EXHIBIT 4

Exhibit 4: U.S. Patent No. 7,469,381 and WO 03/081458 to Lira / U.S. Patent No. 7,872,640 to Lira

U.S. Pat. No. 7,469,381	WO 03/081458 to Lira / U.S. Patent No. 7,872,640 to Lira[1]
Claim 1	
A computer-implemented method, comprising:	Lira discloses a computer-implemented method. For example, Lira discloses a method for viewing and navigating a document on "a device having a small display or a small display window, such as, for example, a PDA, a telephone, a handheld computer, or an electronic book." Lira at p. 1 lns. 16-18.
(a) at a device with a touch screen display	Lira discloses a computer-implemented method at a device with a touch screen. For example, the display of the device "may include a touch screen and tracking motion of the input tool may include tracking motion of the input tool on the touch screen." *Id.* at p. 3 lns. 10-11.
(b) displaying a first portion of an electronic document;	Lira discloses displaying a first portion of an electronic document. For example, Lira discloses an electronic device for browsing an electronic document. Lira at p. 1 ln. 28 – p. 2 ln. 3. As part of that browsing of an electronic document, Lira will display a first portion of an electronic document. As explained and illustrated in Lira, a display screen can be thought of as a small field-of-view window over a large image or electronic document. As disclosed in Lira, the electronic document may be a web page with structured elements such as columns. Lira discloses several ways for a display screen to pan through a document whose size exceeds the size of the display screen. Specifically, Lira discloses several ways for the panning to utilize structures in the document in order to align the display screen with structures in the document.

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[1] Cites are to WO 03/081458.

| | One such mechanism is an animated "snap" feature that "snaps" the edge of the display screen to the edge of a structure in the document when a panning operation ends (for example, when a user lifts their finger off a touch-screen display). This "snap" feature is disclosed in Lira as one of several solutions for ensuring that a display screen panning through a large document remains properly aligned with the data in that large electronic document. See, e.g., Lira at p. 14-15.

Lira illustrates the steps of panning and scrolling an electronic document in its figures. Fig. 2 of Lira shows a webpage (item 100) that is too large to display in its entirety on the relatively small screen of a device such as a PDA. Instead, only a portion of the web page can be displayed in the PDA's browser window at any given time. This is illustrated in Fig. 2 by a display window (item 200) superimposed onto the web page. Since the web page is larger than the display window 200, the user must scroll back and forth (indicated in Fig. 2 by arrows that indicate potential scrolling directions) to view different areas of the web page. |
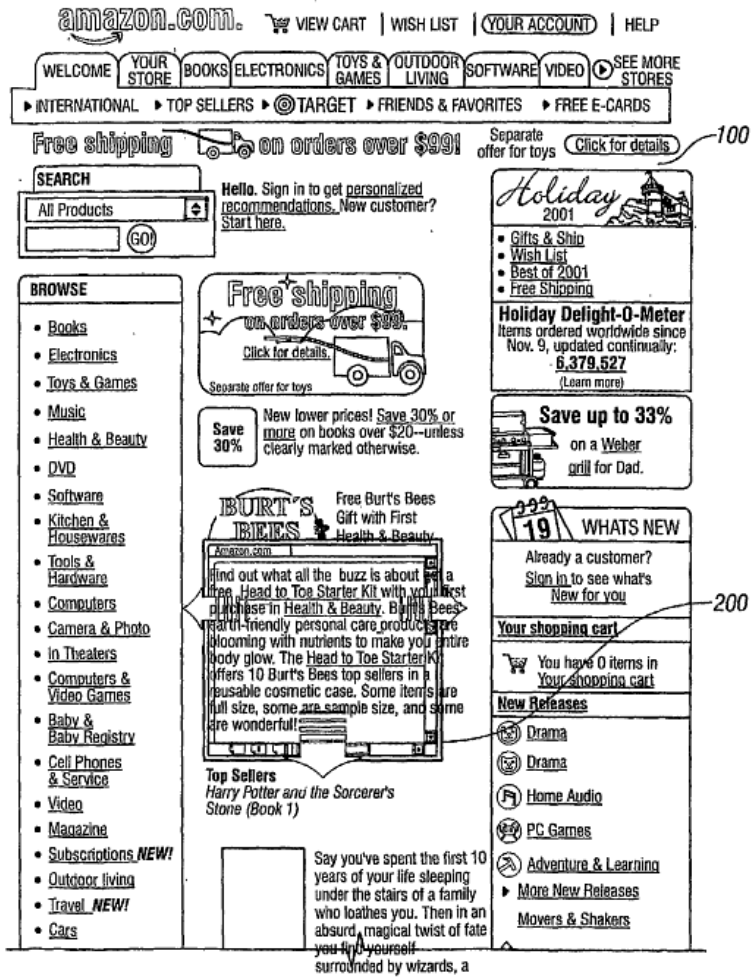|---|---|

