characters include a plurality of component animated font characters and a plurality of completed animated font characters. The component animated font characters can be visual segments of one or more completed animated font characters. In this regard, the completed animated font character can turn into or morph on the display device to a standard font character in the standard font library. In yet another embodiment, the standard font character library described is encoded by the Unicode character encoding method and the private use area is a Private Use Area of the Unicode character encoding method.

BRIEF DESCRIPTION OF THE FIGURES

[0007] FIG. **1** is a schematic block diagram of a system for processing gestures and displaying animated fonts.

[0008] FIG. **2**A shows an example of gesture recognition with visual feedback.

[0009] FIG. **2**B is a continuation of the example of gesture recognition with visual feedback shown in FIG. **2**A.

[0010] FIG. **2**C is a continuation of the example of gesture recognition with visual feedback shown in FIG. **2**B.

[0011] FIG. **2**D is a continuation of the example of gesture recognition with visual feedback shown in FIG. **2**C.

[0012] FIG. **2**E is a continuation of the example of gesture recognition with visual feedback shown in FIG. **2**D.

[0013] FIG. **2**F is a continuation of the example of gesture recognition with visual feedback shown in FIG. **2**E.

[0014] FIG. **3**A is a table showing in the column entitled "Animated Image" the visual feedback elements stored in an animated font character library.

[0015] FIG. **3**B is a continuation of the table of FIG. **3**A.

[0016] FIG. **3**C is a continuation of the table of FIG. **3**B.

[0017] FIG. **3**D is a continuation of the table of FIG. **3**C.

[0018] FIG. **3**E is a continuation of the table of FIG. **3**D.

DESCRIPTION OF THE ILLUSTRATED EMBODIMENTS

[0019] FIG. **1** shows a touch operative input with a visual display device **100** operating in accordance with an embodiment of this disclosure. Device **100** can include a gesture input device **112**, which can include a touchscreen input device for receiving a handwritten character input from a gesture in the form of a finger impression on a touchscreen and a display **111**. Device **100** includes a standard font character library **102** populated with standard font characters and an animated font character library **106** populated with animated font characters **118**, shown in the middle column of a table **107** in FIG. **3**.

[0020] Standard font characters in standard font character library **102** and animated font characters **118** in animated font character library **106** can be encoded in any character encoding format that includes a private use area. The private use area contains values that are intentionally left undefined, so that third parties may define their own characters without conflicting with the standard character assignments. An example of a character encoding method that includes a private use area is the Unicode character encoding method.

[0021] According to the Unicode character encoding method, standard font characters in standard font character library **102** are correlated with values in Unicode Planes 0-14. This correlated standard font character library can be contained in a Unicode font file. This Unicode font file including standard font character library **102** is available to, and widely used by, everyone. Animated font characters **118** in animated character library **106** are correlated with values in Unicode Planes 15-16, which correspond to Unicode's Private Use Area ("PUA"). Only parties with a Unicode font file having

animated character library **106** are able to communicate with or use animated font characters **118**. One skilled in the art would recognize that animated font character library **106** can be stored in the same file (as shown in FIG. **1**) or in a file separate from standard font character library **102**, where the font characters in each library **102** and **106** is correlated with the same character encoding method.

[0022] Animated font character library **106** includes completed animated font characters (e.g., **118***c, d, e, f* in FIG. **3**), as well as component animated font characters (e.g., **118***a, b* in FIG. **3**). Component animated font characters are parts or segments of a completed animated font characters. A single component animated font character can be a part or segment of one or more completed animated font characters; for example, component animated font character **118***a* is a segment of completed animated font characters **118***c*, **118***d*, **118***e*, and **118***f*. Animated font characters **118** are each correlated with a unique numerical value associated with the particular character encoding method, so each animated font character **118** has equal dignity with the standard font characters in font standard font character library **102**. This allows device **100** to receive, process, and display each animated font character **118** in the same manner, and with the same speed and efficiency, as any standard font character in standard font character library **102**.

[0023] Device **100** includes at least one application **110** running on an operating system **108**. Application **110** can be a typical word processing application **110** or any other type of application that a user may use to compose, edit or format written material. Device **100** includes at least one gesture analysis program **114** (which can reside in a gesture analysis module) running on operating system **108**. Gesture analysis program **114** receives a handwriting input from gesture input device **112** and accesses standard font character library **102** directly, or through operating system **118**, and passes animated font characters **118** to display device **111** for display of visual feedback.

