QUINN EMANUEL URQUHART & SULLIVAN, LLP
Charles K. Verhoeven (Cal. Bar No. 170151)
charlesverhoeven@quinnemanuel.com
50 California Street, 22nd Floor
San Francisco, California 94111
Telephone: (415) 875-6600
Facsimile: (415) 875-6700

Kevin P.B. Johnson (Cal. Bar No. 177129)
kevinjohnson@quinnemanuel.com
Victoria F. Maroulis (Cal. Bar No. 202603)
victoriamaroulis@quinnemanuel.com
555 Twin Dolphin Drive 5th Floor
Redwood Shores, California 94065
Telephone: (650) 801-5000
Facsimile: (650) 801-5100

Michael T. Zeller (Cal. Bar No. 196417)
michaelzeller@quinnemanuel.com
865 S. Figueroa St., 10th Floor
Los Angeles, California 90017
Telephone: (213) 443-3000
Facsimile: (213) 443-3100

Attorneys for SAMSUNG ELECTRONICS CO., LTD., SAMSUNG ELECTRONICS AMERICA, INC. and SAMSUNG TELECOMMUNICATIONS AMERICA, LLC

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA, SAN JOSE DIVISION

APPLE INC., a California corporation,

Plaintiff,

vs.

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

DECLARATION OF ITAY SHERMAN IN SUPPORT OF SAMSUNG'S OPPOSITION TO APPLE'S MOTION FOR A PRELIMINARY INJUNCTION

Date: October 13, 2011
Time: 1:30 pm
Place: Courtroom 8, 4th Floor
Judge: Hon. Lucy H. Koh

I, Itay Sherman, declare:

1. I am an independent consultant in the areas of communication and cellular handset technology. I have been asked to provide an expert declaration on behalf of Samsung Electronics Co. Ltd., Samsung Electronics America, Inc., and Samsung Telecommunications America, LLC (collectively "Samsung") in the above-captioned case.

2. I submit this declaration in support of Samsung's Opposition to Apple's Motion for a Preliminary Injunction. If asked at hearings or trial, I am prepared to testify regarding the matters I discuss in this declaration.

3. I understand that discovery from Apple to date has been limited and is on-going. I reserve the right to supplement or amend this declaration based on any new information that is relevant to my opinions.

4. I am being compensated for my work in this matter at the rate of $220 per hour plus expenses and VAT. My compensation is in no way tied to the outcome of this matter.

I. PROFESSIONAL BACKGROUND

5. I earned a bachelor degree with honors (B.Sc) in Electrical engineering from Tel Aviv University in 1991, and a master degree with honors (M.Sc) in Bio medical engineering from Tel Aviv University in 1995.

6. I have worked in the telecommunication industry for the last 20 years of which the last 10 years I worked on mobile handsets technology and products.

7. Between 2004-2007, I was the Chief Technology Officer for Texas Instruments Mobile Connectivity group that developed key components for mobile handsets. While there, I worked closely with the Nokia, Motorola, and Sony Ericsson to define technology solutions based on their handset design constraints.

8. Between 2007-2010, I served as the Chief Technology Officer for modu LTD, a handset and accessories manufacture that pioneered the concept of modular handsets. The modu concept revolved around the idea of a modular phone that has a base unit that can operate as a very small form factor handset, but could also be plugged to consumer electronic devices we termed "jackets" that enhance the capabilities and external design of the handset and enable it to morph.

9. The development of the modu concept required investigation and experimentation with the possible boundaries of handset design electrical circuitry, mechanical design, and industrial design. I led the effort for design of multiple handsets as well as additional consumer devices that the company had been developing. Presentations reflecting the modu concept and portfolio are attached as Exhibit A. The modu1 handset design has been awarded Guinness Book of Records certificate for the lightest handset in the world. The modu-T handset design was awarded the Guinness Book of Records certificate for the lightest touch phone. A picture of these certificates is attached as Exhibit B.

10. Along with supervising the industrial and manufacturing design process, I was responsible for ensuring that the company understood the different technologies and components available for handsets. This required analyzing size and placement limitations, defining the parameters for the achievable dimensions of different designs, and studying competing handsets and understanding their design tradeoffs based on observations and commercial available teardowns.

11. As CTO of modu, I was also responsible for obtaining and maintaining intellectual property registrations, including the design patents.

12. I also served as the head of the handset cluster of the IMA (Israeli Mobile Association) and lectured on handset technology and design at public seminars.

13. I am a named inventor on 15 registered patents and more than 60 pending submissions.

II. APPLICABLE LEGAL PRINCIPLES

14. I am informed by counsel that infringement is determined according to the "ordinary purchaser" test:

> that if, in the eye of an ordinary observer, giving such attention as a purchaser usually gives [and taking into account the prior art], two designs are substantially the same, if the resemblance is such as to deceive such an observer, inducing him to purchase one supposing it to be the other, the first one patented is infringed by the other.

Gorham Mfg. Co. v. White, 81 U.S. 511, 528 (1871) (as clarified in *Egyptian Goddess, Inc. v. Swisa, Inc*., 543 F.3d 665 (Fed. Cir. 2008) (en banc)).

15. I am informed by counsel that the "prior art" includes public information, public knowledge, and public acts that occur before an application for a patent was filed. Prior art includes patents, journals, Internet publications, systems and products.

16. I am further informed by counsel that Section 102 of the Patent Act provides that:

> A person shall be entitled to a patent unless . . . (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or . . . (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States . . . .

17. I am further informed by counsel that design patents may be invalid as obvious or anticipated by the prior art specified by Section 102 of the Patent Act. I am informed that controlling authority holds that:

> For design patents, the role of one skilled in the art in the obviousness context lies … in determining whether to combine earlier references to arrive at a single piece of art for comparison with the potential design or to modify a single prior art reference. Once that piece of prior art has been constructed, obviousness, like anticipation, requires application of the ordinary observer test, not the view of one skilled in the art.

International Seaway Trading Corp. v. Walgreens Corp., 589 F.3d 1233, 1240 (Fed. Cir. 2009).

18. I understand that "a person skilled in the art" is one of "ordinary skill in the field of the patented design." *Hupp v. Siroflex of America, Inc.,* 122 F.3d 1456, 1462 (Fed. Cir. 1997). Such a person is a "designer of ordinary skill or capability in the field to which the design pertains," who is "presumed to have perfect knowledge of all pertinent prior art." *L.A. Gear, Inc. v. Thom McAn Shoe Co.,* 988 F.2d at 117, 1124 (Fed Cir. 1993).

19. A person of ordinary skill in the art relevant to U. S. design patents 504,889 ("D'887"), 618,677, ("D'667"), and 593,087, ("D'087") would have had experience designing mobile devices with touch screen displays.

20. It is also my understanding that functional aspects of a design cannot receive design patent protection, which applies only to ornamental design. *Richardson v. Stanley Works, Inc.*, 597 F.3d 1288, 1293-94 (Fed. Cir. 2010) ("[A] design patent, unlike a utility patent, limits protection to the ornamental design of the article."). "If the patented design is primarily functional rather than ornamental, the patent is invalid." *Lee v. Dayton-Hudson Corp.*, 838 F.2d 1186, 1188 (Fed. Cir. 1988) (citing 35 U.S.C. § 171).

21. I have reviewed the Declaration of Cooper Woodring, submitted in support of Apple's motion and the non-confidential portions of the transcript of the deposition of Cooper Woodring taken on August 5, 2011.

III. THE D 504,889 PATENT

22. The D'889 Patent, titled "Electronic Device," shows a rectangular shaped device, was filed on March 17, 2004, and issued on May 10, 2005.

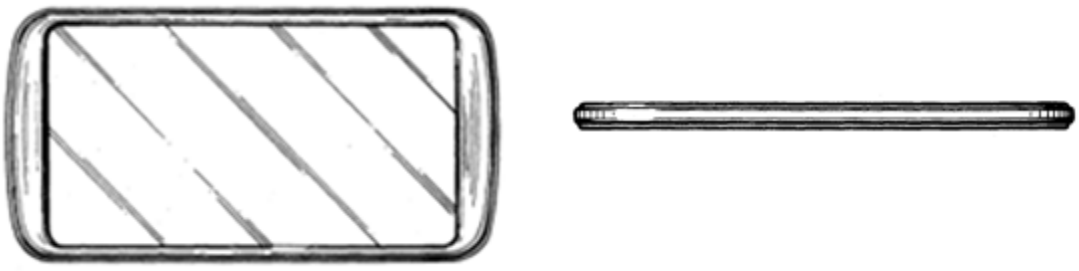
23. The D'889 patent claims a design for a device that has a large rectangular display, with optional borders, that is surrounded by a relatively narrow rim and an external frame that has four rounded corners and a flat back. The front surface of the device is clear and completely flat, and is flush with the thin rim.