FIG. 2

Lira discloses scrolling through this web page by illustrating the position over time of one browser window performing a panning operation. In Fig. 10, Lira illustrates a horizontal scrolling operation by showing multiple display windows that represent the path of a single window scrolling horizontally through the web page:
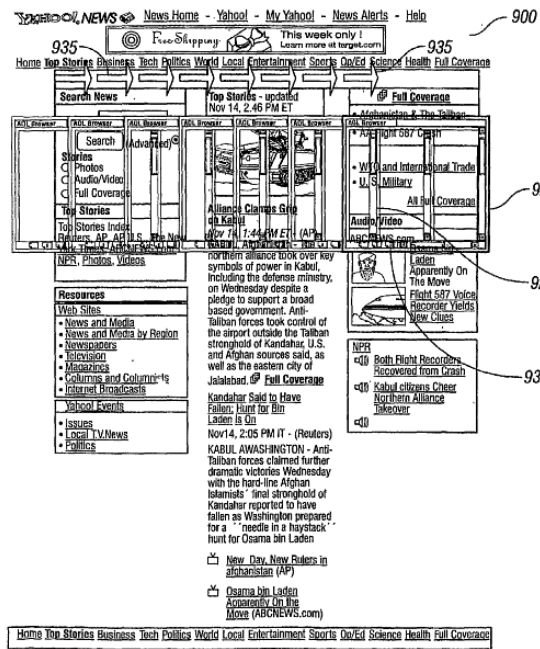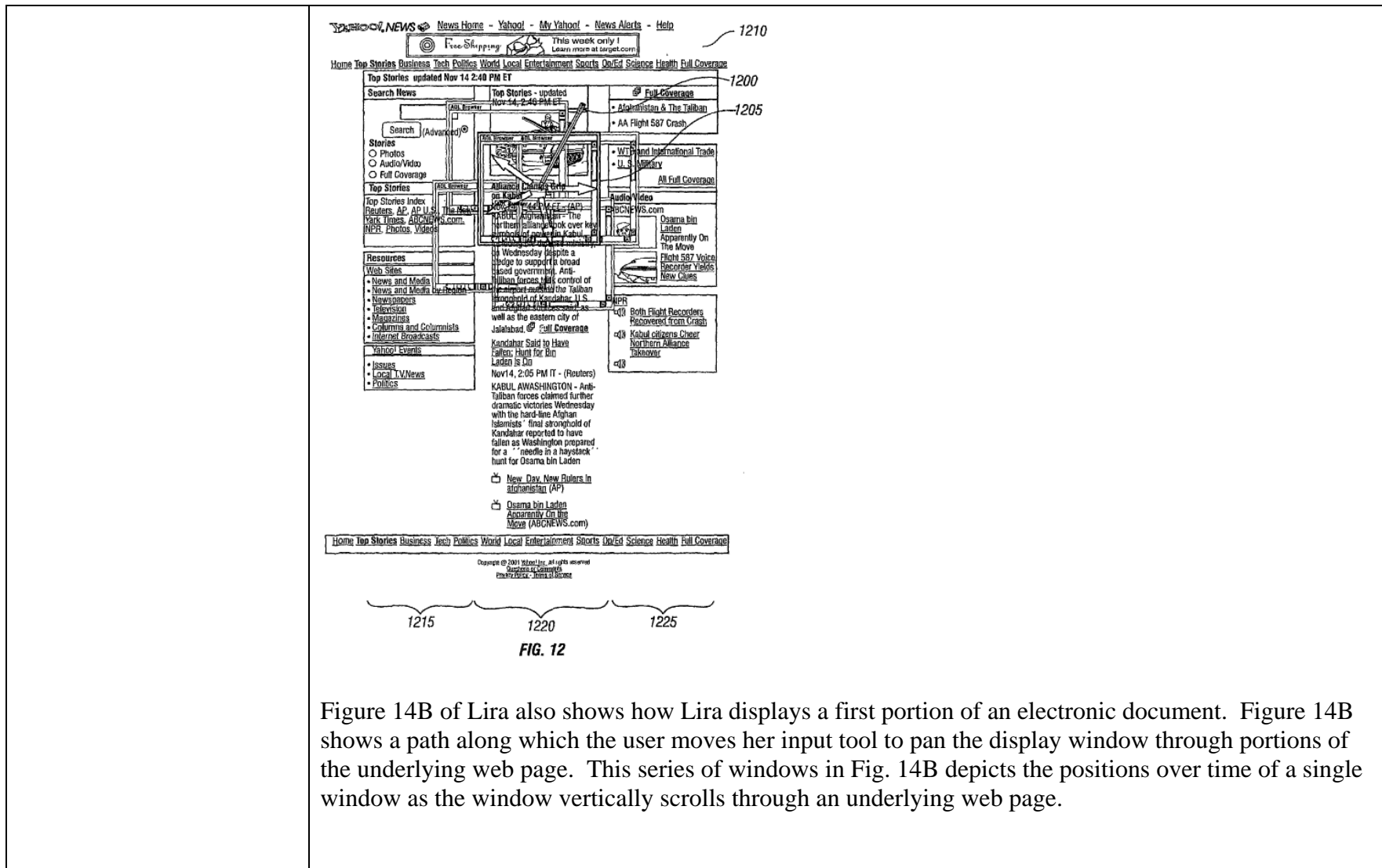
FIG. 10

Fig. 12 likewise illustrates scrolling this window in horizontal, vertical, or diagonal directions using a stylus:

YAHOO! NEWS   News Home – Yahoo! – My Yahoo! – News Alerts – Help — 1210

Free Shipping   This week only !   Learn more at target.com

Home Top Stories Business Tech Politics World Local Entertainment Sports Op/Ed Science Health Full Coverage

Top Stories updated Nov 14 2:40 PM ET — 1200

Search News | Top Stories - updated Nov 14, 2:40 PM ET | Full Coverage — 1205
• Afghanistan & The Taliban
• AA Flight 587 Crash

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Stories
○ Photos
○ Audio/Video
○ Full Coverage

• WTC and International Trade
• U. S. Military
All Full Coverage

Top Stories
Top Stories Index
Reuters, AP, AP U.S, The New York Times, ABCNEWS.com,
NPR, Photos, Videos

Alliance Claims Grip on Kabul
Nov14, 2:44 PM ET - (AP)
KABUL, Afghanistan - The northern alliance took over key symbols of power in Kabul on Wednesday despite a pledge to support a broad based government. Anti-Taliban forces took control of the airport and the Taliban stronghold of Kandahar. U.S. and British officials said as well as the eastern city of Jalalabad. Full Coverage

Audio/Video
Osama bin Laden Apparently On The Move

Flight 587 Voice Recorder Yields New Clues

NPR
Both Flight Recorders Recovered from Crash
Kabul citizens Cheer Northern Alliance Takeover

Resources
Web Sites
• News and Media
• News and Media by Region
• Newspapers
• Television
• Magazines
• Columns and Columnists
• Internet Broadcasts

Yahoo! Events
• Issues
• Local T.V.News
• Politics

Kandahar Said to Have Fallen; Hunt for bin Laden Is On
Nov14, 2:05 PM IT - (Reuters)
KABUL AWASHINGTON - Anti-Taliban forces claimed further dramatic victories Wednesday with the hard-line Afghan Islamists' final stronghold of Kandahar reported to have fallen as Washington prepared for a ''needle in a haystack'' hunt for Osama bin Laden

New Day, New Rulers in afghanistan (AP)

Osama bin Laden Apparently On the Move (ABCNEWS.com)