[0024] Gesture input software **115** operating in gesture analysis program **114** translates gestures received from a user from gesture input device **112**, into a unique code that can be associated with animated font characters **118** in animated font character library **106**. In an embodiment with a touchscreen for gesture input device **112**, the gesture can begin with a finger impression on the touchscreen and continue in the form of a continuous impression until the impression is removed from the touchscreen. In an embodiment, gesture input software **115** in gesture analysis application **114** translates gestures into directional components or unit vectors. An example of such software can be found in U.S. Pat. No. 6,647,145, the contents of which are hereby incorporated by reference herein. These unit vectors can be associated with the numerical values associated with the particular character encoding method and correspond with animated font characters **118** in animated font character library **106** of standard font character library **102**. One skilled in the art would understand, however, that any gesture input software **115** can be used, provided that it can translate a gesture input from gesture input, device **112**.

[0025] FIG. **3** is table **107** that correlates animated font characters **118** in animated font character library **106**, as shown in the middle column entitled "Animated Images," with unit vectors **117** and standard characters in column **105**. The first column in table **107** shows the contents of a register **116**, which stores unit vectors **117** as they are derived from the gesture input. Each unit vector **117** can be associated with the direction of the gesture with respect to an initial reference point or axis or indeed any recognized characteristic of the inputted gesture. Unit vectors **117** include an "L" unit vector **117***a* that corresponds with a left gesture, an "R" unit vector **117***b* that corresponds with a right gesture, a "D" unit vector **117***c* that corresponds with a down gesture, and a "U" unit vector **117***d* that corresponds with an up gesture. In this regard, each direction of a gesture with respect to the initial reference point can be stored in register **116** until the gesture is terminated. One or more unit vectors **117** are summed together to create unique unit vector words **113** in column **116** of table **107**. It should be understood that any characteristic of the inputted gesture can be recognized by gesture analysis program **114** and used to generate a code for the selection of an appropriate animated font character **118** for visual display on display device **111**. Also a standard font character can be drawn using a series of discrete strokes, for example, the English letter "x" or Japanese or Chinese character.

[0026] Each vector word **113** in column **116** is associated with a unique animated font character **118** in animated font character library **106**. Animated fonts **118** include completed animated font characters (e.g., **118***c, d, e, f* in FIG. **3**), as well as component animated font characters (e.g., **118***a, b* in FIG. **3**). Once a gesture input is initiated, register **116** is populated with one or more unit vectors **117** as the gesture progresses to create one of vector words **113** in register **116**. Each vector word **113** is associated with a numerical value corresponding to one of animated font characters **118**, which will be displayed on display device **111** in step with the formation of vector word **113**. Component animated font characters morph into further component animated font characters or completed animated font characters giving the visual appearance to the user of an animated letter growing and forming according to the gesture movements. When the user concludes the gesture, the complete animated font character turns into its corresponding standard font character.

[0027] FIGS. **2**A-**2**F demonstrates a user's finger **120** forming the standard character, the letter "g" on device **100** with the animated visual feedback of animated font characters **118** forming on display device **111**. A glyph **121** tracks the gesture of user **120** and simultaneously displays animated font characters **118** on display device **111**. Glyph **121** is for illustrative purposes of this disclosure to aid in the description of a gesture input into device **100**. What is important is the near instantaneous visual feedback that user **120** sees from animated font characters **118** forming on display device **111**.

[0028] User **120** begins, as shown in FIG. **2** A, with a gesture in the left direction from an initial reference. The gesture is translated by gesture analysis program **114** into L unit vector **117***a* and stored in register **116**. Gesture analysis program **114** passes the numerical value associated with L unit vector **117***a* to operating system **108**. Operating system **108** uses its native font rendering algorithms to display animated font character **118***a* from animated font character library **106** of standard font character library **102**. If user **120** stops the gesture at this point by removing his finger, the gesture input would be interpreted as a "delete" input with visual feedback in the form of animated image **118***a* (shown in row 1 of the table of FIG. **3**).