A. D'889 PRIOR ART

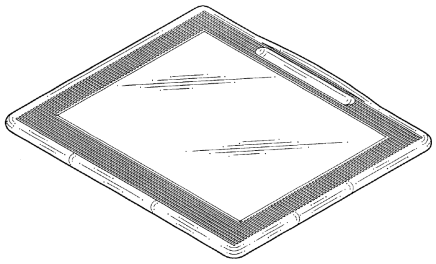
24. I have reviewed the Declaration of Roger Fidler dated August 16, 2011. Based on that declaration, it is my understanding that in 1981 Mr. Fidler described in the prior art an electronic reading device consisting of "portable, flat-screen displays." Declaration of Roger Fidler, ¶ 5 (herinafter "Fidler Decl."). It is also my understanding that Mr. Fidler created a mock-up of the tablet he envisioned, which had an overall rectangular shape, a flat rectangular front surface with no ornamentation, a portable size with a relatively thin depth, and a smooth back surface with no ornamentation. *Id.* at ¶ 7. Attached as Ex. C is a side-by-side comparison of the 1981 Tablet to D'889.

25. I further understand from Mr. Fidler's declaration that he created another mockup in 1994, which was featured in a film distributed to various newspaper organizations and media outlets. Fidler Dec. ¶¶ 13-14. As such, that design was "in use in the United States," in 1994. That tablet also had an overall rectangular shape, a flat rectangular front surface with minimal ornamentation, a portable size with a relatively thin depth, and a smooth back surface with no ornamentation. In addition, it had four evenly rounded corners. *Id.* at ¶¶ 13-15. Attached as Ex. D is a side-by-side comparison of the 1994 Tablet to D'889.

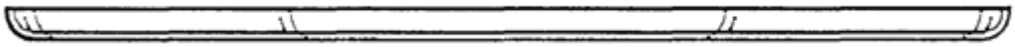
26. On July 20, 1993, U.S. D337,569 was issued for an "Electronic Notebook for Data Entry." *See* Ex. E. This design disclosed a rectangular shaped electronic device with four evenly rounded corners dominated by a flat surface, with a relatively thin depth, and a largely smooth and continuous back surface. The depth of the device is approximately 1/19 of the overall length.



27. U.S. D461,802 was issued on August 20, 2002 for a "Tablet." *See* Ex. F. It discloses another electronic device that is predominately rectangular with four evenly rounded corners, a rectangular inset screen, a relatively narrow rim and a frame, a relatively thin depth, and a smooth, continuous back surface. Judging from the shape and placement of a thin groove at the top, this design apparently contemplates the use of a stylus, which was a common way of interacting with touch screen technology of the time.



28. The profile of the D461,802 design is similar to the one described in the D'889 Patent, but thinner, and its edge is more gently rounded.

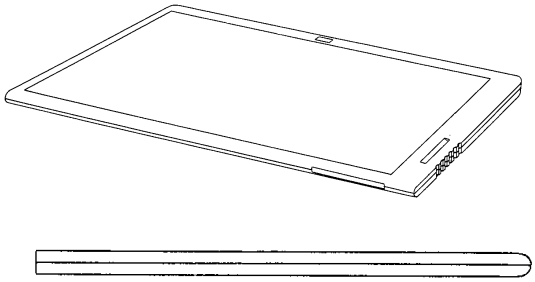


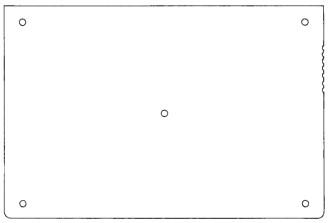
D461,802, Fig. 2.

D'889, Fig. 5.

29. Several other designs were published before March 17, 2003 that feature a rectangular shape dominated by a large flat surface (presumably a screen) with minimal or no additional ornamentation on the surface, and a relatively thin depth.

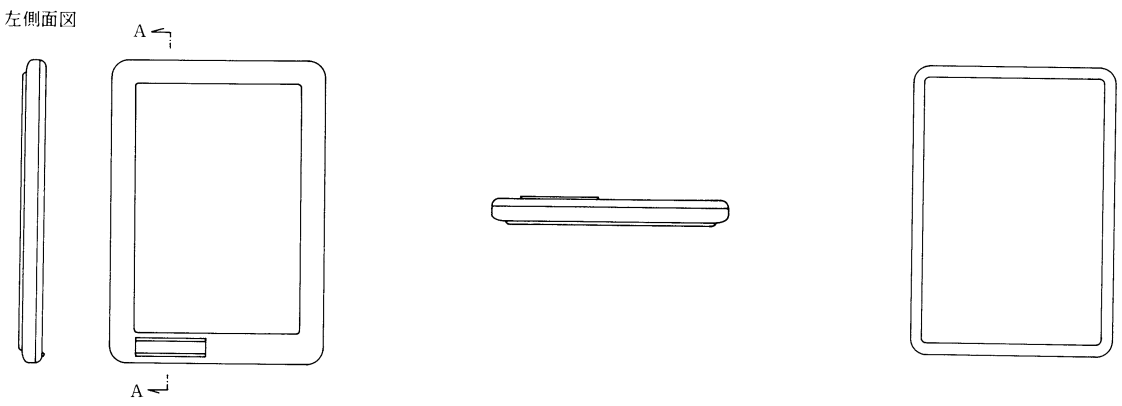
a) JP 0921403 for an electronic calculator, published March 9, 1995 (Ex. G):





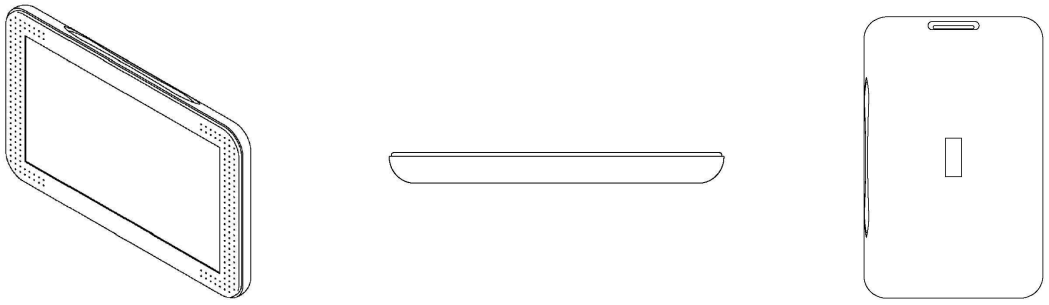
The primary differences between the JP 0921403 and the D'889 are additional features on the left of the bottom border and side edge, along with a small additional button on one of the side borders, asymetrical side edges such that one is verticle and one is curved, with a bull-nosed edge (more similar to the shape of the Galaxy Tab bezel). In addition, the back surface, otherwise free of ornamentation and apparently smooth, has five small circles, which are presumably "feet" for lifting the device off of a flat surface.

b) JP 0887388 for Memo Input/Output Equipment, published December 21, 1993 (Ex. H):



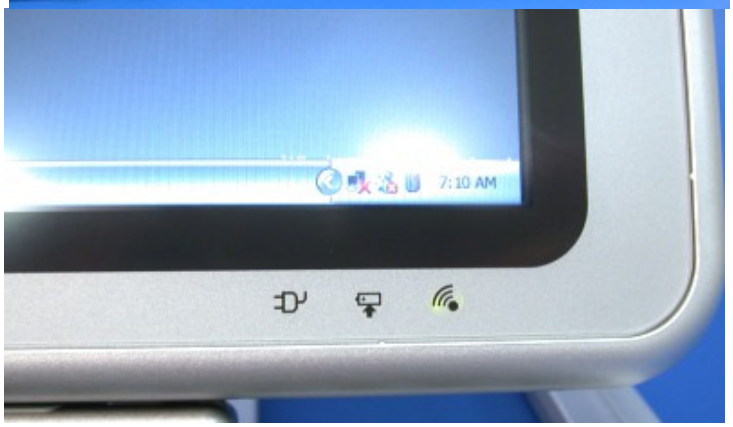
The JP 0887388 appears to share with the D'889 an overall rectangular shape with four evenly rounded corners, a largely smooth and continuous back surface, and an edge that is perpendicular to the front surface and then curves in toward the bottom of the device. *See* Ex. I (comparing JP 0887388 to respective figures from D'889). The primary difference between the JP 0887388 and the D889, appears to be additional rectangular feature on the lower border of the JP 0887388.

