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(54) Title: PORTABLE DEVICE AND METHOD FOR DISPLAYING ML CONTENT IN A PORTABLE DEVICE

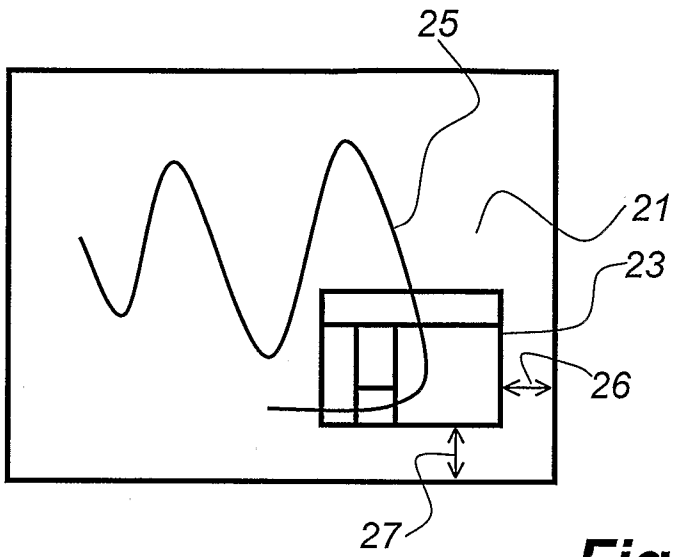

Fig 3

(57) Abstract: A portable device with a small-size display is used to display ML content originally intended for a display that is greater in terms of number of pixels. A miniature overview (23) of the content is rendered. The frames are further rendered, one by one, such that the width of each frame is adapted to the number of pixels in one dimension of the small-sized display. One of the rendered frames (21) is displayed and whenever a predetermined condition is satisfied, the miniature overview is displayed on top of the frame at a sub-portion of the display.

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PORTABLE DEVICE AND METHOD FOR DISPLAYING ML CONTENT IN A PORTABLE DEVICE

Technical field

The present invention relates to a method for displaying ML content of an ML document in a display of a portable device, wherein the ML content includes a plurality of frames. The invention also relates to such a portable device.

Background

Such a method and such a portable device are described e.g. in WO, 2005/071567, A1, where frames are reproduced in the form of a table in the portable device. This allows ML content, originally intended for display e.g. on a desktop computer, to be displayed in a portable device, having a small display, without substantial loss of information.

A general problem with devices of this kind is how navigation e.g. between different frames should be facilitated.

Summary of the invention

One object of the present invention is therefore to provide a displaying method or a portable device with improved navigation capabilities.

This object is achieved by a method according to claim 1 and a portable device according to claim 12.

More specifically, the method for displaying ML content of an ML document in a display of a portable device then involves rendering a miniature overview of the content, wherein the proportions and the relative positions of the frames correspond to the defining information of the ML document, the miniature overview being smaller, in terms of pixels, than the display; rendering the frames, one by one, wherein a frame is rendered such

that its width is adapted to the number of pixels in one dimension of said display; displaying one of the rendered frames at a time in said display, thereby allowing a user to navigate within a frame; and monitoring whether a predetermined condition is satisfied, and when the condition is satisfied displaying said miniature overview on top of the said one of the rendered frames at a sub-portion of the display.

This method allows providing a user with information related to the general outline of the ML content, by displaying the miniature overview, whenever needed, but still allows the user to concentrate on the currently displayed frame in other cases. This facilitates the use of the portable device.

The miniature overview may use less than a quarter of the total display area, thereby making it easier for the user to remain in visual contact with the currently displayed frame even when the overview is shown. This effect may be further enhanced by displaying the overview during a limited period of time, by using a semi-transparent overview, such that content of said one of the rendered frames is visible through the miniature overview, or by displaying the miniature overview in the interior of the display area, such that the currently displayed frame surrounds the miniature overview.

The rendered frames may have a navigation order, and the navigation order may be shown in the miniature overview.

An area corresponding to the currently displayed frame may be highlighted in a first way in the miniature overview, and an area corresponding to a frame affected by a user's action in the currently displayed frame may be highlighted in a second way in the miniature overview.

The predetermined condition may be satisfied when a user, by navigating within said one of the rendered frames, approaches an edge thereof. Additionally, the predetermined condition may be satisfied when a user, by

activating means within said one of the rendered frames, affects the content of another frame.