[0029] User **120** continues to form the letter "g" on device **100** by continuing the gesture in the down direction, as shown in FIG. **2**B. Register **116** is provided with D unit vector **117***c*, as described above, and animated font character **118***b* is shown on display device **111**. User **120** continues the gesture

in the right direction followed by the up direction, as shown in FIG. **2**C. Register **116** is provided with R unit vector **117***b* and U unit vector **117***d*, and animated font character **118***d* is shown on display device **111**. The transition of animated image **118***a* through the subsequent curve toward the right direction can be a compromise between successive animated font characters, in this example animated font characters **118***c* and the animated font character corresponding with the letter "c" and vector word LDR, so the user is presented with a smooth transition or morph. If user **120** stops the gesture with the register containing LDRU by removing his finger, the gesture input would turn into the letter "o."

[0030] User **120** continues the gesture in the down direction in the continuing process of forming the letter "g", as shown in FIG. **2**D. Register **116** is provided with another D unit vector **117***c*. Register **116** now contains LDRUD; so animated font character **118***e* is shown on display device **111**. If user **120** stops the gesture at this point, the gesture input would turn into the letter "a."

[0031] User **120** continues the gesture in the left direction to form the letter "g", as shown in FIG. **2**E. Register **116** is provided with L unit vector **117***a*, which now contains LDRUDL, so animated font character **118***f*, which corresponds to the lower-case form of the basic Latin alphabet letter "g", is shown on display device **111**. FIG. **2**F shows user **120** indicating the gesture is completed by removing his finger or un-touching gesture input device **112** of device **100**. Animated font character **118***f* immediately turns into standard font character for the letter "g" in standard font character library **102**.

[0032] Animated font characters **118***a-f* appear successively on display device **111**, as though they are morphing into a fully-formed letter "g." These completed animated font characters turn into standard font characters in the standard font character library **102**, which can be combined together to form a sequence (word, sentence, paragraph, document) of standard font characters. In this manner, display device **111** shows the drawn parts of a letter in real time, in response to gesture movements of user **120**, giving the visual appearance to the user of an animated letter appearing on display **120** that seems to grow and form according to the gesture movements. This allows user **120** to observe a precise and neat character throughout the entire gesture input on device **100**. Each animated font character **118** is treated as a standard font character of standard font character library **102**, and is associated with a numerical value, so each animated font character **118** is recognized by operating system **108** of device **100** at the machine code level allowing for nearly instantaneous recognition of the gesture input by device **100**.

[0033] Animated font characters **118** can be displayed as outline or vector fonts or as conventional bitmap fonts. A vector font uses drawing instructions and mathematical formulas to describe each glyph or character, while bitmap fonts consist of a matrix of dots or pixels representing the image of each glyph or character. Display of these animated font characters **118** as a conventional bitmap within the time intervals required by user **120** for visual feedback of rapid text entry and with changing scales of the displayed animated font characters **118**, however, can pose specific problems of coding and execution of the computer code. Resealing pixel-based font is complex. Maintaining the pixel based font at different scales requires extra storage space and processing power, and increases inefficiency proportionally to the number of scales supported. Making any change to a pixel based font requires re-drawing as many animated font characters **118** as are supported. While some sizes scale gracefully, others require manual modifications. Editing a vector font is simpler, as the developer only needs to make the changes once.

[0034] Vector font can be rendered dynamically. JavaScript can be used to modify scalable vector graphic files, so that it becomes trivial to modify the shape of animated font character **118** according to a simple set of rules. This allows the developer to define an algorithm to determine the progress a user's finger makes along a path on gesture input device **112**, and then, re-calculate in an analog manner, and re-render the displayed animated font character **118**.

[0035] Vector font allows for animated font characters **118** to be scaled using native operating system algorithms, which offload the complex work of handling text rendering and obtain the benefits from advanced features of font rendering as provided by operating system **108**. Native operating system algorithms come embedded in operating system **108**, and are in common use, which allows the deployment of more advanced font files that use vector-based graphics, such as OpenType™ or TrueType™ fonts. These fonts allow mathematical determination of rendering font characters at different sizes and circumstances. Thus, the required manipulations of displayed fonts are already coded into the operating system **108** as optimized, efficient code, and the task of coding software to manipulate animated font characters **118** is greatly simplified. Examples of advanced features handled by operating system **108** are sub-pixel rendering, anti-aliasing, and kerning, as well as any other performance enhancements. This results in the smoothest possible font animation, with a frame rate that accurately follows finger etc. movements.