c) JP 1142127, published May 27, 2002 for an electronic computer (Ex. J):



The JP 1142127 design appears to share with the D'889 a flat smooth surface from end to end on both the front and back, except that the back also has a rectangular shape in the center and what appears to be a docking port set into the slope toward the back surface, and the appearance of a thin rim surrounding the front surface. *See* Ex. K (comparing JP 1142127 to respective figures from D'889). The JP 1142127 differs most significantly from the D'889 because it includes additional details on claimed borders (whereas the borders in the D'889 are optional and without further design) and a recessed groove inset into the top, presumably as a stylus holder.

30. In addition to the designs described above, in 2002 Hewlett-Packard announced the HP Compaq Tablet PC TC 1000. *See* Ex. L. Although this was a "convertible" tablet device that also permitted the user to access and use a keyboard, the screen of this device had a flat, clear glass cover that extended past the screen and over a border area, which is referred to and can be seen in the images in Ex. M ("Another neat thing is a sheet of tempered glass that covers both the digitizer and the bezel."). This glass appears to be flush with the relatively thin rim that surrounds the front face of the device and then slopes down:



31. It is my conclusion, based on my review of the prior art, I believe that a designer of ordinary skill in designing mobile electronic devices in March 2003 would have found it obvious to create the D'889 tablet design consisting of a rectangular design with four evenly rounded corners, a relatively thin depth, a smooth back that curves up toward the front of the device, and a flat, clear front surface that extended beyond the edges of the display screen. These elements are all disclosed, many in combination with each other, in the prior art discussed above.

32. The flat clear surface is plainly disclosed by the HP Compaq Tablet PC TC 1000. Furthermore, the Japanese design registrations do not have surface shading lines similar to U.S. design patents, but it would be obvious to one of ordinary skill from those designs to utilize a flat clear surface for a tablet design, rather than an embedded screen design.

33. Even apart from the prior art's disclosure of an entirely flat, clear front surface had not been disclosed as of 2003, I believe it would have been obvious to one of ordinary skill in the art at that time. Having a smooth, continuous surface maximizes the significance of the display screen—which is the primary reason for being of the tablet computer. With no unnecessary ornamentation, no tactile buttons, and no contrasting surface materials, nothing distracts from the user's interaction with the display screen. Having a flat, rather than embedded, screen design for a tablet device also makes it easier to keep the device clean, since a flat surface does not accumulate dirt and other debris along the edges of the screen border like an embedded screen does.

34. In addition to highlighting and enhancing the functionality of the tablet, such a clean, simple design makes the product is easy to use—a function Cooper Woodring admitted. Woodring Deposition Transcript (cited excerpts of which are attached as Ex. N) at 150:22-154:16.

B. Functionality

35. Having an overall product design that defers entirely to the screen is functional because the screen embodies the very thing that is functional about a tablet computer. In addition to the overall functionality of a clean simple design in which everything defers to the display, a review of each of the elements of the D'889 that Mr. Woodring claims is distinctive confirms that each of them serves a functional purpose, such as making the product function more efficiently or

more comfortably for the user, making the manufacturing process more reliable or cost effective, or making the product more durable.

Rectangular shape

36. Virtually any device used to view media—newspapers, movies, magazines, or television—has a rectangular shape. This is natural given that the device for viewing media is essentially merely a frame for the content of the media. Thus, the dominant trend for televisions, computer monitors, and electronic readers has long been toward a rectangular shape with a reduced frame, well before the claimed invention of the Apple design patents.

37. As Mr. Woodring testified in his deposition, rectangular screens are commonplace and not proprietary to anyone. Woodring Dep. Tr. at 28:1-21.

Rounded corners

38. Almost all designs of portable consumer devices use some degree of rounding on corners of devices.

39. Rounded corners are functional because they ensure comfortable, safe, and ease of use. Pointed or sharp corners are uncomfortable to hold in one's hands or rest anywhere on the body. Further, they may scratch or puncture the skin of the user, specifically in cases where the device falls. Pointed or sharp corners also may also snag or tear clothing or the material inside a briefcase, backpack, purse, or other carrying case. Rounded corners minimize all of these hazards.

40. Rounded corner also make the device more durable. Pointed or sharp corners on designs are mechanical weak points and they may bend, snag, or break with the application of relatively little force. Rounded corners, on the other hand, are more robust and less likely to break.

41. Rounded corners are easier and more reliable to manufacture – specifically, for plastic molds, creating clean and esthetic corners is difficult. Having changes in the thickness of plastic created in molds tends to leave marks on the surface; therefore it better to have a uniform thickness.

Flat surface

42. Because commercial display screens are flat, devices in which the functionality of the display screen has primary importance, the front surface of the device will be mostly flat.

43. As explained, the use of display touch technology allows for removal of physical keys from the device front face. This helps keep the tablet surface clean and minimizes the chances of dust or water encroachment, which could harm the tablet.

A clear surface without ornamentation

44. If a single continuous flat front surface is used on a tablet computer, having that surface be clear best allows unimpeded viewing of the display screen.

45. The lack of ornamentation that Apple claims as part of its "ornamental design" is, by definition, not ornamental. Also, given the functional purpose of the display screen, adding ornamentation around (or on top of) the display screen would distract from the display screen, thus detracting from the quality of the device's functionality.

46. The "optional" border around the screen shown in the D'889 is also functional. The display screen includes active components and wiring and a controller is required to activate the display. These wires force the actual size of the display glass to be slightly larger than the active viewable area. The controller for the display may be either located on the glass substrate of the display (COG- Chip on Glass) or on a flexible cable extending from the display (COF – chip on flex). The space of the borders above or below the display screen accommodates the controller wiring.

Rim around the front surface

47. Having a rim around a clear surface to hold it into place is the most obvious design choice for a mobile electronic device. Theoretically, the clear surface could be glued from underneath or clamped into place by braces that do not surround the entire edge. However, leaving any part of glass edges exposed would expose the front surface to cracking or scratching. Consider what would happen if, for example, the exposed edge of the surface hit the side of a table. For the same reason that watches have bezels, having a rim surrounding the surface of the tablet is a highly functional choice.

48. This is not to say that all outer edges must look the same. For example, as demonstrated by the prior art discussed above, a rim may be raised around the front surface or may be flush with it. *Compare, e.g.* U.S. D337,569, Ex. E, *with* the HP Compaq Tablet PC, Ex. L. A rim may also be a separate ring component (as in the Galaxy Tab 10.1) or the upper part of a shell-like lower body of a device (as in the D'889 and the iPad). As shown in the images throughout this declaration, and the iPad and iPad 2, a rim may have straight sides, slope or curve on the bottom, top or both, or have straight lines at any point along the way.

49. Standard displays are made of a relatively fragile material that needs to be protected. To be a viable commercial product, a tablet needs to tolerate, to some extent, drops and casual bumps. Maintaining a border between the display and the exterior surface of the device functions to protect the display by absorbing the energy of such impacts directly.

50. Together, these functions and physical limitations work to force the inclusion of a border between the active area of the display and the edge of the front surface in all four directions.

Thinness of Design

51. The relative thinness of the tablet's depth is functional. Being thin facilitates the mobility and portability of the tablet. The trend in electronics for the past decade has been to make products thin while still being resilient and usable.

C. Design comparison

52. As I explained above, it is my opinion that the D'889 is invalid because its design is both obvious and functional. But in the interest of completeness, I have compared the D'889 to the original iPad (referred to hereinafter as "iPad"), the iPad 2, and the Samsung Galaxy Tab 10.1.

