Apple Inc. v. Samsung Electronics Co. Ltd. et al Doc. 1137 Att. 2

Exhibit 2

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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN JOSE DIVISION

APPLE INC., a California corporation,

Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD., A Korean business entity; SAMSUNG ELECTRONICS AMERICA, INC., a New York corporation; SAMSUNG TELECOMMUNICATIONS AMERICA, LLC, a Delaware limited liability company,

Defendants.

Case No. 11-cv-01846-LHK

REBUTTAL EXPERT REPORT OF SUSAN KARE

****CONFIDENTIAL – CONTAINS MATERIAL DESIGNATED AS HIGHLY CONFIDENTIAL – ATTORNEYS' EYES ONLY PURSUANT TO A PROTECTIVE ORDER****

(b) Grid of Icons

26. Mr. Lucente next claims that "[a] grid of icons is functional because it serves as an organizational structure that allows a user to see and understand information quickly." (Lucente Report at 16.) Mr. Lucente even claims that an icon grid is "fundamental." (*Id.*) I disagree with Mr. Lucente because an icon grid is not required for a GUI to function. As shown in Exhibit 10 of my Opening Expert Report, there is a wide variety of icon arrangements that are used in smartphones. Thus, the particular icon grid arrangement shown in the D'790 Patent is not required or dictated by function, as there are other ways to organize user interface elements on a rectangular screen.

27. Mr. Lucente further claims that the spacing of the icons in the D'790 Patent is functional because it allows for a user to select only one icon at a time using a human finger, a human hand with a stylus, or a human hand with a mouse, and that the specific rows and columns shown in the D'790 Patent design are a function of the size of the screen and number of icons displayed. (Lucente Report at 16-17.) I disagree with Mr. Lucente on both points.

28. First, when Mr. Lucente refers to "the spacing of icons" in the D'790 Patent, he is referring to the rounded rectangle elements, which are containers for icons, not necessarily icons themselves. As discussed further in paragraph 35, below, the function of those containers being selectable (with a finger, stylus, or a mouse) depends on the area of the physical screen designated as the "hit area" for the containers, which is not necessarily the same as the area of the container itself. Accordingly, that function does not dictate the spacing between the containers (or, by extension, the spacing between the icons within the containers). The Blackberry Storm 2 and Nokia N9 (Figures 2 and 3, below) show how the spacing of elements on a touch screen is not dictated by the function of being selectable. In both figures, graphic containers analogous to the rounded rectangles in the D'790 Patent are within, but do not necessarily define the boundaries of, separate selectable areas on the screen. In the Blackberry Storm 2, however, the square "badges" containing the icons have almost no space separating them, whereas in the Nokia N9 the icons are contained in much smaller, nearly circular shapes that have noticeable empty space between them. It is an ornamental decision whether to adopt minimal spacing between icon

containers, as in the Blackberry Storm 2, as opposed to having more space between the containers, as in the Nokia N9.