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1215   1220   1225

FIG. 12

Figure 14B of Lira also shows how Lira displays a first portion of an electronic document. Figure 14B shows a path along which the user moves her input tool to pan the display window through portions of the underlying web page. This series of windows in Fig. 14B depicts the positions over time of a single window as the window vertically scrolls through an underlying web page.
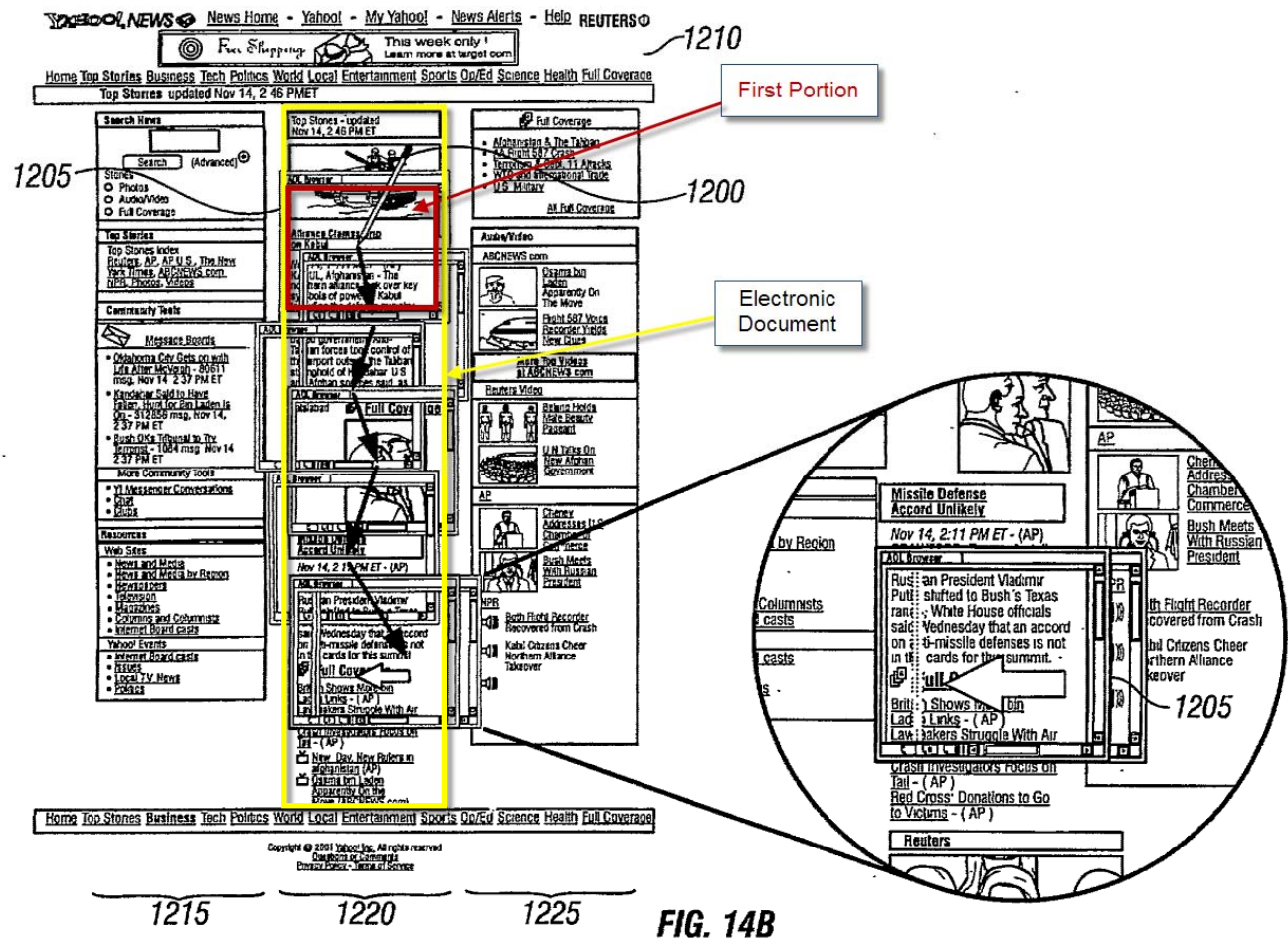
FIG. 14B

As shown in the figure, the logical column 1220 is an electronic document. For example, this logical column 1220 has boundaries. Lira at p. 15 ln. 25 – 29. Logical columns 1215 and 1225 are likewise each electronic documents. All of these logical columns 1215, 1220, and 1225 are sub-documents in a larger electronic document: the web page.

Fig. 14B illustrates several different portions of the electronic document 1220 being displayed in the display window over time. Any one of these displayed area of the logical column 1220 is a first portion

	of that electronic document.

(c) detecting a movement of an object on or near the touch screen display;	Lira discloses detecting a movement of an object on or near the touch screen display. For example, Lira discloses that the user can browse through an electronic document using a touch screen display, which will detect when a user touches or presses the display.
	
	For example, Lira discloses:
	
	    In another general aspect, navigating on a display includes tracking motion of an input tool on a display, comparing the motion of the input tool to a threshold, changing the position of the visible portion of a page of information on the display if the motion exceeds the threshold, and constraining the position of the visible portion of the page of information on the display if the motion does not exceed the threshold.
	
	    . . .
	
	    The display may include a touch screen and tracking motion of the input tool may include tracking motion of the input tool on the touch screen. The touch screen may include, for example, a resistive sensor, a capacitive sensor, an acoustic wave sensor, or an infrared sensor. The touch screen may include a sensor activated by touch activation force by the input tool on the display.
	
	Lira at p. 3 lns. 1-14.

(d) in response to detecting the movement, translating the electronic document displayed on the touch screen display in a first direction to display a second portion of the electronic document,	Lira discloses in response to detecting the movement, translating the electronic document displayed on the touch screen display in a first direction to display a second portion of the electronic document. For example, Lira discloses that in response to detecting the movement of the finger on the touch screen, panning through the electronic document. For example, Lira discloses: In another general aspect, navigating on a display includes tracking motion of an input tool on a display, comparing the motion of the input tool to a threshold, changing the position of the visible portion of a page of information on the display if the motion

| | exceeds the threshold, and constraining the position of the visible portion of the page of information on the display if the motion does not exceed the threshold.

Lira at p. 3 lns. 1-14.

Lira further discloses "touch-and-drag" scrolling, where the user can "scroll the display window by placing a stylus 600 on the display window 605 and then dragging the stylus 600." Lira at p. 11 lns. 27-29. See also Lira at p. 14 ln. 29 – p. 15 ln. 30 & Fig. 12.

As the user drags the document to scroll in a first direction, a second portion of the electronic document that is different than the first portion of the electronic document will be displayed, as illustrated in Figure 14B. |
|---|---|

FIG. 14B
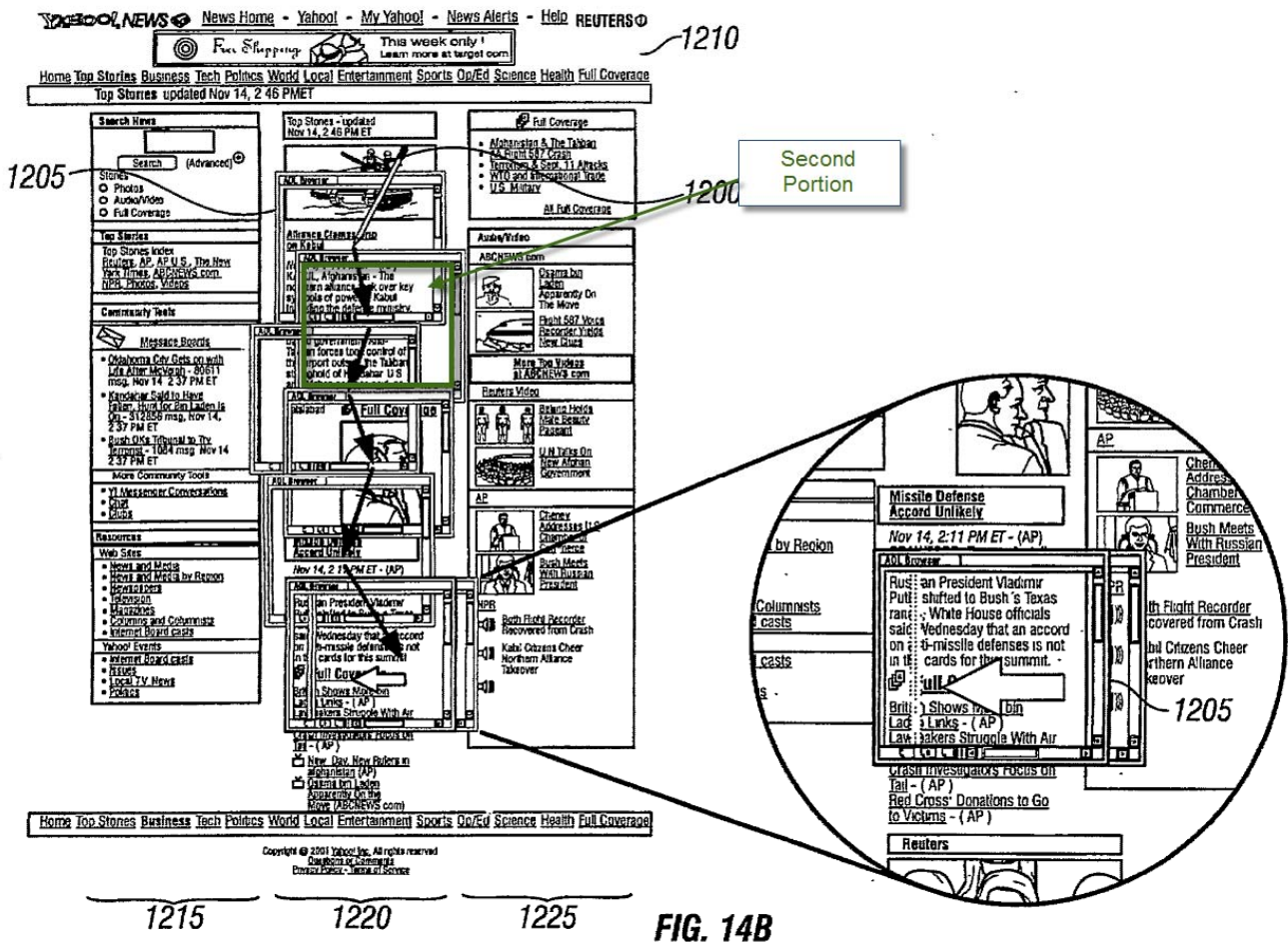
| (e) wherein the second portion is different from the first portion: | Lira discloses the second portion is different from the first portion. For example, the first and second portions are different because the user has scrolled down the document, as shown in Fig. 14B. |