The ML document may contain at least parts of a user interface for the portable device.

A portable device, capable of carrying out the above method, is configured for and generally comprises means for carrying out the actions of the method. The portable device may be varied in the same way as the method. Additionally, the portable device may comprise a first and a second display. If actions in a currently displayed frame affects another frame, the currently displayed frame and the miniature overview may be displayed in the first display, and the affected frame may be displayed in the second display.

Brief description of the drawings

Fig 1 illustrates schematically a web page as displayed in a full-size display, e.g. in a desktop computer.

Fig 2 illustrates the frames of fig 1 when rendered to fit a smaller display.

Fig 3 illustrates a display where a frame and a semi-transparent miniature overview is displayed.

Figs 4 and 5 illustrate additional content that may be provided in a miniature overview.

Fig 6 illustrate functional modules in a portable device.

Fig 7 is a chart illustrating actions in a method.

Detailed description

This disclosure relates to the use of ML (Markup Language) content containing frames. A typical example of ML content is HTML (HyperText Markup Language) content, which is used e.g. for Internet publishing. Such content may be expressed as an HTML document as will be described by an example *doc1.html* as follows:

```
<FRAMESET rows="20%, 80%">
      …contents of first frame (1A)…
      <FRAMESET cols="20%, 80%">
            …contents of second frame first column (1B)…
            …contents of second frame second column (doc2.html)…'
      </FRAMESET>
</FRAMESET>
```

Where in the example *doc2.html* corresponds to:

```
<FRAMESET cols="30%, 70%">
      <FRAMESET rows="60%, 40%">
            …contents of first frame, first row (1C1)…
            …contents of first frame, second row (1C2)…
      </FRAMESET>
            …contents of second frame (1C3)…
</FRAMESET>
```

The HTML code comprises defining information for the content, both the actual content and the appearance thereof.

When rendered in a computer having a full-size display (e.g. 1024*768 pixels) this HTML code may appear as is shown in fig 1. The content of doc1.html thus comprises three different frames, 1A, 1B, and 1C, using the entire display area. One of these frames, 1C, comprises a second, nested frameset, which includes three frames 1C1, 1C2, and 1C3.

Typically, frames 1A and 1B, covering the upper portion, and the leftmost lower portion of the display, respectively, may each comprise a set of buttons that may be activated by a user. The remaining frames may then comprise content that may be influenced by the use of buttons in these two frames. Content in different frames may originate from different sources.

When rendered in a small-size display, e.g. having 240*320 pixels as may be the case with e.g. a cell phone, a different rendering approach is used.

The rendering in fig 1 may be considered as a "true" rendering, as the resulting appearance has the layout and proportion originally intended when drafting the corresponding code. However, a true rendering will not always be useful in a small-size display, since for instance a button in a frame like frame 1B may then be rendered with too few pixels to be recognized.

Instead a "modified" rendering is carried out, wherein the frames are rendered, one by one as is illustrated in fig 2. Each frame is rendered such that its width is adapted to the number of pixels in one dimension (width or height) of the display. The display size is indicated by the dashed box 11 in fig 2. Even though it appears in fig 2 that the frames are rendered as a single pile of frames this is not at all necessary.

In the rendering illustrated in fig 2, the number of pixels in the width 13 of the portable device (mobile phone, inset in upper part of fig 2) is decisive for how the frames are rendered as modified. This is relevant in case the mobile phone is held in a conventional way, display up, keypad down. It is however possible to use the mobile phone with keypad and display side by side (mobile phone, inset in lower part of fig 2), and in that case the height 15 of the display, as held in the conventional way, will be decisive.

Note that frames 1B, 1C1, and 1C3 in fig 2 are provided with scrollbars 17. The scrollbars allow the content of these frames to be rendered with a much greater height than the height of the display, in terms of number of pixels. The user may control the scrollbar by means of e.g. buttons on the portable device and may thus still view the entire content of the frame. This feature allows high and not to wide frames to be viewed at resolution corresponding to or close to the resolution intended when the ML content was originally designed. Panning in the vertical direction is thus provided for, however not usually panning in the horizontal direction.

Therefore e.g. frame 1A in fig 1, which is low and wide, will be substantially shrunk in the horizontal direction. This however may be allowed, since information in this type of frames is not usually very dense. Typically, only a number of buttons or tabs are provided, which may be well reproduced using a much smaller width. Alternatively, buttons, originally intended to be displayed side by side, may instead be displayed in a pile.

