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June 28, 2011

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U.S. PATENT: *7,864,163*
ISSUE DATE: *January 04, 2011*

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Under Secretary of Commerce for Intellectual Property
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N. WILLIAMS
Certifying Officer

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(12) **United States Patent**
Ording et al.

(10) **Patent No.: US 7,864,163 B2**
(45) **Date of Patent: Jan. 4, 2011**

(54) **PORTABLE ELECTRONIC DEVICE, METHOD, AND GRAPHICAL USER INTERFACE FOR DISPLAYING STRUCTURED ELECTRONIC DOCUMENTS**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 688 days.

(21) Appl. No.: **11/850,013**

(22) Filed: **Sep. 4, 2007**

(65) **Prior Publication Data**

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Related U.S. Application Data

(60) Provisional application No. 60/937,993, filed on Jun. 29, 2007, provisional application No. 60/946,715, filed on Jun. 27, 2007, provisional application No. 60/879,469, filed on Jan. 8, 2007, provisional application No. 60/879,253, filed on Jan. 7, 2007, provisional application No. 60/824,769, filed on Sep. 6, 2006.

(51) **Int. Cl.**
G06F 3/041 (2006.01)

(52) **U.S. Cl.** **345/173**; 715/234; 715/781

(58) **Field of Classification Search** 345/173–178; 178/18.01–18.09, 18.11; 715/810, 828–831, 715/234, 781, 700
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,025,842 A 2/2000 Filetto et al. 345/345

(Continued)

FOREIGN PATENT DOCUMENTS

EP 0476972 A2 3/1992

(Continued)

OTHER PUBLICATIONS

Milic-Frayling, N. et al., "Smartview: Enhanced Document Viewer for Mobile Devices," Microsoft Technical Report, Nov. 15, 2002, URL: ftp://ftp.research.microsoft.com/pub/tr/tr-2002-114.pdf, retrieved Dec. 17, 2007.

(Continued)

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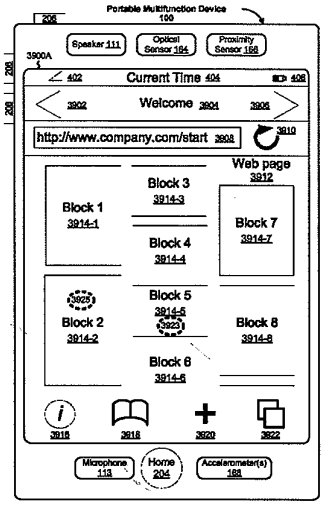
(57) **ABSTRACT**

A computer-implemented method, for use in conjunction with a portable electronic device with a touch screen display, comprises displaying at least a portion of a structured electronic document on the touch screen display, wherein the structured electronic document comprises a plurality of boxes of content, and detecting a first gesture at a location on the displayed portion of the structured electronic document. A first box in the plurality of boxes at the location of the first gesture is determined. The first box on the touch screen display is enlarged and substantially centered.

61 Claims, 29 Drawing Sheets



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A graphical user interface on a portable electronic device with a touch screen display comprises: at least a portion of a structured electronic document, wherein the structured electronic document comprises content; an item of inline multimedia content in the portion of the structured electronic document; and one or more playback controls. In response to detecting a first gesture on the item of inline multimedia content, the item of inline multimedia content on the touch screen display is enlarged, and display of other content in the structured electronic document besides the enlarged item of inline multimedia content is ceased. In response to detecting a second gesture on the touch screen display while the enlarged item of inline multimedia content is displayed, the one or more playback controls for playing the enlarged item of inline multimedia content are displayed. In response to detecting a third gesture on one of the playback controls, the enlarged item of inline multimedia content is played.

The foregoing description, for purpose of explanation, has been described with reference to specific embodiments. However, the illustrative discussions above are not intended to be exhaustive or to limit the invention to the precise forms disclosed. Many modifications and variations are possible in view of the above teachings. The embodiments were chosen and described in order to best explain the principles of the invention and its practical applications, to thereby enable others skilled in the art to best utilize the invention and various embodiments with various modifications as are suited to the particular use contemplated.

What is claimed is:

1. A computer-implemented method, comprising:
at a portable electronic device with a touch screen display;
displaying at least a portion of a web page on the touch screen display, wherein the web page comprises a plurality of boxes of content;
detecting a first finger tap gesture at a location on the displayed portion of the web page;
determining a first box in the plurality of boxes at the location of the first finger tap gesture; and
enlarging and translating the web page so as to substantially center the first box on the touch screen display, wherein enlarging comprises expanding the first box so that the width of the first box is substantially the same as the width of the touch screen display;
resizing text in the enlarged first box to meet or exceed a predetermined minimum text size on the touch screen display;
while the first box is enlarged, detecting a second finger tap gesture on a second box other than the first box; and
in response to detecting the second finger tap gesture, translating the web page so as to substantially center the second box on the touch screen display.