[0036] Furthermore, when inserting graphics into text, operating system **108** expects to handle the graphics as a word boundary. This leads to unexpected behavior, including splitting words at the wrong places. There is no easy way to solve this issue by overriding operating system **108**. Populating private use area **104** with animated font characters **118**, however, allows animated font characters **118** to be inserted into a standard text control of many operating systems, automatically handling the animation as part of the word it is building. This also allows the animation to occur in real time in the text area of the document.

[0037] Using graphic based animation requires potentially complex calculations to align with text (depending on the implementation). Such complex calculations can be avoided by putting the animation frames (e.g., animated font characters **118**) into a font file (e.g., animated font character library **106**). The font file can then be implemented with any font algorithm on any platform. These standard font algorithms simply insert the characters into a string. This avoids the need to calculate the position and scale of the animation according to current text content.

[0038] The user desires smooth visual feedback of animated font characters **118** on display device **111**. Sudden changes of apparent position of component animated font characters (e.g., **118***a, b*) with respect to previously displayed component animated font characters (e.g., **118***a, b*) can disorient the user and give a jerky or discontinuous visual feedback and render character input less easy and efficient. Furthermore, correlating animated font characters **118** with values outside the private use area **104** of a standard font character library **102** would cause "collisions" between ani-

mated font characters **118** and standard font characters. These collisions would interrupt the successive visual display of animated font characters **118**.

[0039] The system and methods described herein can be used globally, as a standard (or animated) font in any language, without interfering with existing writing methods. Standard characters from any language can be deconstructed into partial, component characteristics or characters to form a unique animated font character library **106** full of partial, component and complete characters.

[0040] Furthermore, this disclosure is not limited to fonts. An animation character library is disclosed where any animation can be deconstructed into frames to populate the animation library with each frame being treated as an animated font characters **118** and populated in animated font character library **106** for loading into private use area **104**. This may prove particularly useful in the video game industry or in any interactive animation displays controlled by user gesture input. Instead of using considerable processing power to animate a scene, an animated visual scene can be quickly displayed by invoking a script containing a series of inputs corresponding to a sequence of frames stored in animated font character library **106** allowing the animation to be carried out natively by operating system **108**.

[0041] Device **100** can be any form of digital computer, including a desktop, laptop, workstation, mobile device, smartphone, tablet, and other similar computing devices. Generally, device **100** includes a processor, memory, an input/output device such as a display device **111**, a communication interface, and a transceiver, among other components. The device **100** may also be provided with a storage device, such as a microdrive or other device, to provide additional storage. Each of these components is interconnected using various buses, and several of the components may be mounted on a common motherboard or in other manners as appropriate.

[0042] The processor can execute instructions within the computing device **100**, including instructions stored in the memory. The processor may be implemented as a chipset of chips that include separate and multiple analog and digital processors. The processor may provide, for example, for coordination of the other components of the device **100**, such as control of user interfaces (e.g. gesture input device **112**), applications **110** run by device **100**, and wireless communication by device **100**.

[0043] The processor may communicate with a user through a control interface, and a display interface coupled to display **112**. The display interface may comprise appropriate circuitry for driving display **112** to present graphical and other information to a user. The control interface may receive commands from a user and convert them for submission to the processor.

[0044] The processor can utilize any operating system **108** configured to receive instructions via a graphical user interface, examples of such operating systems include MICROSOFT WINDOWS, UNIX, and so forth. It is understood that other, light weight operating systems can be used for basic embedded control applications. In this regard, the processor executes one or more computer programs, such as applications **110**, gesture application program **114** with gesture input software **115**, and any other software to carry out the methods and implement the systems described herein, that provide functionality in addition to that of the operating system **108**. Generally, operating system **108**, standard font character library **102**, including animated character library **106**, and the computer programs are tangibly embodied in a computer-readable medium, e.g. one or more of the fixed and or removable data-storage devices. Both the operating system **108** and the computer programs may be loaded from such data-storage devices into memory for execution by the processor. The computer programs comprise instructions which, when read and executed by the processor, cause the same to perform the steps necessary to execute the steps or features of the present invention.

