

Claims

1. A method comprising:

associating areas (412, 414, 416, 612, 614, 616, 810-816, 821-826) of a touch interface (104, 204) of a mobile electronic device (100, 200) with letters such that each area is associated with only one letter and at least some of the associated areas overlap with one another;

detecting (302, 502, 506, 702, 706) a location of a touch on the touch interface (104, 204);

determining which of the overlapping areas include the touch location; and

identifying the letters associated with the overlapping areas determined to include the touch location.

2. The method of claim 1, further comprising:

if two or more letters are identified (304, 508, 704), using predictive text software to determine which of the identified letters the user intended to select.

3. The method of claim 2, further comprising:

providing the predictive text software with an indication (304, 508, 704) that the location is closer to one of the identified letters than to others of the identified letters.

4. The method of claim 2 or claim 3, further comprising:

providing the predictive text software with an indication (304, 508, 704) of how much closer the location is to one of said identified letters than to others of the identified letters.

5. The method of any one of claims 1 to 4, wherein for at least one particular letter, the associating step comprises associating an area (412) of the touch interface (104, 204) with the particular letter by completely overlapping jointly the area (412) by a portion of an area (414) of the touch interface (104, 204) associated with an adjacent letter to the left of the particular letter and by a portion of an area (416) of the touch interface (104, 204) associated with an adjacent letter to the right of the particular letter.

6. The method of any one of claims 1 to 4, wherein for at least one particular letter, the associating step comprises associating an area (612) of said touch interface (104, 204) with the particular letter by partially overlapping the area (612) by a portion (603) of an area (614) of the touch interface (104, 204) associated with an adjacent letter to the left of the particular letter and by a portion (605) of an area (616) of the touch interface (104, 204) associated with an adjacent letter to the right of the particular letter.

7. The method of any one of claims 1 to 4, wherein for at least one particular letter, the associating step comprises associating an area (810-814) of the touch interface (204) with the particular letter by bounding the area (810-814) by the horizontal centers (802, 804) of adjacent letters on the same row as the particular letter, and by the vertical centers (806, 808) of adjacent letters on upper and lower adjacent rows.

8. The method of any one of claims 1 to 4, wherein for at least one particular letter, the associating step comprises associating an area (821-826) of the touch interface (204) with the particular letter by joining the centers of letters nearest to the particular letter.

9. A mobile electronic device (100, 200) comprising:

- one or more touch interfaces (104, 204) configured to display one or more rows of letters and receive a touch; and

- a microprocessor (902) configured to associate areas (412, 414, 416, 612, 614, 616, 810-816, 821-826) of the one or more touch interfaces (104, 204) with the letters such that each area is associated with only one letter and at least some of the areas overlap with one another, and the microprocessor (902) is further configured to

- determine which of the overlapping areas include the touch location, and identify the letters associated with the overlapping areas determined to include the touch location.

10. The mobile electronic device (100, 200) of claim 9, wherein the one or more touch interfaces (104, 204) is a single touchpad (104).

11. The mobile electronic device (100, 200) of claim 9, wherein the one or more touch interfaces (104, 204) are two or more touchpads (104).

12. The mobile electronic device (100, 200) of claim 9, wherein the one or more touch interfaces (104, 204) is a single touchscreen (204).

13. The mobile electronic device (100, 200) of any one of claims 9 to 12, wherein the rows of letters are spaced at a sufficient vertical distance that there is no ambiguity as to which row of letters is being touched.

14. The mobile electronic device (100, 200) of claim 12, wherein for at least one particular letter, an area (810-816, 821-826) of the touchscreen (104, 204) associated with the particular letter is overlapped by an area of the touchscreen (104, 204) associated with a different letter of an adjacent row.

15. The mobile electronic device (100, 200) of any one of claims 9 to 13, wherein for at least one particular letter, an area (412) of the one or more touch interfaces (104, 204) associated with the particular letter is completely overlapped jointly by a portion of an area (414) of the one or more touch interfaces (104, 204) associated with an adjacent letter to the left of the particular letter and by a portion of an area (416) of the one or more touch interfaces (104, 204) associated with an adjacent letter to the right of the particular letter.

16. The mobile electronic device (100, 200) of any one of claims 9 to 13, wherein for at least one particular letter, an area (612) of the one or more touch interfaces (104, 204) associated with the particular letter is partially overlapped by a portion (603) of an area (614) of the one or more touch interfaces (104, 204) associated with an adjacent letter to the left of the particular letter and by a portion (605) of an area (616) of the one or more touch interfaces (104, 204) associated with an adjacent letter to the right of the particular letter.

17. The mobile electronic device (100, 200) of any one of claims 9 to 13, wherein for at least one particular letter, an area (810-814) of the one or more touch interfaces (204) associated with the particular letter is bounded by the horizontal centers (802, 804) of adjacent letters on the same row as the particular letter, and by the vertical centers (806, 808) of adjacent letters on upper and lower adjacent rows.

18. The mobile electronic device (100, 200) of any one of claims 9 to 13, wherein for at least one particular letter, an area (821, 826) of the one or more touch interfaces (204) associated with the particular letter is bounded by joining the centers of letters nearest to the particular letter.

19. The mobile electronic device (100, 200) of any one of claims 9 to 18, wherein the microprocessor (902) is configured to execute a predictive text software module to determine which of the identified letters the user intended to select.

20. A computer readable medium storing instructions for execution by a processor (902) of a mobile device (100, 200) for causing the mobile device (100, 200) to implement the method of any of claims 1 to 8.