2. A computer-implemented method, comprising:
at a portable electronic device with a touch screen display;
displaying at least a portion of a structured electronic document on the touch screen display, wherein the structured electronic document comprises a plurality of boxes of content;
detecting a first gesture at a location on the displayed portion of the structured electronic document;
determining a first box in the plurality of boxes at the location of the first gesture;
enlarging and translating the structured electronic document so that the first box is substantially centered on the touch screen display;
while the first box is enlarged, a second gesture is detected on a second box other than the first box; and
in response to detecting the second gesture, the structured electronic document is translated so that the second box is substantially centered on the touch screen display.

3. The method of claim **2**, including: prior to displaying at least a portion of a structured electronic document,
determining borders, margins, and/or paddings for the plurality of boxes that are specified in the structured electronic document; and
adjusting the borders, margins, and/or paddings for the plurality of boxes for display on the touch screen display.

4. The method of claim **2**, wherein the structured electronic document is a web page.

5. The method of claim **2**, wherein the structured electronic document is an HTML or XML document.

6. The method of claim **2**, wherein:
the structured electronic document has a document width and a document length;
the touch screen display has a display width; and
displaying at least a portion of the structured electronic document comprises scaling the document width to fit within the display width independent of the document length.

7. The method of claim **6**, wherein:
the touch screen display is rectangular with a short axis and a long axis;
the display width corresponds to the short axis when the structured electronic document is seen in portrait view; and
the display width corresponds to the long axis when the structured electronic document is seen in landscape view.

8. The method of claim **2**, wherein the plurality of boxes are defined by a style sheet language.

9. The method of claim **8**, wherein the style sheet language is a cascading style sheet language.

10. The method of claim **2**, wherein the first gesture is a finger gesture.

11. The method of claim **2**, wherein the first gesture is a stylus gesture.

12. The method of claim **2**, wherein the first gesture is a tap gesture.

13. The method of claim **12**, wherein the first gesture is a double tap with a single finger, a double tap with two fingers, a single tap with a single finger, or a single tap with two fingers.

14. The method of claim **2**, wherein:
the structured electronic document has an associated render tree with a plurality of nodes; and determining the first box at the location of the first gesture comprises:
traversing down the render tree to determine a first node in the plurality of nodes that corresponds to the detected location of the first gesture;
traversing up the render tree from the first node to a closest parent node that contains a logical grouping of content; and
identifying content corresponding to the closest parent node as the first box.

15. The method of claim **14**, wherein the logical grouping of content comprises a paragraph, an image, a plugin object, or a table.

16. The method of claim **14**, wherein the closest parent node is a replaced inline, a block, an inline block, or an inline table.

17. The method of claim **2**, wherein enlarging and translating the structured electronic document comprises display-

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UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 7,864,163 B2
APPLICATION NO. : 11/850013
DATED : January 4, 2011
INVENTOR(S) : Ording et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Claim 2, column 25, line 66, between the words "enlarged," and "a second" insert --detecting--, and at the end of the line, delete "is detected".

Claim 2, column 26, line 1, between the words "gesture," and "the structured" insert --translated--.

Claim 2, column 26, line 2, delete "is translated".

Claim 50, column 29, line 34, between the words "enlarged," and "a second" insert --detecting--.

Claim 50, column 29, line 35, delete "is detected".

Claim 50, column 29, line 38, between the words "gesture," and "the structured" insert --translating--, and at the end of the line delete "is translated".

Claim 52, column 30, line 8, between the words "enlarged" and "a second" insert --detecting--.

Claim 52, column 30, line 9, delete "is detected".

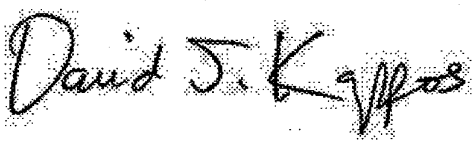
Claim 52, column 30, line 10, between the words "gesture," and "the structured" insert --translating--.

Claim 52, column 30, line 11, delete "is translated".

Claim 53, column 30, line 35, between the words "icon," and "a window" insert --enlarging--.

Claim 53, column 30, line 37, delete "is enlarged".

Signed and Sealed this
Fifteenth Day of March, 2011



David J. Kappos
Director of the United States Patent and Trademark Office

Claim 59, column 31, line 9, between the words "icon," and "a window" insert --enlarging--.

Claim 59, column 31, line 11 delete "is enlarged".