In addition to the frames rendered as illustrated in fig 2, a miniature overview of the content is rendered, where the proportions and the relative positions of the frames at least substantially correspond to the defining information of the ML document. The miniature overview is thus a thumbnail, a very small reproduction, of the content appearing as initially intended, e.g. a miniature of the content as shown in fig 1. It is not necessary to reproduce all the information of the frames in the miniature overview, since in most cases this information will not be recognizable anyway. Instead the miniature overview may contain as little as the framework constituted by the frameset and any nested frameset, optionally supplemented with a rudimentary content, such that each or most frames in the overview retains some general appearance of the original frame. The rendering of the miniature overview may thus e.g. take into consideration the dominating color in each frame.

This miniature overview is displayed on a sub-portion of the display, when certain conditions apply, on top of the currently displayed frame, which has been rendered in the modified fashion. In this way, the user may view a frame rendered in a fashion that makes its content readable and useful, while still retaining a comprehension of the general layout of the entire ML content when needed. The conditions that make the miniature overview appear on the display will be discussed in greater detail later.

Fig 3 illustrates a display where a frame 21 and a semi-transparent miniature overview 23 are displayed. The miniature overview is substantially smaller than the display area. As illustrated, the miniature overview may use less than 25% of the display area in terms of number of pixels. Typically, also less than half of the pixels in each dimension of the display may be used.

The miniature overview 23 is semi-transparent, i.e. content 25 in the frame 21 is at least partly visible through the miniature overview 23. It is of course also possible to use miniature overviews that are not transparent at all.

The miniature overview may be displayed during a limited period of time, typically a few seconds, as soon as a predetermined condition applies.

The miniature overview may, as illustrated in fig 3, be displayed in the interior of the display area, such that the frame 21 surrounds the miniature overview on all sides. The miniature overview is then offset some distances 26, 27 from the display edges. This retains to a great extent the perception of continuous display of the frame's 21 content.

Figs 4 and 5 illustrate additional content that may be provided in a miniature overview. In the miniature overview of fig 4, an area 29 which corresponds to a currently displayed frame is highlighted by providing a specific visual effect in this area. The visual effect may be provided as a higher, lower or varying brightness or a specific color or pattern, etc.

The rendered frames may have a specific navigation order, such that the user, by e.g. activating "forward" and "backwards" buttons may switch to subsequent and previous modified frames in the order, respectively. The navigation order may be shown in the miniature overview 23, e.g. in the illustrated example as an arrow 31 commencing in an area 33 corresponding to the first frame in the order, running through the areas of the frames in

the specific order and ending in an area 35 corresponding to the last frame. In the illustrated example, the user may thus move to the frame immediately below the currently displayed frame 29 by pressing "forward", and may move to the frame immediately to the left of the currently displayed frame by pressing "backwards". Of course other ways of displaying the frame order are possible. Additionally, each frame in the overview may be marked with a tag, e.g. a digit, and input of the tag with input means on the portable device may make the portable device display the modified rendering of the corresponding frame.

In some cases, a user's action in a displayed modified frame, e.g. the activation of a button, may imply changes in another frame in the content. In this case, both an area 41, corresponding to the displayed modified frame, and an area 43, corresponding to the changed frame, may be highlighted in the overview, and optionally in different ways.

A number of predetermined conditions may activate the displaying of the miniature overview.

For instance, the user may navigate within a displayed modified frame, e.g. using a scrollbar or a cursor. In case the user by performing this navigation approaches the edge of a frame, the miniature overview may be displayed. This may continue as the user in this way actually crosses the border between two adjacent frames, switching to another frame. When crossing such a border, the user is thus made aware of where in the overall frame structure he is navigating.

Additionally, inputs from input means of the portable device may activate the overview.

As mentioned earlier, the user may further activate means within the currently displayed modified frame which affects the content of another frame. This action may trigger the displaying of the miniature overview. The same applies if the content of a frame is changed for some other reason e.g. is being updated. If the portable

device comprises a first and a second display, the currently displayed rendered frame and the miniature overview may be displayed in the first display, and the affected frame may be displayed in the second display.