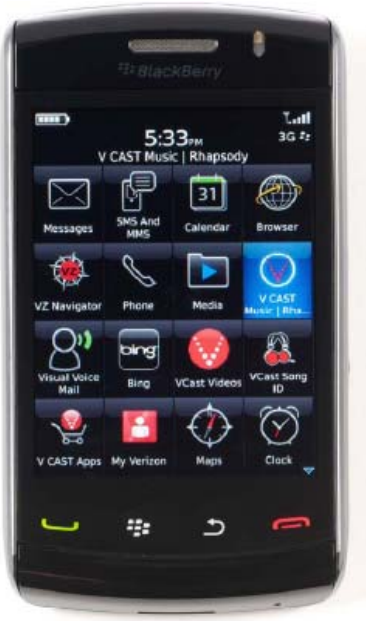


Figure 2
Blackberry Storm 2

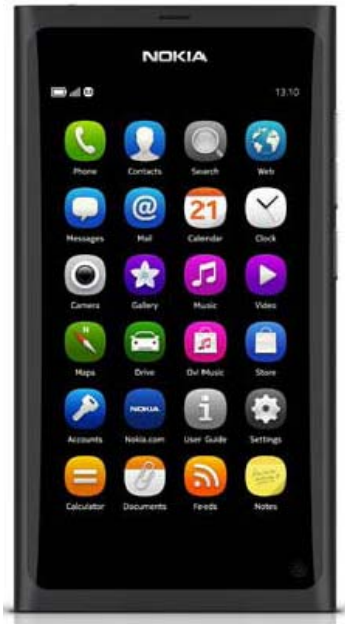


Figure 3
Nokia N9

29. Second, as noted above, the proportions of the rectangular shape of the display screen are not dictated by function. Accordingly, even if Mr. Lucente were correct that the size of the screen dictated the specific rows and columns in the D'790 Design, that does not mean that the "rows and columns in a grid are functional," as Mr. Lucente claims, because the number of rows and columns could be altered by changing the dimensions of the screen. (Lucente Report at 16.) Exhibits 6 through 13 of my Opening Expert Report are a sampling of the many possibilities for utilizing an icon grid in ways that result in noticeably different visual impressions. These examples demonstrate that the particular appearance of the icon grid in the D'790 Design is not required or dictated by the functions Mr. Lucente identifies.

30. Mr. Lucente's remaining commentary about the D'790 Patent is either irrelevant or misguided. He notes that the difference in vertical versus horizontal spacing between the squares in the grid is functional "because it allows space for text under the icons." (Lucente Report at 17.) However, there is no text under the squares in the grid in the D'790 Design, so this purported functionality does not come from the design itself. Mr. Lucente bases his claim on

statements by Imram Chaudhri, which I have been informed is not normally a proper basis for interpreting a patent.

(c) Grouping of Icons

31. Mr. Lucente also relies on the supposed principle that "objects sharing similar attributes, e.g., multiple squares with rounded corners, are perceived as a group." (*Id*.) But Mr. Lucente does not explain how those attributes themselves (squares with rounded corners) are anything but one design option for the visual appearance of the icons individually and for the screen overall. There are infinite ways to design objects on a screen so that they are perceived as a group. As the examples in Exhibits 6 through 13 of my Opening Expert Report demonstrate, even if one were to make the design decision to present icons as a group, the use of squares with rounded corners, as in the D'790 Design, or even icons with consistent shapes is not required or dictated by function.

(d) Dock of Icons

32. Mr. Lucente next claims that the "lower four squares with rounded corners" are a "dock of frequently-used icons" and are thus "functional elements." (Lucente Report at 17.) I do not see anything in the D'790 Patent that refers to or requires this alleged functionality of the bottom row of icons.[19] Mr. Lucente's sole basis for reading this functionality into the patent is the testimony of Mr. Chaudhri, who testified about the design of the iPhone as it related to the D'790 Patent. I have been informed that it is not normally proper to rely on inventor testimony. I have also been informed that the design as shown in the patent itself, and not products that may embody the design, is the proper basis for evaluating a design patent. Because the D'790 Patent itself does not indicate one way or another how the bottom row of icons would actually function in a GUI, there appears to be no basis for Mr. Lucente's conclusion.

33. Moreover, even if Mr. Lucente as correct that the bottom row of squares in the D'790 Design represents a "dock of frequently-used icons," that would not mean that the design element in the D'790 Design is merely functional. There is no functional requirement that such a

[19] For convenience, I have used the term "dock" to refer to the bottom row of icons. This is simply to make clear that I am referring to the same design element that Mr. Lucente is referring to and is not an adoption of Mr. Lucente's position on that element's function.

dock must use rounded rectangle shapes or elements with a similar shape and size as the other elements in the design. Exhibits9 (examples C, F, G, H, F[20]) and 13 of my Opening Expert Report contain multiple examples of screens with "docks" that do not follow the visual approach of the D'790 Design. In these examples, the items in the row at the bottom of the screen noticeably depart from the graphical styles used in the icons elsewhere. These examples demonstrate that even if one makes design choice to have a single grouping of "frequently-used icons" at the bottom of the screen, that functional concern does not require, or dictate, the appearance of the separate row of icons in the lower portion of the screen in the D'790 Design.

