

# EXHIBIT I

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

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

**EXPERT REPORT OF SUSAN  
KARE**

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

1           44.     The user interface graphics of the iPhone 3GS and iPhone 4—the shape,  
2 arrangement and spacing of the icons—is consistent with the original iPhone, but there are some  
3 small changes. (See Figures 5 and 6, above.) The iPhone 3GS screen has the same size and  
4 resolution as the original iPhone,<sup>9</sup> but the 3.5 inch (diagonal) screen of the iPhone 4 has a higher  
5 resolution of 940 x 640, for a pixel density of 326 pixels per inch.<sup>10</sup> Rather than a gray gradient-  
6 patterned background for the bottom portion of the screen, there is a rectangular, reflective  
7 surface that creates a virtual shelf, which serves as a base for the row of icons. The background is  
8 not black, but rather has a gray gradient with scattered water droplets. The anti-aliased text below  
9 the icons is white with a drop shadow. As in the D’334 patent, there is a row of dots between the  
10 top and bottom portion of the screen. These dots provide an indicator of which “page” of icons is  
11 displayed. When the second page is viewed, the second dot becomes white, and the first dot  
12 becomes gray.<sup>11</sup> (Exhibits 4, 5.) Otherwise, the above description of the iPhone’s appearance  
13 applies equally to the user interface graphics of these phones.

14           45.     The icon layouts depicted in Figures 1 through 6 are not the only ways to solve the  
15 design problem of how to represent a set of icons on a touch screen device. Even restricted to the  
16 choice of using icon images (as opposed to words in a menu), a grid of rectangular icons with  
17 rounded corners is not the only way to show and arrange them in a vertical space. For example,  
18 the icons could be presented as irregular shapes on a background, as shown in the Xperia arc S  
19 and Xperia neo V phones, both by Sony Ericsson. (Exhibits 6, 7.) Or, icons could be presented  
20 within or on top of other shapes, as in the Blackberry Storm 2 (Exhibit 8), which displays icons—  
21 designed with a strong, light-colored outline—in a grid but with each appearing on a black  
22 background.

23  
24  
25  
26 <sup>9</sup> <http://www.apple.com/iphone/iphone-3gs/specs.html>

27 <sup>10</sup> <http://www.apple.com/channel/iphone/iphone-4/tour/specs.html>. As discussed in footnote 20 below, the  
28 proportional size of the icons in the iPhone 4 is unchanged from the iPhone and iPhone 3GS.

<sup>11</sup> The iPhone shown above in Figure 4(a) does not display a series of dots because there is no second page of  
applications. However, any of the applications shown could be moved off to a second page, which would cause the  
dots to appear, as in Figure 4(b).

1 rectangle that almost completely fills the space between the icons and has a gradient to add  
2 dimension. The Xperia arc S and Storm 2 are shown in Figures 7 and 8, below. Another  
3 alternative would have been to divide the screen using a visible grid. Also, any uniform color,  
4 bands of color, gradient, or background texture might have been employed.



18 **Figure 7**  
19 **Sony Xperia arc S**



20 **Figure 8**  
21 **Blackberry Storm 2**

22 46. Exhibit 9 is a collection of images depicting a variety of visually distinctive,  
23 alternative approaches to showing a set of icons on a phone screen. As these examples  
24 demonstrate, user interface graphics for phones need not display icons in a 4 x 4 or 4 x 5 grid, nor  
25 do they need to feature icons shaped like those in the Design Patents and the iPhone Devices. In  
26 fact, the icons can be displayed without using a regular grid of rows and columns at all, as shown  
27 in Exhibit 10. (See figures 9 and 10, below.)  
28

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28



**Figure 9**



**Figure 10**

47. Two alternative approaches depicted in Exhibits 11 and 12, applications screens of the Blackberry Torch 9850 and the Nokia N9, are particularly relevant examples because they are visually distinctive from the iPhone but display roughly the same number of elements in a touch screen space comparable to that of the iPhone Devices.



**Figure 11**  
**Blackberry Torch 9850**

48. First, the BlackBerry Torch 9850 shown in Figure 11 (*see* Exhibit 11) has an 800 x 480, 3.7 inch (diagonal) screen with a pixel density of approximately 253 pixels per inch.<sup>12</sup> As shown in Figure 11, the applications screen of the BlackBerry Torch 9850 shows a grid of up to 20 icons (four columns, five rows) on a dark background. Other than the presence of a grid of icons, most of the graphical features of the applications screen distinguish its appearance from that of the iPhone Devices and the Design Patents.

49. At the top of the screen, above the icon grid, are two horizontal bands that occupy approximately 17 percent of the available screen—a significant portion of the screen real estate. The bands are on a background of dark reds and contain variable information such as date, time,

<sup>12</sup> <http://us.blackberry.com/smartphones/blackberry-torch-9850-9860/#!phone-specifications>

1 signal strength and battery charge, as well as indicators relating to sounds and alerts (speaker  
2 icon) and the presence of messages (letter icon).

3           50.       Immediately above the grid of icons, there is a horizontal band that indicates the  
4 categories of applications currently being shown in the grid. This band has a blue highlight with  
5 faded edges when it is “selected” (see figure 11, above), but otherwise it appears along with the  
6 grid of icons as a translucent overlay on top of the background. The icons appear to be stylized  
7 illustrations; many suggest everyday objects (e.g., wrench, envelope, alarm clock, camera,  
8 folders), but others are more abstract (e.g., Social Feeds, Backup Assistant). There is no pattern  
9 of rectangular shapes or rounded corners for the icons; most are various irregular shapes, so even  
10 though the icons are laid out in a grid, they do not read as uniform button-shaped icons. Because  
11 the icons have different dimensions and border shapes, left and right edges and top and bottom  
12 edges of adjacent icons are not precisely aligned. The icons are labeled below with upper and  
13 lower case sans serif, anti-aliased, pale gray/blue text. When there is a highlight to indicate a  
14 glossy finish (e.g., BlackBerry Messenger, Text Messages, Instant Messaging, Applications,  
15 Games, App World) the light area runs diagonally from the upper left to lower right, and fills the  
16 upper right portion of the icons. Unlike the iPhone Devices and the Design Patents, there is no  
17 area on the screen for a separate group of omnipresent icons. The result of all of these elements is  
18 an overall visual impression that is clearly different from that of the iPhone and the Design  
19 Patents.  
20  
21  
22  
23  
24  
25  
26  
27  
28

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28



**Figure 12**  
**Nokia N9**

51. Second, the Nokia N9 shown in Figure 12 has a 854 x 480, 3.9 inch (diagonal) screen.<sup>13</sup> (See Exhibit 12.) As shown in Figure 12, this device utilizes icons displayed within uniform, extremely rounded rectangles that approach being read as circular. Most of the icon images are minimal and symbolic, with few colors and details against a dominant background color with a slight gradient. Most of the icon images read as flat symbols, although there are subtle, shadowed dimensional effects. There is a fairly limited background color set: green, blue, gray, white, magenta, and yellow. The overall visual impression of this interface is clearly distinct from that of the iPhone Devices and the Design Patents, and it can display more icons on the screen than the iPhone Devices can. All the rounded buttons are grouped together on one continuous pane, rather than on separate “pages” as on the iPhone Devices, so that a row of icons may only partially be on the screen as the user scrolls up or down. Also, unlike the iPhone