Fig 6 illustrates a portable device with a display 51, input means 53 such as a keypad, and a set of functional modules 55, 57, 59, and 61. The modules are configured to carry out different actions in connection with functions described above. In the portable device, the modules may be devised as software executed by a processor, firmware or hardware (e.g. an application specific integrated circuit), or combinations thereof. Additionally, the modules may be integrated with each other in different ways.

A first rendering module 55 receives ML information and renders each frame in the modified fashion. A second rendering module 57 receives the ML information and renders the miniature overview as described above. The rendered information is made available to a display driver module 59 which feeds different rendered content to the display 51, and which is responsive to the input means 53. Additionally there is provided a monitoring module 61 which determines whether any of the above mentioned predetermined conditions apply, and, if so, instructs the driver module 59 to display the miniature overview. The monitoring module may receive data from the input means 53 and the driver module 59. The driver module may further alter the appearance of the overview, e.g. if a different modified frame is displayed, as mentioned above.

Fig 7 illustrates schematically a chart comprising action for a method for displaying ML content. In the method, a number of actions are carried out, as mentioned above. A miniature overview of the content is rendered 71, such that the proportions and the relative positions of the frames substantially correspond to the defining information of the ML document. Further the frames are

rendered 73 one by one, such that the width of a rendered frame is adapted to the number of pixels in one dimension of the display. At least one of the frames rendered one by one is displayed 75. Further it is monitored 77 whether a predetermined condition is satisfied, and when the condition is satisfied the miniature overview is displayed on top of the currently displayed frame in a sub-portion of the display.

The displayed ML document may consist of information retrieved from a remote location, but may also correspond to a user interface for the portable device. The user interface may be locally implemented.

The invention is not restricted to the described embodiments, and may be varied within the scope of the appended claims. For instance other ML content than HTML is conceivable, e.g. XML (Extensible Markup Language).

CLAIMS

1. A method for displaying ML content of an ML document in a display of a portable device, wherein the ML content includes a plurality of frames, c h a r a c t e r i z e d by:

-rendering (71) a miniature overview (23) of the content, wherein the proportions and the relative positions of the frames correspond to the defining information of the ML document, the miniature overview being smaller, in terms of pixels, than the display;

-rendering (73) the frames, one by one, wherein a frame is rendered such that its width is adapted to the number of pixels in one dimension of said display;

-displaying (75) one of the rendered frames (21) at a time in said display, thereby allowing a user to navigate within a frame; and

-monitoring (77) whether a predetermined condition is satisfied, and when the condition is satisfied displaying said miniature overview on top of the said one of the rendered frames at a sub-portion of the display.

2. A method according to claim 1, wherein the miniature overview uses less than a quarter of the total display area.

3. A method according to claim 1 or 2, wherein, when the condition is satisfied, the miniature overview is displayed during a limited period of time.

4. A method according to any of the preceding claims, wherein the miniature overview is displayed being semi-transparent, such that content of said one of the rendered frames is visible through the miniature overview.

5. A method according to any of the preceding claims, wherein the miniature overview is displayed in the interior of the display area, such that said one of the rendered frames surrounds the miniature overview.

6. A method according to any of the preceding claims, wherein the rendered frames have a navigation order, and the navigation order is shown in the miniature overview.

7. A method according to any of the preceding claims, wherein an area corresponding to said one of the rendered frames is highlighted in a first way in the miniature overview.

8. A method according to claim 7, wherein an area corresponding to a frame affected by a user's action in said one of the rendered frames is highlighted in a second way in the miniature overview.

9. A method according to any of the preceding claims, wherein the predetermined condition is satisfied when a user, by navigating within said one of the rendered frames, approaches an edge thereof.

10. A method according to any of the preceding claims, wherein the predetermined condition is satisfied when a user, by activating means within said one of the rendered frames, affects the content of another frame.

11. A method according to any of the preceding claims, wherein said ML document contains at least parts of a user interface for the portable device.

12. A portable device for displaying ML content of an ML document in a display of the portable device, wherein the ML content includes a plurality of frames, c h a r a c t e r i z e d by:

- means (57) for rendering a miniature overview of the content, wherein the proportions and the relative positions of the frames correspond to the defining information of the ML document, the miniature overview being smaller, in terms of pixels, than the display;

- means (55) for rendering the frames, one by one, wherein a frame is rendered such that its width is adapted to the number of pixels in one dimension of said display;

-means (59) for displaying one of the rendered frames at a time in said display, thereby allowing a user to navigate within a frame; and

- means (61, 59) for monitoring whether a predetermined condition is satisfied, and when the condition is satisfied displaying said miniature overview on top of the said one of the rendered frames at a sub-portion of the display.