(e) Shape and Size of Icons

34. Mr. Lucente claims that the spacing, proportions, shape, and number of the squares in the D'790 Patent are functional. Regarding size and shape, Mr. Lucente says they are functional "because the consistent size and shape conveys the form of a selectable button and communicates that the icons share similar attributes so that they perceived [*sic*] as a group." (Lucente report at 18.) But this would be true of *any* consistent size and shape and says nothing about the visual appearance of the D'790 Design or the particular design choice to use consistent rounded rectangles. Various examples demonstrate this. The Nokia N9, shown in Exhibit 12 of my Opening Expert Report and above in Figure 3, shows icons set inside consistent shapes (with four rounded sides) that clearly read as a group of "buttons." The Blackberry Storm 2, shown in Exhibit 8 of my Opening Expert Report and above in Figure 2, has icons set on square badges, each clearly reading as a separate button while also being part of a clear grouping of icons. In Exhibits 6 and 7 of my Opening Expert Report, the icons themselves have different shapes and are not presented on a set of identical background containers, but they have consistent perspectives and clearly read as a group of buttons. Obviously, a desire to present icons as a group does not dictate a particular GUI appearance or the particular appearance of the D'790 Design.

[20] In the phone labeled "F" in Exhibit 9 of my Opening Expert Report, the dots along the bottom of the screen are labeled "dial," "phonebook," "messages," and "widgets." (*See* Exhibit 2).

35. Regarding the relative size of the squares, Mr. Lucente says it is functional "because the relative size allows a person to see the icon and a human finger better to select the icon." (Lucente Report at 18.) However, icons or icon containers, such as the rounded rectangles in the D'790 Patent, are not necessarily the same size as the "hit area" (the "selectable" or "tappable" area on a screen) associated with the icons or icon containers. Accordingly, the icon containers shown in the D'790 Patent could be larger or smaller without affecting the user's ability to activate the underlying application; that functionality is provided anywhere within the "hit area," which can be a different size than the icon or icon container. This fact is demonstrated on devices such as the Pantech Hotshot and Sony Ericsson Experia arc S, which have icons that can be selected by touching the screen within an area that contains, but is considerably larger than, the icon images themselves. As shown in Figures 4 and 5, this fact is easily demonstrated using a stylus to select the icons by touching the screen in the area outside of each icon[21]:

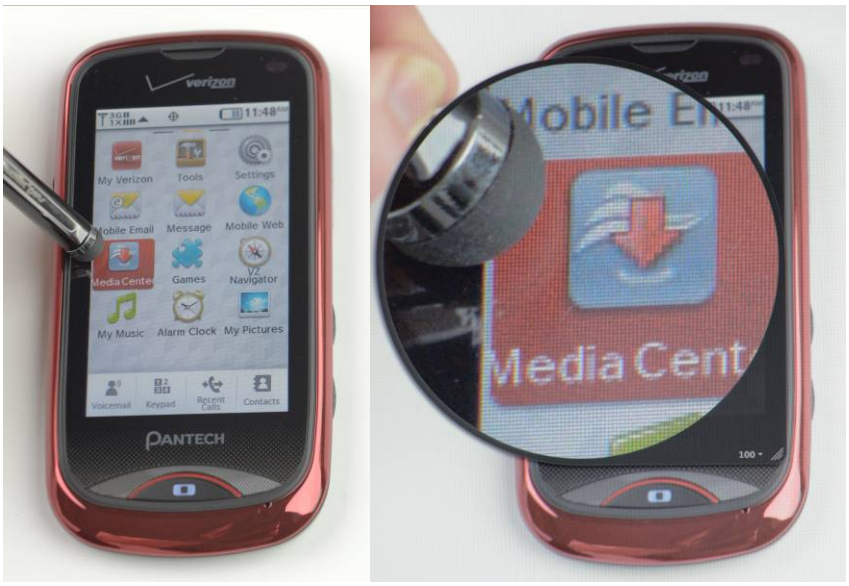


Figure 4

[21] In Figures 4 and 5, the highlighted rectangle around the icon corresponds to the area that can be touched by a stylus or a finger to select that icon. For the pictures shown in Figures 4 and 5 and Exhibit 3, a stylus (a pen with a metallic body and a foam tip on the non-writing end) was used for clarity. The same effect shown in Figures 4 and 5 can be demonstrated on other devices, including the Nokia N9 and the iPhone Devices. The Pantech Hotshot and Sony Ericsson arc S were used here as examples because the visual effects when an icon is selected on those devices are particularly clear.