First and Second Portions are different

FIG. 14B
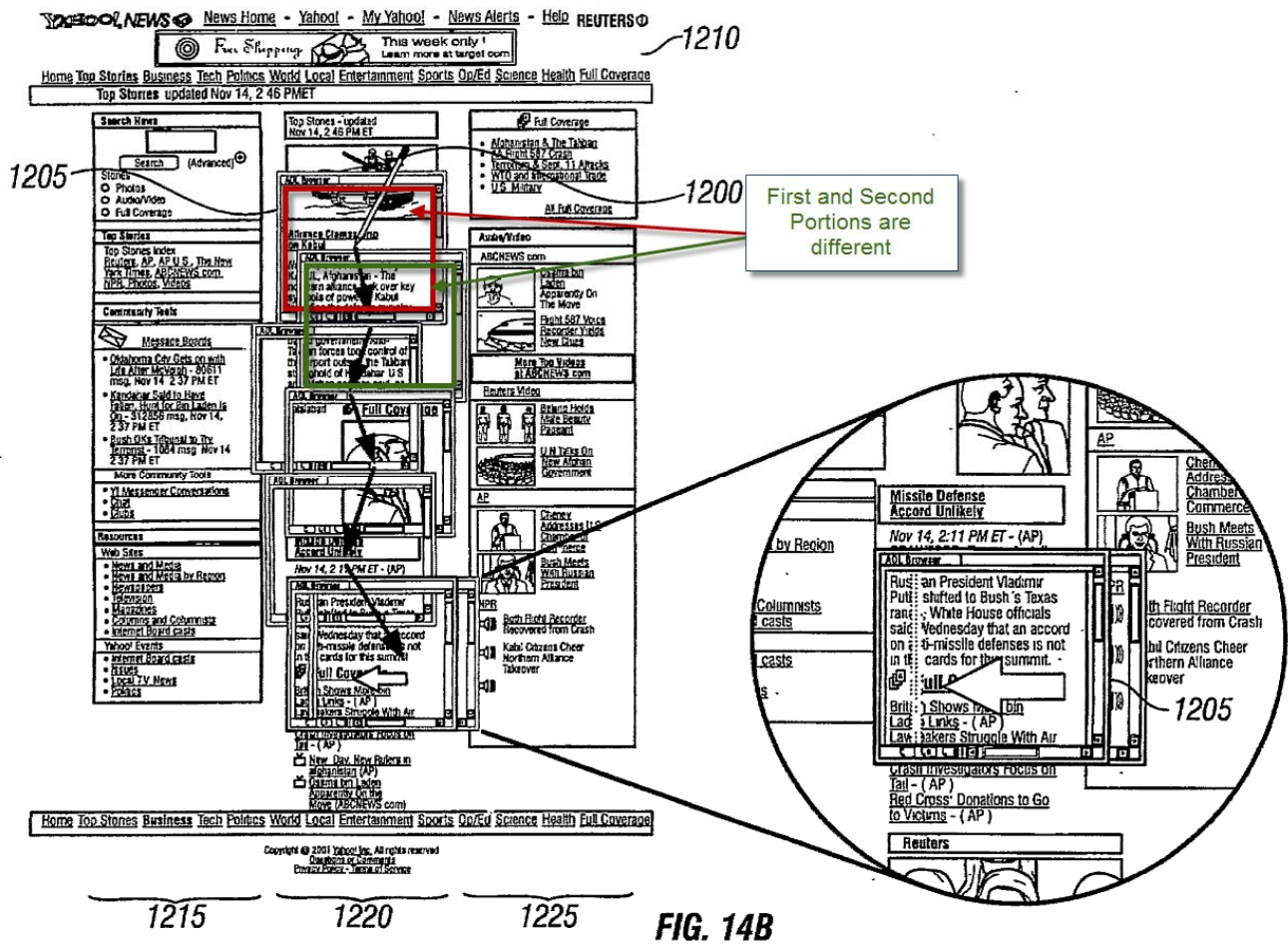
(f) in response to an edge of the electronic document being reached while translating the electronic document in the first direction while the object is	Lira discloses in response to an edge of the electronic document being reached while translating the electronic document in the first direction while the object is still detected on or near the touch screen: displaying an area beyond the edge of the document. For example, in one mode described in Lira, if the user moves the screen away from the column being