<sup>13</sup> <http://europe.nokia.com/find-products/devices/nokia-n9/specifications>

1 Devices and the Design Patents, there is no area on the screen for a separate group of omnipresent  
2 icons.



3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
**Figure 13**  
**“Meizu M8”**

17 52. Finally, the image shown in Figure 13 represents another alternative design  
18 concept for interface graphics of a phone screen.<sup>14</sup> (See Exhibit 13.) The dimensions of the  
19 image are 675 x 450 pixels, giving it an aspect ratio of 1:1.5, the same as the iPhone Devices.  
20 The dark gray background has a subtle highlight and narrow vertical stripes, and it is darker at the  
21 edges and corners. It shows sixteen icons in a 4 x 4 grid, each within approximately 80 x 80  
22 pixels, anti-aliased directly against the background (no rectangular button “containers”) and (with  
23 the exception of the SMS icon) all rendered in a similar dimensional style with detail and  
24 highlights. The icons generally show gray, black, and white, and primary colors (red, yellow, and  
25

26  
27 <sup>14</sup> This graphic was obtained from <http://www.loopycellphones.com/tag/meizu/>. It is identified  
28 as a screenshot for an upcoming phone called “Meizu M8.”

1 blue), though there are some other accent colors. Several of the icons reference “throwback”  
2 technology: an LP record, a cassette, film with sprockets, and a physical calculator. Each is set  
3 off with a thin, dark shadow against the background. At the bottom of the screen, a rounded  
4 rectangular panel “floats” against the background. It separates three gray gradient, unlabeled  
5 icons from the others. There is no row of dots. The overall visual impression of this interface is  
6 clearly distinct from that of the iPhone and the Design Patents, yet it displays approximately the  
7 same number of icons on the screen—sixteen in the grid and three distinct icons in the separate  
8 panel along bottom of screen—as the iPhone and the Design Patents.

### 10 3. Design of Specific iPhone Device Icons

11 53. The five icons described below—the icons for Camera, Photos, Contacts, Phone  
12 and iTunes—are specific solutions employed by the iPhone Devices for particular button images.  
13 They also represent a variety of *types* of approaches (e.g., photorealistic vs. stylized symbol).  
14 This suggests that the consistent use of the rounded rectangular buttons in a grid enabled a fair  
15 amount of stylistic freedom regarding the icons themselves while preserving the overall  
16 distinctive visual impression of the iPhone Devices.



- 18 ■ **Camera.** This image<sup>15</sup> is a photorealistic view of a generic camera lens as a  
19 symbol for the Camera application. It suggests a lens built into a physical  
20 camera (as opposed to an interchangeable lens) and is surrounded by a gray  
21 metallic gradient, indicating a non-specific camera body. An unseen light  
22 source creates reflected highlights, contributing to the precise, 3D quality of  
23 the glass lens, which appears to recede into the button.  
24  
25  
26  
27

28 <sup>15</sup> I have been informed that this image is the subject of U.S. Trademark Reg. No. 3,983,841.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28



▪ **Photos.** This image appears to be a realistic illustration or photograph of a single sunflower matted against a blue sky background as a symbol for the Photos application (used for viewing photos on the device). The flower evokes a photograph but is an apparently arbitrary choice for a category often represented by iconic vacation scenes (e.g., beaches, dogs, or mountain landscapes). It symbolizes photos, but it does not suggest a literal representation of a printed photo or typical digital photo aspect ratio. It seems to be a generic photograph—without a reference to any particular camera or photographic end product. The sunflower is a non-controversial subject that is not specific, such as a photo of a particular, identifiable person or place, and the blue sky both provides contrast against black and is a general symbol of optimism. It also echoes the sunny day image on the Weather icon. The icon is the subject of U.S. Trademark Reg. No. 3,866,200. (Dkt. 75-25.)



▪ **Contacts.** This image is a cropped view of a tabbed, spiral-bound notebook. The tabs protrude beyond the cover, and the debossed silhouette of a person’s head and shoulders appears in the center. It is a combination of a realistic or literal object and an idealized view of an object. It is realistic or literal in that it is a recognizable physical object, with highlights to indicate the metal of the wire binding. It is an idealized view in that the tabs are visible beyond the cover, unlike those in most closed address books, and are relatively large and few, and the silhouette on the cover is filled with a gradient to appear three-dimensional rather than printed. The latter element in particular is a curious, non-realistic detail among other more “book-like”

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

graphic details. The icon is the subject of U.S. Trademark Reg. No. 3,886,197. (Dkt. 75-28.)



**iPhone**



**iPhone 3GS/  
iPhone 4**

- **Phone.** This image is a silhouette of a telephone handset resembling those from classic Bell telephones designed by Henry Dreyfuss in the 1950s (though he designed many similar handsets from 1938-1982<sup>16</sup>). It is a “retro” shape that is a nod to the era before cell phones. It is shown at a 45 degree angle, facing right and in an upward position, set on a primary green background. The characteristic arc of light causes the top part of the icon to be brighter. This phone icon contrasts with the camera icon—it is a flat retro shape of an entire object, whereas the camera lens is a highly detailed part of a device that suggests contemporary consumer electronics. In the iPhone 3GS and iPhone 4 that I examined (running iOS version 5.0.1), the Phone icon has a texture of subtle, dark green with lighter green diagonal stripes that run from the lower left to upper right. The overall texture appears to be filled with a gradient, so the texture becomes very faint as it merges with the bright, lighter green in the lower part of the icon. The diagonal stripes are approximately 2 pixels across, but they are anti-aliased so their edges blend with the background. There is more contrast (darker green texture) in a horizontal band across the center of the icon. There is also a pale gray gradient on the silhouette, but it reads as a solid color, and there also appears to be a slight drop shadow. The phone in the iPhone icon is white and has no drop shadow. The iPhone 3GS/iPhone 4 version of the icon appears in U.S. Trademark Reg. No. 3,886,196. (Dkt. 75-23.)

<sup>16</sup> See <http://imprint.printmag.com/animation/saying-goodbye-to-an-old-friend-the-hardwired-attbell-systemwestern-electric-telephone/>.



- **iTunes.** This image could be interpreted as an updated, stylized version of the “iTunes Eighth Notes + CD” depicted in U.S. Trademark Reg. No. 2,935,038. (Dkt. 75-30.) It is presented as the silhouette of a pair of eighth notes within a thick circular border. The round border could be seen as an abstract reminder of LPs and CDs. The notes are an unmistakable symbol for music, and they are the same basic notes used in the original iTunes logo (see Figure 19, below). The background is violet, with a subtle starburst tone-on-tone pattern that might suggest sound emanating from the image. The icon is the subject of pending U.S. Trademark Application Serial No. 85/041,463. (Dkt. 75-29.)