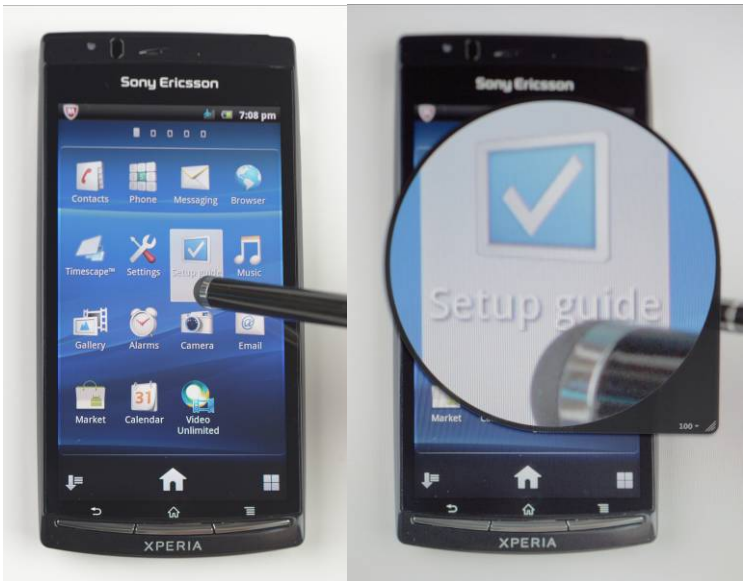


Figure 5

(*See also* Exhibit 3.) Likewise, in the D'790 Patent, the size of the rounded rectangle shapes could be much smaller—possibly even minuscule—without changing the selectable area associated with the icon. The size of the icons or icon containers themselves is thus not dictated by the function of being selectable by a human finger. The choice of icon or icon container size is an ornamental design decision.

36. Even if the size of each icon or icon container were required to be identical to a selectable area on the screen, Mr. Lucente does not show how that dictates the size of the rounded rectangles in the D'790 Patent. Mr. Lucente cites a study that reports 9.2mm as the minimum button size for "discrete tasks" (defined as including "activating buttons, radio buttons and checkboxes") "without degrading performance and preference." (*See* Lucente Report at 18 fn. 46.) Mr. Lucente says that the "icons depicted in the D'790 Patent align to these targets," but he does not explain what that means. (*Id.* at 18.)

37. The D'790 Patent contains one figure, and the rounded rectangles in that figure measure approximately 14mm across, much larger than the 9.2mm reported in the cited study.[22] To the extent that Mr. Lucente meant to refer to the iPhone display, that is an irrelevant

[22] I have been informed that drawings in patents are not interpreted as representing absolute sizes of the claimed design. The D'790 figure is more than 18cm tall and is obviously not intended to represent any absolute size for the claimed GUI appearance.

comparison under the law as explained to me by counsel. Moreover, I have been informed that if the drawing were scaled down so that size of the display screen matched the size of the iPhone screen, the rounded rectangles would be approximately 8.4mm x 8.4mm, nearly 10 percent smaller in each dimension than the 9.2mm minimum reported in the cited study.[23, 24] Thus, even accepting the premise that there is a minimum "target size" for buttons on a display to function, the size of the rounded rectangles in the D'790 Patent either far exceeds the minimum size that Mr. Lucente claims is required for them to function (using the absolute size of the printed patent), or is smaller than that minimum size (using the patent drawing scaled down to the size of an iPhone). These facts do not support Mr. Lucente's conclusion that the size of the rounded rectangles is dictated by there being an optimal "target size," and I know of no other support for Mr. Lucente's conclusion.