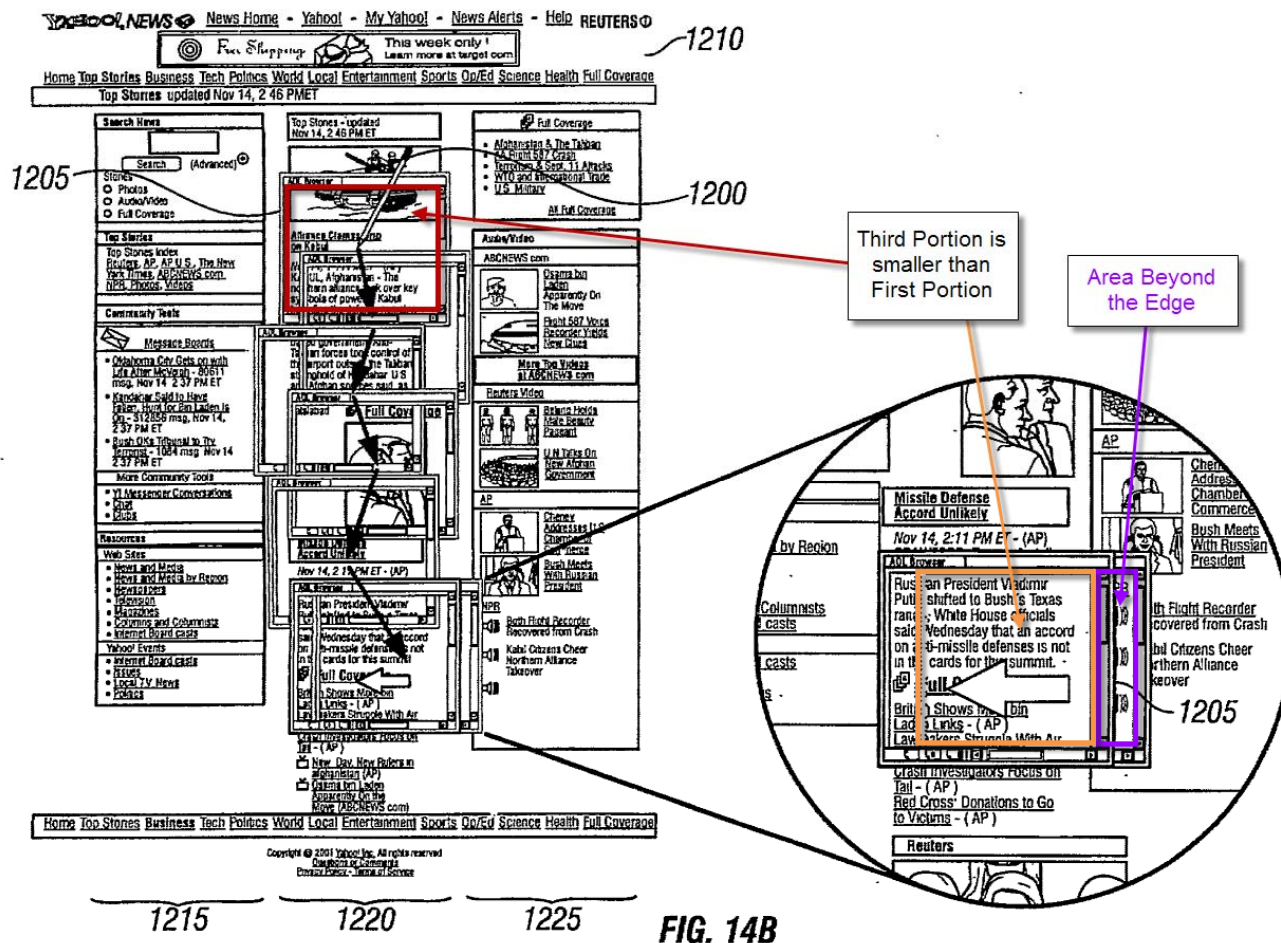| still detected on or near the touch screen: displaying an area beyond the edge of the document, and	read, an area beyond the edge of the column will be displayed.
	For example, Lira discloses "vertical alignment control" which will align the display window to an edge of the electronic document. In one embodiment, "the vertical alignment control is enabled when the user lifts the pen 1200 from the display 1205," which causes the column "to snap into alignment with the display window as the user stops scrolling." Lira at p. 15 lns. 18-31.
	Figure 14B illustrates this "snap-to" behavior, including the conditions that trigger this "snap" behavior. As shown in the figure, the display window 1205 is displaying an area beyond the edge of the logical column 1220. Specifically, the display window 1205 is displaying an area of logical column 1220 and also displaying an area of logical column 1225 (a separate electronic document).
	FIG. 14B