53. The D'889 shows a rectangular-shaped electronic device with evenly rounded corners consisting of two pieces of material: a flat front surface with an inset screen and a separate back surface, which is flat on the back surface and which curves up on all four sides to form a mostly straight edge of the device, which reaches to the front surface. The aspect ratio of the screen is approximately 4:3 and the depth of the device is approximately 1/15 of its height (the height here is the longer dimension of the rectangle, regardless of orientation). Other than

optional symmetrical borders surrounding the interior edge of the front surface and an optional rectangle and circle on two different sides (which appear to be a charging port and earphone jack), the device as a whole has no other features of significance.

54. On a device with such little ornamentation, little differences from the claimed design can be quite significant. Apple's expert, Mr. Woodring, has noted the same point. Woodring Dep. Tr. at 29:6-31:4.

55. A comparison between the D'889 Patent, the iPad, the iPad2, and the Galaxy Tab 10.1 confirms that the design of the Galaxy Tab 10.1 differs significantly from the D'889 and from Apple's two tablet products.

Front face shape

D'889:

56. The D'889 Patent illustrates a flat front surface with optional equal-width borders around a large rectangular display and rounded corners. The border width is ~1/20 of the overall length of the device.

57. No other feature exists on the front surface (i.e. no marking or buttons).

58. The aspect ratio of the display screen illustrated is 4:3 ratio, which was the standard aspect ratio used on older TV screens.

59. The front face is surrounded by a frame that is created by the bottom part of the device extending upward to encapsulate the front face.

iPad & iPad2:

60. Both devices have a flat front surface with a large rectangular display. The borders on the top and bottom are slightly larger then the ones on the side (21mm versus 18mm). The width of the borders are relatively much larger than that illustrated in the design patent (the width of the top & bottom borders is ~1/11 of the overall length of the iPad/iPad2 versus the ~1/20 claimed in the D'889 Patent.

61. Both the ratio of length to width of the front face and the aspect ratio of the display screen are 4:3, the same as the design illustrated in the D'889 Patent.

Samsung Galaxy Tab 10.1:

62. The device has a flat front surface with equal borders around a large rectangular display. The border width is ~1/14 of the total device length – larger than that claimed in the D'889 and smaller than the iPad/iPad2.

63. The aspect ratio of the display screen is ~5:3, which is significantly different than the design claimed in the D'889 Patent and the Apple iPad products.

64. As explained above, the rectangular shape of the display screen, the existence of borders around it, a rim around the glass, and rounded corners are all functional—and all disclosed by the prior art. The functionality of these elements is further confirmed by their widespread use in commercially available tablets. *See* Ex. O (Best Buy Tablet Buying Guide, currently available at http://bestbuy.shoplocal.com/bestbuy/default.aspx?action=entryflash&adref=header). On all other design elements of the front face (aspect ratios, presence of other features, such as a camera lens), the Samsung device differs considerably from both the Apple design patent and the actual iPad devices.

Edge and side profile

D'889:

65. The D'889 design patent has very simple profile. The frame goes down perpendicularly from the front surface and at approximately the halfway mark of the overall depth the sides start curving gradually to the back of the device. This type of profile exists on all of the edge views.

66. The ratio between the depth and length of the device as illustrated is ~1:15.

iPad:

67. The profile of the iPad differs from that of the D'889 Patent. On the iPad, the metal frame is slightly beveled on the top and only then continues with a vertical drop perpendicular to the front face of the device. The vertical drop ends with a very sharp curvature towards the back.

68. The thickness to length ratio is slightly lower than that of the D'889 (~1:20), but very close to it in appearance.

69. The below pictures illustrate the difference between these profiles:

D'889

iPad

iPad2:

70. The profile of the iPad2 differs from that of the D'889 Patent. On the iPad2, the metal frame is slightly beveled on the top and only then continues with a continuous slope inward from from the front surface towards the bottom.

71. The thickness to length ratio is approximately half that of the D'889 design (~1:30).

72. The below pictures illustrate the difference between these profiles:

D'889

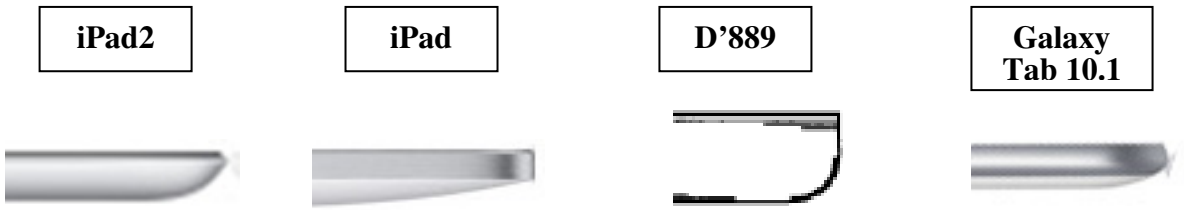
iPad2

Samsung Galaxy Tab 10.1:

73. The Galaxy Tab 10.1 profile differs substantially from the D'889 Patent.

74. The Galaxy Tab 10.1 has a separate bezel with a fully curved profile in both directions of the front face and the back; that is, the bezel curves outward away from the front face before then curving back inward towards the back of the device in a convex form. The curvature is different on each of the sides, but it does not include any significant vertical elements. The overall depth of the Samsung Tab is only 8.6mm, or ~1:30 of its length, creating a much slimmer profile than that in the D'889 Patent. This slimness is accentuated by the curve of the bezel, which elongates the appearance of the bezel by drawing the eye in more gradually and focusing attention on the "equator" of the bezel.

75. These differences yield designs that are clearly distinct in their profiles:



Back surface shape

Design patent, iPad & iPad2:

76. The D'889 Patent, the original iPad, and the iPad2 have a uniform back face that curves upward at the edges in order to hold the front face.

D'889 **iPad** **iPad2**

Samsung Galaxy Tab 10.1:

77. The Galaxy Tab 10.1 design uses three separate parts, a front face, a bezel, and a back cover.

78. The bezel surrounds the device and holds the front face. It extends slightly to the back area on most sides and to a larger extent in the top middle area of the back where it forms a trapezoidal area that includes the back camera feature. This type of feature is not present on the iPads or the D'889 Patent.

79. The majority of the back is covered by a separate back cover part that is clearly distinguished from the bezel part by usage of different material that has a different color and texture than the bezel.

80. In addition, unlike the D'889 Patent, the back surface features additional ornamentation—an upper tab cutout that also contains the camera feature, the Samsung logo and other writing.

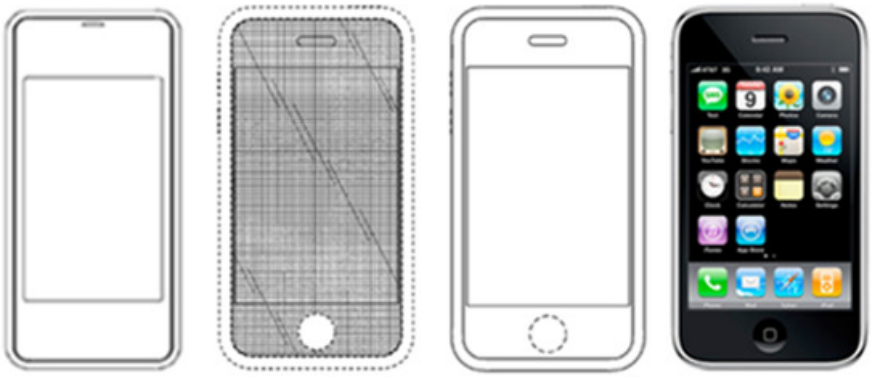
81. The design of the bezel and back panel of the Galaxy Tab 10.1 contrasts sharply with the D'889, the iPad, and the iPad, which all have a single piece of material that makes up the back panel and side edges.

IV. THE D618,677 PATENT

82. In considering Apple's infringement claims concerning the D'677 patent, I examined the Apple iPhone 3GS, Samsung Galaxy S 4G and Samsung Infuse 4G, along with other design patents.

A. **Prior Art**

83. I reviewed several design patents consisting of basically rectangular shapes with rounded corners and rounded slots (presumably for speakers). These include the JP 1241638, which was published June 6, 2005—well over a year before the D'677 was filed in January 2007. That design is shown below, compared to the D'677, as well as the D'087 and the iPhone 3GS:



JP 1241638 D'677 D'087 iPhone 3GS

See Exs. P, Q (attaching a side-by-side comparison of the JP 1241638 and the iPhone).