54. Each of the icons described above represents one particular graphic option for each concept. There is a wide range of alternatives: both different ways to render those particular choices, and different options altogether. In Exhibit 14 and in the following figures, I have gathered a sampling of varying approaches to those icons to demonstrate that there is a variety of valid solutions to these design problems. It is not difficult to find a range of graphic options that could have been used instead.



**Figure 14**

- **Camera.** A camera icon is fairly straightforward in that a camera is an easy noun to represent visually. However, a camera lens could be used by itself, or a camera body could be shown. The amount of detail shown to indicate a lens

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

is completely variable. In fact, very little visual information is needed to make a shape recognizable as a camera; a horizontal rectangle with a circular outline for a lens and a stylized viewfinder or flash is sufficient. Also, the lens need not be dominant; colors and angles can be varied; and a shutter can also symbolize a camera or the act of taking photographs.

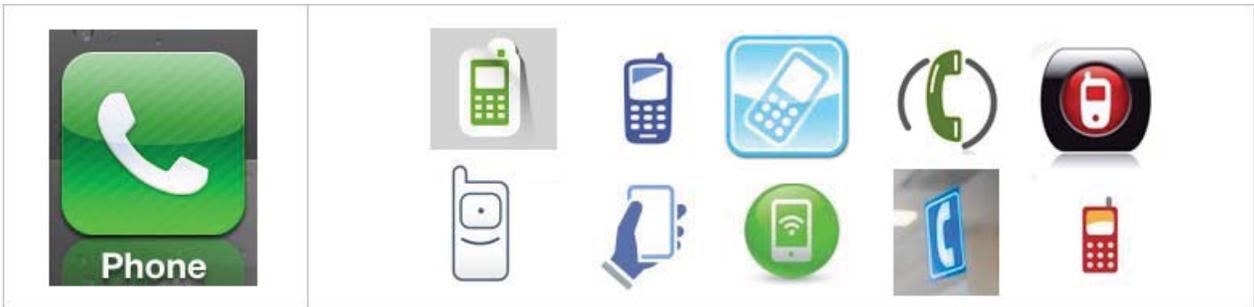


Figure 15

- **Phone.** The phone icons on the iPhone Devices are not self-referential—they do not look like an iPhone Device. They exhibit a classic silhouette, but they are actually a bit discordant because they resemble a vintage, if generic, phone handset, not a mobile phone. Other possible images might have included a stylized cell phone, a more recent phone or receiver, a phone keypad, or a hand holding a cell phone. The receiver could also be at a different angle, or vertical (as is common on phone booths).



Figure 16

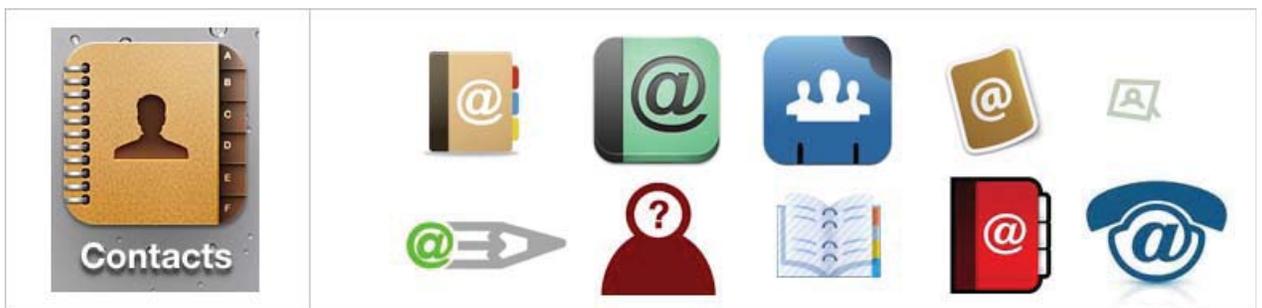
- **Photos.** If the symbol for a user’s photos is a sample photographic image, the possibilities are limitless. It makes sense to avoid a person, because there is no

1 one typical person, but any kind of landscape, animal, or other easily  
 2 recognizable image from nature could be representative: a palm tree with the  
 3 ocean behind it, mountains, a bird, a starry sky with crescent moon, a blue sky  
 4 with clouds, a dog, etc. Most of these images work across cultures and evoke  
 5 typical subjects for a wide range of photographers. Besides a sunflower, any  
 6 easily recognizable flower or plant could work as an icon image.  
 7



8  
 9  
 10  
 11  
 12  
 13 **Figure 17**

- 14
- 15 ▪ **iTunes.** Music-related applications can be represented by a wide range of  
 16 symbols.<sup>17</sup> A single musical note, instrument, headphones, or treble clef are all  
 17 simple shapes that are easy to recognize and associate with music. An image  
 18 incorporating a play button is also an option. Not being tied to a particular  
 19 type of music storage (e.g., disc or device) is advantageous for icon longevity.



20  
 21  
 22  
 23  
 24  
 25 **Figure 18**

- 26
- 27 ▪ **Contacts.** To represent Contacts, Apple uses a cropped illustration of a tabbed  
 28 notebook with wire-o binding containing a silhouette of a person's head and

<sup>17</sup> This discussion applies equally to the iTunes Eighth Note and CD icon described below.

1                   shoulders. There are small indications of letters of the alphabet on the tabs.  
2                   Many options that could work as Contacts icons feature the “@” sign, as  
3                   shorthand for contacting someone via email. Even the “@” sign alone is used  
4                   in some icons, although it also adorns many book images. Stylized groups of  
5                   people, and other styles of tabbed notebooks abound.

6  
7           55.       Looking at the collection of icons portrayed in the iPhone Devices, the D’305  
8 patent, and the D’334 patent as a group, the main unifying graphical feature is the rounded  
9 rectangular button shape against black, or, for the iPhone 3GS and iPhone 4, the alternative  
10 background depicted in Figures 5 and 6 above. In part because the style of the icons themselves  
11 varies, the container shape is an essential element of the overall visual impression created by the  
12 icon arrangement. There are images that read either as illustrations, photographs, or iconic  
13 symbols. The Phone icon and iTunes icon are pale, near-monochromatic symbols – simplified  
14 light gray or white shapes each centered on a distinctive bright-colored gradient background. The  
15 Camera icon, in contrast, is a cropped view of a camera lens, rendered in a photorealistic style  
16 with many details and realistic highlights, receding into what appears to be a brushed aluminum  
17 camera body. The Contacts icon is a cropped view of an illustrated, tabbed notebook, and the  
18 Photos icon shows a photographic image of a single deep yellow sunflower with two green  
19 leaves, matted against blue sky.