Claims

1. A method comprising:
 - associating areas (412, 414, 416, 612, 614, 616, 810-816, 821-826) of a touch interface (104, 204) of a mobile electronic device (100, 200) with letters such that each area is associated with only one letter and at least some of the associated areas overlap with one another;
 - detecting (302, 502, 506, 702, 706) a location of a touch on the touch interface (104, 204);
 - determining which of the overlapping areas include the touch location; and
 - identifying the letters associated with the overlapping areas determined to include the touch location.
2. The method of claim 1, further comprising if two or more letters are identified (304, 508, 704), using predictive text software to determine which of the identified letters the user intended to select.
3. The method of claim 2, further comprising providing the predictive text software with an indication (304, 508, 704) that the location is closer to one of the identified letters than to others of the identified letters.
4. The method of claim 2 or claim 3, further comprising providing the predictive text software with an indication (304, 508, 704) of how much closer the location is to one of said identified letters than to others of the identified letters.
5. The method of any one of claims 1 to 4, wherein for at least one particular letter, the associating step comprises associating an area (412) of the touch interface (104, 204) with the particular letter by completely overlapping jointly the area (412) by a portion of an area (414) of the touch interface (104, 204) associated with an adjacent letter to the left of the particular letter and by a portion of an area (416) of the touch interface (104, 204) associated with an adjacent letter to the right of the particular letter.
6. The method of any one of claims 1 to 4, wherein for at least one particular letter, the associating step comprises associating an area (612) of said touch interface (104, 204) with the particular letter by partially overlapping the area (612) by a portion (603) of an area (614) of the touch interface (104, 204) associated with an adjacent letter to the

left of the particular letter and by a portion (605) of an area (616) of the touch interface (104, 204) associated with an adjacent letter to the right of the particular letter.

7. The method of any one of claims 1 to 4, wherein for at least one particular letter, the associating step comprises associating an area (810-814) of the touch interface (204) with the particular letter by bounding the area (810-814) by the horizontal centers (802, 804) of adjacent letters on the same row as the particular letter, and by the vertical centers (806, 808) of adjacent letters on upper and lower adjacent rows.

8. The method of any one of claims 1 to 4, wherein for at least one particular letter, the associating step comprises associating an area (821-826) of the touch interface (204) with the particular letter by joining the centers of letters nearest to the particular letter.

9. A mobile electronic device (100, 200) comprising:
one or more touch interfaces (104, 204) configured to display one or more rows of letters and receive a touch; and
a microprocessor (902) configured to associate areas (412, 414, 416, 612, 614, 616, 810-816, 821-826) of the one or more touch interfaces (104, 204) with the letters such that each area is associated with only one letter and at least some of the areas overlap with one another, and the microprocessor (902) is further configured to determine which of the overlapping areas include the touch location, and identify the letters associated with the overlapping areas determined to include the touch location.

10. The mobile electronic device (100, 200) of claim 9, wherein the one or more touch interfaces (104, 204) is a single touchpad (104).

11. The mobile electronic device (100, 200) of claim 9, wherein the one or more touch interfaces (104, 204) are two or more touchpads (104).

12. The mobile electronic device (100, 200) of claim 9, wherein the one or more touch interfaces (104, 204) is a single touchscreen (204).

13. The mobile electronic device (100, 200) of any one of claims 9 to 12, wherein the rows of letters are spaced at a sufficient vertical distance that there is no ambiguity as to which row of letters is being touched.

- 14.** The mobile electronic device (100, 200) of claim 12, wherein for at least one particular letter, an area (810-816, 821-826) of the touchscreen (104, 204) associated with the particular letter is overlapped by an area of the touchscreen (104, 204) associated with a different letter of an adjacent row.
- 15.** The mobile electronic device (100, 200) of any one of claims 9 to 13, wherein for at least one particular letter, an area (412) of the one or more touch interfaces (104, 204) associated with the particular letter is completely overlapped jointly by a portion of an area (414) of the one or more touch interfaces (104, 204) associated with an adjacent letter to the left of the particular letter and by a portion of an area (416) of the one or more touch interfaces (104, 204) associated with an adjacent letter to the right of the particular letter.
- 16.** The mobile electronic device (100, 200) of any one of claims 9 to 13, wherein for at least one particular letter, an area (612) of the one or more touch interfaces (104, 204) associated with the particular letter is partially overlapped by a portion (603) of an area (614) of the one or more touch interfaces (104, 204) associated with an adjacent letter to the left of the particular letter and by a portion (605) of an area (616) of the one or more touch interfaces (104, 204) associated with an adjacent letter to the right of the particular letter.
- 17.** The mobile electronic device (100, 200) of any one of claims 9 to 13, wherein for at least one particular letter, an area (810-814) of the one or more touch interfaces (204) associated with the particular letter is bounded by the horizontal centers (802, 804) of adjacent letters on the same row as the particular letter, and by the vertical centers (806, 808) of adjacent letters on upper and lower adjacent rows.
- 18.** The mobile electronic device (100, 200) of any one of claims 9 to 13, wherein for at least one particular letter, an area (821, 826) of the one or more touch interfaces (204) associated with the particular letter is bounded by joining the centers of letters nearest to the particular letter.
- 19.** The mobile electronic device (100, 200) of any one of claims 9 to 18, wherein the microprocessor (902) is configured to execute a predictive text software module to determine which of the identified letters the user intended to select.

20. A computer readable medium storing instructions for execution by a processor (902) of a mobile device (100, 200) for causing the mobile device (100, 200) to implement the method of any of claims 1 to 8.