13. A portable device according to claim 12, wherein the portable device is configured such that the miniature overview uses less than a quarter of the total display area.

14. A portable device according to claim 12 or 13, wherein the portable device is configured such that, when the condition is satisfied, the miniature overview is displayed during a limited period of time.

15. A portable device according to any of claims 12-14, wherein the portable device is configured such that the miniature overview is displayed being semi-transparent, such that content of said one of the rendered frames is visible through the miniature overview.

16. A portable device according to any of claims 12-15, wherein the portable device is configured such that miniature overview is displayed in the interior of the display area, such that said one of the rendered frames surrounds the miniature overview.

17. A portable device according to any of claims 12-16, wherein the portable device is configured such that the rendered frames are given a navigation order, and the navigation order is shown in the miniature overview.

18. A portable device according to any of claims 12-17, wherein the portable device is configured such that an area corresponding to said one of the rendered frames is highlighted in a first way in the miniature overview.

19. A portable device according to claim 18, wherein the portable device is configured such that an area corresponding to a frame affected by a user's action in said

one of the rendered frames is highlighted in a second way in the miniature overview.

20. A portable device according to any of claims 12-19, wherein the predetermined condition is satisfied when a user, by navigating within said one of the rendered frames, approaches an edge thereof.

21. A portable device according to any of claims 12-20, wherein the predetermined condition is satisfied when a user, by activating means within said one of the rendered frames, affects the content of another frame.

22. A portable device according to claim 21, wherein the portable device comprises a first and a second display, wherein said one of the rendered frames and the miniature overview is displayed in the first display, and wherein said another frame is displayed in the second display.

23. A portable device according to any of claims 12-22, wherein said ML document contains at least parts of a user interface for the portable device.