38. Moreover, mobile phone devices on the market demonstrate that icons can function as buttons in a touch screen GUI even when they are smaller than 8.4mm (the size of the squares in the D'790 Patent scaled down relative to the iPhone screen). The Nokia N9, for example, has icons that are less than 8mm x 8mm, and the Pantech Hotshot has icons that are less than 7mm x 7mm.

(f) Number of Icons

39. Mr. Lucente also claims that "the number of the icons is functional because the number is determined by the overall area of the rectangular outline, the size of the icon, shape of the icon, the spacing of the icon in the grid *and the number of icons desired by the user and/or the manufacturer*." (Lucente Report at 18 (emphasis added).) With respect to the first four factors listed, Mr. Lucente is simply saying that the number of icons depends on other design elements. As explained above, the functions that Mr. Lucente assigns to those design elements do not

[23] The calculation provided to me, at my request, is as follows: the ratio of the iPhone screen size (3.5 inches, or 8.89cm, diagonal) to and the size of the display in the printed D'790 Patent (approximately 14.8cm, diagonal) is approximately .6:1 (8.89/14.8:1), so scaling the 14mm-wide squares in the printed D'790 Patent down to the relative size of the actual iPhone would result in squares 8.4mm wide (14mm x .6 = 8.4mm).

[24] It is also unclear how the Apple iOS Human Interface Guidelines relate to Mr. Lucente's conclusions. He states that the guidelines specify a "comfortable minimum size of tappable UI elements," but he does not analyze whether the rounded rectangles depicted in the D'790 Patent correspond to and therefore may have been "dictated by" that minimum size.