(g) displaying a third	Lira discloses displaying a third portion of the electronic document that is smaller than the first portion.
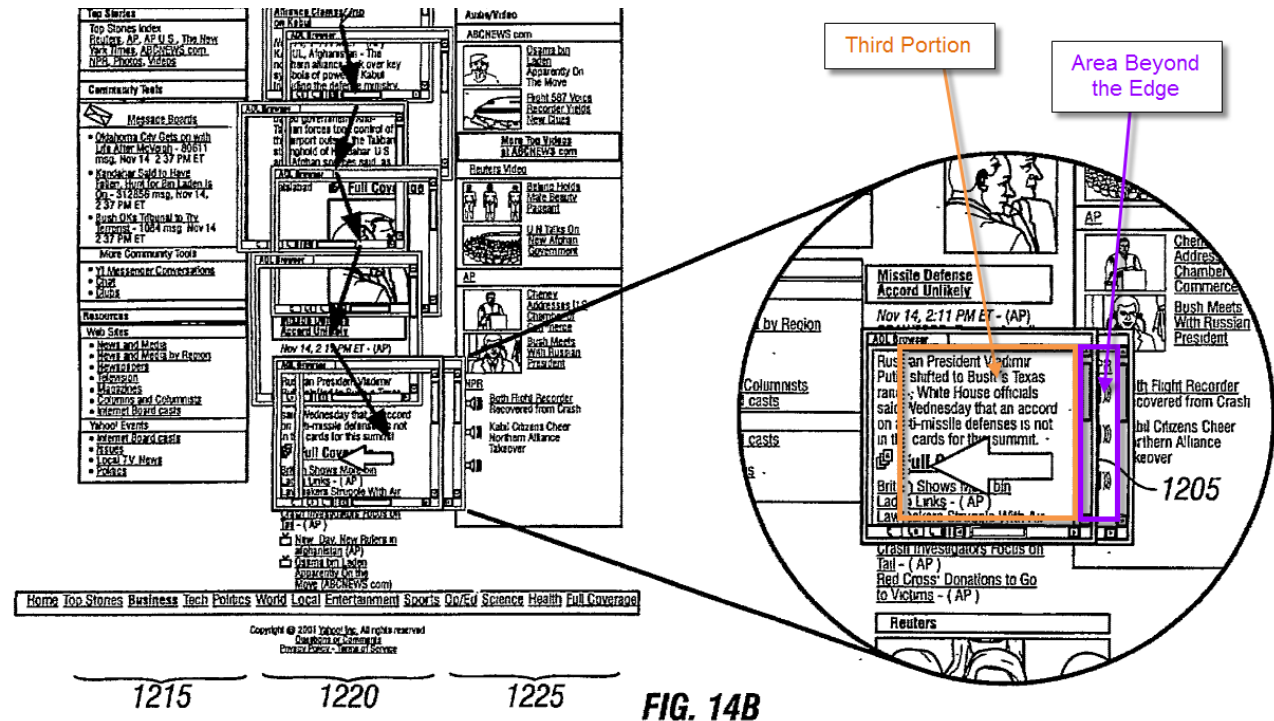
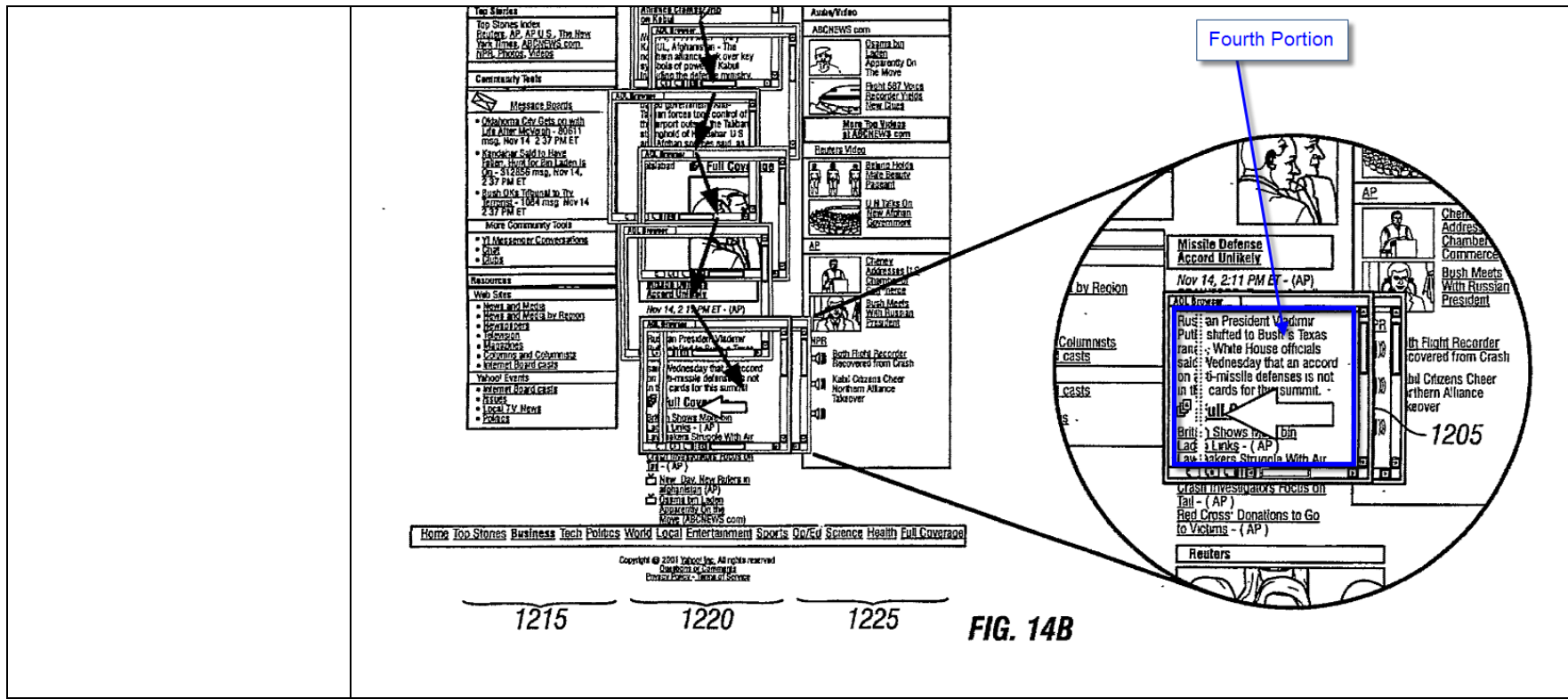|	
portion of the electronic document, wherein the third portion is smaller than the first portion; and	For example, as the user continues to drag the display window beyond the edge of the logical column 1220, the display window will increasingly pan over areas of logical column 1225. When this occurs, because the display window is only devoting a portion of its display area to the display of logical column 1220, the third portion of the column 1220 being displayed is smaller than the first portion of column 1220.
	FIG. 14B
(h) in response to detecting that the object is no longer	Lira discloses in response to detecting that the object is no longer on or near the touch screen display, translating the electronic document in a second direction until the area beyond the edge of the electronic