84. Mr. Woodring testified that this design is "substantially the same" design as the D'677 except for the color and the flatness and inset nature of the screen. Woodring Dep. Tr. at 212:4-213:22. Even assuming the JP 1241638 did not claim those features, it would have been obvious to one ordinarily skilled in the art, to modify the JP 1241638 to have a flat black screen rather than an embedded screen.

85. More specifically, it is my understanding that design patents are generally not specific as to color. By specifying a color, the D'677 narrows the scope of the design claim. With no such limitation, the JP 1241638 necessarily includes a claim for a black front surface—as well as any other colored surface.

86. Even if the JP 1241638 is not understood as including the black surface claimed by the D'677, making the front cover transparent black would have been an obvious choice in January of 2006 because the display screens available at that time were only commercially available in shades of black. Unless a designer wanted to the make an unusual choice of creating a multiple color unified front face, using black for the unified front surface was not only an obvious choice; it was the natural default. This is confirmed by the other smartphones developed at the same time that also used black as the color for the front cover, including for example, the LG Chocolate, announced in March 2006, and the LG Prada, announced in December 2006. *See* Exs. R and S.

LG Chocolate

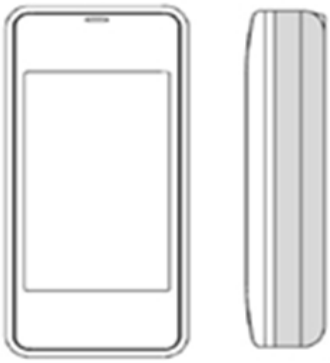
LG Prada

87. The LG Chocolate also shares with the D'677 a rectangular, predominately black front surface, flat except for a center navigation button on the lower portion of the phone below a screen that is inset and centered horizontally between narrow borders and below a wider top border, in which a horizontally-oriented rounded speaker slot is horizontally centered. The primary differences in appearance between the LG Chocolate and the D'677 are the additional ornamentation around the speaker and navigation button, the rounded rectangle nature of the center button, and the aspect ratio (4:3 for the LG Chocolate compared to 3:2 for D'677). The LG Chocolate's product dimensions are 94.6 x 45.6 x 17 mm; whereas the iPhone 3GS 115.5 x 62.1 x 12.3 mm. Attached as Ex. T is a side-by-side comparison of the LG Chocolate and the iPhone.

88. The LG Prada shares with the D'677 a rectangular, predominately black front surface, flat except for a thin row of navigational buttons forming a silver line on the lower portion of the phone below a screen that is inset and centered horizontally between narrow borders and below a wider top border, in which a horizontally-oriented rounded speaker slot is horizontally centered. The primary differences in appearance between the LG Prada and the D'677 are the additional ornamentation around the speaker and navigational button, the shape of the center button, and the aspect ratio (5:3 for the LG Prada compare to 3:2 for the D'677). The LG Prada's product dimensions are 98.8 x 54 x 12 mm compared to 115.5 x 62.1 x 12.3 mm for the iPhone 3GS. Attached as Ex. U is a side-by-side comparison of the LG Prada and the iPhone.

89. The front surface of the JP 1241638 does not appear to be perfectly flat from top to bottom. As Mr. Woodring testified, whether users will perceive a non-flat surface to be "substantially the same design," depends on how much the surface deviates from being flat. Woodring Dep. Tr. at 228:16-229:3. Here, the slanting of the surface at the top and bottom edges

may not have appeared to consumers as a different design. Consider, too, the apparent commercial embodiment of the JP 1241638, which appears to have been released by Sharp (SoftBank) in 2008.



JP 1241638

SoftBank 825SH

iPhone 3GS

See Exs. V, Q.

90. Even if JP 1241638 was not so close to the D'677 to be perceived by ordinary observers as substantially the same design, and render the D'677 invalid because of anticipation by the JP 1241638, creating a smartphone with a black, flat front screen would have been obvious to a designer of mobile devices of ordinary skill by January 2006.

91. Mobile electronic devices with flat screen were taught by the prior art by January of 2006--not only the prior art discussed above in connection with the D'889, but also the D'889 itself.

92. In addition, a flat front surface was a design that naturally evolved as a result of technological progress.

93. As of January 2006, by default, electronic devices with large display screens had mostly flat surfaces, because commercial display screens were flat.

94. Multiple classical keypad based mobile handset designs, such as the Motorola Razor, attempted to reach an almost flat surface for the keypad structure.

95. The introduction of touch technology allowed the removal of keypads and otherwise allowed for the reduction in the number of surface mounted buttons. Early commercial smartphone models used resistive touch technology. Resistive touch technology dictated that the

active touch layer would be exposed externally so that the user could apply pressure to it. Since this active layer is not resilient to scratches and since it is activated by pressure, a bezel elevated from its surface was used to provide protection from scratches and false triggering in cases where device was placed on its front surface.

96. Later, capacitive touch display technology matured to the point where it could be made available on a commercial scale at a price affordable to some consumers and was adopted by the mobile industry. Capacitive touch technology had been described in articles by E.A. Johnson in 1965, and actual models for advanced mutual capacitance touch displays were demonstrated in CERN at 1977. But some time was needed for the technology to mature and for reaching price points more suitable for the mobile handset market.

97. Unlike resistive touch technology, capacitive technology allows placement of the active surface below an externally hardened surface (reinforced glass or plastic). The screen therefore could be made flush but still protected against scratches and unintended activations, since an elevated surround was no longer dictated to protect the exposed touch layer of the screen. Once the technology reached this maturity level, the concept of a flat surface emerged almost simultaneously from multiple handset vendors, including the LG Chocolate and Prada designs shown above, which both predate the filing of the Apple iPhone design. *See* Exs. R, S.

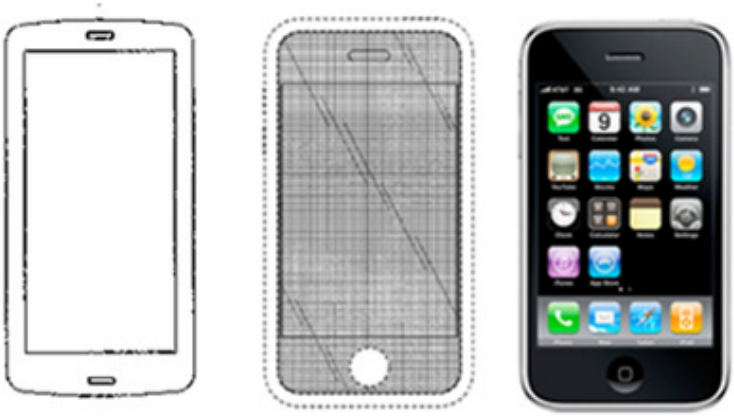
98. In addition, before the iPhone was announced, other smartphone designs also incorporated a flat front surface.

99. Another design, JP 1280315, filed on December 1, 2005, and published September 4, 2006, three months before Apple announced the iPhone, similarly shows a primarily front flat surface of a rounded rectangular shape dominated by a screen:

JP 1280315 **D'677** **iPhone 4**

See Ex. W. (JP 1280315). Attached as Ex. X is a side-by-side comparison of the JP 1280315 and the iPhone.

100. Another Japanese design registration, the JP 1009317, was first published in 1996, a decade before the D'677 was supposedly invented:



JP 1009317 **D'677** **iPhone 3GS**

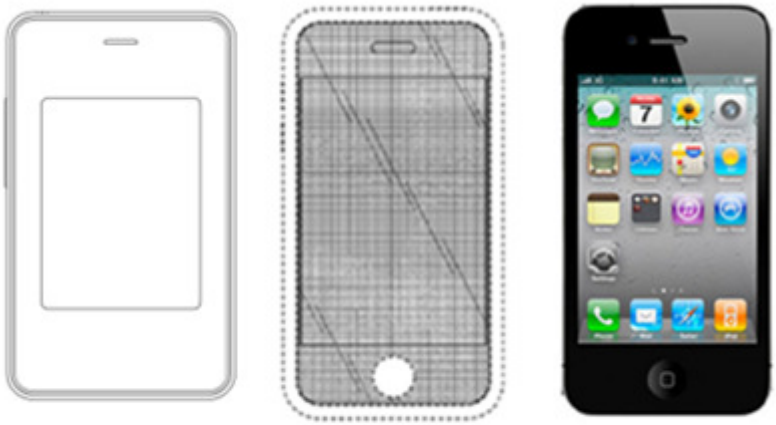
See also Ex. Y. Attached as Ex. Z is a side-by-side comparison of the JP 1009317 and the iPhone.