20  
21  
22           56.       It would have been possible, if desired, to design all the icons of the iPhone  
23 Devices using a single, consistent stylistic approach. For example, the camera lens is detailed and  
24 “modern” while the phone is stylized, “retro,” and detail-free. It would have been possible  
25 instead to create a simplified camera icon to “match” the style of the Phone icon. As designed,  
26 while there is a variety of different graphic styles for the icons—the simple (e.g., chat bubble for  
27 Text/Messages) versus the detailed (e.g., sunflower for Photos), the literal (e.g., camera lens for  
28

1 Camera) versus the metaphorical (e.g., gears for Settings)—the consistent rounded rectangular  
2 shape of the icons and their layout on the screen unifies them in producing their overall visual  
3 appearance as a group.

#### 4 **4. Design of the iTunes Eighth Notes + CD Icon**

5 57. This icon (*see* Figure 19, below) combines a background image (optical disc) with  
6 a pair of eighth notes that appear to be in the foreground because they overlap the outline of the  
7 disc. The eighth note at left is slightly lower, so the bar that connects them angles up to the right.  
8 The disc appears as concentric circles—not exactly circular, but condensed at a slight angle. The  
9 disc is easily recognizable as an audio CD due to the size and location of the two inner circles and  
10 the fact that it is paired with musical notes. This icon is registered in U.S. Trademark  
11 Registration No. 2,935,038. (Dkt. 75-30.)



12  
13  
14  
15  
16  
17  
18  
19 **Figure 19**

#### 20 **B. Similarity Between Apple Designs and Samsung Icons and User Interface Graphics**

21  
22 58. I have been asked to examine Samsung Phones and opine on the design—  
23 including with respect to layout and icon design—of the “applications screens” that are accessible  
24 via a button displayed on the phones’ default home screens.<sup>18</sup> The phones I have analyzed are:

- 25 • Captivate

26  
27 <sup>18</sup> The iPhone Devices, in contrast, do not have a “home screen” that is separate from the screens showing a grid of  
28 icons as in Figures 4 through 6. With respect to the iPhone Devices, “home screen” and “applications screen” are  
synonymous.

- 1 • Continuum
- 2 • Droid Charge
- 3 • Epic 4G
- 4 • Fascinate
- 5 • Galaxy S 4G
- 6 • Galaxy S i9000
- 7 • Gem
- 8 • Indulge
- 9 • Infuse 4G
- 10 • Mesmerize
- 11 • Galaxy S Showcase (i500)
- 12 • Vibrant

13 59. Photographs of the applications screens of each of the Samsung Phones are  
14 contained in Exhibits 15 through 27. I have examined each of the phones themselves. I have also  
15 examined screen capture images of the applications screens of the Droid Charge, Fascinate,  
16 Mesmerize, and Galaxy S i9000 (the only four phones from which I could obtain screen capture  
17 images created using the phones' built-in operating system). (Exhibits 28, 29, 30, 31.)

### 21 **1. Similarities Between the Icon Layouts of the Samsung Phones and the** 22 **iPhone Devices**

23 60. The aspect ratios of the Samsung screens are either the same (1:1.5) or similar  
24 (1:1.67) to that of the iPhone Devices (1:1.5).<sup>19</sup> The screens have black backgrounds, with  
25 battery, time, signal strength, and other status information in a band across the top. In the Droid

---

26  
27 <sup>19</sup> The aspect ratio for each phone was calculated using the resolution available from specifications printed on the  
28 device packaging or available on Samsung's website (<http://www.samsung.com>). I also confirmed the screen  
resolutions (800 x 480, for a ratio of 1:1.67) of the Droid Charge, Fascinate, Mesmerize, and Galaxy S i9000 by  
using Adobe Photoshop to examine screen shots taken by the devices themselves.

1 Charge, Fascinate, Mesmerize, and Galaxy S i9000, this row is 36 pixels tall, or 4.5 percent of the  
2 800 pixel screen height. For the other Samsung Phones, the row of status information appears to  
3 be the same or substantially the same height. For all but three of the Samsung Phones, the row of  
4 status information is a slightly lighter shade of gray against the apparently black background of  
5 the rest of the screen (the Continuum, Mesmerize, and Galaxy S Showcase (i500) have a lighter  
6 gray or blue bar). The iPhone Devices also have a row in which signal strength, time, and battery  
7 are displayed in the same manner as shown in the D'305 and D'334 patents. The row is 20 pixels  
8 tall in the iPhone and iPhone 3GS (4.17 percent of the 480 pixel screen height) and 40 pixels tall  
9 in the iPhone 4 (4.17 percent of the 960 pixel screen height). For both the iPhone Devices and the  
10 Samsung Phones, the narrow row of status information uses a small area of the display and does  
11 not significantly affect the overall visual impression of the screen.  
12

13  
14 61. The Samsung Phones use the same basic layout as the iPhone Devices: icons  
15 arranged in a grid of four rows and four columns in the top portion of the screen, and at the  
16 bottom of the screen there is a panel that holds four key icons, with the Phone icon anchoring the  
17 left-hand side. (Exhibits 15-31.) The panel sets off those four icons, which do not change as  
18 different pages of icons are viewed, and has a gradient to create the appearance of a separate area.  
19 The icons in this area generally have a dominant rectangular shape with rounded corners. All of  
20 the icons in the top portion of the screen appear on rectangles with rounded corners, each labeled  
21 below with light gray or white, sans-serif, anti-aliased upper and lower case type, and each set  
22 apart from each other with horizontal and vertical bands of black background color. As on the  
23 iPhone, the colorful rounded rectangles contrast with the black of the background, especially  
24 some with jewel-like tones of green, blue, and magenta. The rounded rectangular icons are,  
25 proportionally, approximately the same size as the icons on the iPhone. On the Droid Charge,  
26 Fascinate, Mesmerize, and Galaxy S i9000, the icons are 84 x 84 pixels, which equals 10.5  
27  
28

1 percent of the 800 pixel screen height and 17.5 percent of the 480 pixel width; the iPhone's 57 x  
2 57 pixel icons are 11.9 percent of the screen height and 17.8 percent of the screen width.<sup>20</sup> There  
3 is also a row of dots that indicates which "page" of applications icons is currently being  
4 displayed.



15  
16  
17  
18 **Figure 20 (See Exhibit 27)**  
19 **Vibrant Applications Screen**  
20 **(Page 1 of Applications)**



21  
22 **Figure 21 (See Exhibit 18)**  
23 **Epic 4G Applications Screen**  
24 **(Page 1 of Applications)**

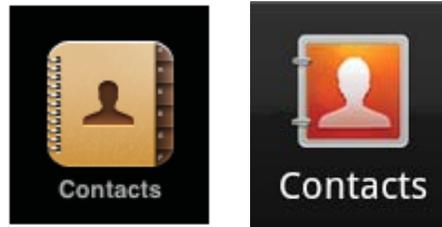
## 2. Similarity Between Apple Icons and Samsung Icons

25 62. Exhibit 32 shows the Samsung icons for Contacts, Camera, Gallery, Music/Music  
26 Player, and Phone next to the corresponding Apple icons appearing in the iPhone Devices, the  
27 D'305 patent, the D'334 patent, and various trademark registrations and applications. At a  
28 glance, a number of overall similarities between these pairs of icons are evident and—more

<sup>20</sup> The proportional size of the iPhone 3GS and iPhone 4 icons (measured without including the drop shadow) are exactly the same as on the iPhone: 114 x 114 pixels out of 960 x 640 (11.9 percent of height; 17.8 percent of width).