| on or near the touch screen display, translating the electronic document in a second direction until the area beyond the edge of the electronic document is no longer displayed to display a fourth portion of the electronic document, | document is no longer displayed to display a fourth portion of the electronic document.

For example, Lira discloses that "as the pen 1200 is lifted from the screen" certain actions occur depending on whether the panning operation moving the display from column 1220 to column 1225 has exceeded some threshold. Specifically, when the user lifts the stylus or finger from the screen, "the logical column 1220 [will] snap into alignment with the display window 1205 as the user stops scrolling. The user can adjust the snap sensitivity by, for example, setting the alignment control to snap to the nearest logical column based on a user-defined threshold. If the user's scrolling does not exceed the threshold, which indicates an intention to continue to view the text column 1220, the display 1205 centers the logical column 1210 as the pen 1200 is lifted from the screen." Lira at p. 15 lns. 19-25.

This snap-to function will move the document in a second direction, as indicated in the arrow in Fig. 14B, until the area beyond the edge of the column is no longer displayed. This will result in a fourth portion of the column 1220 being displayed, and will also result in no area of column 1225 being displayed, as shown in Fig. 14B: |
|---|---|

Fourth Portion

1215   1220   1225   **FIG. 14B**

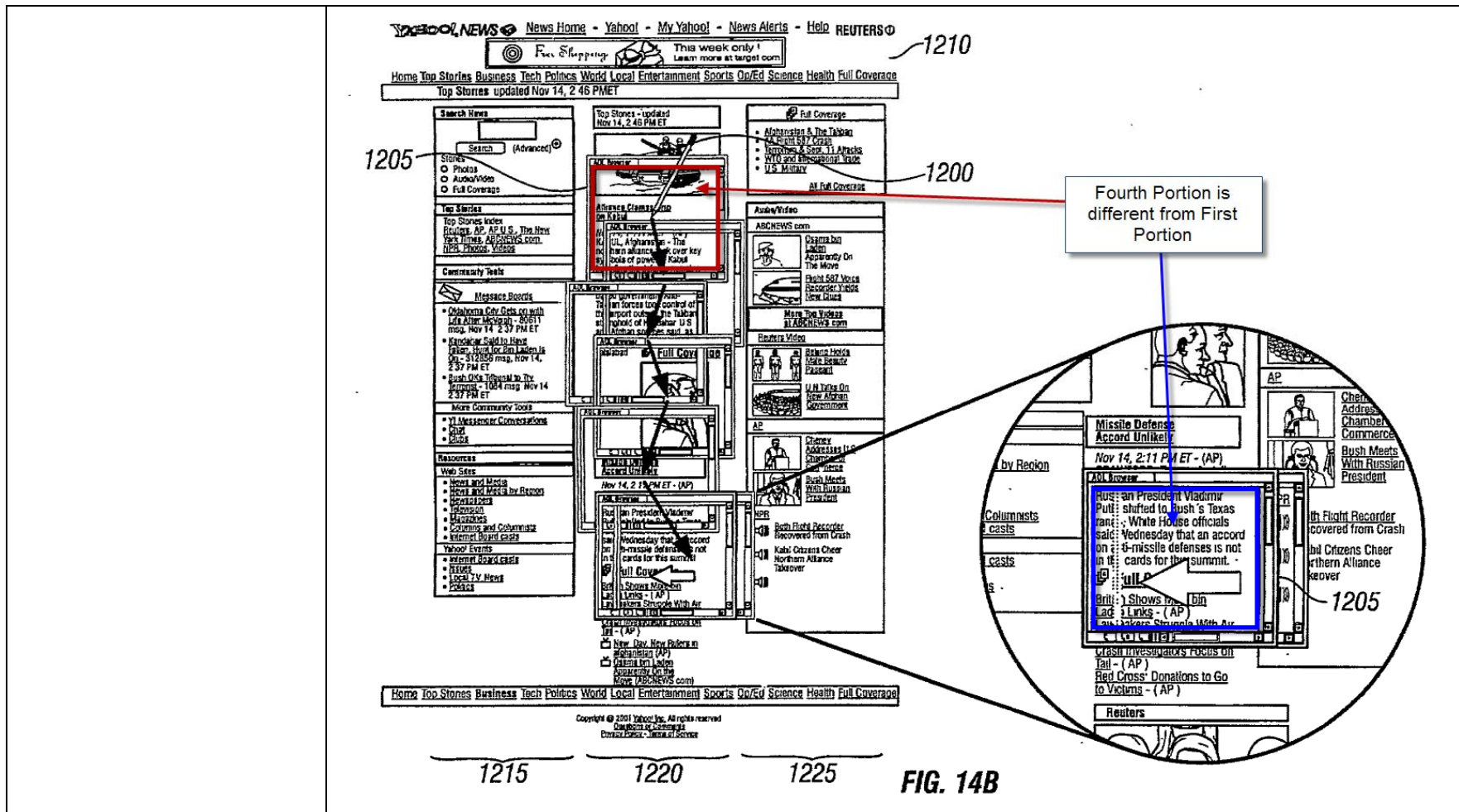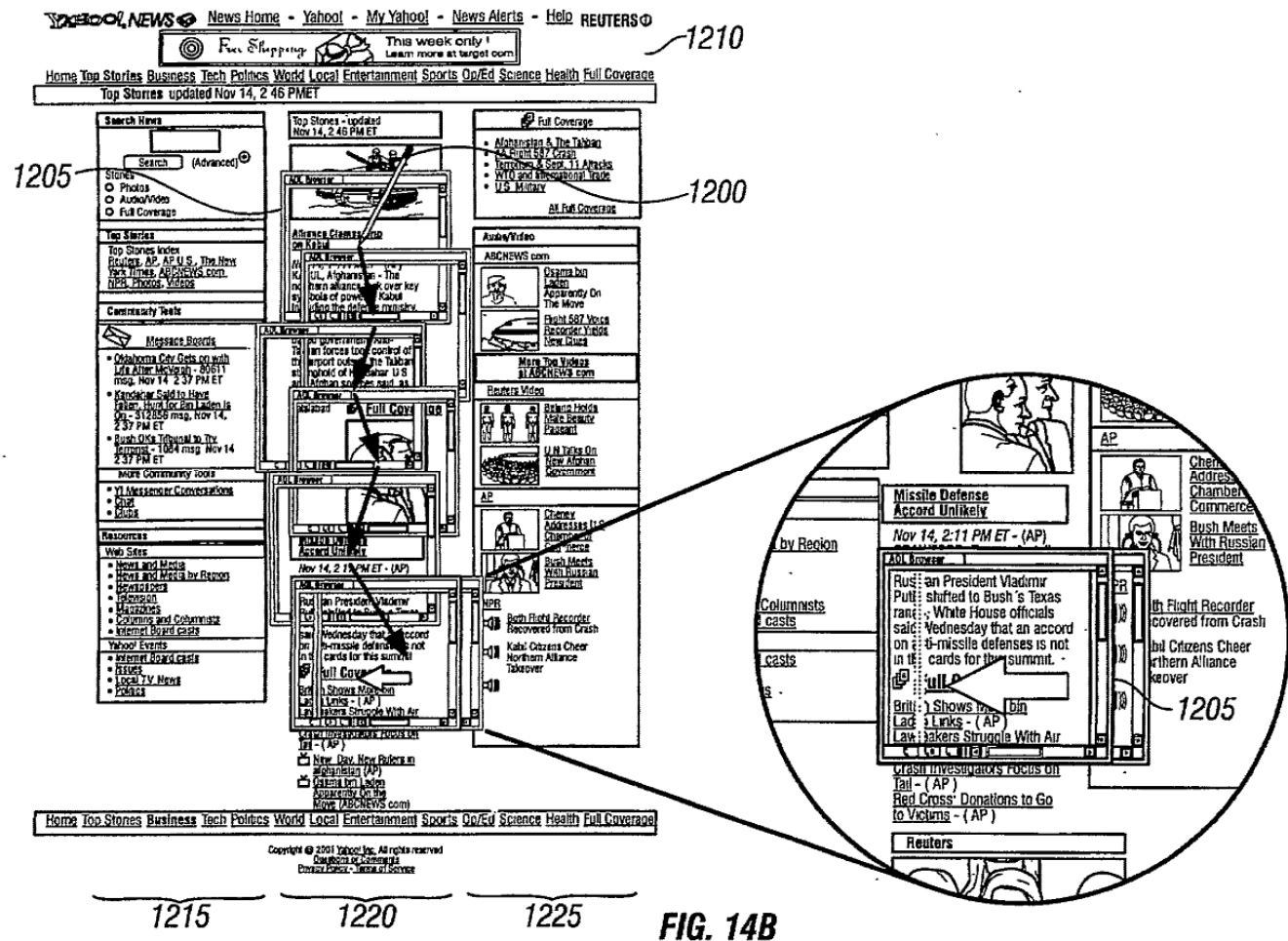|	
(i) wherein the fourth portion is different from the first portion.	Lira discloses the fourth portion is different from the first portion. For example, the fourth portion will be different from the first portion because the user has scrolled down through the electronic document, as shown in Figure 14B.

FIG. 14B

Callout in figure: "Fourth Portion is different from First Portion"

Reference numerals: 1210, 1200, 1205, 1215, 1220, 1225

Claim 2	
The computer-implemented method of claim 1, wherein the first portion of the electronic document, the second portion of the electronic document, the	Lira discloses the first portion of the electronic document, the second portion of the electronic document, the third portion of the electronic document, and the fourth portion of the electronic document are displayed at the same magnification. For example, the first, second, third, and fourth portions of the electronic document are all displayed at the same magnification. As Figure 14B illustrates, the magnification of the document is not changed as the page turning animation progresses:

third portion of the electronic document, and the fourth portion of the electronic document are displayed at the same magnification.	 FIG. 14B
Claim 3	
The computer implemented method of claim 1, wherein the movement of the object is on the touch screen display.	Lira discloses that the touch screen input occurs in response to the user touching or pressing the touch screen display: The display may include a touch screen and tracking motion of the input tool may include tracking motion of the inptu tool on the touch screen. The touch screen may include, for