101. The JP 1241383 design registration, first published June 6, 2005, also discloses an inset rectangular screen surrounded by a bezel:

JP 1241383 **D'087** **iPhone 3GS**

See Ex. AA. Attached as Ex. BB is a side-by-side comparison of the JP 1241383 and the iPhone.

102. A Korean design patent registration KR 30-418547 publication date of July 2006 was not cited by Apple as prior art, but discloses all elements of the D'677 patent:

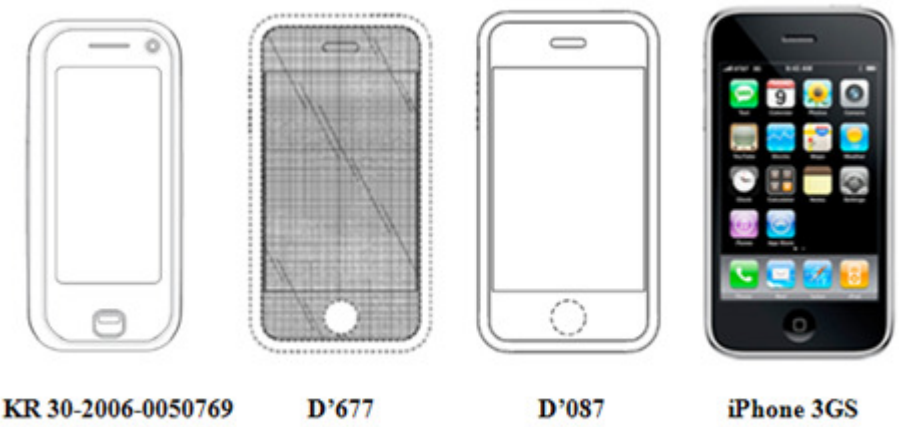


KR 30-041857 **D'677** **iPhone 4**

See also Ex. CC. Attached as Ex. DD is a side-by-side comparison of the KR 30-418547 and the iPhone.

103. In December 2006, the month before the iPhone was first announced, Samsung filed a design patent application in Korea for a phone with a smooth, continuous surface, with the exception of a centered navigation button, a screen inset between two narrow side borders and more substantial top and bottom borders, a rounded horizontal shape (presumably for a speaker). In addition to a surrounding bezel, which is not shown in the D'677, the Samsung design differs

from Apple's design most notably by the additional element of a circle in its upper right portion, presumably for a camera, and the phone's more elongated rectangular form:



See also Ex. EE. Attached as Ex. FF is a side-by-side comparison of the KR 30-2006-0050768 and the iPhone.

104. In sum, by 2006, designing a smartphone with a flat front surface was technologically possible, commercially feasible, and functionally efficient. Unlike a keypad with numerous raised or recessed buttons, a flat surface was easy to wipe clean. It also was less likely to result in "pocket dials"--inadvertently placed phone calls or emails sent as a result of a physical keypad bumping against objects in pants pocket or handbag.

105. Thus, the obviousness of the using a flat front surface on a smartphone with a rectangular shape, evenly rounded corners, a inset screen with narrow side borders, wider top and bottom borders and a rounded, horizontally-oriented slot in the upper portion of the phone is confirmed by other smartphones and/or smartphones designs in development before the application for the D'677 was filed.

B. **Functional analysis**

106. The D'677 reflects Apple's fundamentally un-ornamental approach to design. Jonathan Ive explained this approach, describing how a user "physically . . . connect[s] to the product." In the documentary film *Objectified*, he is shown saying:

So for example something like the iPhone, everything defers to the display. A lot of what we seem to be doing in a product like that is actually getting design out of the way. And I think when forms develop with that sort of reason, and they're not just arbitrary shapes, it feels almost inevitable. It feels almost undesigned.

See Ex. GG. As Mr. Ive observes, the primary way of interacting with a smart phone is through the display screen. The D'677 design serves to focus the user on this functionality and not interfere with or distract from the user's interaction with the display screen. Such functional, "undesigned" designs are not by their nature ornamental.

Aside from the overall functionality of the design as a whole, the individual elements of the D'677 that Apple claims are the key features of the design are also functional.

Surface flatness

107. As explained above, one of the reasons having a flat screen smartphone was obvious in 2006 is because of the functionality concerns of ease of cleaning and limiting inadvertent transmissions from physical keys.

Surface Transparency

108. Any permanent covering over a display screen must be transparent; otherwise, the purpose of the display screen would be impaired. Given the choice of a continuous flat surface on the front of the phone, it follows that it must be transparent.

Blackness of Surface

109. For similar reasons that the display screen mandates a transparent covering, it also is obvious that any single color applied to the front surface would be a shade of black given that display screens only come in shades of black.

In addition, black is a particularly useful color for the surface of a phone. It efficiently hides the wiring and electronic components underlying it; it makes it easier to determine if the display of the device is turned on or off; it minimizes the appearance of the phone, making it seem smaller and less prominent than a bright color would; and it provides a sharply-defined contrast to edge of the screen that helps the content of the display screen stand apart from whatever context the smartphone is in. The strong contrast also helps increase the saturation of the colors of the

display screen, creating a finer impression of the quality of the display screen, and, given the vast consumer preference for black for electronic products well before January 2006, serves a neutral color choice for consumers, which does not send an overt message of flashiness or frivolity.

Rounded Corners

110. As discussed in connection with the D'889, rounded corners serve many functions in handheld consumer products. *See, supra,* ¶¶ 38-41. Considerations of sharpness and potential injury to the user are all the more important for products that are held close to the face.

Rectangular Screen

111. Rectangular screens are virtually mandatory for any use of a display screen. As Mr. Woodring recognized, display screens themselves are rectangular. Woodring Dep. Tr. 157:25-158:12. That is not proprietary to Apple. *Id.* at 28:2-8. This is in accord with the longstanding use of rectangular shapes as the format for viewing any media--movies, television, magazines, newspapers, books, letters, legal briefs, or clay tablets.

112. Rectangular shapes are also easier to hold in the human hand.

Inset display screen

113. The flatness of the display screen on a phone serves to protect the screen since a screen that protrudes or is directly exposed as part of the surface creates a greater risk of damage to the screen. Nor could the display screen itself cover the complete front surface of the electronic device in 2006. As discussed above in the context of tablet computers, display screens for smartphones then (and now) include active components and wiring and require a controller that activates the display. These wires force the actual size of the display glass to be slightly larger than the active viewable area. The controller for the display may be either located on the glass substrate of the display (COG- Chip on Glass) or on a flexible cable extending from the display (COF – chip on flex). The space of the borders above or below the display screen accommodates the controller wiring.

As also discussed above, standard display screens for smartphones then (and now) are made of a relatively fragile material that needs to be protected. To be a viable commercial product, a mobile handset needs to tolerate, to some extent, drops and casual hits. Maintaining a

border between the display and the exterior surface of the device functions to protect the display by absorbing the energy of such impacts directly.

Narrow borders on the long sides of the screen

114. As Mr. Woodring testified, narrow borders are preferable to wide borders on the long sides of a screen because significantly widening the borders would reduce the size of the display screen or require a wider product, which could be awkward to hold in the hand. Woodring Dep. Tr. at 121:4-123:6. Handsets are primarily designed to be operated using a single hand, with the thumb being able to press the buttons/keys, while the device is held on the same hand. This standard, considering the general range for human hands, forces designs to have limited width. The exact width of a comfortable handset would depend on the individual hand size, but designs no wider than 65 mm are often considered to be better suited for general-purpose single hand operation.

115. As a practical matter, eliminating the side borders and having the screen extend the width of the product, from one side to the other was not technically feasible or desirable in 2006. In addition, having no side border would increase the likelihood that the screen would be damaged if it bumped against anything.

Wider borders on the top and bottom of the front surface

116. The wider borders on the top and bottom of the display screen are a practical and obvious solution to placing speakers and navigational buttons on the front surface without having to drill through or otherwise interrupt the display screen.