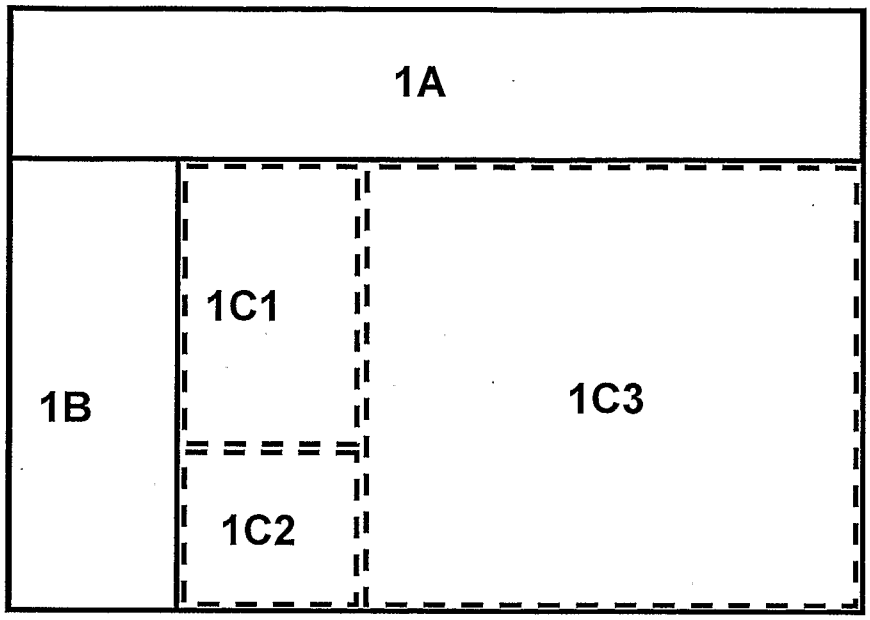

Fig 1

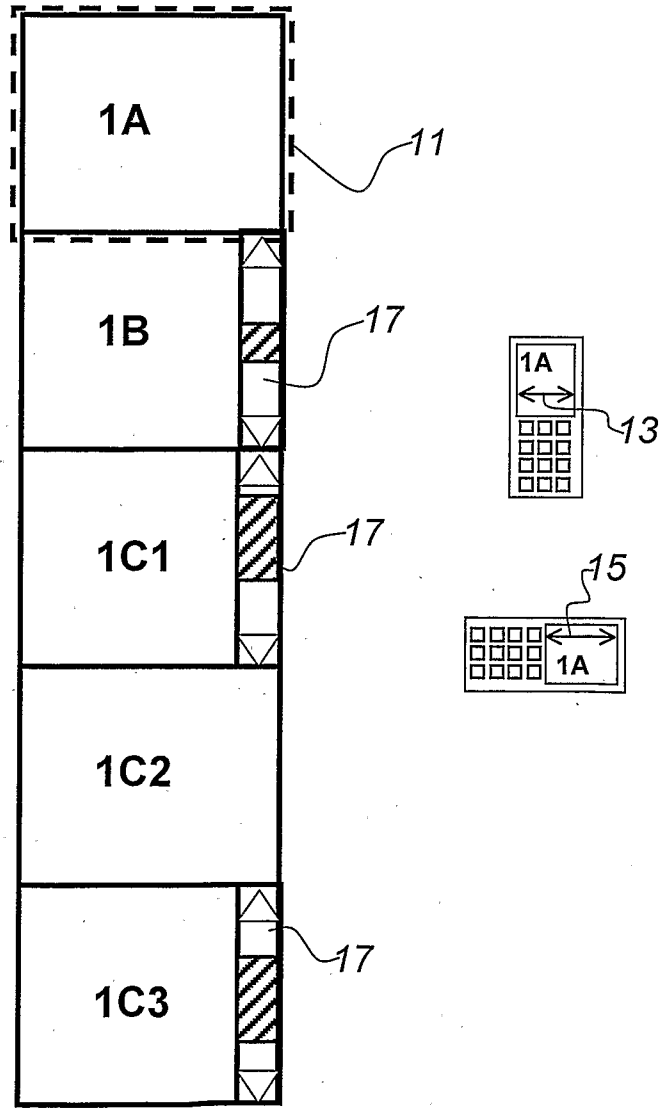

Fig 2

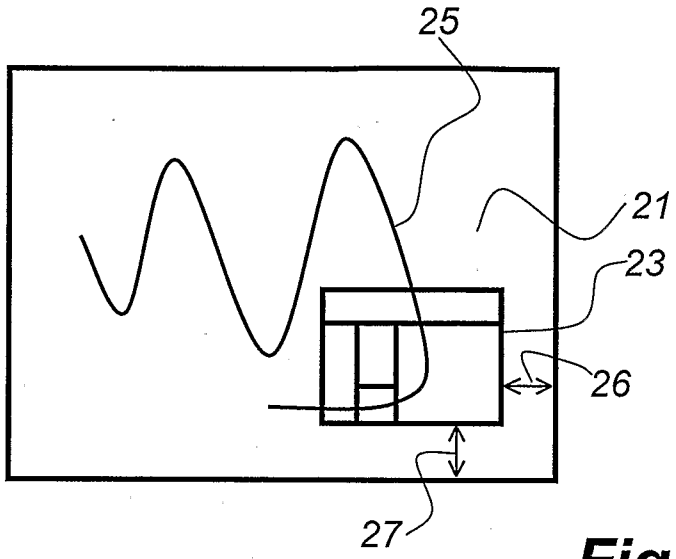

Fig 3

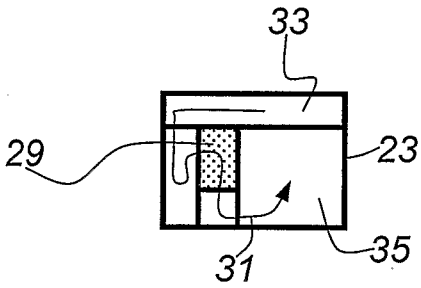

Fig 4

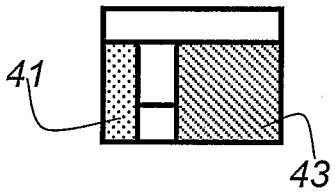

Fig 5

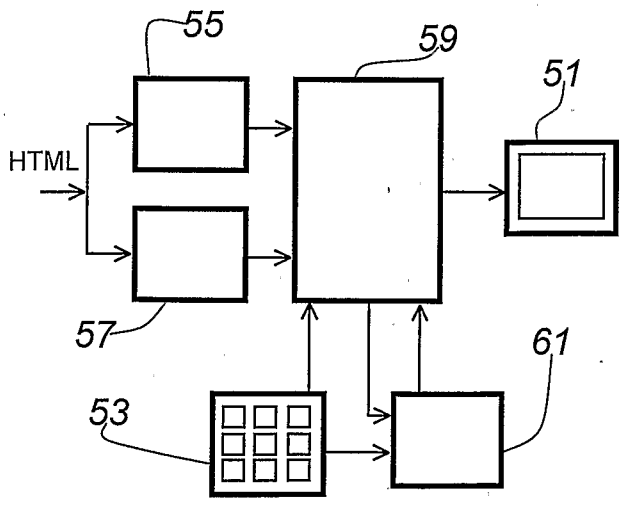

Fig 6

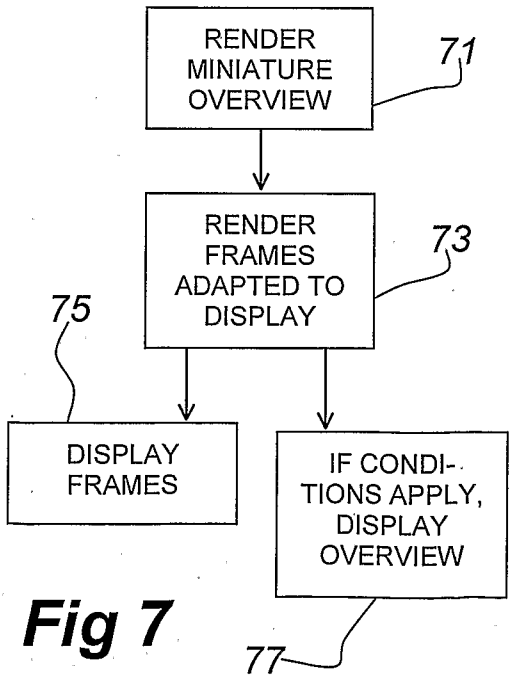

Fig 7

INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE2007/000035

A. CLASSIFICATION OF SUBJECT MATTER

IPC: see extra sheet
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC: G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MILIC-FRAYLING N, ET AL "SmartView: Enhanced document Viewer for Mobile Devices" Technical Report MSR-TR 2002-114, November 15, 2002. Retrieved October 8 2007 on the Internet: ftp://ftp.research.microsoft.com/pub/tr/tr-2002-114.pdf, figures 2-4, sections 2 and 2.1	1-23
A	US 20060259859 A1 (IVARSOY, G ET AL), 16 November 2006 (16.11.2006), paragraphs 126-127, figure 6, claims 1-3, abstract	1-23
A	WO 2005071567 A1 (NOKIA CORPORATION), 4 August 2005 (04.08.2005), page 9, line 6 - line 16, figure 4b, claims 1-4	1-23

[X] Further documents are listed in the continuation of Box C. [X] See patent family annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
11 October 2007	19-10-2007