[0045] The touchscreen input device for a gesture input device can include display panel **111** and input panel **112**, where input panel **112** is transparent and overlaid on display panel **111**. The touch-sensitive area is substantially the same size as the active pixels on display panel **111**. Display panel **111**, however, could be any type of display or panel, even including a holographic display, while gesture input device **112** could be a virtual-reality type input where the gesture input is performed in the air or some other medium.

[0046] While this disclosure has been particularly shown and described with reference to exemplary embodiments, it should be understood by those of ordinary skill in the art that various changes, substitutions and alterations can be made herein without departing from the scope of the invention as defined by the appended claims and their equivalents.

What is claimed is:

1. A method for providing visual feedback of a gesture input, comprising:

receiving the gesture input;

correlating the gesture input with a first animated font character in an animated font character library, wherein the animated font character library is associated with a private use area of a character encoding method; and

displaying the first animated font character from the animated font character library on a display device.

2. The method of claim **1**, and further comprising resolving the first animated font character into a second animated font character to give a visual appearance to a user of a character forming on the display device.

3. The method of claim **2**, wherein the first animated font character and the second animated font character are component animated font characters that are each a segment of a completed animated font character.

4. The method of claim **3**, wherein the character encoding method is a Unicode character encoding method and the private use area is a Private Use Area of the Unicode character encoding method.

5. The method of claim **1**, wherein the animated font character library further comprises a plurality of animated font characters.

6. The method of claim **5**, wherein the plurality of animated font characters are each directly associated with a numerical value for execution by a machine code.

7. The method of claim **5**, wherein the plurality of animated font characters include a plurality of component animated font characters and a plurality of completed animated font characters, wherein at least two of the component animated font characters are segments of at least one of the completed animated font characters, and wherein the completed animated font character turn into to a standard font character library.

8. The method of claim **1**, wherein the first animated font is a vector font.

9. A system for visual feedback of a handwritten character input, the system comprising:

a standard font character library having a plurality of standard font characters;

an animated font character library correlated with a private use area, wherein the animated font character library further having a plurality of animated font characters, wherein the animated font characters further having a plurality of component animated font characters and a plurality of completed animated font characters, wherein at least two of the component animated font characters are segments of at least one of the completed animated font characters; and

a display device for displaying animated font characters from the animated font character library.

10. The system of claim **9**, wherein the completed animated font character turns into on the display device to one of the plurality of standard font characters in the standard font character library.

11. The system of claim **9**, further comprises a gesture input device to receive the handwritten character input.

12. The system of claim **11**, further comprise a gesture analysis program with a register that stores a value that changes as the gesture analysis program translates the handwritten character input, wherein the display device successively displays the animated font character that corresponds with the value each time the value changes.

13. The system of claim **12**, wherein the display device successively displays at least two component animated font characters followed by a completed animated font character.

14. The system of claim **9**, further comprise a gesture input device to receive the handwritten character input, and a gesture analysis program, wherein the handwritten character input begins with an impression on the gesture input device and includes a continuous impression on the gesture input device while simultaneously the gesture analysis program translates the continuous impression for the display device to display at least two of the plurality of component animated font characters followed by at least one of the plurality of completed animated font characters before the impression is removed from the gesture input device.

15. The system of claim **14**, wherein the at least one of the plurality of completed animated font characters turns into a standard font character in the standard font character library.

16. The system of claim **9**, wherein the standard font character library is encoded according to a Unicode character encoding method and the private use area is a Private Use Area of the Unicode character encoding method.

17. A computer device comprising:

a standard font character library having a plurality of standard font characters;

a private use area having an animation library;

a plurality of frames in the animation library that when arranged in a sequence show an animated visual scene; and

a display device for displaying the plurality of frames.

18. The device of claim **17**, wherein the plurality of frames is a plurality of animated font characters, wherein the animation library is an animated font character library, wherein the animated font characters further having a plurality of component animated font characters and a plurality of completed animated font characters, wherein at least two of the component animated font characters are segments of at least one of the completed animated font characters.

19. The device of claim **17**, further comprises a gesture input device to receive a handwritten character input, and a gesture analysis program with a register that stores a value that changes as the font engine translates the handwritten character input, wherein the display device successively displays the animated font character that corresponds with the value each time the value changes, wherein the display device successively displays at least two component animated font characters followed by a completed animated font character.

20. The device of claim **17**, wherein the standard font character library is encoded according to a Unicode character encoding method and the private use area is a Private Use Area of the Unicode character encoding method.

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