117. In addition to facilitating the placement of the speaker slots and navigation buttons, the wider borders provide functional space for the antennae. The display screen operates using high frequency signals, extending over wires which have considerable length. As a result, the display tends to emit radiated noise that may interfere with the operation of other components. It is a common practice to cover the display with a metal shield on its back side. A handset design must also include an antenna to enable its cellular radio operation. The existence of large metal objects in the area of the antenna influences and distorts its radiation pattern. It is therefore a

common practice to keep the antenna's area from overlapping with the metal shielded area of the display. Therefore, the antenna is commonly placed behind one of these larger borders.

Centered display screen

118. Centering the display screen not only communicates strongly to the user the primary importance of the display to the smartphone, but also enables the user to easily use the smartphone with any of its four edges oriented on top. If one border was particularly prominent, it would more strongly suggest the orientation of the screen and potentially dissuade users from fully appreciating the automatic-adjustment functionality of the smartphone.

Speaker slot

119. The use of a speaker is necessary on a smartphone to allow the user to listen privately to a conversation.

Centering of the speaker slot on the front surface above the display screen

120. Ever since handsets were invented, the most natural place to put the speaker of the phone was on the upper part of the handheld part of the phone—removed from the microphone which needs to be roughly aligned with the user's mouth—and near the ear. Centering the speaker horizontally on the surface signals to users that they have some flexibility in where to hold the phone to align it most conveniently with their ear. Placing the speaker anywhere other than on the upper portion of the phone, such as on the back or side of the phone, would be a highly unusual choice that would force users to hold the smartphone in an unnatural position when using the phone feature (except on speakerphone).

Rounded horizontal speaker slot

121. Horizontal speaker slots (as opposed to vertical slots) maximize the area that can be devoted to a speaker without impinging on the display screen size. The use of a horizontal speaker slot, with its narrow height, also serves to protect the mesh covering the speaker below it by not having a more expansive area, such as a circle or rectangle, that might be more easily punctured, torn, or obscured by dirt or dust.

122. The use of a horizontal seaker slot also increases the durability of the smartphone surface by not weakening it with a relatively large expanse of less rigid material.

123. In addition, having rounded edges for the speaker slot increases the ease of manufacturing by allowing the slot to be created by a drill (the slots created by which are naturally rounded due to the spinning of the drill) or a tool with structural integrity that is less likely to have a piece break off than one with sharp edges for example.

Substantially free of other ornamentation

124. By definition, being "free of ornamentation" cannot be ornamental. Further, in the case of a smart phone, being free of substantial ornamentation enhances the device's ease of use and the viewer's perception of the content of the display screen.

125. The functionality of all of these features, particularly the black color, a flat, clear, display screen symmetrically placed between narrow side borders and more substantial upper and lower borders, and a rounded speaker slot horizontally oriented and centered in the upper portion of the phone above the display screen, are evident by inspecting other smartphones currently on the market. Such features are nearly universal because of their fundamental importance in the functioning of a smartphone. See, for example, the Best Buy September Buying Guide, Ex. HH (currently available at http://bestbuy.shoplocal.com/bestbuy/default.aspx?action=entryflash&adref=header) (featuring many smartphones, including those using other operating systems and manufacturers).

C. Design comparison

126. As with the D'889 design, the designs shown in D'677 and D'087 have such little ornamentation that small differences can be quite significant. Woodring Dep. Tr. at 30:8-23.

127. Comparison of the iPhone 3, the iPhone 4, the Samsung S 4G and the Infuse 4G to the D'677 and D'087 patents confirms that the designs at issue in the Infuse 4G and the Samsung S 4G are significantly different from either the D'677 or Apple's iPhones.

Rounded Corners

Design Patents and iPhones:

128. The D'677 and D'087 designs as well as the iPhones have four equally rounded corners.

Samsung Galaxy S 4G

129. The Samsung Galaxy S 4G has four rounded corners, but of different radii than that found in the claimed designs and on the iPhones. In fact, the corners of Galaxy S 4G are not equally rounded: the top two corners of the Galaxy S 4G have a smaller radius than the bottom corners.

Galaxy S 4G top corner

Galaxy S 4G bottom corner

(rotated to enable accurate comparison)

iPhone 3GS top corner

iPhone 3GS bottom corner

(rotated to enable accurate comparison)

Samsung Infuse 4G

130. The radii of the Samsung Infuse 4G are distinctly smaller than that depicted in the design patents and embodied in the iPhone. Thus the corners of the Infuse 4G are much tighter, creating a more rectangular appearance.

Infuse 4G top corner **Infuse 4G bottom corner**

(rotated to enable accurate comparison)

iPhone 3GS top corner **iPhone 3GS bottom corner**

(rotated to enable accurate comparison)

Screen location and aspect ratio

Design patents:

131. The D'677 and D'087 patents show a front surface that includes a large rectangular display flushed with the surface of the device. The height to width ratio (aspect ratio) of the display screen is ~3:2. The display is illustrated as having almost no border between the display screen and the outer edge of the front surface (1mm when scaled to actual product size). The top and bottom borders are considerably larger than the side borders and are equal in size.

iPhones:

132. The iPhone 3GS uses a 3.5" rectangular display screen (the size of the rectangular display is measured on the diagonal). The display's location resembles the design patent, but the actual border between the edge of the display and the edges of the front surface, on the sides, is extended to 3mm. The aspect ratio of the display screen is similar to the design patent and is ~3:2.

133. The iPhone 4 uses a 3.5" rectangular display. The display's location resembles the design patent and the iPhone 3GS, including that the actual side border is 3mm. The aspect ratio of the display screen is similar to the design patent and is ~3:2.

Samsung Galaxy S 4G:

134. When the Samsung Galaxy S 4G is turned off (the only time the front surface is black), it is difficult to discern the borders of the display screen. Rather than appearing divided into three horizontal bands like the iPhones and the D'677 design, the Samsung Galaxy S 4G appears to have a solid black surface from top to bottom, with the exception of white ornamentation--the T-Mobile and Samsung names and the four navigation buttons--on the upper and lower portions. However, the display is located in the middle of the device with equal top and bottom spaces.

135. The design has a 4" rectangular display. The side border is 3mm (different from the design patents, and similar to iPhone and many other designs in the market). The display is located in the middle of the device with equal top and bottom spaces. The aspect ratio of the display screen is ~5:3.

136. The display screen has similar width to the iPhone display but it is clearly longer.

137. The Samsung Galaxy S 4G display size and aspect ratio differs significantly from both the Apple design patents and the iPhones.

Samsung Infuse 4G:

138. When the Samsung Infuse 4G is turned off (the only time in any of phones that the front surface remains black), it is difficult to discern the borders of the display screen. Rather than appearing divided into three horizontal bands like the iPhones and D'677, the Samsung Infuse 4G appears to have a solid black surface from top to bottom, with the exception of contrasting ornamentation—the AT&T and Samsung names and the four navigation buttons, along with camera lenses--on the upper and lower portions. However, the display is located in the middle of the device with equal top and bottom spaces.

139. The design has a 4.5" rectangular display screen. The side border is 4mm. The display screen aspect ratio is ~5:3.

140. The display screen is distinctly wider and longer than the iPhones' displays.

141. The larger display screen size forces the overall width and height of the phone itself to be larger as well.

142. The design prioritizes a very large screen size over the standard ergonomic restrictions on the width of the handset and provides consumers with a different operation point.

143. The Samsung Infuse display size and aspect ratio differs significantly from both the Apple design patents and the iPhones.

Speaker

Design patents:

144. The D'677 and D'087 design patents illustrate an elongated pill shape, which is used for the speaker. This speaker slot is vertically centered in the space between the top edge of the front surface and the top edge of the display screen. The ratio between the length and width of the hole is ~4:1.

iPhones:

145. The speaker slot on both iPhones has a similar location and shape (when measured from the outer edge—approximately 12 mm wide by 3 mm high) as the one described in the design patent.

146. The bottom side of the hole is covered with a silver metallic mesh, which is lighter in color than the surrounding border and contrasts the speaker hole and its depth from the surface.

Samsung Galaxy S 4G:

147. The handset speaker is located on the top portion of the front surface, but it is not aligned equally between the top of the front surface of the phone and the top of the display screen; rather, it is discernibly closer to the top of the front surface than to the display screen (4 mm vs. 9 mm).