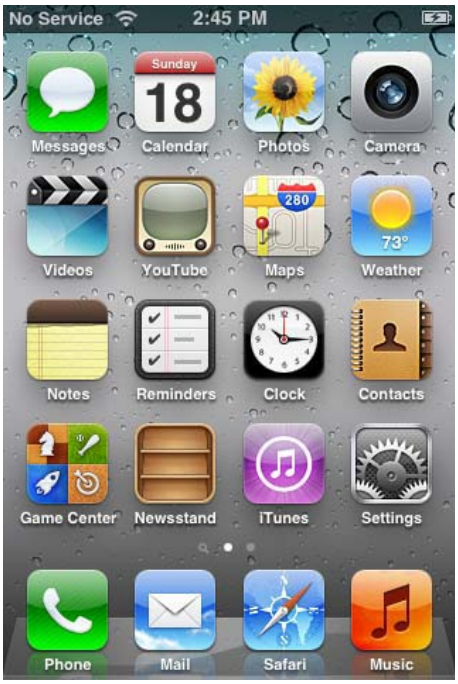


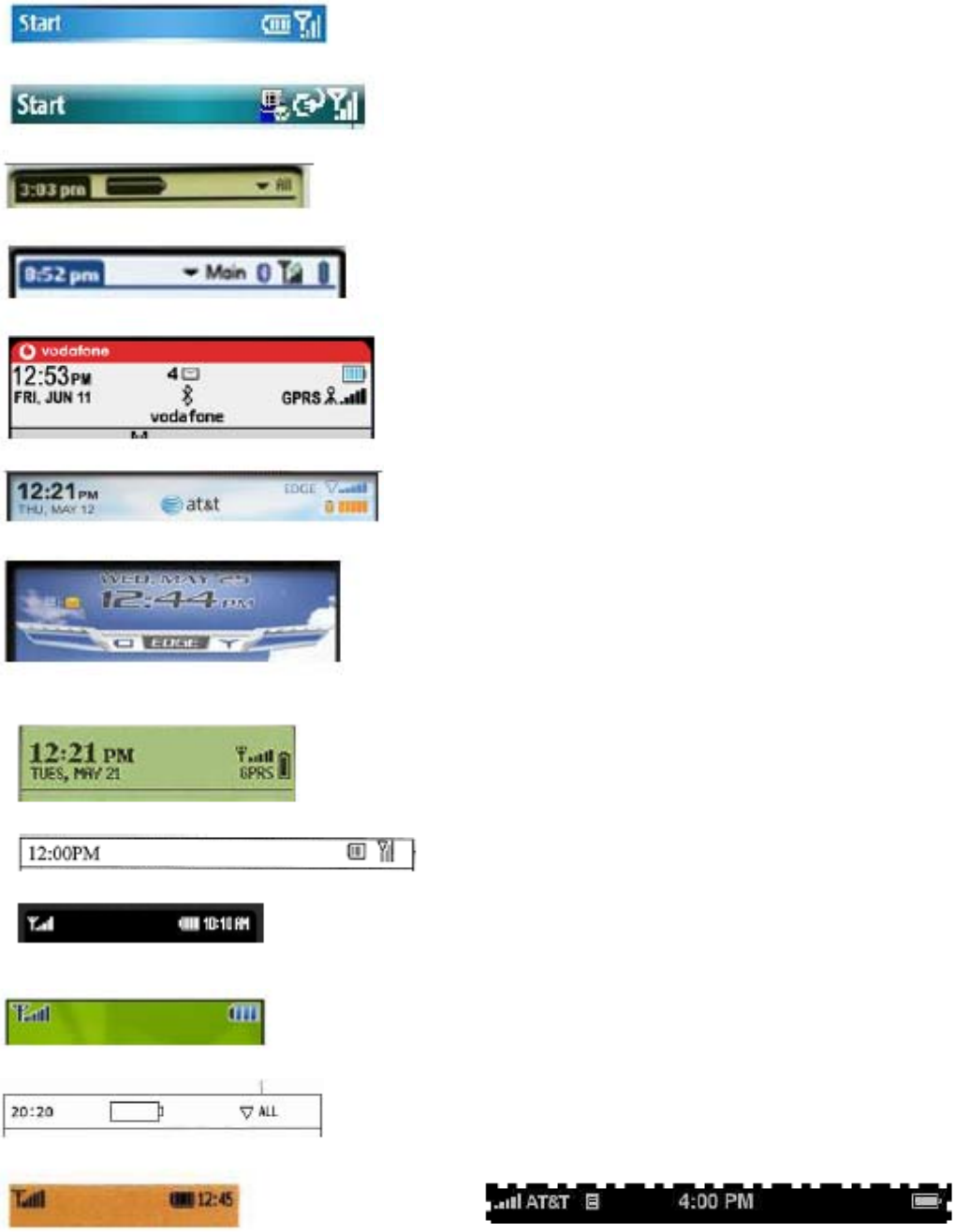
Figure 7

44. Mr. Lucente also concludes that the status bar—the row containing status indicators at the top of the screen in the D'305 Design—is a "merely functional" element, although he does not even attempt to argue that the visual appearance of the status bar in the D'305 Design is primarily dictated by any function. (Lucente Report at 20) In fact, just as Mr. Lucente concedes that certain details of the icon dock "could be an ornamental choice" (i*d*.), the particular appearance of the status bar is an ornamental choice. Mr. Lucente's own alleged prior art examples reveal the many different ornamental designs that a status bar could use, including more colorful status bars with varying thickness and a status bar that appears at the bottom of a screen instead of the top. (*Id*. at 41, 53-56, 62-63.) Moreover, the status bar in the D'305 Design does not play a significant role in creating the overall appearance of the design, so even if its appearance were entirely determined by function, that would have little relevance to whether the overall appearance of the D'305 Design is dictated by function.

45. Mr. Lucente also concludes that the icons in the D'305 Patent "are functional because they are metaphors for the function the user wishes to access." (Lucente Report at 21.) At no point in his report does Mr. Lucente consider the fact that icons, including those shown in the D'305 Patent, can have unique visual appearances. Instead, Mr. Lucente concludes that