Name and mailing address of the ISA/ Swedish Patent Office Box 5055, S-102 42 STOCKHOLM Facsimile No. +46 8 666 02 86	Authorized officer Alexander Lakic/ABW Telephone No. +46 8 782 25 00

INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE2007/000035

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 20040133848 A1 (HUNT, S ET AL), 8 July 2004 (08.07.2004), abstract --	1-23
A	WO 2005017872 A1 (NOKIA CORPORATION), 24 February 2005 (24.02.2005), abstract -- --------	1-23

International patent classification (IPC)
G06F 17/00 (2006.01)
G06F 17/22 (2006.01)
G06F 17/30 (2006.01)

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Cited literature, if any, will be enclosed in paper form.

US	20060259859	A1	16/11/2006	NONE			
WO	2005071567	A1	04/08/2005	EP	1706829	A	04/10/2006
				FI	6249	U	27/05/2004
				FI	20040086	A,V	23/07/2005
				KR	20060126729	A	08/12/2006
				US	20050188298	A	25/08/2005
US	20040133848	A1	08/07/2004	AU	2003286614	A	00/00/0000
				US	20040049737	A	11/03/2004
				WO	2004040481	A	13/05/2004
				US	7072984	B	04/07/2006
				WO	02087135	A	31/10/2002
WO	2005017872	A1	24/02/2005	EP	1656661	A	17/05/2006
				EP	1665223	A	07/06/2006
				FI	20031169	A	20/02/2005
				US	20050044484	A	24/02/2005
				US	20050044506	A	24/02/2005
				WO	2005017873	A	24/02/2005
				FI	20045112	A	01/10/2005