148. The ratio of the width to length is ~9:1 (14 mm x 1.5 mm) differs distinctly from the iPhone or the asserted design patents.

149. The speaker opening is covered with a black metallic surface with a single line of small holes therein. The speaker surface which is flush with the front surface of the phone.

150. The overall concept is to hide the earpiece hole and blend it with the front surface, as opposed to Apple's concept of contrasting and emphasizing the earpiece hole.

151. The Samsung Galaxy S 4G speaker design differs in its non-functional aspects from both the Apple design patents and the iPhones.

Samsung Infuse:

152. The handset speaker is located on the top portion of the front surface, but it is not aligned equally between the top of the front surface of the phone and the top of the display screen; rather, it is discernibly closer to the top of the front surface than to the display screen (4 mm vs. 9 mm).

153. The ratio of the width to length is ~10:1 (15.5 mm x 1.5 mm), which is considerably different from the iPhone or the asserted design patents.

154. The speaker opening is covered with a black metallic surface with a single line of small holes therein. The speaker surface which is slightly raised compared to the front surface of the phone.

155. The overall concept is to hide the speaker opening and blend it with the front surface, as opposed to Apple's concept of contrasting and emphasizing the speaker opening.

156. The Samsung Infuse speaker opening design differs in all design-related aspects from both the Apple design patents and the iPhones.

Control buttons on the front surface

Design patents:

157. The D'677 and D'087 design patents show a single optional, round button on the bottom of the front surface. The button is relatively large: the diameter of the button is ~1/5 of overall device width.

158. The button is the only operational button apparent on the design.

iPhones:

159. Both the iPhone 3GS and iPhone 4 designs implement the optional button of the design patents.

160. Additionally, the button has a readily-noticeable icon of a white square with slightly rounded corners appearing in the middle of the inset round button.

161. This "home" button is clearly a unique Apple design feature and is being reiterated in all of its latest generation mobile devices (all iPhones, iPads, iPod Touch devices).

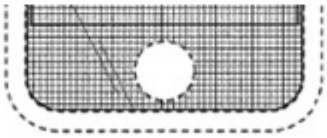
Samsung Galaxy S 4G & Infuse 4G:

162. The Samsung phones have no physical keys or buttons on the front surface. Instead, they have four virtual touch keys that are marked by drawings on the front surface and have backlit illumination.

Infuse 4G

Galaxy S 4G

iPhone 3GS



D'677

D'087

163. The design embodied by these control keys is clearly distinct from the Apple design patents or the iPhones.

Device marking

Design patents:

164. Neither the D'677 patent nor the D'087 patent shows any specific marking on the front surface area; rather, the front surface is decidedly unornamented.

iPhones:

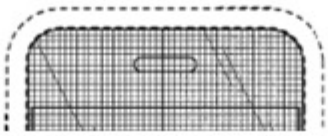
165. None of the iPhone versions have any markings on their front faces, except for the rounded square shape inside the round button. No company logo or name is added to the front face.

166. Even when the iPhone is sold exclusively via specific US carriers, it is not marked by the carrier or operator brand on the front face.

Infuse 4G

Galaxy S 4G

iPhone 3GS



D'677

D'087

167. The lack of any marking on the front is a clear design feature of Apple mobile devices.

Samsung Galaxy S 4G and Infuse 4G:

168. Both Samsung handsets have a clear "Samsung" marking on the front, using the stylized Samsung logo.

169. The handsets are co-branded and the carrier or operator logo is also visibly presented on the front face.

V. THE D593,087 PATENT

170. In considering Apple's infringement claims concerning the D'087 patent, I examined the Apple iPhone, Samsung Galaxy S 4G, and Samsung Infuse 4G, along with other design patents.

D'087 Patent:

171. The D'087 patent, in one of its embodiments (see figures 41-46), is the same as the D'677 except that it claims a does not claim a black, smooth front surface and instead it shows a separate element bezel around the front surface, which connects the front surface to the back surface. The bezel has a uniformly wide radius of curvature and is of equal width at all points. Its outer edge resembles the outer edge of a curved quotation mark. When viewed from the front, the bezel has equally rounded corners and is completely flush with the front surface of the device.

172. Because the D'087 is so similar to the D'677, the prior art and functionality arguments that apply to both, which were discussed above, are not recited again here.

Functionality of the Bezel

173. A bezel in a mobile phone handset is a frame that surrounds the front face of the device and joins and holds together front and back pieces of the device.

174. Some design feature is necessary to hold together the front and back surfaces, but its exact details can be implemented through a range of choices.

Comparison Regarding Bezel

iPhone 3GS:

175. The iPhone 4 does not have the bezel feature of the D'087, which I assume is why Apple's motion compares the iPhone 4 to Samsung phones for the D'677, but not the D'087 Accordingly, the following bezel comparison pertains only to the D'087, the iPhone 3GS, and the accused Samsung phones:

176. The iPhone 3GS bezel implements the bezel in the D'087 design. In addition, it is characterized by a bright silver metallic color, which contrasts sharply with the black front surface.

Samsung Galaxy S 4G:

177. The bezel of the Samsung Galaxy S 4G has a non-uniform width. Along the top edge of the device the bezel is very narrow. Along the left and right edges of the device, the bezel is wider, and along the bottom edge of the device the bezel is wider still.

178. The bezel has two curvatures: one extends away from the front face to a middle point on the bezel, and the other curves back toward the back surface of the device. Its outer edge resembles a "greater than" or "less than" symbol. It follows the lines of the front surface, including its corners, which are tighter on the upper edge of the phone than the lower edge. The resulting profile is distinctly different from both the iPhone and the D'087 design.

179. The upper edge of the bezel of the Samsung Galaxy S 4G is slightly elevated above the front surface of the device.

180. The bezel is colored metallic gray, which creates a sense of smooth transition from the front black color to the light gray cover of the back of the device that is a different appearance than the strongly contrasting silver bezel of the iPhone.

181. The overall appearance and shape of the bezel of the Samsung Galaxy S 4G differs significantly from the design of the D'087 patent or the iPhone 3GS.

D'087

iPhone 3GS

Samsung Galaxy S 4G

D'087

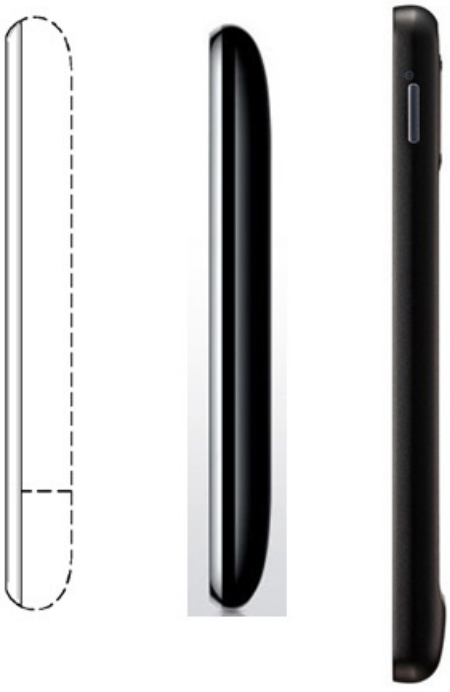
iPhone 3GS

Samsung Galaxy S 4G

Samsung Infuse 4G:

182. The Samsung Infuse 4G does not have a separate bezel element that joins the front and back surfaces together. Rather, the sides are formed by upward bending of the back surface straight up toward the front surface. This creates a striking difference between the D'087 and the Infuse 4G.

183. As such, the Samsung Infuse 4G does not resemble iPhone 3GS or the D'087 design.



D'087 iPhone 3GS Infuse 4G

184. It is my opinion that (1) the D'889, 'D677, and D'087 patents are invalid in light of the prior art described above; (2) the designs claimed by the D'889, 'D677, and D'087 patents are not protectable because they only encompass non-ornamental elements; (3) the Samsung Galaxy Tab 10.1 differs significantly from the design claimed by the D'889 Patent; and (4) the designs of the Samsung Galaxy S 4G and Samsung Infuse differ significantly from the designs claimed by the D'677 and D'087 patents.

I declare under penalty of perjury that the foregoing is true and correct. Executed in Bohinjska Bistrica, Slovenia, on August 22, 2011.

By _____
Itay Sherman