1 notably—the stylistic differences between the individual icons are consistent from pair to pair<sup>21</sup>:

- 2 • **Address Book (Apple) vs. Contacts (Samsung):.**



3  
4  
5  
6  
7  
8 **Apple Samsung**  
**Figure 22**

9 These icons share a similar head and shoulders silhouette in a square book-like  
10 format with a ring binding on the left edge. The bindings are not identical, but  
11 they both are drawn to appear to be metal rings that pierce the book cover. Both  
12 book cover silhouettes (which appear to be the head and shoulders of a person with  
13 short hair) have a similar amount of dimension, though Samsung's is embossed  
14 and Apple's is debossed. There is a slight lighting effect from the top. Because of  
15 these similarities, both icons contribute similarly to the overall visual impression  
16 of the screens in which they appear on the respective phones. This analysis applies  
17 to the Contacts icon appearing in each of the Samsung Phones I examined.  
18  
19  
20  
21  
22  
23  
24  
25  
26

27  
28 <sup>21</sup> Except where indicated, the Samsung icons in the comparisons below are taken from the screen capture images shown in Ex. 29.

1 • **Camera (Apple) vs. Camera (Samsung):**



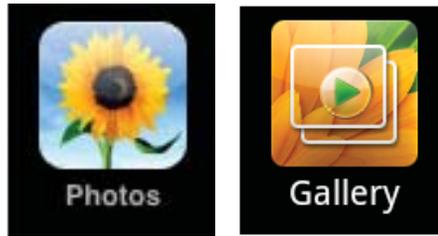
6

7 **Apple Samsung**

8 **Figure 23**

9 Samsung's camera icon uses a graphic style similar to that of the camera icon  
10 common to the D'305 patent, D'334 patent, and the iPhone Devices. Both camera  
11 icons share what reads as a brushed aluminum-finish, with the emphasis on a  
12 highly detailed, dimensional lens with reflected light, and what appears to be  
13 concentric circles of lens housing. Color is used in the illustration of both lenses,  
14 and blue appears as the predominant accent color in each. Although one image is  
15 cropped and one shows a whole camera, the dominant feature in both is the round,  
16 embedded lens with glossy highlights. There are other graphic style options for a  
17 camera icon, but these two particular camera icons make a similar visual  
18 impression, as they appear "realistic," particularly when surrounded by other  
19 styles of icon images on the respective phones. This analysis applies to the  
20 Camera icon appearing in each of the Samsung Phones I examined, although it  
21 applies to a lesser extent to the Camera icon in the Galaxy S 4G and Vibrant,  
22 which uses a consistent graphical style but has a black camera with a less  
23 prominent lens.  
24  
25  
26  
27  
28

1 • **Photos (Apple) vs. Gallery (Samsung):**



6

7 **Apple Samsung**  
**Figure 24**

8 Both of these icons represent the user's photograph collection, and both use a  
9 photographic image of a yellow flower with many long petals that appear textured  
10 with ridges and appear to narrow at the tips, like the petals of a sunflower. The  
11 whole flower appears in Apple's icon. The Samsung image is cropped and  
12 zoomed-in, but the yellow petals and green leaves looks similar to those in Apple's  
13 icon and could suggest the same type of flower to the user. The similarity between  
14 the two icons is enhanced by the appearance of a nearly identical curved reflection  
15 of a light source that creates a shiny, arc-shaped effect in the top half of each icon.  
16 There is a striking similarity of subject choice along with color and petal shape.  
17 Even though the Samsung icon includes round rectangles to suggest picture  
18 frames, and a play button, the green of the play button keeps the coloring  
19 consistent with Apple's icon. Because of these similarities, both icons contribute  
20 similarly to the overall visual impression of the screens in which they appear on  
21 the respective phones. The similarities between these designs also could cause  
22 users to see them as coming from the same company or source, or representing the  
23 same brand. This is especially the case because each icon uses the same  
24 distinctive subject to represent photos, even though, as discussed above, a yellow  
25 flower is not a symbol predominantly or historically associated with photos (e.g.,  
26  
27  
28

1 beaches with palm trees and mountains). This analysis applies to the Gallery icon  
2 appearing in each of the Samsung Phones I examined except for the Droid Charge.

3  
4 • **Phone (Apple) vs. Phone (Samsung):**



9 **Apple**

**Samsung**

10 **Figure 25**

11 The icons for Phone occupy the bottom left corner of the display in the Samsung  
12 Phones, the D'334 and D'305 patents, and the iPhone Devices. As explained in  
13 Paragraph 53, there are two slightly different Apple Phone icons: the iPhone has  
14 the same Phone icon as in the D'334 and D'305 patent, whereas the iPhone 3GS  
15 and iPhone 4 have the slightly different icon shown in U.S. Trademark Reg.  
16 No. 3,886,196. All three icons (Samsung's Phone icon and Apple's two slightly  
17 different icons) feature a stylized handset silhouette similar to a classic 1950s-style  
18 desktop phone. The Samsung Phone icon closely resembles both of the Apple  
19 icons:  
20 icons:

- 21
- 22 ○ Regarding the iPhone 3GS/iPhone 4 Phone icon, both it and the Samsung  
23 icon appear light gray with shading towards white. Each slants diagonally  
24 from upper left to lower right across a green rounded rectangle with a  
25 gradient, and each faces the upper right. Both icons show a classic desk  
26 phone receiver. The receivers are not precisely identical, but they both  
27 evoke the same real-world classic phone, without a cord. The background  
28

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

is not an identical shade of green, but the greens are similar, and the pale gray gradient palette against the green (with a slight, edge-defining drop shadow) creates a similar amount of contrast. Because of the similarities between these designs, I would expect that users might see them as coming from the same company or source, or representing the same brand. Also, both icons contribute similarly to the overall visual impression of the screens in which they appear on the respective phones, in particular because they appear in the same location on the screen. This analysis applies to the Phone icon appearing in each of the Samsung phones I examined.