	example, a resistive sensor, a capacitive sensor, an acoustic wave sensor, or an infrared sensor. The touch screen may include a sensor activated by touch activation force by the input tool on the display. Lira at p. 3 lns. 10-14.
Claim 4	
The computer-implemented method of claim 1, wherein the object is a finger.	Lira discloses that the user can operate the touch screen using his finger. For example, Lira discloses "the input tool may be a pen stylus or a finger, and the tracking motion of the input tool may include tracking the pen or finger on the display surface." Lira at p. 3 lns. 6-9.
Claim 5	
The computer-implemented method of claim 1, wherein the first direction is a vertical direction, a horizontal direction, or a diagonal direction.	Lira discloses that the first direction is a vertical direction. For example, Lira discloses "vertical alignment control" that can be used to minimize wobble "during vertical scrolling." Lira at p. 14 lns. 29-30. See also Figures 12 & 14B.
Claim 6	
The computer-implemented method of claim 1, wherein the electronic document is a web page.	Currently not at issue.
Claim 7	
The computer-implemented method of claim 1, wherein the electronic document is a digital image.	Lira does not explicitly disclose applying its methods to a digital image. However, because images can be included within an HTML page, the techniques disclosed by Lira are explicitly applied to electronic documents that include digital images. Thus it would have been obvious to one of ordinary skill in the art to modify the computing device disclosed by Lira so that the electronic document is a digital image. The user interface features identified above as anticipating claim 1 of the '381 patent operate independently of the nature of the underlying electronic document. In other words, the user can use these same techniques to manipulate any document displayed on the screen, regardless of whether the document is a list of items or a digital image. Additionally, because digital images are commonly displayed on computing devices, one of skill in the art would be motivated to modify Lira so that its user interface features would operate on digital images as well.

Claim 8	
The computer-implemented method of claim 1, wherein the electronic document is a word processing, spreadsheet, email or presentation document.	Currently not at issue.
Claim 9	
The computer-implemented method of claim 1, wherein the electronic document includes a list of items.	Lira discloses the electronic document includes a list of items. For example, as shown in Fig. 14B, the logical columns of the web page as disclosed by Lira include lists of items.

Figure labels visible in figure: 1210, 1205, 1200, List of Items, Electronic Document, 1215, 1220, 1225, 1205

FIG. 14B

Claim 10	
The computer-implemented method of claim 1, wherein the second direction is opposite the first direction.	As noted above, Lira discloses that the first direction can be horizontal, vertical, or diagonal, such that the first direction can be any direction – including the opposite direction of the "snap to" operation. The goal of Lira's snap-to function is to "cause[] the logical column 1220 to snap into alignment with the display window 1205 as the user stop scrolling." Lira at p. 15 lns. 19 – 21.
Claim 11	

The computer-implemented method of claim 1, wherein translating in the first direction prior to reaching an edge of the document has an associated speed of translation that corresponds to a speed of movement of the object.	Currently not at issue.
Claim 12	
The computer-implemented method of claim 1, wherein translating in the first direction is in accordance with a simulation of an equation of motion having friction.	Currently not at issue.
Claim 13	
The computer-implemented method of claim 1, wherein the area beyond the edge of the document is black, gray, a solid color, or white.	Lira does not explicitly disclose the area beyond the edge of the column displayed is black, gray, a solid color, or white. However, the area beyond the edge will be dictated by the particular web page being scrolled. If the background of the web page is a solid color, that will be the color of the area beyond the edge of the column. Thus, it would be obvious to one of skill in the art that the area beyond the edge of the column displayed can be black, gray, a solid color, or white.
Claim 14	
The computer-implemented method of claim 1, wherein the area beyond the edge of the document is visually distinct from the document.	Lira discloses the area beyond the edge of the document is visually distinct from the document. For example, Fig. 14B shows the neighboring column displayed beyond the edge of the document, which is visually distinct from the document.
Claim 15	
The computer-implemented method of claim 1, wherein	Currently not at issue.

translating the document in the second direction is a damped motion.	
Claim 16	
The computer-implemented method of claim 1, wherein changing from translating in the first direction to translating in the second direction until the area beyond the edge of the document is no longer displayed makes the edge of the electronic document appear to be elastically attached to an edge of the touch screen display or to an edge displayed on the touch screen display.	Lira discloses changing from translating in the first direction to translating in the second direction until the area beyond the edge of the document is no longer displayed makes the edge of the electronic document appear to be elastically attached to an edge of the touch screen display or to an edge displayed on the touch screen display. For example, Lira's snap-to function "causes the logical column 1220 to snap into alignment with the display window 1205 as the user stop scrolling." Lira at p. 15 lns. 19 – 21. This snap-to-align function makes the edge of the electronic document appear to be elastically attached to an edge of the touch screen display.
Claim 17	
The computer-implemented method of claim 1, wherein translating in the first direction prior to reaching the edge of the electronic document has a first associated translating distance that corresponds to a distance of movement of the object prior to reaching the edge of the electronic document; and wherein displaying an area beyond	Currently not at issue.

the edge of the electronic document comprises translating the electronic document in the first direction for a second associated translating distance, wherein the second associated translating distance is less than a distance of movement of the object after reaching the edge of the electronic document.	
Claim 18	
The computer-implemented method of claim 1, wherein translating in the first direction prior to reaching the edge of the electronic document has a first associated translating speed that corresponds to a speed of movement of the object, and wherein displaying an area beyond the edge of the electronic document comprises translating the electronic document in the first direction at a second associated translating speed, wherein the second associated translating speed is slower than the first	Currently not at issue.

associated translating speed.	
Claim 19	
A device, comprising:	*See* preamble of claim 1.
a touch screen display;	*See* claim 1(a).
one or more processors;	*See* preamble of claim 1.
memory; and	*See* preamble of claim 1.
one or more programs, wherein the one or more programs are stored in the memory and configured to be executed by the one or more processors, the programs including:	*See* preamble of claim 1.
instructions for displaying a first portion of an electronic document;	*See* claim 1(b).
instructions for detecting a movement of an object on or near the touch screen display; instructions for translating the electronic document displayed on the touch screen display in a first direction to display a second portion of the electronic document, wherein the second portion is different from the first portion, in response to detecting the movement;	*See* claim 1(c) – 1(e).
instructions for displaying an area beyond an edge of	*See* claim 1(f) – 1(g).

the electronic document and displaying a third portion of the electronic document, wherein the third portion is smaller than the first portion, in response to the edge of the electronic document being reached while translating the electronic document in the first direction while the object is still detected on or near the touch screen display; and	
instructions for translating the electronic document in a second direction until the area beyond the edge of the electronic document is no longer displayed to display a fourth portion of the electronic document, wherein the fourth portion is different from the first portion, in response to detecting that the object is no longer on or near the touch screen display.	*See* claim 1(h) – 1(i).
Claim 20	
A computer readable storage medium having stored therein instructions, which when executed by a	*See* preamble of claim 1 and claim 1(a).

device with a touch screen display, cause the device to:	
display a first portion of an electronic document;	*See* claim 1(b).
detect a movement of an object on or near the touch screen display; translate the electronic document displayed on the touch screen display in a first direction to display a second portion of the electronic document, wherein the second portion is different from the first portion, in response to detecting the movement;	*See* claim 1(c) – 1(e).
display an area beyond an edge of the electronic document and display a third portion of the electronic document, wherein the third portion is smaller than the first portion, if the edge of the electronic document is reached while translating the electronic document in the first direction while the object is still detected on or near the touch screen display; and	*See* claim 1(f) – 1(g).

translate the electronic document in a second direction until the area beyond the edge of the electronic document is no longer displayed to display a fourth portion of the electronic document, wherein the fourth portion is different from the first portion, in response to detecting that the object is no longer on or near the touch screen display.	*See* claim 1(h) – 1(i).