123. Mr. Lucente also presents a series of GUI interfaces that he alleges "can serve as secondary references of obviousness for the rounded square design feature, as well as other features, such as the use of a status bar and arrangement of icons in a grid pattern." (Lucente Report at 59.) Korean Patent 30-2006005195 displays a group of rectangles on an angled plane seen in perspective, giving them a substantially different appearance than the rounded squares in the Design Patents. In European Community Design Registration No. 000505532-0001, the image presented by Mr. Lucente is very low resolution. Nevertheless, the rectangular shapes appear to have an effect that makes them appear as three dimensional frames as opposed to simple rounded rectangles like the ones in the D'790 Design. Korean Design Patent 30-0403504 has rectangles that read as squares with sharp corners, although the corners along the outside of the grid do appear to be slightly rounded. Japanese Design patent D1189312 displays cube-shaped icons that do not read as individual rounded rectangles. Also, none of these references, the Nokia N7710, or U.S. Patent Application Publication 2007/0067738 have an overall appearance that is substantially the same as any of the Claimed Designs. Furthermore, even though Mr. Lucente claims that these references could be used as "secondary references," nowhere in his report does he suggest how visual elements of the references could be combined with a particular primary reference to create the overall visual appearance of any of the Claimed Designs.

124. Mr. Lucente also presents 13 examples of a "status bar or region at the top of the display." (Lucente Report at 62.) These examples merely demonstrate that there is a variety of options for the appearance of a status bar:



Alleged Prior Art Examples **Status Bar from D'305**

None of the examples Mr. Lucente presents has substantially the same appearance as the status bars in the D'305 and D'334 Designs, and most of them are markedly different. Mr. Lucente does not suggest any way in which the examples he provides could be combined with a primary reference to create substantially the same overall visual appearance as the D'305 or D'334

Design.[39] Moreover, the status bars in the D'305 and D'334 Designs do not play a major role in creating the overall appearance of each design, so even if its exact appearance was present in the prior art, that would have little significance in showing that the overall appearance of each design was obvious.

125. Mr. Lucente also presents a long list of "icons using the same metaphors that appear to have been used by Apple in the D'305 and D'334 Patents." (Lucente Report at 63.) Mr. Lucente has collected icons that appear to use the following symbols: a phone to represent a phone; gears to represent settings; a note pad image to represent notes; an address book and/or silhouette of a person's head and shoulders to represent contacts; a compact disc and/or musical notes to represent music; a flower to represent photos; a speech bubble to represent text messages; a calendar to represent a calendar; a calculator or calculator buttons to represent a calculator; an envelope to represent mail; a clock to represent a clock; a globe or Earth to represent a web browser; a camera to represent a camera; and a line graph to represent stocks. The list, which contains more than 170 different icons, merely shows that there are many visually distinct ways that icons can represent each of these concepts.[40] Mr. Lucente does not argue that any of the icons actually is substantially the same as any of the icons in the D'305 and D'334 Designs, nor does he suggest any specific combination of the icons that would produce an overall appearance that is substantially the same as the D'305 or D'334 Design.

126. Even if it were relevant that certain concepts or symbols (as opposed to particular appearances) were present in the prior art, Mr. Lucente makes multiple errors in identifying those concepts in the prior art. For example, he presents two examples of "photos icons." (Lucente Report at 71.) As explained above, the Windows Vista icon did not represent a collection of user photographs. (Exhibit 4.) Also, the "Photoshop 2006" icon appears to be a photographic image of a sunflower, not an icon used to represent a collection of user photographs.[41] The existence of

[39] I have been informed that the status bar shown in the D'790 Patent is not part of the claimed design. Paragraph 123 does not concern the D'790 Patent.

[40] Although Mr. Lucente refers to the icons as using "common metaphors," many of the icons feature literal illustrations, rather than metaphors, to make a concept visual (e.g., a handset image to represent a phone, and a note pad image to represent a note pad).

[41] In fact, this exact photograph is publicly available to anyone under a royalty-free license from PhotoSpin, Inc. (*See* Exhibit 7.) Mr. Lucente provides no information to support the assertion that the photograph was used as an icon by

X. EXHIBITS TO BE USED

129. I anticipate using as exhibits during trial certain documents and things referenced or cited in this report or accompanying this report. I also anticipate using other demonstrative exhibits or things at trial.

Dated: April 16, 2012

Susan D. Kare

SUSAN KARE