- o Regarding the iPhone/D'334/D'305 Phone icon, it shows a classic desk phone receiver in white, anti-aliased against a green background. It slants from the upper left to lower right and faces the upper right corner of its rounded rectangular background. The lightest shades of green are in the top half, where there is a highlight, and the darker shades of green are in the lower half. The Samsung Phone icon is similar; it also shows a pale, retro-style receiver that slants diagonally and faces the upper right. It is also shown on a rounded rectangular background element with shading that is brightest toward the top and darker below. Neither receiver has any indication of a cord; they are symbols as opposed to “realistic” illustrations. Both icons contribute similarly to the overall visual impression of the screens in which they appear on the respective screens, in particular because they appear in the same location on the screen. This analysis applies to the Phone icon appearing in each of the Samsung

1 Phones I examined.

2 • **iTunes (Apple) vs. Music/Music Player (Samsung):**



10 **Figure 26**

- 11 ○ Regarding the iTunes Eighth Notes + CD icon (U.S. Trademark Reg.  
12 No. 2,935,038; far left in Figure 26), the Samsung Music/Music Player  
13 icon—which appears in two slightly different versions, one with light blue  
14 eighth notes and one with red eighth notes—closely resembles the Apple  
15 icon. Both feature an image of a compact disc with a pair of eighth notes  
16 as an overlay. In each, the pair of notes shows the higher note on the right,  
17 and the bar that connects the notes slopes up slightly to the right. In each  
18 icon, the notes appear to be in the foreground (as opposed to being printed  
19 on the disc) because part of the notes overlap the round border of the disc,  
20 and the vertical line of the left note crosses the center portion of the disc.  
21 Considering the fact that, as explained above in paragraph 54, there is a  
22 wide range of alternative icons available for symbolizing music, the  
23 similarities between these designs might cause a user to see them as  
24 coming from the same company or source, or representing the same brand.  
25  
26

27  
28 <sup>22</sup> The Music Player icon with red eighth notes appears in the Captivate, Epic 4G, Galaxy S 4G, Galaxy S i9000, Infuse 4G, and Vibrant. The example shown here and below is from a photograph of the Captivate (Exhibit 15).

1 This analysis applies to the Music/Music Player icon appearing in each of  
2 the Samsung Phones I examined.



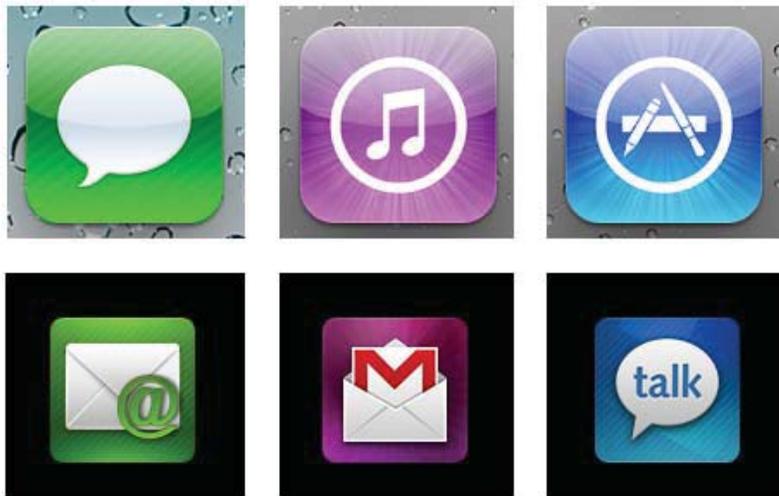
10 **Figure 27**

- 11 ○ Regarding the iTunes icon (U.S. Trademark Application Serial No.  
12 85/041,463, far left in Figure 27), it shares several elements with the  
13 Samsung Music Player icon. First, it appears on a purple background with  
14 what appears to be a magenta radial gradient. Both have darker areas at the  
15 left and right. Both share a circular element combined with a pair of eighth  
16 notes, and both pairs of eighth notes have a slightly higher note on the  
17 right, which causes the horizontal bar that connects them to slope upward  
18 toward the right. Because of these similarities, both icons contribute  
19 similarly to the overall visual impression of the screens in which they  
20 appear on the respective phones. This analysis applies to the Music/Music  
21 Player icon appearing in each of the Samsung Phones I examined.

22  
23 63. Figure 28 shows the Samsung icons for the Gmail (or Google Mail),<sup>23</sup> Email,<sup>24</sup> and  
24 Talk applications as well as the iTunes, App Store, and Messages icons from the iPhone 4:  
25

26 <sup>23</sup> The Gmail icon appears in this form on all of the Samsung Phones except for the Gem, which shows the Gmail  
27 icon with an orange background.

28 <sup>24</sup> The Email icon appears in this form on all the Samsung Phones except for the Galaxy S 4G, Gem, Indulge, and  
Vibrant. For some of the screens shown in Exhibits 15 through 31, the icon is not displayed in this form, because it  
appears without the green background when moved to the row of icons at the bottom of the screen.



**Figure 28<sup>25</sup>**

Although the icons for Email (Samsung) and Messages (Apple) represent different subjects, they share a similar green gradient with a diagonal texture behind pale gray icons. This use of similar backgrounds contributes to the overall visual similarity between the applications screens of the Samsung Phones, the iPhone 3GS, and iPhone 4. Similarly, the icon for Gmail (Samsung) obviously represents a different subject than the iTunes (Apple) icon, but they share a very similar magenta radial gradient background, visible behind a pale image. This use of similar backgrounds contributes to the overall visual similarity between the applications screens of the Samsung Phones and iPhone Devices. A similar resemblance between backgrounds exists between the App Store icon and the blue backgrounds appearing in various Samsung icons, such as Skype mobile, Settings, and Talk. (See Exhibits 15 through 31.) For example, the App Store icon (Apple) and the Talk icon (Samsung) shown in Figure 28 share a similar blue tonal striped background. Although both are not radial gradients, they have similarly colored bands, similar lighter blues at the bottom and darker areas at the sides. The use of a grid of square icons that have rounded corners and share similarly textured and shaped jewel-toned backgrounds with

<sup>25</sup> These images are taken from screen capture images of the iPhone 4 (Exhibit 5) and Fascinate (Exhibit 29).

1 equivalently detailed imagery evokes a particular overall graphical style and contributes to the  
2 overall visual similarity between the applications screens of the Samsung Phones and the iPhone  
3 Devices. The similarities with respect to the patterns and textures in the backgrounds of the  
4 iTunes and App Store icons also apply to the D'334 patent, although not with respect to the  
5 particular colors.<sup>26</sup>

6  
7 64. As mentioned above, many icons in the D'305 patent, the D'334 patent, and the  
8 iPhone Devices show a curved reflection of a light source that creates a shiny, arc-shaped effect  
9 in the upper half of the icon. A nearly identical effect is present in numerous Samsung icons,  
10 including: Clock (all except Gem), Gallery (all except Droid Charge), Places (e.g., Epic 4G,  
11 Indulge), Navigation (e.g., Epic 4G, Galaxy S i9000). This similarity further contributes to the  
12 overall visual similarity between the applications screens of the Samsung Phones and the iPhone  
13 Devices, the D'305 patent, and the D'334 patent. The impact is well demonstrated by the Clock  
14 icon common to the iPhone, the D'305 patent, and D'334 patent when compared with the Clock  
15 icon on the Samsung Phones. Both are compositions that feature a round wall clock. The  
16 Samsung clock appears on a blue-gray gradient background and shows four numerals. The Apple  
17 clock appears on a black to gray background and has twelve numerals and a second hand.  
18 However, the basic commonality of the form factor, plus the distinctive highlight (common to  
19 many Apple icons), contributes to the similar appearance of these icons:  
20  
21



22  
23  
24  
25  
26 **iPhone Clock**

**Samsung Clock**

**Figure 29**

27  
28 <sup>26</sup> As noted in footnote 4, the D'334 patent does not incorporate color. The comparison to the D'334 patent here is only with respect to the appearance of the design shown in the patent (*see* Figure 3; APLNDC00030421-425).

1                                   **3. Overall Visual Impression of Samsung Applications Screens Versus the**  
2                                   **Overall Visual Impression of the Design Patents**

3           65.     The applications screens of the Samsung Phones address the same design problem  
4 addressed by the iPhone Devices and the Design Patents: how to present a set of application icons  
5 on a touch screen device. As demonstrated above in Paragraphs 45 through 52, there are  
6 numerous alternative ways to achieve that design goal. Also as demonstrated above in  
7 Paragraphs 45 through 52, those alternatives need not produce the same overall visual  
8 appearance.

9           66.     As demonstrated in Sections V.B.1 and V.B.2, the icons in the applications screens  
10 displayed by the Samsung Phones use varying graphic styles in a similar fashion as do the icons  
11 used by the iPhone Devices and contained in the D’305 and D’334 patents. As with the iPhone  
12 Devices, the D’305 patent, and the D’334 patent, the consistent use of rounded, square-shaped  
13 icons in a grid layout unifies the icons in producing an overall visual appearance as a group. The  
14 result of the similarities demonstrated in Sections V.B.1 and V.B.2 is that that overall visual  
15 appearance is substantially the same as the overall visual appearance of the designs depicted in  
16 the D’305 patent and the D’334 patent. This opinion is unaffected by the fact that the design  
17 shown in the D’305 patent has only three rows in the top portion of the screen, as the overall  
18 visual appearance of that design is still substantially the same as that of the Samsung Phones,  
19 which, in any event, can be configured so that the applications screens only show three rows in  
20 the top portion. (*E.g.*, Exhibit 33.)

21           67.     For the same reasons described above, the applications screens of the Samsung  
22 Phones also have substantially the same visual impression as the design shown in the D’790  
23 patent. The overall visual impression of the Samsung Phones’ applications screens is created  
24 mostly by the appearance of a variety of icon images presented on a grid of rounded rectangular  
25 shapes. Relative to the size of the display screen, the size and spacing of the rounded rectangles  
26  
27  
28

1 in the top portion of the Samsung Phones closely resemble the size and spacing of the rounded  
2 rectangles in the D'790 patent. Although the default configuration (which, as noted above, can be  
3 modified by the user) of the Samsung Phones has a fourth row in the top portion of the screen,  
4 and the bottom row of icons is not uniformly rectangular like the icons in the top portion, the  
5 overall visual impression is still substantially the same as that shown in the D'790 patent.  
6

#### 7 **4. Overall Visual Impression of Samsung Applications Screens Versus the** 8 **Overall Visual Impression of the iPhone Devices**

9 68. I have been informed that Apple has asserted trade dress claims concerning the  
10 Samsung Phones. I have also been informed that certain aspects of the iPhone Devices' interface  
11 graphics are relevant to the asserted trade dress claims, including:

- 12 • a grid of brightly colored, square icons that have rounded corners having the same  
13 pixel radius;<sup>27</sup>
- 14 • a row of dots; and
- 15 • a separate area at the bottom of the screen containing four square icons (with the  
16 same rounded corners mentioned above) that remain unchanged when the user  
17 views additional pages of icons.  
18  
19

20 69. I have been informed that there are additional factors at issue regarding Apple's  
21 trade dress claims that do not concern the icons and interface graphics of the iPhone Devices. As  
22 explained above, however, I have only been asked to opine on the design of icons and interface  
23 graphics and the overall visual impression they create. I have not been asked to evaluate  
24 hardware designs or the visual impression they create.  
25

26 70. As explained in Sections V.B.1 and V.B.2, the applications screens of Samsung  
27

---

28 <sup>27</sup> I have been informed that "evenly rounded corners" (the term used in the Amended Complaint (Dkt. 75)) means corners having the same pixel radius.

1 Phones display a grid of brightly colored, square icons that have rounded corners. Each corner of  
2 the square icons appears to have the same pixel radius. Also, each of the Samsung Phones  
3 displays a row of dots that indicates which page of the applications screens is currently displayed.  
4 Finally, each of the Samsung Phones has a separate area at the bottom of the screen containing  
5 four icons that do not change when the user views additional pages of icons. The icons in this  
6 area generally have a dominant rectangular shape with rounded corners.  
7

8 71. The bottom row of icons in the Samsung Phones does not have uniformly square  
9 icons. However, the similarities between the Samsung Phones and iPhone Devices, discussed  
10 above in Sections V.B.1 and V.B.2, results in the applications screens of the Samsung Phones and  
11 the iPhone Devices producing the same overall visual impression. The similarities are such that  
12 they appear to represent the same general design approach, and users could see the designs as  
13 coming from the same company or source, or representing the same brand.  
14

15 **C. The Similarities Between the Samsung Phones and the iPhone Devices**  
16 **Support the Possibility that Samsung Used the iPhone Devices as a Guide in**  
17 **Designing Icons and User Interface Graphics for the Samsung Phones**

18 72. I have been informed that the iPhone Devices were released to the public as  
19 follows: the iPhone was released on June 29, 2007; the iPhone 3G was released on July 11, 2008;  
20 the iPhone 3GS was released on June 19, 2009; and the iPhone 4 was released on June 24, 2010.

21 73. I have been informed that the Vibrant was the earliest of the Samsung Phones to be  
22 released, with a release date of approximately July 2010.

23 74. As explained above, there is a wide range of alternatives for the design of the  
24 Samsung Phones' user interface graphics, including many options for the individual icons,  
25 general icon style, and overall appearance of the applications screens. Also as explained above,  
26 many design decisions are required in order to arrive at final designs for icons and user interface  
27 graphics.  
28

1           75.     Given the breadth of options for the design of individual icons and the overall  
2 visual appearance of a graphical interface, I would expect that Apple’s and Samsung’s respective  
3 decisions regarding icon and layout design would result in design identities that vary between the  
4 Samsung Phones and the iPhone Devices. In other words, I would expect that independently  
5 designed user interface graphics would result in screens with different overall appearances, such  
6 as the screens shown in Exhibits 9 through 13.

8           76.     However, as described above in Section V.B, there are a number of striking  
9 similarities between the applications screen icons and layout of the iPhone Devices and Samsung  
10 Phones. The pattern of similarities supports the possibility that the iPhone Devices’ screen  
11 graphics influenced and served as a guide for the design of the applications screens of Samsung  
12 Phones.

13           77.     I have been asked to opine as to whether my impressions above are consistent with  
14 certain documents obtained by Apple from Samsung in this litigation and provided to me. The  
15 documents that I have reviewed are consistent with my opinions (1) that there are many  
16 alternative designs, both individual and overall, that Samsung could have chosen for the Samsung  
17 Phones; (2) that there were many alternatives for the overall visual appearance of the interface  
18 graphics for its applications screens; and (3) that the pattern of graphical similarities between the  
19 applications screens of the Samsung Phones and iPhone devices, as explained in paragraphs 60  
20 through 71 above, supports the possibility that Samsung used the iPhone as a guide when  
21 designing the Samsung Phones’ applications screens.

22  
23  
24                           **1. Samsung Documents Corroborate the Existence of Alternative Icon**  
25                           **Designs**

26           78.     Samsung documents are consistent with my opinion, explained in paragraphs 54  
27 through 56 above, that there are many icon design options that do not closely resemble particular  
28 iPhone icons or the general style of the iPhone user interface graphics.



1 vast number of alternatives.

2 81. Another example is a November 26, 2007 document titled “Moria,: Advanced UX  
3 Strategy for 2009.”<sup>29</sup> It describes a user interface theme, including an “icon archetype.”  
4 (SAMNDCA00204884-5031 at 00205008-5018.) Using a camera icon as an example, the  
5 document shows stylistic options for icon design that are very different from any of the icons  
6 used in the iPhone Devices, including the camera. (See Figure 31, below.) The icons shown at  
7 pages SAMNDCA00205008 through SAMNDCA00205018 represent many stylistic treatments  
8 based on several outlined camera shapes. The iconic images range from flat and simple, to  
9 debossed, to modeled 3D images. They range from monochromatic to colorful, and some of the  
10 most detailed incorporate patterned textures (e.g., wood grain and floral). These are stylistic  
11 options that do not mirror the styles of icons used on the iPhone Devices or depicted in the D’305  
12 and D’334 patents.  
13  
14



15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
**Figure 31**

26 82. Another document (SAMNDCA10202899-983) dated October 23, 2008 appears to  
27

28 <sup>29</sup> I have been informed that “UX” is shorthand for “User Experience.”

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28

**VIII. EXHIBITS TO BE USED**

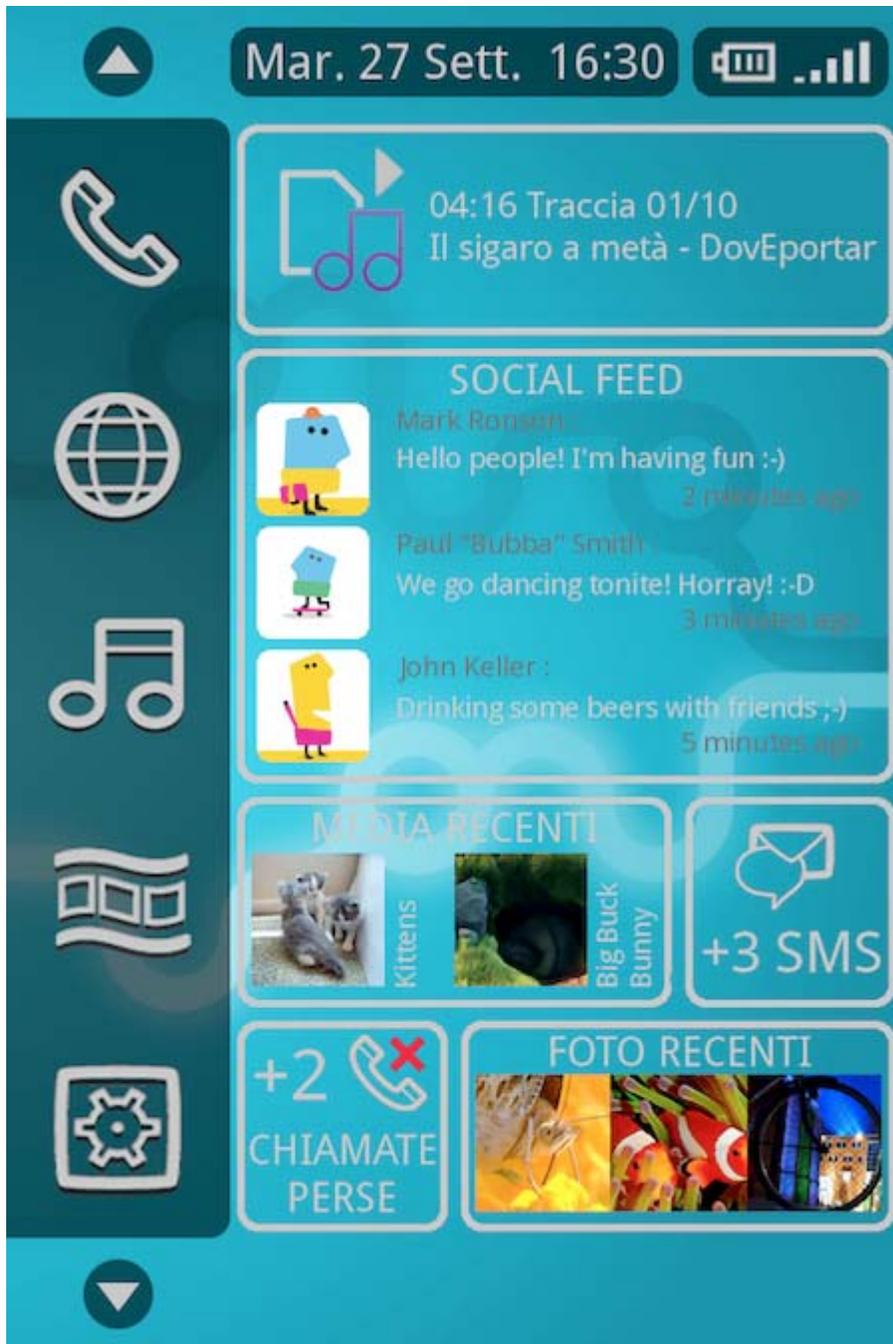
93. I anticipate using as exhibits during trial certain documents and things referenced or cited in this report or accompanying this report. I also anticipate using other demonstrative exhibits or things at trial.

Dated: March 22, 2012

  
\_\_\_\_\_  
SUSAN KARE

sf-3098252

# Exhibit 10



<http://linuxbird.deviantart.com/art/Mockup-MeeGo-handset-260376988>



<http://www.warungdigital.com/wp-content/uploads/2011/05/kddi-infobar-a01-android.jpg>



<http://www.portablegadgets.net/index.php?id=300>



<http://www.hpsblog.com/2011/02/personalize-your-phone-screen-with.html>



<http://www.geeky-gadgets.com/wp-content/uploads/2009/02/windows-mobile-6-5.jpg>